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**ATTENTION : THIS DOCUMENT IS ALSO AVAILAIBLE AT R/RPS/AES/NMS/Québec/Août 2016/Français/Division 1 Exigences générales**

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**Partie 1      General**

**GENERAL NOTE:** in this section the term “site” includes all the facilities located at the site where the work is taking place (construction site, buildings, access, infrastructure, parkings, bays, etc.).

**1.1            RELATED REQUIREMENTS**

- .1      Section [\_\_\_\_\_].

## 1.2 REFERENCES

- .1 Province of Québec
  - .1 Loi sur la santé et la sécurité du travail L.R.Q., c. S-2.1 (Act respecting occupational health and safety).
  - .2 Code de sécurité pour les travaux de construction L.R.Q., c. S-2.1, r.4 (Safety code for the construction industry).

## 1.3 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Make submittals in accordance with Section [01 33 00 - Submittal Procedures].
- .2 Submit to Departmental representative, [and the CNESST] the site-specific prevention program, as outlined in the article “GENERAL REQUIREMENTS”, at least 10 days prior to the start of work.
- .3 Departmental representative will review Contractor’s site-specific prevention program and provide comments to Contractor within 10 days after receipt of the document. Revise plan as appropriate and resubmit to Departmental representative within 5 days after receipt of comments from Departmental representative. Departmental representative reserves the right not to authorize the start of work on the construction site as long as the content of the prevention program is not satisfactory. The Contractor shall then update his prevention program and resubmit it to the Departmental representative if the scope of work changes or if the working methods of the Contractor differ from his initial plans or for any other applicable new condition.
- .4 Departmental representative’s review of Contractor’s site-specific prevention program should not be construed as approval of the program and does not reduce the Contractor’s overall responsibility for construction Health and Safety during the work.
- .5 Submit copies of Contractor’s authorized representative’s construction site health and safety inspection reports to Departmental representative, [determine frequency, but at least once a week].
- .6 Submit to Departmental representative within 24 hours a copy of any inspection report, correction notice or recommendation issued by Federal, Provincial and Territorial health and safety inspectors.
- .7 Submit to Departmental representative within 24 hours an investigation report for any accident involving injury and any incident exposing a potential hazard.

The investigation report shall contain at least the following:

  1. date, time and place of accident;
  2. name of sub-contractor involved in the accident;
  3. number of persons involved and condition of wounded;
  4. witness identification;
  5. detailed description of tasks performed at the time of the accident;
  6. equipment being used to accomplish the tasks performed at the time of the accident;
  7. corrective measures taken immediately after the accident;
  8. causes of the accident;

9. preventive measures that have been put in place to prevent a similar accident.
- .8 Submit to Departmental representative WHMIS MSDS - Material Safety Data Sheets in accordance with Section 01 33 00 - Submittals [01 47 15 - Sustainable Requirements: Construction] and Section [02 81 01 - Hazardous Materials]. Contractor must also keep one copy of these documents on the construction site.
- .9 Medical Surveillance: where prescribed by legislation, regulation or prevention program, submit certification of medical surveillance for construction site personnel prior to commencement of Work, and submit additional certifications for any new construction site personnel to Departmental representative.
- .10 Submit to Departmental representative an on-site Emergency Response Plan at the same time as the prevention program. The Emergency Response plan must contain the elements listed in the article “GENERAL REQUIREMENTS” of this section.
- .11 Submit to Departmental representative copies of all training certificates required for the application of the prevention program, in particular (if applicable) for the following:
  - .1 first aid in the workplace and cardiopulmonary resuscitation;
  - .2 work likely to release asbestos dust (mandatory for all work where asbestos is present);
  - .3 work in confined spaces (mandatory for all work in confined spaces);
  - .4 lockout-tagout procedures (mandatory for all work requiring lockout);
  - .5 safely operating forklift trucks (mandatory for all forklift usage);
  - .6 safely operating elevating work platforms (mandatory for the use of all elevating platforms);
  - .7 any other requirement of Regulations or the safety program.

In addition, the certifications of the *Cours de santé et sécurité générale pour les chantiers de construction* (General Health and Safety Training for Construction Sites) shall be available on demand on the construction site.
- .12 Engineer’s plans and certificates of compliance: Contractor must submit to the Departmental representative and to the *Commission des normes, de l’équité, de la santé et de la sécurité du travail* (CNESST) a copy signed and sealed by engineer of all plans and certificates of compliance required pursuant to the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the construction industry) or by any other legislation or regulation or by any other clause in the specifications or in the contract. The Contractor must also submit a certificate of conformity signed by an engineer once the facility for which these plans were prepared has been completed and before a person uses the facility. A copy of these documents must be available on site at all times.

#### **1.4 FILING OF NOTICE OF CONSTRUCTION SITE OPENING**

- .1 Notice of construction site opening shall be submitted to the CNESST before work begins. A copy of such notice and acknowledgment of receipt from the CNESST shall be submitted to Departmental representative.

At the completion of all the work, a notice of construction site closing shall be submitted to the CNESST, with a copy to Departmental representative.

- .2 The Contractor shall assume the role of being the Principal Contractor in the limits of the construction site and elsewhere where he must execute work within the framework of this project. The Contractor shall recognize the responsibility of being the Principal Contractor of the project and identify himself as such in the notice of the construction site opening he provides to the CNESST.
- .3 The Contractor shall accept to divide and identify the construction site adequately in order to define time and space at all times throughout the course of the project.

## **1.5 HAZARD ASSESSMENT**

- .1 The contractor must perform construction site specific safety hazard assessment related to project.

## **1.6 MEETINGS**

- .1 Schedule and administer Health and Safety meeting with Departmental representative prior to commencement of Work.
- .2 Contractor's representative with decision power must attend any meetings at which construction site safety and health issues are to be discussed.
- .3 If it is anticipated that there will be 25 workers or more on the construction site at any given time, the Contractor shall set up a worksite committee and hold meetings as required by the *Code de sécurité pour les travaux de construction* (S-2.1, r. 4) (Safety code for the construction industry). A copy of the minutes of the meetings of the committee shall be provided to the Departmental representative no later than 5 days after the committee meeting.

## **1.7 REGULATORY REQUIREMENTS**

- .1 Do the Work in accordance with Section [01 41 00 - Regulatory Requirements].
- .2 Comply with all legislation, regulations and standards applicable to the construction site and its related activities.
- .3 Comply with specified standards and regulations to ensure safe operations on a site containing hazardous or toxic materials.
- .4 Always use the most recent version of the standards specified in the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the construction industry), notwithstanding the date indicated in that *Code*.

## **1.8 COMPLIANCE REQUIREMENTS**

- .1 Comply with the *Loi sur la santé et la sécurité du travail* (L.R.Q., c. S-2.1) (Act Respecting Occupational Health and Safety) and the *Code de sécurité pour les travaux de*

*construction* (S-2.1, r. 4.) (Safety code for the construction industry) in addition to respecting all the requirements of this specification manual.

## **1.9 RESPONSIBILITIES**

- .1 The Contractor must acknowledge and assume all the tasks and obligations which customarily devolve upon a principal Contractor under the terms of the *Loi sur la santé et la sécurité du travail* (L.R.Q., ch. S-2.1) (Act Respecting Occupational Health and Safety) and the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the construction industry).
- .2 The Contractor must be responsible for health and safety of persons on construction site, safety of property on construction site and for the protection of persons adjacent to construction site and the environment to the extent that they may be affected by conduct of the work.
- .3 No matter the size or location of the construction site, the Contractor must clearly define the limits of the construction site by physical means and respect all specific regulation requirements applicable in this regard. The means chosen to define the limits of the construction site must be submitted to the Departmental representative.
- .4 Comply with and enforce compliance by employees with safety requirements of Contract Documents, applicable federal, provincial, territorial and local statutes, regulations, and ordinances, and with site-specific prevention Plan.

## **1.10 WORK PERFORMED BY EXTERNAL CONTRACTORS**

- .1 On this construction site, it is anticipated that work will be performed by an external contractor that has not been hired by the Contractor:
- .2 The Contractor must take the necessary steps to protect the health and safety of external contractors that have no contractual link with the Contractor but have been mandated by the Departmental representative to perform certain work. In return, these external contractors are obligated to submit to the authority of the Contractor (Principal Contractor). A subordination agreement must be signed by the Contractor and by each external contractor to this effect and submitted to the Departmental representative prior to the start of the work of each contractor (see the wording in the article HEALTH AND SAFETY SUBORDINATION AGREEMENT)

## **1.11 GENERAL REQUIREMENTS**

- .1 Before undertaking the work, prepare a site-specific prevention program based on the hazards identified according to the article “HAZARD ASSESSMENT” and the article “RISKS INHERENT TO THE WORKSITE” in this section. Apply this program in its totality from the start of the project until demobilization of all personnel from the construction site. The prevention program shall take into consideration the specific

characteristics of the project and cover all the work to be executed on the construction site.

The safety program must include at least the following:

- .1 company safety and health policy;
- .2 description of the stages of the work;
- .3 total costs, schedule and projected workforce curves;
- .4 flow chart of safety and health responsibilities;
- .5 physical and material layout of the construction site;
- .6 risk assessment for each stage of the work, including preventive measures and the procedures for applying them;
- .7 identification of the preventive measures relative to the specific risks inherent to the worksite indicated in the article “RISKS INHERENT TO THE WORKSITE”;
- .8 identification of preventive measures for health and safety of employees and / or public works site as indicated in the article “SPECIFIC REQUIREMENTS FOR THE HEALTH AND SAFETY OF OCCUPANTS AND PUBLIC”;
- .9 training requirements;
- .10 procedures in case of accident/injury;
- .11 written commitment from all parties to comply with the safety program;
- .12 construction site inspection checklist based on the preventive measures;
- .13 emergency response plan which shall contain at least the following:
  - .1 construction site evacuation procedures;
  - .2 identification of resources (police, firefighters, ambulance services, etc.);
  - .3 identification of persons in charge of the construction site;
  - .4 identification of the first-aid attendants;
  - .5 communication organizational chart (including the person responsible for the site and the Departmental representative);
  - .6 training required for those responsible for applying the plan;
  - .7 any other information needed, in the light of the construction site’s characteristics.

If available the Departmental representative will provide the evacuation procedures to the Contractor who shall then coordinate the construction site procedure with that of the site and submit it to the Departmental representative.

- .2 Departmental representative may respond in writing, where deficiencies or concerns are noted in the prevention program and may request resubmission with correction of deficiencies or concerns.
- .3 In addition to the prevention program, during the course of the work the Contractor shall elaborate and submit to the Departmental representative specific written procedures for any work having a high risk factor of accident (for example: demolition procedures, specific installation procedures, hoisting plan, procedures for entering a confined space, procedures for interrupting electric power, etc.) or at the request of the Departmental representative.

- .4 The Contractor shall plan and organize work so as to eliminate the danger at source or ensure collective protection, thereby minimizing the use of personal protective equipment.
- .5 Equipment, tools and protective gear which cannot be installed, fitted or used without compromising the health or safety of workers or the public shall be deemed inadequate for the work to be executed.
- .6 All mechanical equipment (for example, but not limited to: hoisting devices for persons or materials, excavators, concrete pumps, concrete saws) shall be inspected before delivery to the construction site. Before using any mechanical equipment, the Contractor shall obtain a certificate of compliance signed by a qualified mechanic dated less than a week prior to the arrival of each piece of equipment on the construction site; the certificate shall remain on the construction site and transmitted to the Departmental representative on demand.
- .7 Ensure all inspections (daily, periodic, annual, etc.) for the hoisting devices for persons or materials required by the current standards are carried out and be able to provide a copy of the inspection certificates to the Departmental representative on demand.
- .8 The Departmental representative can at all times, if he suspects a malfunction or the risk of an accident, order the immediate stop of any piece of equipment and require an inspection by a specialist of his choice.
- .9 The Departmental representative must be consulted for the location of storing gas cylinders and tanks on the construction site.

#### **1.12 RISKS INHERENT TO THE WORKSITE**

- .1 In addition to the risks related to the tasks to be carried out, personnel responsible for the execution of the work on the construction site will be exposed to the following risks, inherent to the area where the work will be executed..

At the worksite there is in particular the presence of the following:

- .1 materials containing asbestos;
- .2 materials containing lead;
- .3 moulds;
- .4 other dangerous materials (specify);
- .5 confined spaces;
- .6 overhead power lines;
- .7 underground services (electric, gas, vapour, water system, etc.);
- .8 laboratories;
- .9 trees and landscaping to preserve and protect;
- .10 potentially unstable ground;
- .11 barbed wire fences;
- .12 body of water close by;
- .13 [other to specify];
- .14 [other to specify];

.15 [other to specify].

The Contractor shall process to a risk assessment of the site to validate this information and see if other risks are present on the site. He must include in its prevention program all risks that have been identified.

### **1.13 SPECIFIC REQUIREMENTS FOR THE HEALTH AND SAFETY OF OCCUPANTS AND PUBLIC**

.1 The worksite is occupied by employees and/or the public during the following times: [specify the times]. The Contractor shall consider the following specific requirements for the protection of employees and / or the public:

.1 [ ]

.2 [ ]

.3 [ ]

These requirements must be included in the Contractor's site-specific safety plan as well as any other measures provided by the Contractor to protect the health and safety of employees and / or the public on the site.

### **1.14 UNFORESEEN HAZARDS**

.1 Whenever a source of danger not defined in the specifications or identified in the preliminary construction site inspection arises as a result of or in the course of the work, the Contractor must immediately suspend work, notify the person responsible for health and safety on the construction site, take appropriate temporary measures to protect the workers and the public and notify Departmental representative, both verbally and in writing. Then the Contractor must do the necessary modifications to the prevention program or apply the security measures required in order to resume work.

### **1.15 PERSON IN CHARGE OF HEALTH AND SAFETY**

.1 If the construction site meets the requirements of article 2.5.3 of the *Code de la sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the construction industry), the Contractor needs to hire a competent person authorized as a safety officer and appoint this person full time from the beginning of the work. This person's tasks shall solely be dedicated to the management of health and safety on the construction site. This safety officer must have the following qualifications:

.1 have a safety officer certificate issued by the CNESST;

.2 have site-related working experience of at least [\_\_\_\_\_] years specific to the activities associated with the present project;

.3 have working knowledge of occupational health and safety regulations in the workplace;



- .4 be responsible for completing Contractor's Health and Safety Training Sessions and ensuring that personnel not successfully completing required training are not permitted to enter the construction site to perform work;
- .5 be responsible for implementing, enforcing in detail and monitoring site-specific Contractor's Health and prevention program;
- .6 be on construction site at all times during execution of work;
- .7 inspect the work and ensure compliance with all regulatory requirements and those indicated in the contract documents or the site-specific prevention program.
- .8 Keep a daily log of actions taken and submitting a copy to Departmental representative each week.

The safety officer's certificate shall be submitted to the Departmental representative before the start of the work.

- .2 When the hiring of a safety officer is not required or if this person is hired by the Departmental representative, the Contractor shall designate a competent person to supervise and take responsibility for health and safety, no matter the size of the construction site or how many workers are present at the workplace. This person shall be on construction site at all times and be able to take all necessary measures to ensure the health and safety of persons and property at or in the immediate vicinity of the construction site and likely to be affected by any of the work. The Contractor shall submit the name of this person to the Departmental representative before the start of work.

## **1.16 POSTING OF DOCUMENTS**

- .1 Ensure applicable items, articles, notices and orders are posted in conspicuous location on construction site in accordance with Acts and Regulations of the Province, and in consultation with Departmental representative.
- .2 At a minimum, the following information and documents must be posted in a location readily accessible to all workers:
  - .1 notice of construction site opening;
  - .2 identification of principal Contractor;
  - .3 company OSH policy;
  - .4 site-specific prevention program;
  - .5 emergency plan;
  - .6 minutes of worksite committee meetings;
  - .7 names of worksite committee representatives;
  - .8 names of the first-aid attendants;
  - .9 action reports and correction notices issued by the CNESST.

### **1.17 INSPECTION OF THE CONSTRUCTION SITE AND CORRECTION OF NON-COMPLIANCES**

- .1 Inspect the construction site and complete the construction site inspection checklist and submit it to the Departmental representative in accordance with the article “ACTION AND INFORMATIONAL SUBMITTALS” in this section.
- .2 Immediately take all necessary measures to correct any situations deemed non-compliant during the inspections mentioned in the previous paragraph or noticed by the authorities having jurisdiction or the Departmental representative or his agent.
- .3 Submit to Departmental representative written confirmation of all measures taken to correct the situation in case of non-compliance in matters pertaining to health and safety.
- .4 The Contractor shall give the safety officer or, where there is no safety officer, the person assigned to safety and health responsibilities, full authority to order cessation and resuming of work as and when deemed necessary or desirable in the interests of safety and health. This person should always act so that the safety and health of the public and construction site workers and environmental protection take precedence over cost and scheduling considerations.
- .5 The Departmental representative or his agent may order cessation of work if the Contractor does not make the corrections needed to conditions deemed non-compliant in matters pertaining to health and safety. Without limiting the scope of the preceding articles, the Departmental representative may order cessation of work if, in his view, there is any hazard or threat to the safety or health of construction site personnel or the public or to the environment.

### **1.18 PREVENTION OF VIOLENCE**

- .1 Health and safety management of Public Works and Government Services Canada construction sites includes the implementation of measures designed to protect the psychological health of all persons who access the construction site where the work is taking place. Consequently, in addition to physical violence, verbal abuse, intimidation and harassment are not tolerated on the construction site. Any person who demonstrates such actions or behaviors will receive a warning and/or could be definitely expelled from the construction site by the Departmental representative.

### **1.19 BLASTING**

- .1 Blasting or other use of explosives is not permitted without prior receipt of written instruction by Departmental representative.
- .2 Do blasting operations in accordance with Section [31 23 16.26 - Rock Removal].
- .3 Any operation involving explosives must be carried out under the supervision of a qualified shot-firer.
- .4 The purchase, carriage, storage and use of explosives must comply with all applicable federal and provincial legislation:

- .1 Canada: *Explosives Act* (E-17)1, *Explosives Regulations* (C.R.C. CH. 599), Standard for Storage of Blasting Charges and Detonators, *Transportation of Dangerous Goods Act and Regulations*.
- .2 Québec: *Loi sur les explosifs* (Explosives Act) (E-22), *Règlement d'application sur les explosifs* ((E-22, r.1), *Code de sécurité pour les travaux de construction* (S-2.1, r.4), (Safety code for the Construction Industry) *Règlement sur le transport des matières dangereuses* (Transportation of Dangerous Goods Regulations).
- .5 Contractor shall obtain all permits required pursuant to the legislation and regulations referred to above and keep copies on hand at the construction site.
- .6 Contractor shall facilitate inspection of the construction site, stored explosives and vehicles used to transport explosives by any government representatives or police officers whose jurisdiction encompasses explosives.

#### **1.20 POWDER ACTUATED DEVICE**

- .1 Use powder actuated devices only after receipt of written permission from Departmental representative.
- .2 Any person using an explosive actuated tool shall hold a training certificate and meet all requirements of Section 7 of the *Code de sécurité pour les travaux de construction* (S- 2.1, r. 4). (Safety code for the construction industry)
- .3 Any other explosive-actuated device shall be used in accordance with the manufacturer's directions and applicable standards and regulations.

#### **1.21 USE OF PUBLIC ROADS**

- .1 Where it is necessary to encroach on a public road for operational reasons or to ensure the security of the workers, the occupants or the public (for example: the use of scaffolding, cranes, excavation work, etc.), the Contractor shall obtain at his own expense any authorizations and permits required by the competent authority.
- .2 The Contractor shall install at his own expense any signage, barricades or other devices needed to ensure the safety and security of the public and the Contractor's own facilities.

#### **1.22 LOCKOUT-TAGOUT**

- .1 For all work on electrically or otherwise energized equipment, the Contractor shall draw up and implement a general lockout-tagout procedure and submit it to the Departmental representative.
  - .2 Supervisors and all workers concerned by work requiring lockout-tagout must have received training on lockout-tagout procedures by a recognized organization; Contractor shall submit training certificates to the Departmental representative.
-

- .3 Before starting the lockout-tagout procedure of a piece of equipment on an occupied site, Contractor must coordinate his work with the representative of the site if the interruption of the power sources can have an impact on the operations of the site or on its occupants.
- .4 Contractor must designate a qualified person as responsible for the lockout-tagout and must make sure that that person prepares a lockout-tagout data sheet for each piece of equipment involved. The lockout-tagout data sheet must be submitted to the Departmental representative at least 48 hours before the beginning of the work. The Departmental representative will review the data sheet with the representative of the site if the work takes place in an existing building. The data sheets for lockout-tagout must contain at least the following information:
  - .1 description of work to carry out;
  - .2 identification, description and location of the circuit and/or ~~piece of~~ equipment to lockout-tagout;
  - .3 identification of energy sources that feeds the ~~piece of~~ equipment;
  - .4 identification of each cutout point;
  - .5 sequence of lockout-tagout and the release of residual energy as well as the sequence of unlocking;
  - .6 list of material needed for the lockout-tagout;
  - .7 method of verification of zero energy implementation;
  - .8 name and signature of the person who prepared the data sheet.

When required by the Departmental representative, Contractor must record all this information on the site's representative form.

- .5 At the time of lockout-tagout, the person responsible must date the data sheet and ensure that each worker involved in the work on the circuit/~~piece of~~ equipment to lockout-tagout puts his name on the data sheet and signs it.

### **1.23 ELECTRICAL WORK**

- .1 Contractor shall ensure that all electrical work is executed by qualified employees in accordance with the provincial regulation respecting vocational training and qualification.
- .2 Contractor shall respect all requirements of standard CSA Z462 *Workplace Electrical Safety Standard*.
- .3 No repairs or alterations shall be carried out on any live equipment except where complete disconnection of the equipment is not feasible.
- .4 Contractor shall respect all requirements prescribed in paragraph "LOCKOUT-TAGOUT" in this section.
- .5 Contractor shall advise in writing the Departmental representative of all the work that cannot be done with de-energized equipment and obtain his authorization. Contractor shall demonstrate to the Departmental representative that it is impossible to do the work with de-energized equipment and provide all the information necessary to request and

obtain an energized electrical work permit (indicate working procedures, arc flash hazard analysis, protective perimeter, protective equipment, etc.) before the beginning of the work, excluding for the exceptions indicated in standard CSA Z462 Workplace electrical safety.

- .6 The energized electrical work permit on must contain at least the following elements:
- description of the circuit and equipment and its location;
  - justification for having to do the work in an energized condition;
  - description of safe work practices to apply;
  - results of the shock hazard analysis;
  - limit of the protective perimeter against electric shocks;
  - results of the arc flash hazard analysis;
  - description of the arc flash protection boundary;
  - description of the personal protective equipment required;
  - description of the means to limit access to unqualified persons;
  - proof that an information session has been carried out;
  - approval signature of the energized electrical work (by a person in authority or by the owner).
- .7 If for the operational requirements of the occupants of the site the representative of the site requires that the Contractor performs work in an energized condition, the Contractor shall obtain all the information required to request and obtain obtain an energized electrical work permit (indicate working procedures, arc flash hazard analysis, protective perimeter, protective equipment, etc.) and have it signed by the representative of the site assigned by the Departmental representative before the beginning of the work.

## 1.24 ASBESTOS EXPOSURE

It is not anticipated that the work covered by the present specifications involves the manipulation of materials containing asbestos; however, if the Contractor or the Departmental representative or his agent discover materials which are susceptible of containing asbestos, the Contractor must immediately stop the work and advise the Departmental representative. If more investigation demonstrates that the materials do contain asbestos, the Contractor shall comply with the following requirements.

Prior to starting any work likely to emit asbestos dust, the Contractor must:

1. Provide a written procedure for the work, identifying the risk level of the work (low, moderate, high), as defined in section 3.23 of the *Code de la sécurité pour les travaux de construction S-2.1, r-4*, (Safety code for the construction industry). This procedure must take into account all the requirements of that section 3.23.

2. Submit certificates that demonstrate that all workers involved in the work have received training on asbestos hazards and on the procedure required in the preceding paragraph.
3. Demonstrate that he has all the material and equipment required on hand to respect the procedure and for safely conducting the work.

## **1.25 FUNGAL CONTAMINATION**

It is not anticipated that the work covered by the present specifications involves the manipulation of materials contaminated by mould; however, if the Contractor or the Departmental representative or his agent discover materials which are susceptible of being contaminated by mould, the Contractor must immediately stop the work and advise the Departmental representative. If more investigation demonstrates that the materials do contain mould, the Contractor shall comply with the following requirements.

Prior to starting any work where workers are likely to be in contact with materials contaminated by mould, the Contractor must:

1. Provide a written procedure for the work which respects all the requirements of the *Code de la sécurité pour les travaux de construction* S-2.1, r- 4, (Safety code for the construction industry), as well as the requirements indicated in the document “*Mould Guidelines for the Canadian Construction Industry*” published by the Canadian Construction Association (<http://www.cca-acc.com/documents/electronic/cca82/cca82.pdf>).
2. Demonstrate that he has all the material and equipment required on hand to respect the procedure and for safely conducting the work.

## **1.26 EXPOSURE TO SILICA**

For any interior or exterior work generating silica, the Contractor must respect the following requirements, in addition to those in the *Code de sécurité pour les travaux de construction* S-2.1, r.4 (Safety code for the construction industry).

1. Work in wet environment or use tools with the inflow of water in order to reduce dustiness, if not, collect dust at the source and retain it with a high-efficiency filters not to propagate dust in the environment.
2. Clean surfaces and tools with water, never with compressed air.
3. Sand and pickle surfaces by using an abrasive containing less than 1% of silica (also called amorphous silica).

4. Install shields or other containment device to prevent silica dust from migrating toward other workers or the public.
5. Wear individual respiratory and ocular protection equipment during all the operations that could generate silica dust in accordance with the requirements of the *Code de sécurité pour les travaux de construction, S-2.1, r.4* (Safety code for the construction industry).
6. Wear coveralls to prevent contamination outside the construction site.
7. Do not eat, drink, or smoke in a dusty environment.
8. Wash the hands and the face before drinking, eating or smoking.

### **1.27 SANDBLASTING**

Prior to starting any sandblasting work, the Contractor must:

1. Provide a written procedure of the work that meets the requirements of section 3.20 of the *Code de sécurité pour les travaux de construction, S-2.1, r.4* (Safety code for the Construction Industry).
2. Demonstrate that he has all the material and equipment required on hand to respect the procedure and for safely conducting the work.
3. All sanding and sandblasting work shall be done by using an abrasive containing less than 1% of silica.

### **1.28 LEAD-BASE PAINT REMOVAL**

Prior to all work where workers are likely to handle materials containing lead-base paint or other substances containing lead, the Contractor must:

1. Provide a written procedure for the work which respects all the requirements of the *Code de sécurité pour les travaux de construction S-2.1, r- 4*, (Safety code for the construction industry), as well as the requirements indicated in the document “*Guideline for Lead on Construction Projects*” published by the Ontario Ministry of Labour ([http://www.labour.gov.on.ca/english/hs/pdf/gl\\_lead.pdf](http://www.labour.gov.on.ca/english/hs/pdf/gl_lead.pdf)). If there is a discrepancy between the Québec regulation and the Ontario document, the most stringent requirement shall apply.
2. Demonstrate that he has all the material and equipment required on hand to respect the procedure and for safely conducting the work.

### **1.29 EXPOSURE TO ANIMAL’S FECAL DROPPINGS**

Prior to all work where workers are likely to come in contact with materials contaminated by animal's fecal droppings, the Contractor must:

1. Provide a written procedure for the work which respects all the requirements of the *Code de la sécurité pour les travaux de construction* S-2.1, r- 4, (Safety code for the construction industry), as well as the requirements indicated in the document "*Des fientes de pigeons dans votre lieu de travail: méfiez-vous*" (Pigeon droppings in your workplace: Beware" published by the CNESST ([http://www.csst.qc.ca/publications/100/Documents/DC100\\_1331\\_1web2.pdf](http://www.csst.qc.ca/publications/100/Documents/DC100_1331_1web2.pdf))
2. Demonstrate that he has all the material and equipment required on hand to respect the procedure and for safely conducting the work.

### **1.30 RESPIRATORY PROTECTION**

1. Contractor must ensure that all workers who must wear a respirator as part of their duties have received training for that purpose as well as fit testing of their respirator, in accordance with CSA Standard Z94.4 *Selection, use and care of respirators*. Submit the certificates of the fit testingS to the Departmental representative on demand.

### **1.31 FALL PROTECTION**

1. Plan and organize work so as to eliminate the risk of fall at the source or ensure collective protection, thereby minimizing the use of personal protective equipment. When personal fall protection is required, workers must use a safety harness that complies with CSA standard CAN/CSA Z-259.10 M90. A safety belt must not be used as fall protection.
2. Every person using an elevating platform (scissors, telescopic mast, articulated mast, rotative mast, etc.) must have a training regarding this equipment.
3. The use of a safety harness is mandatory for all elevating platforms with telescopic, articulate or rotative mast.
4. Define the limits of the danger zone around each elevating platform.
5. All openings in a floor or roof must be surrounded by a guardrail or provided with a cover fixed to the floor able to withstand the loads to which it could be exposed, regardless of the size of the opening and the height of the fall it represents.
6. Everyone who works within two metres from a fall hazard of three metres or more must use a safety harness in accordance with the requirements of the regulation, unless there is a guardrail or another device offering an equivalent safety.
7. Despite the requirements of the regulation, the Departmental representative may require the installation of a guardrail or the use of a safety harness for specific situations presenting a risk of fall less than three metres.



## 1.32 SCAFFOLDINGS

In addition to the requirements of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry), the Contractor who uses scaffoldingS must respect the following requirements:

### Foundation

1. ScaffoldingS shall be installed on a solid foundation so that it does not slip or rock.
2. Contractors wishing to install scaffoldingS on a roof, overhang, canopy or awning shall submit their calculations and loads, as well as plans signed and sealed by an engineer to the Departmental representative and obtain his authorization before beginning installation.

### Assembly, bracing and mooring

1. All scaffoldingS shall be assembled, braced and moored in accordance with the manufacturer's instructions and the provisions of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry).
2. Where a situation requires the removal of part of the scaffoldingS (e.g., crosspieces), the Contractor shall submit to the Departmental representative an assembly procedure signed and sealed by an engineer certifying that the scaffolding assembled in that manner will allow the work to be done safely given the loads to which it will be subject.
3. For scaffoldingS where the span between two supports is greater than three metres, the Contractor shall provide the Departmental representative an assembly plan signed and sealed by an engineer.

### Protection against falls during assembly

1. Workers exposed to the risk of falling more than three metres shall be protected against falls at all times during assembly.

### Platforms

1. Scaffolding platforms shall be designed and installed in accordance with the provisions of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry).
2. If planks are used, they shall be approved and stamped in accordance with section 3.9.8 of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry)
3. ScaffoldingS of four sections (or six metres) high or more shall have a full platform covering the entire surface between the putlogs every three metres high or fraction thereof, and the components of that platform shall not be moved at any time to create an intermediate landing.

### Guardrails

1. A guardrail shall be installed on every landing.
2. Cross braces shall not be considered as guardrails.
3. If the platforms are not covering the entire surface between the putlogs, the guardrail must be installed just above the edge of the platform so that there is no empty horizontal space between the platform and the guardrail.
4. Where scaffoldingS has four sections (or six metres) high or more and full platforms are required, the guardrails shall be installed on each landing at the start of work and shall remain in place until the work is completed.

### Access

1. The Contractor shall ensure that access to the scaffoldingS does not compromise worker safety.
2. Where the platforms of the scaffoldingS are comprised of planks, ladders shall be installed in such a way that planks extending beyond the platform do not block the way up or down.
3. Notwithstanding the provisions of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry), stairs shall be installed on all scaffoldingS that have six or more rows of uprights or is six sections (or nine metres) high or higher.

### Protection of the public and occupants

1. When scaffoldingS are installed in a zone accessible to the public, the Contractor shall take the necessary measures to prevent the public from having access to them and, if applicable, to the work or storage area located in the vicinity of these scaffolding.
2. Contractor must install covered walkways, nets or other similar devices to protect workers, the public and the occupants against falling objects. The means of protection must be approved by the Departmental representative.

### Engineering plans

1. In addition to those required by the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry), the Departmental representative reserves the right to require engineering plans for other types or configurations of scaffoldingS.
2. A plan signed and sealed by an engineer is required for all scaffoldingS that will be covered with a canvas, a tarpaulin or any other material that has wind resistance.
3. A certificate of conformity signed by an engineer is required in all cases where an engineering plan is required ~~for the installation~~ and this, before anybody uses the facility. A copy of these documents must be available on the construction site at all times.

## 1.33 CONFINED SPACES

In addition to the requirements of the provincial regulation applicable to confined spaces, the Contractor must respect the requirements in the following paragraphs.

The Departmental representative reserves the right, depending on the nature of the risk of the confined spaces, of the work to be done and/or of the level of competence in confined spaces demonstrated by the Contractor, to require from the latter that he use the services of a firm specialized in health and safety or in confined space work to perform the analysis of the risks inherent to the confined spaces, to complete the entry permit, to conduct surveillance of the work or for any other task related to the work in confined spaces.

### **Information on confined spaces existing on the construction site**

1. The following presents a non-exclusive list of the confined spaces that the Contractor will likely have to access during this project:

*List of confined spaces*

2. The Contractor shall take into consideration each of these confined spaces and must also add to this list the confined spaces that he is likely to build/install during this project.

### **Person in charge of the health and safety for the work in confined spaces**

1. The Contractor shall designate a person to be in charge of the health and safety for the work in confined spaces. This person shall be qualified, as defined in the article 297 of the *Règlement sur la santé et la sécurité du travail* (S-2.1, r.13) (Occupational Health and Safety Regulation). This person must be present at all times during work in confined spaces and must make sure that all the requirements of the regulation and the ones specified in this section are respected. This person must amongst other things fill out and issue the entry permit for the confined spaces.

### **Training**

1. All persons having access to a confined space, including the person in charge and the watcher of the confined space shall have completed training on entry in confined spaces.
2. All persons who have to use supplied-air respirator to access the confined spaces shall have completed training on the use of these apparatus.
3. All persons identified as rescuers for confined spaces shall have completed training on confined spaces rescue.
4. Each training required in the preceding paragraphs must be provided by a firm specialized in health and safety or in confined spaces.
5. The training certificates of the persons mentioned above must be submitted to the Departmental representative before the beginning of the work in confined spaces.

### **Risk assessment of confined spaces**

1. For each of the confined spaces listed at the beginning of this article, the Contractor must obtain the necessary information from the site representative and proceed to the assessment of the risk inherent to each confined space and relative to:
  - a. the prevailing internal atmosphere, namely the concentration of oxygen, inflammable gases and vapours, combustible or explosive dusts as well as the categories of contaminants likely to be present in this enclosed area or nearby;
  - b. the fact that the natural or mechanical ventilation is insufficient
  - c. The materials that are present there and that can cause the worker to sink, to be buried or to drown, such as sand, grain or a liquid;
  - d. the interior configuration;
  - e. pipes and conduits penetrating the confined space;
  - f. energies such as electricity, moving mechanical parts, heat stress, noise and hydraulic energy;
  - g. ignition sources such as open flames, lighting, welding and cutting, static electricity or sparks;
  - h. all other particular circumstances, such as the presence of vermin, rodents or insects.

These risk assessments must be done by the person in charge of the health and safety of the work in confined spaces. They must be submitted to the Departmental representative for analysis at least 10 days before the proposed date for the work in confined spaces and they must also include the following information:

- a. location of the confined space;
- b. description of the confined space;
- c. dimensions of the confined space;
- d. number, location and dimension<sup>S</sup> of the openings;
- e. content of the confined space (material, substances, etc.)
- f. date of the assessment;
- g. name and signature of the person who conducted the assessment and the name of his employer.

The Contractor must repeat the same process for each of the confined spaces that he will build/install during this project.

### **Confined spaces entry permits**

1. At least 5 days before the scheduled date for the work in a confined space the Contractor must submit for analysis to the Departmental representative a copy of each entry permit specific to the confined spaces where he must access. The entry permits must be completed by the person in charge of the health and safety of the work in confined spaces, and must contain the following information as a minimum:
  - a. description of the work that will be carried out and the method of work, including the materials and tools needed to do this work;
  - b. description of the risks and corresponding preventive measures according to the risk assessment inherent to the confined space done previously and according to the work to be carried out;

- c. safety equipment that will be used to control the risks of confined spaces (e.g.: fan, gas detectors, local exhaust ventilation, personal protective equipment, etc.);
  - d. rescue procedure covering at least the following:
  - e. means of communication between the supervisor of the confined space and the workers in the confined space;
  - f. lifesaving equipment specific to each confined space;
  - g. confirmation that the municipal emergency response service has been advised that work in confined spaces would be going on at this specific construction site and that they may intervene do to a confined space rescue; otherwise, the Contractor must identify the workers on the construction site that will act as rescuers in a confined space in the case where such rescuers must enter the confined space (rescue training is mandatory);
  - h. location of telephone and phone number of the municipal emergency response service (if applicable);
  - i. date of entry permit;
  - j. name of person who issued the permit and the name of his employer;
  - k. name of the confined space safety watcher and the name of his employer;
  - l. name of the workers who must enter the confined space and the name of each one's employer.
2. In cases where the site representative requires the use of a confined space entry permit specific to his site, the Contractor must comply with the requirements of that permit.

### **Medical surveillance**

1. The Contractor must submit to the Departmental representative a medical certificate dated in the last two years for all persons who must use a supplied-air respirator. The certificate must confirm the ability of each person to use this type of apparel.
2. It is recommended that the persons who have to work in sewer collection systems or other similar systems be vaccinated against diphtheria, tetanus and hepatitis "B".

### **Requirements while working in confined spaces**

1. Before each entry into a confined space, the person in **charge** of the health and safety for the work in confined spaces shall take readings of oxygen concentration, flammable gases and all toxic gases likely to be present and record these readings on the entry permit required earlier.
2. No worker can access the confined space if the following requirements are not respected:
  - a. the concentration of oxygen shall be greater than or equal to 19.5% and less than or equal to 23%;
  - b. the concentration of inflammable gases or vapours shall be less than or equal to 10% of the lower explosion limit;
  - c. the concentration of other gases must not exceed the standards prescribed in annex I of the *Règlement sur la santé et la sécurité du travail* (S-2.1, r.13) (Occupational Health and Safety Regulation).

3. If the oxygen and gas concentrations measured respect the regulatory values, the person in charge of the health and safety for the work in confined spaces must ensure that all preventive measures indicated on the permit are in place and then must complete the entry permit (date, time, signatures, etc.) before issuing the permit and allow entry into the confined space.
4. A permit is only valid for one work shift; the Contractor must submit a new permit for each extra shift.
5. During the work inside the confined space, the gas concentration must be measured continuously and the gas detector must be installed at ~~the level of the~~ the breathing area of the workers. If the conditions inside the confined space are such that the workers might not hear/see the detector's alarm, the Contractor must find a way for the confined space safety watcher to watch the concentration measures while maintaining the measurements at the level of the breathing zone of the workers.
6. If the work is organized in a way that the workers are scattered far away from each other in a large confined space, the Contractor needs to provide additional gas detectors.
7. The Contractor must provide the gas detectors and maintain them in good condition. He must be able to show that the gas detectors used have been calibrated and adjusted by the person in **charge** of the health and safety for the work in confined spaces or by a qualified person, in accordance with the manufacturer's recommendations. The Departmental representative can at all times have the accuracy of the measuring devices checked. In the event of the failure of a detection device, the work must be stopped immediately and all workers must leave the confined space.
8. The manufacturer's manual of the gas detectors must be available on the construction site.
9. The Contractor shall provide a ventilation system to keep concentrations of contaminants below the regulatory limits.
10. If work generating contaminants are performed (welding, use of products, etc.), the Contractor must, if needed, install an aspiration system for the contaminants so that the regulatory values of air quality can be maintained at all times.
11. If a detecting device alarm goes off, all workers shall leave the confined space. The measured levels of concentration must then be recorded on the entry permit. The Contractor shall then find the source of contamination, neutralize it, ventilate the confined space to eliminate contaminant residues and authorize access to the confined space only when concentrations of oxygen and gas have returned to normal.
12. Compressed gas cylinders or welding equipment shall not be brought into confined spaces: this equipment shall remain outside and shall not block entrances or exits; all cylinders shall be properly secured.
13. Tools and electrical devices used to work in the confined spaces shall be grounded and, when necessary, designed to be explosion-proof. All equipment must be connected to a ground fault interrupter outlet or to a step-down transformer. The Contractor shall, at his own cost, hire a qualified electrician to adjust power receptacles and/or circuit breakers that he intends to use which do not meet these criteria.

14. The Contractor shall obtain a Hot Work Permit and respect the requirements to that effect when the work to be carried out includes hot work.
15. The Contractor must assign a competent person to assume the duties of confined space safety watcher. The supervisor shall be exclusively dedicated to these duties and must constantly remain outside of the confined space as long as there is a worker in it. He must also:
  - a. ensure that the entry permit has been filled, signed and posted near the confined space;
  - b. be familiar with the work procedure specific to the confined space and ensure that it is respected;
  - c. ensure continuous communication with all the workers in the confined space and ensure that all the equipment required in case of emergency is present;
  - d. have a good knowledge of the backup-ventilation systems and ensure their proper functioning for the duration of the work;
  - e. prevent access to unauthorized persons;
  - f. ensure that the conditions around the confined space zone is not a health or security risk for the workers inside the confined space;
  - g. initiate the emergency procedure if needed.
16. The same person may act as a confined space safety watcher and as the person in charge of the health and safety of the work in confined spaces, provided all requirements of both functions are met.

### **1.34 EXCAVATION WORK**

In addition to the requirements of the *Code de sécurité pour les travaux de construction* (Safety code for the construction industry), the Contractor who performs the digging of trenches or excavations must respect the following requirements:

1. Fill out the following form and submit it to the Departmental representative before beginning to excavation work.
2. Submit to the Departmental representative, as appropriate, the following documents:
  - a. plans and specifications, signed and sealed by an engineer, of the shoring needed to be installed for the excavation work; or
  - b. engineer's advice specifying the wall angles of the trench or excavation.



# Excavation guidelines

N° \_\_\_\_\_ of \_\_\_\_\_

This directive is provided as an example by the Commission de la santé et de la sécurité du travail (CSST). It contains the main instructions that the employer should give to the person responsible for the work on the site and to the operator of the earth-moving machine.

Company name	
Project name	Project no.
Address of the site	Construction start date

## Field survey

Chaining or axes : from \_\_\_\_\_ to \_\_\_\_\_ Attached plan  Plan no. : \_\_\_\_\_

## Working method to use

While making sure the excavation walls do not pose the risk of landslide

- dig and shore according to the plans and specifications of the engineer ;
- dig and shore using a trench box ;
- dig without shoring as long as one of the following conditions is respected:
  - rock is sound;
  - no worker goes down in the trench or excavation;
  - the walls are dug according to the engineer's advice.

## Dimensions of excavation (Dig according to the following profile.)


	Minimum	Maximum
H Depth		
Wb Width at bottom		
Width at top		

## Safety measures

Deposit the materials at a distance of at least 1.2 metre (4 feet) from top of walls.  
Do not allowed any vehicle to come closer than 3 metres (10 feet) from top of walls.

- Respect the engineer's plan concerning work in the proximity of an existing facility.
- Follow the location plan to locate the underground infrastructures.
- Install signaling devices prescribed in the traffic plan (barriers, visual references, etc.).
- Assign a flag person or more to control the flow of traffic.
- Respect the procedure prescribes for work near power lines.
- Provide protection devices for the workers, such as concrete crash barriers.

Name	Occupation	
Signature	Date	Telephone no.
Directive submitted		
<input type="checkbox"/> to the responsible of the work on the site <input type="checkbox"/> to the operator of the earth-moving machine		

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### **1.35 LIFTING LOADS WITH CRANE OR BOOM TRUCK**

1. Unless specified otherwise, the Contractor must prepare a hoisting plan and submit it to the Departmental representative for all lifting operations done with a crane or a boom truck at least 5 days before these lifting operations begin. The hoisting plan must contain at a minimum the information listed at the end of this article.
2. The hoisting plan must be signed and sealed by an engineer for the following lifting operations:
  - a. lifting of concrete panels;
  - b. lifting mechanical/electrical equipment on a roof or on the floor of a building;
  - c. lifting of loads encroaching on the public road;
  - d. lifting large dimensionS or very heavy loads;
  - e. all other lifting operation, in accordance with the requirements of the Departmental representative.
3. In addition to the above requirements, the Contractor must plan the hoisting operations in a way as to avoid that the loads pass over the occupied zones on the site. When there is no alternative, the hoisting plan must absolutely be signed and sealed by an engineer and must guarantee the security of the occupants in that zone; the plan must also be approved by the Departmental representative. The Departmental representative can, if he deems necessary, require that the work be done at night or on weekends.
4. Upon the beginning of the work on the construction site, the Contractor must submit the list of the hoisting plans anticipated for the whole project to the Departmental representative. That list shall be updated as needed if changes occur during the work.
5. In addition to the mechanical service inspection certificate, the annual inspection certificate and the crane logbook must be aboard all cranes and boom truck cabs.
6. The entire lifting area shall be marked off to prevent the entry of non-authorized persons.
7. The Contractor shall carefully inspect all of the slings and lifting accessories and make sure that those in poor condition are destroyed and scrapped.
8. Compressed-gas cylinders shall be lifted with a basket specially designed for this purpose.

#### **MINIMUM CONTENT OF HOISTING PLAN**

- Sketch indicating at a minimum, the location of the crane, the surrounding facilities, the zone covered by the hoisting operations, the pedestrian's pathways and vehicular routes, the security perimeter, etc.
- Weight of loads
- DimensionS of loads
- List of hoisting devices and weight of each

- Total weight lifted
- Maximum height of obstacles to clear
- Height of loads lifting relative to the surface of the roof (in the case of loads to be placed on roofs)
- Use of guide cables
- Type of crane used
- Crane capacity
- Boom length
- Boom angle
- Crane's radius of action
- Deployment of stabilizers
- Percentage usage of the crane's capacity
- Verification confirmation of hoisting equipment
- Identification of the crane operator and the person responsible for the hoisting operations with date and signatures

### **1.36 HOT WORK**

Hot work means any work where a flame is used or a source of ignition may be produced, i.e., riveting, welding, cutting, grinding, burning, heating, etc.

1. Before the beginning of each shift of work and for each sector, the Contractor must obtain a "Hot Work Permit" emitted by the person responsible for the site.
2. A working portable fire extinguisher suitable to the fire risk shall be available and easily accessible within a 5 m radius from any flame, spark source or intense heat.
3. The Contractor must appoint an individual to do continuous monitoring of the fire risks for a period of one (1) hour after the end of the shift of hot work. This individual shall sign the section for this purpose on the permit and give it to the person in charge of the construction site after the one-hour period.
4. When the hot work is done in areas where there is combustible materials or where the walls, ceilings or floors are made of or covered with combustible materials, a final inspection of the

work area must be scheduled four (4) hours after the work has finished. Unless specified otherwise by the Departmental representative, the Contractor must assign a person to carry out this monitoring.

### **Welding and cutting**

In addition to the requirements prescribed in the preceding paragraphs, the Contractor must respect the following requirements:

1. Welding and cutting work must be carried out in accordance with the requirements of the *Code de Sécurité pour les travaux de construction, S-2.1, r.4* (Safety code for the construction industry) and CSA standard W117.2, Safety in Cutting, Welding and Allied Processes.
2. Air extraction system with filters must be used for all welding and cutting work performed inside.
3. Stop all activities producing flammable or combustible gas, vapours or dust in the vicinity of the welding or cutting work.
4. Store all compressed gas cylinder on a fireproof fabric and make sure that the room is well ventilated.
5. Store all oxygen cylinders more than 6 metres from a flammable gas cylinder (ex: acetylene) or a combustible such as oil or grease, unless the oxygen cylinder is separated from it by a wall made of non-combustible material as mentioned in the article 3.13.4 of the *Code de sécurité pour les travaux de construction, S-2, r. 6* (Safety code for the construction industry)
6. Store the cylinders far from all heat sources.
7. Not to store the cylinders close to the staircases, exits, corridors and elevators.
8. Do not put acetylene in contact with metals such as silver, mercury, copper and alloys of brass having more than 65% copper, to avoid the risk of an explosive reaction.
9. Check that welding equipment with electric arc has the necessary tension and are grounded.
10. Ensure that the conducting wires of the electric welding equipment are not damaged.
11. Place the welding equipment on a flat ground away from the bad weather.
12. Install fireproof canvas when the welding work is done in a superposition and where there is the risk of falling sparks.
13. Move away or protect the combustible materials which are closer than 15 metres from the welding work.
14. Prohibition to weld or cut any closed container.
15. Do not perform any cutting, welding or work with a naked flame on a container, a tank, a pipe or other container containing a flammable or explosive substance unless:
  - a. they have been cleaned and air samples indicating that work can be done without danger has been taken; and
  - b. provisions to ensure the safety of the workers have been made.

## 1.37 ROOFING WORK

### Protection against fall from heights

1. Installation of guardrails is mandatory at all times; however, the installation of a warning line is allowed to define the limits of the work zones provided that all the requirements of the articles 2.9.4.0 and 2.9.4.1 of the *Code de sécurité pour les travaux de construction* (Safety code for the Construction Industry) are respected.
2. The guardrails must remain in place until the end of the project. The Departmental representative will authorize their dismantling when he can confirm that all the work, inspections and corrections have been made.
3. Workers installing guardrails must wear safety harnesses.
4. Workers installing and modifying guardrails or flashing shall wear safety harnesses in the event guardrails must be moved temporarily.
5. Workers shall wear safety harnesses when receiving material and giving directions to the crane operator next to a drop.
6. Safety harnesses shall be worn when carrying out work next to a drop where collective protection is not sufficiently safe.
7. The Contractor shall provide a fastening method and safety cable system compliant with section 2.10.12 of the *Code de sécurité pour les travaux de construction (L.R.Q., S-2.1, r.4)* (Safety code for the Construction Industry) for each construction site or location.

### Lifting of materials

1. For all winch installations, the Contractor shall provide the Departmental representative with the installation method recommended by the manufacturer. If unavailable, the Contractor shall then provide an installation procedure signed and sealed by an engineer. The installation procedure must take into account load-bearing capacity, the amount, weight and location of counterweight and any other detail that may affect the capacity and stability of the device.
2. The Contractor shall carefully inspect all of the slings and lifting accessories and make sure that those in poor condition are destroyed or scrapped.
3. Compressed-gas cylinders shall be lifted with a basket specially designed for this purpose.
4. In all cases where a crane or boom truck is used, the Contractor must respect the requirements of the paragraph Lifting Loads With Crane or Boom Truck, in this section.

### Protection against burns

1. Individuals assigned to the boilers shall wear long sleeves, safety glasses and a face shield when filling the boilers.
2. Individuals working with asphalt or other hot liquids shall wear gloves, long sleeves and safety glasses.

### Protection against fire

1. The storage and use of propane cylinders shall comply with the standard CAN/CSA-B149.2, *Propane Storage and Handling Code*. The cylinders shall be stored outdoors, in a safe place, away from any unauthorized handling, in a storage cabinet specially designed for this purpose.

The cylinders shall be securely kept upright and locked at all times in a place where no vehicles are allowed unless the cylinders are protected by barriers or similar protection.

2. The number of propane cylinders on the roof shall not exceed the number of cylinders necessary for a day's work, and cylinders shall at all times be secured upright or held in a cart designed for this purpose.
3. All hot work (burning, heating, riveting, welding, cutting, grinding, etc.) must be done in accordance with paragraph "Hot Work" in this section.

### **Material and waste management**

1. On the roof, light material and sheet material shall be kept in containers or be securely fastened. In the event this requirement is disregarded in the slightest way, the Departmental representative may disallow the storage of materials on the roof.
2. Waste shall be discarded as produced using a waste chute or appropriate containers. The Contractor shall provide the means to prevent waste from being carried away by the wind.
3. All waste must be removed from the roof at the end of shifts.
4. Unless otherwise authorized by the Departmental representative, all waste bins must be placed at least 3 m from any structure or building.

### **Protection of occupants and the public**

1. Contractor must install covered passageways, nets or other devices above the entrances and the exits of the building to protect the workers, the public and the occupants against falling object. The means of protection must be approved by the Departmental representative.
2. A safety perimeter on the ground must be placed under the work zone in order to protect the workers, the public and the occupants.
3. The ground construction site, material handling area and boiler area shall be clearly sealed off to prevent occupants or the public from accessing the construction site and areas.
4. Before installing any device that may emit gas or fumes, the Contractor shall receive authorization from the person in charge of the construction site, who shall make sure that there is no risk of gas or fumes infiltrating the building's ventilation system.

## **1.38 STEEL STRUCTURE ERECTION OR DISMANTLING WORK**

- .1 In addition to respecting section 3.24 du *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry), the Contractor must also respect the requirements described in the following paragraphs.
- .2 Contractor must submit the following documents to the Departmental representative before the beginning of steel structure erection work:
  - .1 erecting procedures in accordance with article 3.24.10 du *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry);
  - .2 rescue procedures for the release of a worker suspended in a safety harness within a maximum of 15 minutes; procedures must be adapted to the construction

- site and in accordance with article 3.24.4 of that same code; the procedure must be accompanied by a written confirmation that it has been tested;
  - .3 statement from an engineer that the anchor rods have been installed in accordance with the anchoring plan as required by the article 3.24.12 of that same code;
  - .4 hoisting procedures in cases where the lifting is done in one of the ways described in the article 3.24.15 of that same code;
  - .5 name of the individual identified as rescuer and his rescue training certificate;
  - .6 name of the individual identified as first-aid attendant and his first-aid training certificate.
- .3 The Contractor must make sure that the following documents are available for consultation on construction site at all times:
- .1 Steel structure manufacturer's erection plan in accordance with the requirements of article 3.24.9 du *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry);
  - .2 Column anchor rods's anchoring plan in accordance with the requirements of article 3.24.11 du *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry).

### 1.39 WORK NEAR BODIES OF WATER

1. For all work done near a body of water (such as work above water, work on a wharf, work on the edge of a watercourse, etc.), the Contractor must respect the requirement of the following paragraphs in addition to those of *Code de sécurité pour les travaux de construction* (Safety code for the Construction Industry).
2. The Contractor must plan his work in a way to implement safety measures to prevent any worker from falling in the water. The use of these measures should be favoured over the wearing of a life jacket.
3. Submit the following documents to the Departmental representative before the beginning of the work:
  - a. description of the body of water;
  - b. description of the work done next to this body of water;
  - c. plan of transportation on water adapted to the work and to the characteristics of the body of water;
  - d. rescue plan adapted to the work and to the characteristics of the body of water;

Each of the document listed above must contain at a minimum the information required in section 11 of the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry).

If there is the possibility that all or part of the work can be done during the winter, the safety measures included in the documents required above must be adapted accordingly.

4. The Contractor must submit to the Departmental representative the certificate of training required in article 11.2 du *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry) for the following individuals:
  - a. the person assigned to prepare the documents required in the preceding paragraph; and
  - b. each person responsible for the transport or rescue operations
5. If the rescue plan stipulates the use of a vessel, the Contractor must submit to Departmental representative the competency card or certificate for the individuals in the rescue team for his work, issued by Transport Canada.
6. The Contractor must include in his weekly inspection checklist the devices required in the articles 11.4 and 11.5 du *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry).
7. Ensure that a rescue vessel moored and in the water is available at each place where a worker may fall in the water. However, a vessel may serve more than one workplace on the same construction site provided the distance between any of these workplaces and the vessel is less than 30 m.
8. Where the construction site is a wharf, a pier, a quay or any similar structure, a ladder with at least two (2) rungs below the surface of the water shall be installed on the front of the structure every 60 m.

#### **1.40 INTERIOR USE OF INTERNAL COMBUSTION ENGINES**

1. In addition to respecting article 3.10.17 of the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry), the Contractor must also respect the requirements described in the following paragraphs.
2. The use of a gas-powered equipment inside a building is prohibited even if the building is provided with openings.
3. The use of other equipment powered by an internal combustion engine inside a building must be submitted to the approval of the Departmental representative.
4. For the use of any piece of equipment powered by an internal combustion engine inside a building, even if the building is provided with openings, the Contractor must install a ventilation system able to maintain the concentrations of toxic gases below the regulatory values. The stale air shall be exhausted outside the building.
  - a. Before using equipment powered by an internal combustion engine, the Contractor must plan and write the following:
    - b. number of fans to install;
    - c. power of the fans;
    - d. location of the fans;
    - e. dimensions of the openings that will be open during the work.

5. During the operation of equipment with internal combustion engine, the Contractor must measure the concentrations of carbon monoxide and nitrogen oxides in the work area and at the breathing area of the workers; the concentration levels measured must be recorded in a register every 30 minutes that must be available for consultation.
6. If work is in an occupied building, the Contractor must also measure the concentrations of carbon monoxide and nitrogen oxides in the rooms next to the work area and the concentration levels measured must be recorded in a register every 30 minutes.
7. If the carbon monoxide or nitrogen oxides detector alarm goes off during the work, the Contractor must stop the work and take the corrective measures required before resuming the work.
8. A portable fire extinguisher must be available at all times in the work area during the use of equipment with internal combustion engines.
9. The equipment must be maintained at a safe distance from all combustible material.
10. The storage of fuel for any equipment with internal combustion engine is prohibited inside a building.

#### **1.41                    TEMPORARY HEATING**

1. In addition to respecting section 3.11 of the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry), the Contractor must also respect the requirements described in the following paragraphs.
2. A portable fire extinguisher must be available at all times near the heating units, no matter what type of heating is used.
3. The heating units must always be used in accordance with the manufacturer's specifications.
4. If applicable, the canvas or tarpaulins used next to the heating units must be solidly fixed so as not to be projected on the heaters, on the pipes connected to the heaters or on any other heat source.
5. The gas cylinders must be installed in a way that they are protected from vehicle and other equipment traffic.
6. For the use of heating units other than electric, the Contractor must install a carbon monoxide detector in the work area, next to the heating units and/or the workers, throughout the course of the heating period. The Contractor must immediately apply the corrective measures required to the heating units if the detector's alarm goes off.
7. The Contractor must ensure a minimum surveillance of the heating units outside the hours of work (nights and weekends). He must submit a surveillance plan to the Departmental representative before the use of the heating units.



## 1.42 WORK NEAR OVERHEAD POWER LINES

- .1 When there is an overhead power line in the work zone and that the Contractor chooses to apply paragraph b) of article 5.2.2 of the *Code de sécurité pour les travaux de construction* (2.1, r.4) (Safety code for the Construction Industry), a copy of the agreement with the electrical power company and a copy of the work process, required in the article 5.2.2 b), must be submitted to the Departmental representative before the beginning of the work in relation to these documents.

## 1.43 DIVING OPERATIONS

In accepting this contract, the Contractor agrees to satisfy the following requirements:

1. Compliance with all the requirements of the *Règlement sur la santé et la sécurité du travail* (S-2.1, r. 13) (Regulation respecting occupational health and safety), more precisely section XXVI, I, entitled *Travail effectué en plongée* (Underwater Work). Compliance, furthermore, with the latest editions of standards CAN/CSA Z275.2 – *Occupational Safety code for Diving Operations*, CAN/CSA Z275.1 – *Hyperbaric Chambers* and CAN/CSA Z275.4 – *Competency Standard for Diving Operations*. In the event of conflict between these requirements, the most stringent requirement shall apply.
2. In addition to the above, in cases where construction work is involved, compliance with the *Code de sécurité pour les travaux de construction* (S-2.1, r.4) (Safety code for the Construction Industry).
3. Before starting the work, submit to the Departmental representative the following documents, as per the *Règlement sur la santé et la sécurité au travail* (S-2.1, r.13) (Regulation respecting occupational health and safety):
  - a. the professional diving training certificate of each member of the dive team OR a document recognizing the skills of those persons in accordance with the *Competency Standard for Diving Operations*, CAN/CSA Z275.4-02, as per section 312.8 of the Regulation;
  - b. the workplace first-aid training certificate of each member of the dive team;
  - c. the medical certificate of each member of the dive team;
  - d. for each dive included in this contract, a dive plan containing the following information, in addition to that required under the *Règlement sur la santé et la sécurité au travail* (Regulation respecting occupational health and safety):
    - i. the thermal protection to be used;
    - ii. the repetitive dive factor;
    - iii. the no-decompression limit;
    - iv. the circumstances in which the dive must be terminated;
    - v. the procedures to be followed to ensure that machinery, equipment or devices that could create a hazard have been locked out;
    - vi. the decompression table to be used, as required;
  - e. notification confirming that a system for communicating with the *Service d'assistance médicale pour les urgences en plongée* (Medical assistance service for diving emergency) is available at the diving station at all times.

4. The Contractor shall take into account the following specific characteristics of the worksite, and adapt its dive plan accordingly:

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5. Where the dive takes place at one of the following locations, provide the Departmental representative confirmation that the authorities concerned have been notified:
- upstream or downstream from a hydraulic structure or submerged water line;
  - in marine waterways;
  - in port facilities.
6. If the dive station is more than 2 metres above the water, provide the Departmental representative:
- a drawing of the equipment used to transport the worker through the air-water interface, if a device other than a stage is used for that purpose;
  - a drawing of the device used to hoist the stage or other device, unless that device is a crane or boom truck.
7. If the dive is carried out from a vessel, provide the Departmental representative the following documents:
- proof of qualification of the vessel operator;
  - the vessel's certificate of compliance from Transport Canada.
8. Before starting the work, carry out an underwater rescue simulation at the site, as required under section 312.31 of the *Règlement sur la santé et la sécurité du travail* (S-2.1, r.13) (Regulation respecting occupational health and safety).
9. On a daily basis, complete and provide to the Departmental representative a checklist confirming the presence and condition of the equipment required at the dive site as per the dive plan.
10. Ensure that all other documents required under section XXVI of the *Règlement sur la santé et la sécurité du travail* (S-2.1, r.13) (Regulation respecting occupational health and safety) are available at the construction site at all times (diving logbook, diver's logbook, etc.).

### 1.44 HEALTH AND SAFETY SUBORDINATION AGREEMENT

**Project:** \_\_\_\_\_ **Address:** \_\_\_\_\_

#### EXTERNAL CONTRACTOR

I hereby agree to submit to the authority of (name of the Principal Contractor's business) \_\_\_\_\_, which is the Principal Contractor for the project indicated above during the entire duration of our work on the construction site. Accordingly, I confirm that I have reviewed the Principal Contractor's prevention program, and I agree to:

- inform my employees of the content of the Principal Contractor's prevention program and ensure that its content are complied with at all times;
- apply the prevention program that is specific to the activities that we carry out under this project;
- inform the Principal Contractor of my actions or dealings on the construction site and obtain the Principal Contractor's agreement before the start of work; and
- follow the health and safety directives provided by the representative of the Principal Contractor on the construction site and, depending on requirements, attend training sessions and health and safety meetings organized by the representative of the Principal Contractor.

Name of representative: \_\_\_\_\_

Name of business: \_\_\_\_\_

Description of work to be done on the construction site: \_\_\_\_\_

Approximate dates of work (start-end): \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

#### PRINCIPAL CONTRACTOR

I hereby agree to allow the business (name of external contractor) \_\_\_\_\_ to perform the work under this project indicated above and, as Principal Contractor, to take the necessary steps to protect the health and safety of workers on the construction site. Should the Contractor repeatedly refuse or fail to comply with my directives, I agree to inform PWGSC's Departmental representative of this and to provide documentary evidence of my actions or dealings with the Contractor.

Name of representative: \_\_\_\_\_

Name of the Principal Contractor's business: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

Submit a completed and signed copy to PWGSC's Departmental representative