Z&D architectes

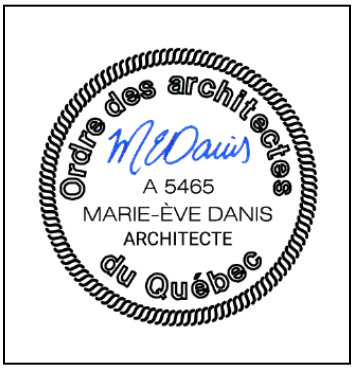
CORRECTIONAL SERVICE CANADA

Archambault Institution, Sainte-Anne-des-Plaines

ISSUED FOR SUBMISSION
January 19th, 2024

ADDING BARBED WIRE TO THE EXISTING FENCE

TECHNICAL SPECIFICATIONS
PROJECT NO. 230509



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DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS

DIVISION 01 – GENERAL REQUIREMENTS

DIVISION 02 – EXISTING CONDITIONS

DIVISION 32 – EXTERIOR IMPROVEMENTS

1 GENERAL

1.1 WORK BY OTHERS

.1 Co-operate with other Contractors in carrying out their respective works and carry out instructions from the Departmental Representative.

.2 Co-ordinate work with that of other Contractors. If any part of work under this Contract depends for its proper execution or result upon work of another Contractor, report promptly to the Departmental Representative, in writing, any defects which may interfere with proper execution of Work.

1.2 FUTURE WORK

.1 Ensure that the works do not interfere on the areas designated for the upcoming works.

1.3 WORK SEQUENCE

.1 Construct Work in stages to accommodate the Departmental Representative's use of premises during construction.

.2 Co-ordinate Progress Schedule and co-ordinate with the Departmental Representative Occupancy during construction.

.3 The work should be carried out in stages, one courtyard at a time.

.4 Maintain fire access/control.

1.4 CONTRACTOR USE OF PREMISES

.1 Co-ordinate use of premises under direction of Departmental Representative.

.2 Obtain and pay for use of additional storage or work areas needed for operations under this Contract.

.3 Remove or alter existing work to prevent injury or damage to portions of existing work which remain.

.4 Repair or replace portions of existing work which have been altered during construction operations to match existing or adjoining work, as directed by Departmental Representative.

.5 At completion of operations condition of existing work: equal to or better than that which existed before new work started.

1.5 OCCUPANCY BY THE DEPARTMENTAL REPRESENTATIVE

.1 The Departmental Representative will occupy premises during entire construction period for execution of normal operations.

.2 Co-operate with the Departmental Representative in scheduling operations to minimize conflict and to facilitate the Departmental Representative usage.

1.6 PARTIAL OCCUPANCY BY THE DEPARTMENTAL REPRESENTATIVE

.1 Notify the Departmental Representative well in advance before the start of the work to allow the Departmental Representative to carry out the measurement for payment purposes if required.

1.7 MODIFICATIONS, AJOUTS OU RÉPARATIONS AU BÂTIMENT EXISTANT

.1 Execute work with least possible interference or disturbance to building operations, and normal use of premises. Arrange with Departmental Representative To facilitate execution of work.

.2 Use only access points identified by the Departmental Representative for moving workers and material.

.1 Protect walls of passenger elevators, to approval of Departmental Representative prior to use.

.2 Accept liability for damage, safety of equipment and overloading of existing equipment.

1.8 EXISTING UTILITY SERVICES

.1 Notify Departmental Representative and utility companies of intended interruption of services and obtain required permission.

.2 Where Work involves breaking into or connecting to existing services, give Departmental Representative 48 hours notice for necessary interruption of mechanical or electrical service throughout course of work. Minimize duration of interruptions. Carry out work at times as directed by governing authorities with minimum disturbance to pedestrian, vehicular traffic and normal activities.

.3 Provide alternative routes for personnel, pedestrian and vehicular traffic.

.4 Establish location and extent of service lines in area of work before starting Work. Notify Departmental Representative of findings.

.5 Submit schedule to and obtain approval from Departmental Representative for any shut-down or closure of active service or facility including power and communications services. Adhere to approved schedule and provide notice to affected parties.

.6 Provide temporary services when directed by Departmental Representative to maintain critical building and tenant systems.

.7 Provide adequate bridging over trenches which cross sidewalks or roads to permit normal traffic.

.8 Where unknown services are encountered, immediately advise Departmental Representative and confirm findings in writing.

.9 Protect, relocate or maintain existing active services. When inactive services are encountered, cap off in manner approved by authorities having jurisdiction.

.10 Record locations of maintained, re-routed and abandoned service lines.

.11 Construct barriers in accordance with Section 01 50 00 – Construction Site.

1.9 REQUIRED DOCUMENTS

.1 Maintain at job site, one copy each document as follows:

.1 Contract Drawings.
.2 Specifications.
.3 Addenda.
.4 Reviewed Shop Drawings.
.5 List of Outstanding Shop Drawings.
.6 Change Orders.
.7 Other Modifications to Contract.
.8 Field Test Reports.
.9 Copy of Approved Work Schedule.
.10 Health and Safety Plan and Other Safety Related Documents.
.11 Other documents as specified.

1.10 WORK SCHEDULE

.1 Submit the work schedule indicating the various stages of progress and the expected completion date concerning the stipulated deadline in the contractual documents:

.1 Submission dates for shop drawings, material lists, and samples;

.2 Delivery dates for equipment parts and materials;

.3 Start and end dates for the work described in each section of the specifications;

.4 The final completion date of the work in relation to the stipulated completion deadlines in the contractual documents.

.2 Reviews of the progress of work, based on the submitted schedule, will be conducted at the discretion of the Departmental Representative. The schedule will be updated by the contractor, with the collaboration and approval of the Departmental Representative, to ensure compliance with all requirements.

1.11 SITE MEETINGS

.1 Meetings will be held in a space provided and set up by the contractor.

.2 Conduct meetings at times and locations approved by the Departmental Representative.

.3 Notify all relevant parties.

.4 The Departmental Representative will organize and set the dates and times of the site meetings, write, and distribute reports or minutes.

1.12 OTHER DRAWINGS

.1 The Departmental Representative may, solely for clarification purposes, provide the contractor with additional drawings to ensure proper execution of the work. These drawings will carry the same significance and scope as if they were part of the contractual documents.

1.13 COORDINATION

.1 The works described in each section are governed by all contractual documents.

.2 Before the start of the works described in a section, ensure that the site conditions and parts of the structure receiving the products specified in that section (including dimensions and sizes) are satisfactory.

.3 Report in writing to the Departmental Representative any discrepancies that may affect the quality of the work.

.4 The start of the works described in a section implies the acceptance of previous works described in other sections and the responsibility for their corrections if necessary.

.5 Similarly, deficiencies in works from other sections cannot serve as justification for deficiencies in the works of each section.

.6 When works identified in plans and specifications are not covered by a specialty, it is the responsibility of the general contractor to determine whether they will perform the works themselves or delegate the responsibility to a subcontractor, with no extra allowance granted in this case.

1.14 SUPERINTENDENT

.1 The contractor must employ a competent superintendent, whose presence is mandatory on the site at all times during the execution of the works, until the final acceptance of the project, including the complete resolution of deficiencies.

1.15 WORKING HOURS

.1 The works must be executed during regular hours, from 06:45 AM to 4:00 PM. Any additional work is the responsibility of the contractor. No additional amount will be granted for overtime hours undertaken to meet the submitted schedule. Prior authorization from the Departmental Representative is required for any work to be carried out outside the aforementioned regular hours.

.2 The Departmental Representative may halt the works without prior notice for major reasons related to building activities

1.16 INSPECTION OF WORKS DURING EXECUTION

.1 The contractor must notify the Departmental Representative, within reasonable timeframes, of any work that is to be concealed by other work so that the representative can inspect it while still possible.

1.17 ADDITIONAL WORKS

.1 The contractor is obligated to pay the cost of all minor works that are not specifically detailed in the drawings or specifications but are customary, implicitly necessary, and reasonably foreseeable to complete the work of each trade according to the rules of the trade, common practice, and prevailing construction standards. No change order will be issued to cover the works described above.

1.18 INSPECTION OF DEFICIENCIES

.1 Before the Departmental Representative establishes the initial deficiency list, the contractor must conduct a comprehensive site inspection to establish their own deficiency list, which they must submit to the Departmental Representative.

.2 The contractor must independently ensure, through an on-site inspection, that corrective actions following the lists of works to be corrected or completed have been effectively carried out before requesting an inspection from the Departmental Representative. For this purpose, the contractor must send the initialed lists to the Departmental Representative.

2 PRODUCTS

2.1 NOT USED

.1 Not used.

3 EXECUTION

3.1 NOT USED

.1 Not used.

E N D O F S E C T I O N

1 GENERAL

1.1 SUMMARY OF WORK

.1 The planned works aim to secure the interior courtyards by preventing climbing on the facades up to the roof by:

- Adding concertina-type barbed wire to the existing fences;
- Modifying sections of fences to increase their height;
- Adding concertina-type barbed wire to sections of existing walls.

1.2 PHASING

.1 The works will need to be divided into phases, and the work will be carried out one courtyard at a time.

1.3 REQUIRED SCHEDULE

.1 Submit the schedule, including the following listed items:

1. Work schedule;
2. Shop drawing and technical data submittal schedule;
3. Sample submittal schedule;
4. Product order and delivery schedule.

1.3 PRESENTATION

.1 Prepare a schedule in the form of horizontal bar chart and a critical path diagram.

.2 Assign a separate bar for each operation or trades.

.3 Represent time on a linear scale horizontal identifying the first business day of each work week.

.4 Introducing Lists: according to the table of contents of the quote.

.5 Description of contents lists: by subject's specification sections.

1.4 WORK EXECUTION SCHEDULE

.1 Identify the different construction tasks (activities) and list them on the schedule.

.2 Provide start and end dates for each of the main tasks.

.3 Indicate the progress status of each task on the date of the schedule revision.

.4 Indicate changes that occurred since last schedule was submitted:
- .1 Primary changes pending.
- .2 Activities changed since presentation of last schedule.
- .3 Revised status report and date of completion of work, with and without reservation;

.4 Other possible changes.

.5 Prepare detailed report on following items:

1. Problem cases, foreseeable delays and their impact on schedule.
2. Proposed corrective measures and anticipated results.
3. Probable effect of these amendments on other main contractors' schedule

1.5 SCHEDULE FOR SUBMISSION OF REQUIRED DOCUMENTS

.1 Submit schedule for shop drawing, technical data and sample submittals for approval.

.2 Specify the submission dates, review timeframe, resubmission date, float allowance, and the deadline for the production of the elements.

.3 Specify the deadline by which the Departmental Representative must submit the verified documents. Allow t**en (10) working days** to leave time to Departmental Representative to check submitted documents.

E N D O F S E C T I O N

1. GENERAL

1.1 DOCUMENTS TO SUBMIT

.1 Submit to the Departmental Representative, for verification purposes, the workshop drawings, product descriptions, and samples of all prescribed products and materials.

.2 It is prohibited to commence any work for which the workshop drawings, samples, and products have not received the aforementioned verification.

1.2 SHOP DRAWINGS

.1 The submitted drawings must be **originals**, prepared by the contractor, subcontractor, supplier, or distributor, illustrating the relevant part of the work, manufacturing details, layout, and prescribed installation or assembly details in the related sections.

.2 Identify the details using sheet numbers and sketches from the contract drawings. The contractor will sign these drawings before transmitting them to the Departmental Representative.

.3 Documents can be transmitted directly via email in PDF format.

.4 The contractor will be responsible for any delay caused by the refusal of submitted documents for verification that do not comply with the aforementioned requirements.

.5 Any work requiring structural calculations must bear the seal of a qualified structural engineer, a member of the Ordre des ingénieurs du Québec, attesting that the loads and methods used comply with codes, subject to professional examination.

1.3 PRODUCT DESCRIPTION

.1 Certain sections of the specifications provide that, in certain cases, schematic sketches normally provided by the manufacturer, technical data sheets, diagrams, tables, charts, illustrations, and ordinary descriptive data may serve as workshop drawings.

.2 Above documentation will not be accepted if not in accordance with the following:

1. shall not contain information irrelevant to the Work.
2. basic information must be completed by additional information.
3. relating to the Work.
4. must indicate dimensions and required clearances.
5. must state performance characteristics, capacities, etc.
6. must illustrate wiring diagrams and controls.
7. Bear the signature of the contractor and project identification.

1.4 SAMPLES OF MATERIALS AND WORKS

.1 Submit the required number of samples with measurements and dimensions.

.2 Where color, pattern or texture is criterion, submit full range of samples.

.3 Build material and work samples in a location on the site suitable for the Departmental Representative.

.4 Each sample and mock-up must be presented in full, i.e. it must include the work of all trades.

.5 Once approved, the samples become the quality standard for materials and workmanship and will be used to verify the work on site.

1.5 VERIFICATION OF SUBMITTED DOCUMENTS

.1 Verify the shop drawings, product characteristics, and samples before submitting them to the Departmental Representative.

.2 Verify :

1. Measurements taken on site.
2. Execution criteria.
3. Catalog numbers and other related data.

.3 Match the submitted documentation with the work requirements and contract documents.

.4 The Contractor is not released from liability for errors and omissions in the submitted documentation, even if the Departmental Representatives have verified the documentation.

.5 The contractor is not released from liability for deviations from the requirements of the contractual documents, even if the concerned Departmental Representatives have verified the submitted documentation unless they express their written acceptance of specific deviations.

.6 When submitting the documents, inform the concerned Departmental Representative in writing of any deviations present in the submitted documentation.

.7 Do not distribute copies until receiving approval from the Departmental Representative.

.8 Implement all changes that the Departmental Representative deems appropriate regarding the contractual documents, and resubmit the documents or samples according to their directives, clearly identifying the revision dates.

.9 Requirements for document submission:

.1 Set the submission date at least ten (10) days prior to the date when the revised documentation is required.

.2 The cover letter must contain the following information:

1. The date.
2. Project designation and number.
3. Contractor's name and address.

4. The number for each shop drawing, product descriptions, submitted samples, etc.
5. Any other relevant information.

.3 The submitted documentation must include:

1. The date and revision dates of the original documents' presentations.
2. Project designation and number.
3. Name, address, telephone, fax of:
   1. The contractor.
   2. The subcontractor.
   3. The supplier.
   4. The manufacturer.
   5. The retailers, if applicable.
4. Product or material identification.
5. Its arrangement in relation to adjacent structures;
6. On-site measurements, clearly identified as such.
7. Performance-related characteristics according to the corresponding section of the technical specification to be identified.
8. Applicable standards, for instance, CSA Group or CGSB standards, and their numbers.
9. The contractor's seal with initials or a signature certifying that the submitted documentation has been reviewed, on-site measurements have been verified, and everything complies with the contractual documents

1.6 DISTRIBUTION OF REVISED DOCUMENTATION

.1 Distribute the copies of the shop drawings as follows:

1. A copy must be filed and kept on the site.
2. One copy for the Departmental Representative.
3. One copy for the main contractors.
4. Copies for the subcontractors.
5. A copy for the supplier.
6. A copy for the manufacturer.

.2 Distribute the samples according to the prescribed instructions.

E N D O F S E C T I O N

1 GENERAL

1.1 PURPOSE

.1 To ensure that the work and institutional activities are carried out smoothly with no undue delays, and that institutional security is maintained at all times.

1.2 DEFINITIONS

.1 « CSC » Correctional Service Canada.

.2 « Warden » Warden of the institution.

.3 « Departmental representative » Any employee who is mandated to intervene, carry out supervision, ensure coordination and/or supervision of the work.

.4 « Work enclosure » Area where, as indicated on the project plans, the contractor is authorized to work. This can be isolated from the perimeter of the institution.

.5 « Perimeter » Area of the establishment surrounded by fences or walls preventing the movement of inmates.

.6 « Prohibited items » :

.1 Intoxicants, including alcohol, drugs and narcotics;

.2 A weapon or a component thereof, ammunition, or anything that is designed to kill, injure or disable a person or that can be assembled or modified for such purposes, possessed without prior authorization ;

.3 An explosive or a bomb, or a component thereof ;

.4 An amount of money exceeding the regulatory limit ;

NOTE: Consult the Corrections and Conditional Release Regulations (SOR/92-620): $50 limit in a minimum-security institution, $25 limit in a medium-security institution, maximum-security institution, or multi-level security institution.

.5 Any other item possessed without prior authorization that could jeopardize the security of the penitentiary or the safety of persons;

.6 Electronic or telecommunication devices;

.7 Tobacco products and associated products (including, but not limited to, cigarettes, electronic cigarettes, cigars, tobacco, chewing tobacco, cigarette-making machines, matches and lighters) are considered unauthorized items.

.7 « Commercial vehicle » Vehicle intended for the transportation of material, equipment or tools necessary for the work.

1.3 PRELIMINARY MEASURES

.1 Prior to starting the work, the Contractor must communicate with the Departmental representative to:

1. Discuss the nature and the scope of the work associated with the project;

2. Establish mutually-acceptable security measures, in accordance with this directive and the specific needs of the institution.

.2 The Contractor must:

.1 Be sure to inform their employees of the security requirements;

.2 Work with institutional staff to ensure that their employees comply with the security requirements.

1.4 CONTRACTOR'S EMPLOYEES

.1 According to the Warden's preference, the Contractor must be aware that no employee will be admitted access to the institution without valid security clearance and have a recent photo identification card, such as a provincial driver's licence.

.2 The Contractor must submit to the Departmental representative a list of the names and birth dates of all his employees scheduled to work in the institution or all other CSC site, as well as their completed security clearance forms (*Federal Institution Access Request* form). Allow two (2) weeks for the security clearance forms to be processed.

.3 The Warden may require that headshots be taken of the Contractor's Employees so that their pictures can be posted in appropriate areas throughout the institution or entered into a database for identification purposes. The Warden may also require that the Contractor's Employees prominently display photo identification on their clothing when they are within the institutional perimeter.

.4 An individual will be refused entry to institutional premises if there is reason to believe that they pose a security risk.

.5 Individuals will be immediately removed from institutional premises if:

1. They appear to be under the influence of alcohol, drugs or narcotics;
2. They behave in an abnormal or disorderly manner;
3. They are in possession of prohibited items.

.6 Before accessing the institution any individual may be required to fill out a form or to answer questions concerning their immediate health state. When requested by the Warden, the individual's body temperature may be checked. Following these verifications, CSC might chose to refuse access to any individual.

1.5 VEHICLES

.1 The personal vehicles of the Contractor's Employees are not allowed within the perimeter of medium- or maximum-security institutions without the express permission of the Warden.

.2 All individuals who leave a vehicle unattended on CSC premises must close the windows and lock the doors and trunk. The owner of the vehicle or the employee from the company that owns the vehicle must ensure that the keys are kept safely in their personal possession.

NOTE: The institution may require that all vehicles and motorized equipment be equipped with a device that allows for locking the fuel cap.

.3 The Warden can limit the number and type of vehicles permitted within the perimeter at any time.

.4 Those delivering materials needed for the work may be required to have security clearance.

.5 Should the Warden allow trailers to be left within the institution's perimeter, the doors and windows must remain closed and locked when left unattended. Windows must be equipped with expanded metal grates.

1.6 PARKING

.1 The Departmental representative designates authorized parking areas for vehicles. If the Contractor's Employees park elsewhere, their vehicle may be towed.

1.7 SHIPMENTS

.1 All shipments of material, equipment or tools for the work must be addressed to the Contractor to clearly distinguish them from shipments for the institution. The Contractor must ensure that his employees are on site to receive deliveries, as CSC staff will **not** accept deliveries of materials, equipment or tools intended for the Contractor.

1.8 COMMUNICATION DEVICES

.1 Cellular or digital cordless phones (including, but not limited to, text messaging devices, pagers, BlackBerry, and telephones used as two-way radios), laptop computers and tablets are prohibited in the institution without the express authorization of the Warden. Even when permitted, they are not to be used by inmates.

.2 The Warden may approve but limit the use of two-way radios.

NOTE: In some institutions, cellular or digital phones and two-way radios are permitted; however, conditions may apply. For example, their use may not be permitted in areas accessible to inmates.

1.9 TOOLS AND EQUIPMENT

.1 The Contractor must keep a comprehensive list of the tools and equipment used during the work. This list must be kept up-to-date throughout the work and be submitted for inspection when

necessary.

NOTE: A list of unauthorized or restricted tools and equipment may be provided to the Contractor if necessary.

.2 The Contractor's Employees must never leave tools unattended, particularly mechanical tools, files, saw blades, hacksaws, wire, rope, ladders and any item used for lifting (jacks, cylinders, etc.).

.3 The Contractor's Employees must store tools and equipment in a secure, authorized location.

.4 The Contractor's Employees must lock all toolboxes after use and keep the keys with them at all times. They must also lock scaffolding that is not being used; once erected, scaffolding must be secured to the satisfaction of the Departmental representative.

.5 The Contractor's Employees must notify the Departmental representative immediately if any tools or equipment have been lost or are unaccounted for.

.6 The Warden will ensure that security staff verifies the Contractor's tools and equipment based on the list provided by the Contractor, at the following times:

1. at the beginning and end of each project;
2. each week, if the work lasts more than one (1) week.

NOTE: Some institutions require that tools and equipment be removed from the work site on a daily basis (e.g., in a busy area).

.7 Some tools and equipment - such as cartridges and metal saw blades - are closely controlled. At the beginning of the day, the Contractor will be given a sufficient number of these items for one (1) day's work. Used blades/cartridges must be returned to the security personnel at the end of each day.

.8 The use of fastening tools or other tools with cartridges is strictly prohibited.

NOTE: Controlled items are managed differently from one institution to another and must be verified with the specific institution.

.9 If propane or natural gas is used as a heat source for the work, the institution requires that a member of its personnel supervise the work site outside of regular working hours.

NOTE: This is a concern if the work site is located near inmates' living units. A fire could put human lives in danger. Check the institution's policy.

1.10 KEYS

.1 During the work, the Contractor must use regular cylinders in regular locks.

.2 Once the security locks are installed, the Departmental representative who escorts the Contractor's Employees must obtain the keys in order to open doors according to the Contractor's

needs. The Contractor must inform his employees that only the Departmental representatives escorting them are authorized to use the keys.

1.11 PRESCRIPTION MEDICATION

.1 If the Contractor employs individuals who must take prescription medication during the work day, these employees must obtain authorization from the Warden to bring one (1) day's dosage into the institution.

1.12 RESTRICTIONS ON TOBACCO USE

.1 Neither Contractors nor the Contractor's Employees are permitted to smoke inside correctional institutions, nor outside while within the perimeter of a correctional institution. They must not have unauthorized tobacco products in their possession within the institutional perimeter.

.2 All individuals who violate this policy will be asked to stop smoking or to throw out all unauthorized tobacco products immediately. Individuals who continue to violate this policy will be asked to leave the institution.

.3 Smoking will only be permitted outside the correctional institution's perimeter, in a location designated by the Departmental representative.

1.13 PROHIBITED ITEMS

.1 Firearms, ammunition, explosives, alcohol, drugs and narcotics are prohibited on institutional premises.

.2 The Warden must be notified immediately if anyone is found in possession of prohibited items on the work site.

.3 The Contractor must be vigilant in monitoring their employees as well as the employees of their Subcontractors. Individuals found in possession of prohibited items may have their security clearance revoked. If the violation is serious, the company in question may be expelled from the institution for the duration of the work.

.4 If firearms or ammunition are found in the vehicle of a Contractor, Subcontractor, supplier, or their personnel, the security clearance of the vehicle's driver will be revoked immediately.

1.14 SEARCHES

.1 All individuals and vehicles arriving on the institution's premises may be searched.

.2 If the Warden has reason to believe that one of the Contractor's Employees is in possession of a prohibited item, the Warden may order a search of that individual.

.3 The personal belongings of all the Contractor's Employees arriving at the institution may be checked to search for the residue of contraband drugs.

1.15 CONTACT WITH INMATES

.1 It is prohibited to enter into contact with inmates, speak to them, give them anything or accept anything from them without specific authorization. Anyone who violates this order will be expelled from the site and have their security clearance revoked.

.2 It is prohibited to photograph inmates or CSC employees. It is also prohibited to photograph sectors of the institution when such photography is not required for the execution of the present contract.

2 PRODUCTS

2.1 NOT USED

.1 Not used.

3 EXECUTION

3.1 ACCESS TO THE INSTITUTION

.1 Neither the Contractor's Employees nor commercial vehicles may be admitted to the institution's premises outside normal working hours without the express authorization of the Departmental representative.

.2 The work week at the facility is Monday to Friday, generally 7:30 a.m. to 4 p.m. Hours of work vary from institution to institution. They should be checked with the institution concerned.

3.2 DAILY WORK PROGRAM

.1 The contractor must send a daily work program to the departmental representative in the form of an email one day in advance and before noon, so that he can coordinate the work with the operations and security of the institution as well as with other work in progress and schedule the security escorts required for surveillance. The contractor must notify the departmental representative as soon as possible if there are any changes to the day's schedule, eg: interruption or need for extension of work, etc.

3.3 VEHICLE TRAFFIC

.1 Vehicles may enter and leave the facility escorted through the vehicle access barrier, at the times specified by the Departmental representative for each site. Note that service barriers will be inaccessible during the lunch hour.

NOTE: Hours vary from one institution to the next. They should be verified with the institution concerned.

.2 The Contractor must provide the Departmental representative forty-eight (48) hours' notice of the arrival of heavy equipment.

.3 Vehicles carrying detritus or other material deemed impossible to search must constantly be monitored by CSC employees or security personnel who report to the Warden or must wait for an official head-count of the inmates to be conducted.

.4 Before a commercial vehicle may be admitted onto the institution's perimeter, the Contractor or its representative must certify that the vehicle's content is essential to the execution of the work.

.5 Entry will be refused to all vehicles carrying materials that the Warden believes pose a risk to institutional security.

3.4 CIRCULATION OF THE CONTRACTOR'S EMPLOYEES ON INSTITUTIONAL PREMISES

.1 Subject to proper institutional security, the Warden will give the Contractor and the Contractor's Employees as much freedom of movement and autonomy as possible.

.2 The previous paragraph notwithstanding, the Warden may:

1. Prohibit access to sections of the institution;

2. Require that the Contractor's Employees be accompanied by CSC security personnel in designated sections;

3. Require that the Contractor's Employees remain on-site during coffee/health and lunch breaks, depending on the institution and the situation. The Contractor's Employees are not authorized to eat in the break room of CSC employees, but they may use another area designated by the Departmental representative.

3.5 UNINSTALLED EQUIPMENTS AND ACCESSORIES

.1 Return all uninstalled devices, devices, equipment, accessories or hardware to the Departmental Representative to ensure that they are disposed of or kept in a safe place for later reuse. If authorized by the departmental representative, dispose of it responsibly.

3.6 MONITORING AND INSPECTION

.1 CSC security personnel will monitor and inspect the Contractor's Employees activities as well as related movement and vehicle traffic to ensure that established security standards are being followed.

.2 At the start and throughout the duration of the work, CSC staff will convey to the Contractor's Employees the necessity of monitoring and inspections.

3.7 WORK STOPPAGE

.1 At any time, the Warden may ask the Contractor, the Contractor's Employees, or Subcontractors not to enter the work site or to leave immediately if a security incident is in progress in the institution. The Contractor's Employees must note the name of the CSC employee issuing the request as well as the time and comply with the order as soon as possible.

.2 Once notified, the Contractor must inform the Departmental representative of work stoppage without delay.

3.8 WORK COMPLETION

.1 Unless otherwise indicated in the contract, once the project is completed or the facilities handed back to the CSC, the Contractor must remove all materials, tools and equipment from the institution, as well as perform a final clean-up of the site.

E N D O F S E C T I O N

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 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).

1.2 ACTION AND INFORMATIONAL SUBMITTALS

.1 Make submittals in accordance with Section 01 34 00 – Shop Drawings, Products and Samples.

.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 Contactor 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, 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. 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.

1.3 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.

1.4 HAZARD ASSESSMENT

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

1.5 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.

1.6 REGULATORY REQUIREMENTS

.1 Comply with all legislation, regulations and standards applicable to the construction site and its related activities.

.2 Comply with specified standards and regulations to ensure safe operations on a site containing hazardous or toxic materials.

.3 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*.

1.7 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.

1.8 RESPONSABILITIES

.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.

1.9 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: Not applicable.

.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)

1.10 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.

.2 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.

.3 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.

.4 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.

.5 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.

.6 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.

.7 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.

.8 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.

.9 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.

.10 The Departmental representative must be consulted for the location of storing gas cylinders and tanks on the construction site.

1.11 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;

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.

1.12 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.

1.13 PERSON IN CHARGE OF HEALTH AND SAFETY

.1 If the construction site meets the requirements of article 2.5.3 of the *Code the 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 5 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.

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

.3 .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.

1.14 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.

1.15 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.

1.16 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.

1.17 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) , *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.

1.18 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 the 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.

1.19 USE OF PUBLIC ROADS

.1 .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

1.20 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.

1.21 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.

1.22 EXPOSITION À L'AMIANTE

.1 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 the 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.

2. Demonstrate that he has all the material and equipment required on hand to respect the procedure and for safely conducting the work.

1.23 FUNGAL CONTAMINATION

.1 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.

.1 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 the 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.

1.24 EXPOSURE TO SILICA

.1 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.

1.25 SANDBLASTING

.1 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.

1.26 LEAD-BASE PAINT REMOVAL

.1 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). 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.

1.27 EXPOSURE TO ANIMAL'S FECAL DROPPINGS

1. 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 the 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)

2. Demonstrate that he has all the material and equipment required on hand to respect the procedure and for safely conducting the work.

1.28 RESPIRATORORY 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.

1.29 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.

1.30 SCAFFOLDINGS

.1 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:

.1 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.

.2 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.

.4 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.

.5 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. Scaffolding**s** 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.

.6 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.

.7 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.

.8 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.

.9 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.

1.31 CONFINED SPACES

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

.2 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.

.3 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:

.1 *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

.4 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.

.5 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.

.6 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.

.2 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 dimensionS 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.

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

.1 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:

i. means of communication between the supervisor of the confined space and the workers in the confined space;
ii. lifesaving equipment specific to each confined space;
iii. 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);
iv. 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.

.8 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.

.1 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".

.2 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 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 equipement 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.

1.32 EXCAVATION WORK

.1 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.

Directive de creusage

N° _____ de _____

Cette directive de creusage est fournie à titre d'exemple par la Commission de la santé et de la sécurité du travail (CSST). On y trouve les principales indications que l'employeur devrait donner à la personne responsable des travaux sur le terrain et à l'opérateur de l'engin de terrassement.

Nom de l'entreprise	
Nom du projet	N° du projet
Adresse du chantier	Date du début des travaux

Repérage

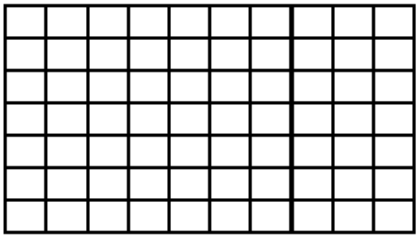
Chaînage ou axes : de _____ à _____ Plan annexé ☐ N° du plan : _____

Méthode de travail à utiliser

Tout en s'assurant que les parois ne présentent aucun danger de glissement de terrain,

- ☐ **creuser et étançonner** selon les plans et devis d'un ingénieur ;
- ☐ **creuser et étançonner** en utilisant une boîte de tranchée ;
- ☐ **creuser sans étançonner** pourvu que l'une des conditions suivantes soit respectée :
  - ☐ le roc est sain ;
  - ☐ aucun travailleur ne descend dans la tranchée ou l'excavation ;
  - ☐ les parois sont creusées conformément à l'avis d'un ingénieur.

Dimensions du creusement (Creuser selon le profil suivant.)



	Minimale	Maximale
H Profondeur		
Lf Largeur au fond		
Ls Largeur en surface		

Mesures de sécurité

Déposer les matériaux à une distance d'au moins 1,2 mètre (4 pi) du sommet des parois.
Ne laisser aucun véhicule s'approcher à moins de 3 mètres (10 pi) du sommet des parois.

- ☐ Respecter le plan de l'ingénieur concernant les travaux à proximité d'une construction existante.
- ☐ Suivre le plan de localisation pour repérer les infrastructures souterraines.
- ☐ Installer le matériel de signalisation prévu par le plan de circulation (barrières, repères visuels, etc.).
- ☐ Affecter un ou des signaleurs au contrôle de la circulation.
- ☐ Respecter la méthode prévue pour le travail à proximité des lignes électriques.
- ☐ Mettre en place les dispositifs de protection des travailleurs, par exemple les glissières de sécurité en béton.

Nom	Fonction	
Signature	Date	N° de téléphone
Directive remise ☐ au responsable des travaux sur le terrain ☐ à l'opérateur de l'engin de terrassement		

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1.33 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. 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.

.9 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

1.34 HOT WORK

.1 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.

.2 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.

.3 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.

5. 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.

5. 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.

.1 Welding and cutting

.1 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 inthe 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.

1.35 ROOFING WORK

.1 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.

.2 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.

.3 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.

.4 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.

.5 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.

.6 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.

1.36 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).

1.37 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 theses 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.

1.38 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.

1.39 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.

1.40 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.

1.41 DIVING OPERATIONS

.1 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:

5. Where the dive takes place at one of the following locations, provide the Departmental representative confirmation that the authorities concerned have been notified:

   a. upstream or downstream from a hydraulic structure or submerged water line;
   b. in marine waterways;
   c. in port facilities.

   6. If the dive station is more than 2 metres above the water, provide the Departmental representative:
   a. 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;
   b. 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:

   a. proof of qualification of the vessel operator;
   b. 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

2 PRODUCTS

2.1 NOT USED

.1 Not used.

3 EXECUTION

3.1 NOT USED

.1 Not used.

E N D O F S E C T I O N

1 GENERAL

1.1 FIRE

.1 Fires and burning of rubbish on site not permitted.

1.2 DISPOSAL OF WASTES

.1 It is prohibited to dispose of waste materials or volatile substances such as mineral spirits and oil or paint thinners by pouring them into storm sanitary sewers.

.2 The contractor must keep a waste container on the site at all times to collect construction debris, and all waste materials must be transported to a location approved by the Departmental Representative. The placement of the containers is subject to the owner's approval.

1.3 POLLUTION CONTROL

.1 Cover or wet down dry materials and rubbish to prevent blowing dust and debris. Provide dust control from temporary roads.

.2 Maintain temporary erosion and pollution control features installed under this contract.

.3 Control emissions from equipment and installations to local authorities' emission requirements.

.4 Build temporary shelters to prevent blasting materials and other foreign substances from contaminating the air beyond the application zone.

.5 Avoid excessive or unnecessary noise from the use of any instrument or noise-generating equipment, in compliance with local authority regulations.

1.4 DRAINAGE

.1 Provide temporary drainage and pumping as necessary to keep excavations and site free from water.

.2 It is prohibited to pump water containing suspended materials into waterways, sewer or drainage systems.

.3 Control disposal or runoff of water containing suspended materials or other harmful substances in accordance with local authority requirements.

E N D O F S E C T I O N

1 GENERAL

1.1 SCOPE OF WORK

.1 The transportation, erection, rental, movement, dismantling and removal of all scaffolding required to perform the work.

.2 All expenses pertaining directly to this scaffolding such as but not limited to the rental, permits, the costs of inspecting and approving the erection plans.

.3 The Contractor shall visit the premises to estimate the number and quality of scaffolding required to do the work.

.4 The Contractor is bound to abide by all of the obligations the plans and specifications impose upon it, and prior to bidding, the Contractor shall visit and examine the locations where the work must be done, the condition and the nature of the structures to be kept and any obstacles close to where the work will be done; study all documents, the specifications and the plans, verify the dimensions provided, etc.

.5 The contractor will ensure that the erection and movement of these scaffolds do not damage the building in any way. Any damage will be repaired by the contractor to the satisfaction of the Departmental Representative.

2 PRODUCTS

2.1 TYPE OF SCAFFOLDING

1. The choice as to the type and number of scaffolds is up to the Contractor, provided they meet the following requirements and performance levels:

    1. Requirements: Reference standards:

        .1 Act respecting occupational health and safety(reference: *Safety Code for the construction industry*, most recent edition).
        .2 The most recent municipal acts and regulations.
        .3 CAN/CSA S 269.2-M1987 standards.
        .4 Follow the most stringent provisions of 1, 2 and 3 above.

    2. Verification:

        .1 A scaffolding plan signed by an engineer, as required, shall be submitted to the proper authorities for approval. This plan shall provide all calculation data, propping, guy ropes, etc., work plans for different levels, means of access and hoisting.

        .2 The Contractor shall ask for regular inspections of its scaffolding by a CSST representative and comply with the directives issued by that inspector.

3. Safety:

.1 The contractor shall be responsible for all direct or indirect damage caused by its scaffolding.

.2 The Contractor shall be fully responsible for the safety of:
- its workers;
- any person authorized to access the work at the buildings;
- buildings
- passersby and occupants;
- public and private property.

3 EXECUTION

3.1 GENERAL

.1 Strict and effective measures must be taken to prevent the public from climbing on them at all times. For this purpose, they must be equipped at the base with a barricade made of 2,400 mm high and 20 mm thick plywood sheets, securely attached to the tubular structure. Access doors must be equally secure and locked.

.2 Allow the execution of the work.

.3 No anchors shall be inserted into or drilled into existing surfaces.

.4 This scaffolding shall not rest directly or indirectly on the fragile parts of the existing building or endanger the contents of the existing building.

.5 The points of support on the existing surfaces shall be designed so that they are not damaged.

.6 This scaffolding shall include ladders or stairs compliant with workplace safety regulations.

.7 This scaffolding shall include the hoisting mechanisms for materials needed for the work.

.8 This scaffolding shall allow inspection of the premises before and after the work. Suspended scaffolding shall not be accepted.

E N D O F S E C T I O N

1 GENERAL

1.1 DELIVERY, STORAGE, HANDLING AND PROTECTION

.1 The products are delivered onto the site and stored in their original packaging and containers, with intact labels, protected from any damage, and kept away from direct contact with the ground.

.2 Materials stored outside must not obstruct normal vehicle or pedestrian traffic, especially pathways leading to public exits.

.3 Materials stored indoors must not create dangerous overloads for the existing structure; the engineer has full authority to assess the danger of such overloads and order the relocation of stored materials.

.4 Damaged materials are replaced without changes in costs and delay.

2 PRODUCTS

2.1 PRODUCTS CHOICE

.1 Use new products/material and equipment unless otherwise specified

.2 The unspecified products are of the best quality suited for the required purposes, and their use is subject to approval by the Departmental Representative.

3 EXECUTION

3.1 MANUFACTURER'S INSTRUCTIONS

.1 The work will be carried out in accordance with the manufacturers' instructions for the products used: accessories such as mechanical fixings, adhesives, etc., and the cleaning method recommended by them.

3.2 OPERATION AND EQUIPMENT MAINTENANCE INSTRUCTION MANUALS

.1 Each subcontractor must provide the Departmental Representative with manuals written in French containing detailed instructions for the operation and maintenance of all equipment and materials included in their contract.

.2 The contractor must ensure and require that suppliers of specialized equipment provide bulletins or instruction manuals for the installation, operation, cleaning, and maintenance of the devices, equipment, and materials used.

.3 The contractor must provide a list of parts, replacement parts, and/or equivalent parts with their catalog numbers.

.4 The manuals must be submitted for approval before the acceptance of the work.

E N D O F S E C T I O N

1 GENERAL

.1 Carry out cleaning and disposal operations according to local regulations and anti-pollution laws.

.2 Do not dispose of volatile waste such as mineral spirits, oil, or paint and varnish solvents into a storm or sanitary drain.

.3 Place volatile waste in covered metal containers and remove them from construction site daily.

.4 Avoid build-up of potentially dangerous waste.

.5 Ensure good ventilation when using volatile or toxic substances.

2 PRODUCTS

.1 Use only manufacturer recommended cleaning products for each surface to be cleaned, and only in the way recommended by the cleaning product's manufacturer.

3 EXECUTION

3.1 CLEANING DURING CONSTRUCTION

.1 Keep construction site clean and public properties free of debris and waste on a daily basis. Take necessary precautions to avoid disrupting the normal flow of activities within the existing building.

.2 Have on site the necessary containers intended for waste and debris.

.3 Remove the waste and debris from the construction site.

.3 Vacuum inside the building before starting work on finishing paint and continue to do so, as needed, until building is almost finished and ready for occupancy.

.4 Set cleaning schedule so that blown up dust and other dirt does not fall onto freshly painted surfaces.

.5 All surplus materials and debris must be progressively removed from the site and transported to an ecologically acceptable location, ensuring that the disposal of these materials does not detract from the surrounding environment.

3.2 FINAL CLEANING

.1 Sweep the asphalt surfaces and rake the grounds.

.2 Remove debris and surplus materials from rooftops.

.3 Remove snow and ice from accesses to building

.4 Remove from the premises (roofs, parking lots, floors, offices, etc.) any unused equipment, materials, waste, rocks, gravel, wood debris, stumps, roots, and cement bags. Clean material locations and tools. If necessary, restore ditches and watercourses, unblock obstructed drains to proper condition. Repair or replace damaged or destroyed existing structures.

.5 The contractor is responsible for keeping clean, clear, and safe access to any required exit at all times.

.6 In general, after the general contractor's cleaning, the floors should be waxed, and the premises ready for occupancy.

E N D O F S E C T I O N

1 GENERAL

1.1 AS-BUILT DRAWINGS

.1 Keep drawings and record any deviations from the Contract Document's requirements, changes imposed by the nature of the Site and changes requested by the Departmental Representative.

.2 Note changes in red.

.3 Record the following information:

.1 The depth of the various elements of the foundation in relation to the basement level.

.2 The location, both vertically and horizontally, of underground utility networks and their dependencies in relation to the final surface of the ground.

.3 The positioning of internal utility networks and their dependencies, concealed within the construction, concerning the visible and accessible structural elements.

.4 On-Site changes for dimensions and execution details.

.5 Changes made as per orders received, on-site or not.

.4 In addition to providing all the previously listed documents on paper, the contractor must also supply the same information, including all documents verified by the Departmental Representative (workshop drawings, changes, etc.), in PDF format on a DVD.

1.2 MAINTENANCE MANUALS AND MAINTENANCE

.1 The Manual is a structured An organized compilation of operating and maintenance data including detailed technical information, documents and records describing operation and maintenance of individual products or systems as specified in individual sections of the Divisions 2 through 16.

.2 Assemble, coordinate, bind and index required data into "Operation and Maintenance Manual".

.3 Submit complete "Operation and Maintenance Manual" to Departmental Representative one (1) week prior to substantial work completion.

.4 Submit two (2) copies of the manual in French.

.5 Organize data into same numerical order as specifications sections.

.6 Label each section with tabs protected with celluloid covers fastened to hard paper dividing sheets.

.7 Type lists and notes.

.8 Drawings, diagrams and manufacturers' literature must be legible.

.9 Manual :

1. Binders with three (3) rings consisting of loose sheets of 215 x 280 mm, hardcover vinyl and provided with a pocket on the back of notebooks.

2. Indicate the contents of each notebook on the cover on the back of the notebook.

.10 Contents:

1. Architecture manual
(Divisions 2 to 14):

   a) The cover of the notebook should contain the information following:
      i) The date of submission
      ii) Project designation, location and number
      iii) The name and address of Contractor and all sub - contractors.

   b) Table of contents.
   c) The list of replacement equipment.
   d) The list of special tools specified.
   e) The list of spare parts.
   f) Warranty.
   g) Copies of certificates of approval and other required certificates..

2. Mechanical and electrical manual (divisions 15 to 16):
   a) The cover of the notebook should contain the information following:
      i) The date of submission
      ii) Project designation, location and number

   b) Table of contents.
   c) The following data specified in the individual sections of Divisions 15 and 16:
      i) Equipment list, including the service center.
      ii) Information found on the nameplate such as equipment number, trademark, dimensions, capacity or power, model number, and serial number.
      iii) Parts list.
      iv) Details related to equipment installation.
      v) Operating instructions for the equipment.
      vi) Maintenance instructions for the equipment.
      vii) Instructions for maintaining finishes.

3. Shop drawings:

   a) Bind separately one complete set of revised shop drawings and product descriptions.

1.3 REPLACEMENT EQUIPMENT AND SPARE PARTS

.1 This section includes the following elements:

a) Spare parts
b) Replacement equipment
c) Special tools

.2 Spare parts, replacement equipment, and special tools provided must be new, in good working condition, and of the same manufacture and quality as those used in the project.

.3 Provide, upon request, documents confirming the type, source of procurement, and quality of the supplied products.

.4 Defective products, even if previously inspected, will be rejected and must be replaced by the contractor at their expense.

.5 The contractor is responsible for transportation costs.

.6 Storage :

a) Store spare parts, replacement equipment, and special tools in a manner that prevents any kind of damage or deterioration.

b) Store parts, equipment, and tools in their original packaging, kept in good condition, with the manufacturer's seal and intact label.

c) Store items prone to damage in weatherproof cabinets.

d) Store paint and materials susceptible to freezing in a heated and ventilated room.

e) The contractor must remove damaged items and replace them at their expense, to the complete satisfaction of the Departmental Representative.

.7 Spare parts and replacement equipment:

a) Provide spare parts and replacement equipment as specified quantities in the specific sections of the specifications.

b) Provide spare parts and replacement equipment of the same manufacture and quality as those used in the project.

c) Deliver, install, and store spare parts and replacement equipment at the location designated by the Departmental Representative.

d) Receive and catalogue all parts and equipment, then submit the inventory list to the Departmental Representative.

e) Maintain a receipt detailing all parts and equipment, then submit the inventory list to the Departmental Representative.

.8 Special tools:

a) Provide the quantities of special tools specified in the specific sections of the specifications.

b) The tools must bear a label indicating their function and the equipment with which they are to be used.

c) Deliver, install, and store the tools at the location designated by the Departmental Representative.

d) Receive and catalogue all tools.

E N D O F S E C T I O N

1 GENERAL

1.1 WORK DESCRIPTION

.1 The contractor must assess the condition of the existing building at the time of preparing their bid and plan for **all the necessary works** to carry out demolition, required modifications as shown in the drawings, and/or as required by the existing condition until the complete removal of existing structures.

1.2 PLANS AND SPECIFICATIONS

.1 The contractor must carefully review all architectural, structural, mechanical, and electrical plans and specifications. All necessary cuts, demolitions, and leveling required for the complete installation of structural, mechanical, and electrical works and the completion of the contract must be fully anticipated, whether or not they are indicated in the drawings and specifications.

.2 All works required shall be executed in accordance with the indications of this specification by each of the respective specialties involved.

1.3 DOCUMENTS AND SAMPLES TO SUBMIT

.1 If required by the competent authorities, submit demolition drawings for approval, detailing the method the contractor intends to use for the demolition work.

.2 Submit shoring and bracing drawings for approval and review.

.3 Submit the necessary documents and samples for approval.

.4 Submit the construction waste management and waste reduction plan for the project, specifying recycling and recovery requirements.

.5 All drawings of support and protection elements must bear the seal and signature of a recognized Professional Engineer in Quebec.

1.4 REFERENCE CODES AND REGULATIONS

.1 Commission de la santé et de la sécurité du travail (CNESST).

.1 *Safety Code for the construction industry* (S-2.1, r-6), *Act respecting occupational health and safety* (L.R.Q., chap. S-2.1).

.2 *Regulation respecting the quality of the work environment* (S-2.1, r.15).

.2 Canadian General Standards Board (CGSB).

.1 CAN/CGSB-1.205, Sealer for Application to Asbestos-Fibre- Releasing Materials
.2 Department of Justice Canada
.3 Loi canadienne sur la protection de l'environnement (most recent version).

.3 Workplace Hazardous Materials Information System (WHMIS)/Health Canada.

.4 Transports Canada (TC).

.1 Transportation of Dangerous Goods Act (most recent version).

.5 Canadian Standards Association (CSA).

.1 CAN/CSA-Z94.4-F02 (ou version en vigueur) – Selection, Use, and Care of Respirators
.2 Institut de recherche Robert-Sauvé en santé et en sécurité du travail (IRSST)
.3 Respiratory Protection Guide

.8 Comply with all provincial and municipal codes and regulations regarding safety, hygiene, noise, liquid and solid waste, lighting, barricades, fences, etc. (C*ode Canadien de Sécurité sur les Chantiers de Construction*, CNESST, CSA S350 standards and other applicable standards).

1.5 CONDITION OF THE WORKS TO BE DEMOLISHED

.1 Undertake the demolition of the works in the state to be demolished in which they are on the day the contract is awarded.

.2 Verify the Hazardous Materials Report, if present in the contractual documents, and take necessary measures to preserve the environment.

.3 If material resembling sprayed-on asbestos or other designated hazardous substances is discovered during the execution of the works, suspend these activities, take appropriate precautions, and immediately notify the Departmental Representative.

.1 Resume work only after receiving written instructions from the Departmental Representative.

.4 Notify the Departmental Representative before impeding access to the building or interrupting services.

1.6 PROTECTION MEASURES

.1 Take all necessary measures to avoid shifting or settling of structures, pipes, sidewalks, road surfaces, trees, landscaping, grounds, and parts of adjacent buildings, or causing any damage to them. Provide and install the parts required for reinforcing and shoring. Repair damaged structures and accept responsibility for any bodily injury that may result from demolition work.

.2 Properly support all the works concerned and, if it seems that the demolition work constitutes a danger for the adjacent works or for the public, stop the work and notify the Departmental Representative.

.3 Ensure that the demolitions do not obstruct the surface water drainage system, electrical systems, and mechanical systems, which should remain operational.

.4 Ensure, after each demolition period, that areas adjacent to demolition sites are cleaned and tidy.

Mechanical, electrical, alarm systems, and others should be operational every morning and should not hinder building occupants from safely occupying their rightful spaces.

.5 Demolition of structures containing sprayed-on asbestos or applied in any other form may pose a health hazard. If such material is encountered during demolition, take all necessary measures as required by the laws in force to remove and dispose of it.

.6 The contractor is responsible for the building's waterproofing at all times and must protect it against weather conditions at the first sign of bad weather. Demolish and reconstruct simultaneously to minimize risks.

.7 Seal all openings in floors and walls after demolition.

1.7 PLANNING

.1 Review the architectural, structural, mechanical, and electrical plans in relation to each other to properly assess the following works and their reciprocal influences:

.1 Demolition;
.2 Wall, floor, ceiling, and roof openings;
.3 Structural reinforcements;
.4 Removal, addition, and connection to existing systems of ventilation ducts, plumbing pipes, fire protection, conduits, and electrical wiring;
.5 External drainage.

.2 Carry out the work with minimal disruption to occupants and the public, ensuring, wherever possible, normal use of the premises. Coordinate with the Departmental Representative to facilitate the execution of the works.

.3 When safety measures have been reduced due to the contracted works, implement necessary temporary measures to ensure necessary safety.

.4 If renovation and repair work is required near occupied spaces, provide and install temporary dust screens, partitions, and warning signs.

1.8 SECURITY MEASURES

.1 Install all fences, safety awnings, guardrails, rails, signage, and raillings, if necessary, during execution to protect individuals and property in accordance with the plans.

.2 Ensure site safety outside of regular working hours.

.3 Provide adequate lighting in work areas.

.4 Protect adjacent properties from any damage.

.5 Allow access to the building without hindrance access or compromising public safety.

.6 Control and exterminate vermin as necessary.

.7 Unless expressly authorized by the Departmental Representative, the use of explosives is prohibited.

.8 Minimize obstruction to public roads as much as possible.

.9 Ensure that exits remain functional and compliant with the Code throughout the duration of the works.

2 PRODUCTS

2.1 MATERIALS

.1 Protected pedestrian walkways where required (public roads, building access, protection of existing surfaces located beneath the projected works...)

1. Frame erected using metal scaffolding of "masonry" style with interior clearances measuring 8'-0" in height (headroom) and 5'-0" in width.

2. Wooden joists providing a uniform platform on top of the scaffolding, capable of withstanding the point loads generated by the works.

3. 20mm plywood covering the entire width of the platform.

4. Signage indicating ongoing works and electric lighting devices required by law.

5. Stamp from a structural engineer certifying the overall structural strength of the walkways.

3 EXECUTION

3.1 EXAMINATION

.1 Inspect the site with the Departmental Representative and verify the location and extent of works that must be removed, disposed of, recovered, recycled, recovered, and those that must remain in place.

.2 Identify and protect public utility lines, ensuring the maintenance of those that are still operational on-site.

.3 Before commencing demolition work, notify and obtain approval of utility companies.

.4 Disconnect, seal, or reroute existing public utility lines obstructing work execution as necessary, in compliance with the requirements of relevant authorities. Identify the location of these pipelines and any previously abandoned ones on the site and note their positions (horizontal and vertical) on as-built drawings. Properly support, brace, and secure encountered pipelines and conduits.

.1 Immediately inform the Departmental Representative and the relevant utility company of any damage caused to a service pipeline intended to be preserved.

.2 Promptly notify the Departmental Representative upon discovering any unmarked public utility pipeline and await written instructions regarding necessary actions.

3.2 PRELIMINARY WORKS

.1 Temporary erosion and sediment control:

.1 Provide temporary erosion and sedimentation control measures to prevent soil erosion and discharge of soil-bearing water runoff or airborne dust to adjacent properties and walkways, in accordance with authorities having jurisdiction.

.2 Inspect, repair, and maintain erosion and sedimentation control measures during construction.

.3 Remove erosion and sedimentation controls and restore and stabilize areas disturbed during removal.

.2 Protection of existing works :

.1 Take necessary measures to prevent movement, settling, or any other damage to structures, public utility pipelines, landscaping features, and parts of the building to remain in place. Provide bracing and shoring required.

.2 Keep noise, dust, and inconvenience to occupants to minimum.

.3 Protect appliances, systems, electrical installations within the building, and public utility pipelines.

.4 Provide temporary dust screens, covers, railings, supports and other protection as required.

.3 Demolition/removal

.1 Remove the specified elements and works.

.2 Removal of hard pavement, curbs, and gutters.

.1 Square up adjacent surfaces to remain in place by saw cutting or other method approved by the Departmental Representative.

.2 Protect adjacent joints and load transfer devices.

.3 Protect underlying or adjacent materials.

.3 Remove parts of existing building to permit new construction.

.4 Trim edges of partially demolished building elements to tolerances as defined by Departmental Representative to suit future use.

3.3 WORKS

.1 Clear the demolition site as per the requirements of the competent authorities unless stated otherwise.

.2 Blasting during demolition works is prohibited.

3.4 CLEANING

.1 Progress Cleaning: Leave the premises clean at the end of each workday.

.2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment.

.3 Refer to demolition drawings and specifications for items to be salvaged for reuse.

.4 Waste management: Separate waste materials for recycling and reuse.

.1 Remove recycling bins and containers from the site and dispose of materials at the appropriate facilities.

E N D O F S E C T I O N

1 GENERAL

1.1 REFERENCES

.1 This article refers to the latest versions of standards, laws and regulations applicable at the time of the execution of the works.

.2 ASTM International (ASTM) ;

.1 ASTM A53/A53M, Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated, Welded and Seamless ;

.2 ASTM A90/A90M, Standard Test Method for Weight [Mass] of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings ;

.3 ASTM A121, Standard Specification for Metallic-Coated Carbon Steel Barbed Wire ;

.4 ASTM A123/A123M, Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products ;

.5 ASTM A653/A653M, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process ;

.6 ASTM C618, Standard Specification for Coal Fly Ash and Raw or Calcined Natural Pozzolan for Use in Concrete ;

.7 ASTM F1664, Standard Specification for Poly(Vinyl Chloride) (PVC) and Other Conforming Organic Polymer-Coated Steel Tension Wire Used with Chain-Link Fence ;

.8 ASTM F1910, Standard Specification for Long Barbed Tape Obstacles ;

.3 Canadian General Standards Board (CGSB) ;

.1 CAN/CGSB-1.181, Ready-Mixed Organic Zinc-Rich Coating;

.2 CAN/CGSB-138.1, Fabric for chain link fence ;

.3 CAN/CGSB-138.2, Steel framework for chain link fence ;

.4 CAN/CGSB-138.3, Installation of chain link fence ;

.5 CAN/CGSB-138.4, Gates for chain link fence ;

.4 CSA Group (CSA) ;

.1 CSA A23.1/CSA A23.2, Concrete materials and methods of concrete construction/Test methods and standard practices for concrete ;

.2 CSA A3000, Cementitious materials compendium ;

.5 The Master Painters Institute (MPI) ;

.1 Architectural Painting Specification Manual, [édition courante].

1.2 RELATED REQUIREMENTS

.1 Not used.

1.3 GENERAL INFORMATION AND REQUIREMENTS REGARDING THE PRODUCTS

.1 Not used.

1.4 CALCULATION CRITERIA, DESIGN AND PERFORMANCE REQUIREMENTS

.1 According to CAN/CGSB-138.2 and CAN/CGSB-138.3.

1.5 DOCUMENTS AND SAMPLES TO SUBMIT

.1 Submit the documents and samples according to the prescriptions of the section 01 34 00 – Shop Drawings, Products and Samples :

.1 Product data sheets:

.1 Submit all the required data sheets, the installation instructions and manufacturer's documentation concerning the fencing material, the posts and all the other necessary components. The product data sheets must indicate the characteristics of the products, the performance requirements, the metal thickness, the limitations and the finishes.

.2 Shop drawings:

.1 Submit the required shop drawings, demonstrating the location and type/gauge/post finishes, fences, accessories, anchors and supports.

.3 Engineer's structural drawings:

.1 The Contractor must obtain signed and sealed structural drawings from a structural engineer who is a member of the Ordre des ingénieurs du Québec, indicating the specifications for the construction of foundations, posts and rails, required assemblies, load calculations and any structural information required to execute the works described in these documents.

.2 Submitted shop drawings must bear the seal of a competent engineer recognized in the province of Quebec. This seal certifies that the design of the chain link fence and gate system meets the requirements of the contract documents, the current building code, regulations and applicable standards.

.3 At the end of the work, the Contractor shall issue a certificate of conformity signed and sealed by the engineer who designed it. The visits and services required to issue such a certificate must be included in the Contractor's bid.

1.6 QUALITY ASSURANCE

.1 Not used.

1.7 TRANSPORT, STORAGE AND HANDLING

.1 Transport, store and handle all materials/equipment in accordance with section 01 61 10 – Product Requirements.

.2 Delivery and acceptance: deliver all materials to the construction site in their original packaging, which must bear a label indicating the manufacturer's name and address.

.3 The materials and works must be protected by the Contractor until their acceptance in order to avoid breakage and damage caused by handling, weather and adjacent activities.

1.8 IMPLEMENTATION CONDITIONS AND CLIMATIC CONDITIONS

.1 Not used.

1.9 SECURITY

.1 Carry the works in accordance with the applicable standards and regulations.

.2 Carry the works in accordance with the prescriptions of section 01 54 50 – Security Measures.

1.10 WASTE MANAGEMENT AND DISPOSAL

.1 Waste management: Divert pallets, crates, padding, and packaging materials for their reuse and return to the manufacturer, following the directives outlined in the construction waste management plan, in accordance with section 01 74 19 - Waste Management and Disposal.

1.11 MAINTENANCE, DOCUMENTATION, AND ITEMS TO BE SUBMITTED UPON COMPLETION OF WORK

.1 Submit maintenance sheets as prescribed by section 01 78 00 - Closeout Submittals.

1.12 STARTUP

.1 Not used.

1.13 WARRANTY

.1 Not used.

2 PRODUCTS

2.1 MANUFACTERERS

.1 Systems:

.1 All materials from the same system must be supplied by the same manufacturer.

.2 All materials must comply to the standards and references.

2.2 MATERIALS AND EQUIPMENT

.1 Chain link fence materials: compliant with CAN/CGSB-138.1.

.1 Type 1, category A, heavy diamond wire mesh (4,8 mm, 6 gauge), quality 3 (2.0 oz).

.2 Mesh diamond size: 50.8 mm.

.3 Top and bottom ends in barbed wire.

.4 The average mass of zinc plated wire mesh should not be less than 610 g/m^2 of uncovered wire.

.5 Breaking load of at least 10 000N.

.6 Height of the fence: as indicated in the drawings.

.7 The chain link must be seamless along its entire height and installed along the yard's perimeter.

.2 Posts, struts, and rails: galvanized steel pipes, compliant with the CAN/CGSB-138.2 standard.

.1 The works include the extension of the existing poles. The added sections must be of the same diameter as the existing ones.

.1 The existing corner post and gate have an outer diameter of 88.9 mm. Use 88.9 mm posts, “schedule 40”, weighing 11.28 kg/m for the extension and/or replacement of these posts.

.2 The intermediate posts have a diameter of 60.3 mm. Use 60.3 mm posts, “schedule 40”, 5.73 kg/m for the extension and/or replacement of these posts/rails.

.3 The rails have a diameter of 42.2 mm. Use 42.2 mm posts, schedule 40, 3.38 kg/m for the extension and/or replacement of these posts/rails.

.4 Dimensions shown are approximate. The contractor is responsible for validating existing dimensions before ordering.

.2 Intermediate rails are not to be used.

.3 Barbed wire: compliant with standard CAN/CGSB-138.2. The barbed wire consists of two (2) strands of 2.5 mm diameter wire (12 gauge) equipped with 4 barbs points set 130 mm intervals. All must be galvanized steel.

2.3 SYSTEMS

.1 Not used.

2.4 ACCESSORIES

.1 Assembling parts and hardware: compliant with standard CAN/CGSB-138.2, galvanized steel.

.1 Tension bar clips (bands): in galvanized steel, minimum 3 mm × 20 mm.

.2 End post caps. These must:

.1 provide a waterproof fit,

.2 be securely fixed to the posts,

.3 supporting the top rail.

.3 Overhanging caps. These must:

.1 provide a waterproof fit,

.2 support the upper crossbar.

.3 support the overhanging barbed wire,

.1 galvanized steel support arms combined with a post cap, supplied for all posts overhung by a concertina.

.4 be welded to posts.

2.5 ANCHORAGES AND FASTENERS

.1 Lower tension wires: single wires, galvanized steel wires with a diameter of 5 mm, compliant with CAN/CGSB-138.1 standard.

.2 Attachment wires: Galvanized steel wires of 3.7 mm (gauge 9), compliant with CAN/CGSB-138.1

standard.

.3 Tension bars for the fence's ends: Galvanized steel bars, minimum 5 mm × 20 mm, compliant with ASTM A653/A653M standard.

.4 Tension bar clips (bands): Galvanized steel bars, minimum 3 mm × 20 mm, compliant with ASTM A653/A653M standard. Vertically spaced at 300 mm center-to-center.

.5 Pre-drilled galvanized steel plate with a mounting base to receive the support arm of concertina-type barbed wire for wall installation.

.6 Provide locking screws, locking nuts, rivets, locking nut head screws or other equivalent locking devices that have been approved to secure various components.

.7 Use rivets, locking screws or locking nuts only in areas where maximum protection against removal is required.

.8 Use nut head screws only where protection against removal is not as important and where items may need to be removed and repaired occasionally.

.9 Locking nuts and screws must have an additional head that breaks by twisting when the screw or nut is securely attached so that the main head has no hole or slot to insert a tool for removal.

.10 Locking nut head screws must have six internal lobes and a protrusion that requires the use of a special wrench for removal.

.11 Round head screws are not acceptable except in approved locations where the materials are not thick enough to allow conical drilling.

.12 Standard screws are not acceptable.

.13 Visible securing devices must have the same finish as the material through which they pass and be compatible with that material.

2.6 FINISHING

.1 Galvanization

.1 Chain link mesh: in accordance with CAN/CGSB-138.1, category 2, zinc plating of at least 610 g/m^2.

.2 Pipes: zinc plating of at least 550 g/m^2 in accordance with ASTM A90 standard

.3 Barbed wire: compliant with CAN/CGSB-138.2 standard.

.4 Other assembly parts: compliant with ASTM A123/A123M.

.2 Organic zinc-rich coating: compliant with CAN/CGSB-1.181.

2.7 MANUFACTURING/SHAPING

.1 Concertina-type barbed wire:

.1 Compliant with CAN/CGSB-138.2 and ASTM F1910 standards, composed of barbed wire forming a concertina spiral with a nominal diameter of 710 mm. Once installed, the concertina must have a minimum diameter of 630 mm and have blades measuring 20 mm from end to end. Additionally, the barbed wire clusters must be spaced approximately 45 mm center to center. The concertina is formed from loops of helical coil rolls fastened together by at least three (3) points along their circumference using galvanized steel clips. Once stretched, the resulting coil must form a cylinder. The space between loops must not exceed 230 mm.

.2 On the top the fencing, the concertina wires are supported by two (2) stretched barbed wires and they must be secured to the post arms.

.3 Concertina wires must be supported by two (2) barbed wires and be secured to them, respecting a spacing of 230 mm.

3 EXECUTION

3.1 GENERAL

.1 Immediately inform the Departmental Representative of any unacceptable or different conditions from the plans and technical specifications.

3.2 PREPARATION

.1 Proceed with the demolition of the fence sections indicated on the drawings

3.3 FENCE INSTALLATION

.1 Chain link fences must be installed in accordance with CAN/CGSB-138.3 standard.

.2 The extension of existing posts will be carried out by adding sleeves of sufficient diameter to be inserted inside the existing posts, serving as a male part for the installation of the new posts. The sleeve, along with the junction between the existing and new posts, will be welded with zinc coating.

.3 Install the braces between the end and gate posts, and the closest intermediate post, in the middle of the post and parallel to the ground surface.

.1 Install the braces identically on each side of the corner and reinforcement posts.

.4 Install overhanging connections and post caps.

.5 Place the bottom and top braces between the posts and securely attach them; Secure overhang

connectors and caps.

.6 Install the bottom and top tension wire, stretching it out tightly, and securely attach it to the end, corner, gate and brace posts using tensioners and tension band.

.7 Unroll the fence chain link. It must be stretched out before installed. Stretching it out tightly, and securely attach it to the end, corner, gate and brace posts using tensioners and tension bar affixed to each post with clamps at 300 mm intervals. Once the chain link is installed, the tension must be verified by conducting tensile tests. When a perpendicular tension of 12 kg applied to the midpoint of any chain link panel (midpoint of posts/rails), the fence should not move more than 30 mm vertically. Ensure that the distance between the tension bar and the posts does not exceed 13 mm.

.8 Secure the chain link to the top, intermediate braces and bottom tension wire using tie wires at 300 mm intervals.

.1 The attachment link must be twisted and welded on the side opposite to the inmates.

.9 Install the barbed band and securely fasten it to the brackets on each extension.

.10 When the fastening requires bolts and nuts, they must be positioned on the exterior and tightened securely.

3.4 CLEANING

.1 Final touches: Clean and prepare damaged surfaces using a wire brush to remove any loosened or cracked surface layers, to remove rust and foreign materials. Apply two (2) layers of zinc-rich paint on damaged surfaces.

.2 Cleaning: carry out cleaning work in accordance with section 01 74 11 - Cleaning.

3.5 INSPECTION AND TESTING

.1 Not used.

E N D O F S E C T I O N