



**RETURN BIDS TO:**

**RETOURNER LES SOUMISSIONS À:**

Public Works and Government Services Canada  
ATB Place North Tower  
10025 Jasper Ave./10025 ave. Jasper  
5th floor/5e étage  
Edmonton  
Alberta  
T5J 1S6  
Bid Fax: (780) 497-3510

**SOLICITATION AMENDMENT  
MODIFICATION DE L'INVITATION**

The referenced document is hereby revised; unless otherwise indicated, all other terms and conditions of the Solicitation remain the same.

Ce document est par la présente révisé; sauf indication contraire, les modalités de l'invitation demeurent les mêmes.

**Comments - Commentaires**

**Vendor/Firm Name and Address  
Raison sociale et adresse du  
fournisseur/de l'entrepreneur**

**Issuing Office - Bureau de distribution**  
Public Works and Government Services Canada  
ATB Place North Tower  
10025 Jasper Ave./10025 ave Jasper  
5th floor/5e étage  
Edmonton  
Alberta  
T5J 1S6

<b>Title - Sujet</b> CSC EMSI Fence Repair	
<b>Solicitation No. - N° de l'invitation</b> EW038-190361/A	<b>Amendment No. - N° modif.</b> 003
<b>Client Reference No. - N° de référence du client</b> CSC	<b>Date</b> 2018-06-07
<b>GETS Reference No. - N° de référence de SEAG</b> PW-\$PWU-004-11381	
<b>File No. - N° de dossier</b> PWU-8-41024 (004)	<b>CCC No./N° CCC - FMS No./N° VME</b>
<b>Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2018-06-19</b>	<b>Time Zone Fuseau horaire</b> Mountain Daylight Saving Time MDT
<b>F.O.B. - F.A.B.</b> <b>Plant-Usine:</b> <input type="checkbox"/> <b>Destination:</b> <input type="checkbox"/> <b>Other-Autre:</b> <input type="checkbox"/>	
<b>Address Enquiries to: - Adresser toutes questions à:</b> Espedido, Karielen K.	<b>Buyer Id - Id de l'acheteur</b> pwu004
<b>Telephone No. - N° de téléphone</b> (780) 497-3859 ( )	<b>FAX No. - N° de FAX</b> (780) 497-3510
<b>Destination - of Goods, Services, and Construction: Destination - des biens, services et construction:</b>	

**Instructions: See Herein**

**Instructions: Voir aux présentes**

<b>Delivery Required - Livraison exigée</b>	<b>Delivery Offered - Livraison proposée</b>
<b>Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur</b>	
<b>Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur</b>	
<b>Name and title of person authorized to sign on behalf of Vendor/Firm (type or print) Nom et titre de la personne autorisée à signer au nom du fournisseur/ de l'entrepreneur (taper ou écrire en caractères d'imprimerie)</b>	
<b>Signature</b>	<b>Date</b>

Solicitation No. - N° de l'invitation  
EW038-190361/A

Amd. No. - N° de la modif.  
003

Buyer ID - Id de l'acheteur  
pwu004

Client Ref. No. - N° de réf. du client  
CSC

File No. - N° du dossier  
PWU-8-41024

CCC No./N° CCC - FMS No./N° VME

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This amendment has been raised with the following changes:

**AMENDMENT #003:**

**ADDENDUM #002:**

The following changes to the tender documents are effective immediately and will form part of the contract documents:

**1. GENERAL**

- 1.1 The Bidding Documents are amended as noted in this Addendum, which consists of seven (7) pages plus the following attachments:
- 1) Specification Section 01 35 13 – Security Requirements.
  - 2) Specification Section 09 01 90 62 - Exterior Repainting.
  - 3) Specification Section 32 31 13 – Chain Link Fences and Swing Gates.
  - 4) Drawing A0.0 – Cover Sheet, Project Information & Drawing List.
  - 5) Drawing A1.1 – Overall Site Plan.
  - 6) Drawing A2.0 – Fence & Gate Elevations.
  - 7) Drawing A2.1 – Fence & Gate Details.
  - 8) Drawing A2.2 – Fence & Gate Details.
  - 9) Drawing A2.3 – Cremona Bolt Details.
  - 10) Drawing A3.0 - .Site Plan – Existing Utility Layout & Proposed Contractor Staging.
- 1.2 This Addendum is issued prior to bid closing to incorporate revisions noted herein. Include in the Bid price all such revisions which will become part of the Work. Perform all such Work in accordance with the Contract Documents.
- 1.3 All affected drawings, schedules and panel changes shall be reflected in final as-built and manual submissions.

**2. ANSWERS TO BIDDERS' QUESTIONS**

- 2.1 **Question #1:** What is the expectation for Contractor Superintendent supervision and site attendance over the course of the project?

**Answer:** Please refer to STANDARD ACQUISITION CLAUSES AND CONDITION R2820D (2016-01-28) GC2.6 (2008-05-12) SUPERINTENDENT states, among other things, The Contractor shall designate a Superintendent and shall keep the Superintendent at the Work site during working hours – for all stages of project delivery including but not limited to mobilization, deliveries, execution, inspections, turnover deficiencies and demobilization – until the Work has reached completion.

Departmental Representative will not accept deliveries on behalf of the Contractor under any circumstance.

Please refer to WORK RESTRICTION Specification 01 14 00 Section 1.1.3 which states that the Site Supervisor is allowed to use the perimeter road to perform supervisory duties for the work being performed. Contractor must equip the vehicle with a buggy whip to facilitate identification of the vehicle at a distance from institutional operators.

- 2.2 **Question #2:** Will permitting be required from City of Edmonton on this project?

**Answer:** No, permitting will not be required in any capacity for this scope of work via City of Edmonton standard permitting process.

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2.3 **Question #3:** What will the hours of work be? Will the work be allowed to take place on weekends?

**Answer:** Hours of work preferred by the institution are 7am-3pm, Monday-Friday.

Acceptable hours of work are 7am to 7pm, Monday to Friday.

Contractor must seek approval on a week by week basis for any work past 4pm weekdays, or for any weekend work.

If after hours work (after 4pm weekdays) and/or weekend work has been authorized, Contractor shall completely and always avoid NW quadrant of site (plan view photo 22 near main gate, to plan view photo 5 near ceremonial yard) either inside the main security fence (IPF) or in the no-man's-land in between IPF & EPF. This requirement is for the safety and security of CSC staff and inmates.

2.4 **Question #4:** Will the owner be supplying washroom facilities?

**Answer:** Please refer to CONSTRUCTION FACILITIES Specification 01 52 00 Section 1.9 SANITARY FACILITIES (PORTA POTTIES) which states that the Contractor must provide sanitary facilities that will remain outdoors and locked while not in use. Specification goes into detail on where sanitary facilities are allowed and not allowed to be placed for the duration of the project. Contractor is to coordinate bathroom access and schedule with Commissionaires. Please note that the hand-cleaning substance in the sanitary facilities may not contain alcohol as it is considered contraband.

2.5 **Question #5:** Will the contractor material laydown/seacan's be located inside the security gate?

**Answer:** Please refer to CONSTRUCTION FACILITIES Specification 01 52 00 Section 1.8 EQUIPMENT, TOOL AND MATERIALS STORAGE which goes into detail on where material can be staged

EPF material must be kept outside of the security fence.

Sweat lodge, IPF, NW Rec Yard material staging acceptable shown in that spec section. Minor residual material staging as directed by Departmental Representative.

2.6 **Question #6:** What should be expected for how long it will take employees to enter through security and move material/equipment from laydown through the main gate?

**Answer:** Please refer to WORK RESTRICTIONS Specification 01 14 00 Section 1.1.1 & 1.1.2 WORK RESTRICTIONS which states that a half-an-hour (0.5) allowance is to be made for screening each instance of personnel at the beginning of the work shift, and for any re-entries throughout the work shift. Any personnel to arrive at site at an unscheduled time or otherwise arrive on site for an unscheduled reason (i.e. late for shift, drop-in or unexpected site visit, etc.) shall allow for one (1) hour for security screening and escort to area of work. Section 1.1.2 states that one (1) hour allowance is to be made for screening each vehicle.

A telehandler, forklift or any other equipment used for material and equipment staging, shall, for all intents and purposes, be interpreted as a vehicle. As such, contractor should plan for one (1) hour for security screening every instance material or equipment must be moved into the work area via the main security gate. This includes but is not limited to material staging for EPF.

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2.7 **Question #7:** Will the owner be hosting the bi-weekly progress meetings?

**Answer:** Please refer to PROJECT MEETINGS Specification 01 31 19

Contractor is to prepare agenda, record minutes and hold bi-weekly meetings throughout the duration of the project.

Contractor will hold bi-weekly meetings in the Departmental Representative provided meeting space on site.

2.8 **Question #8:** Will the institution be providing an office for the Contractor Superintendent?

**Answer:** Contractor is responsible for any temporary trailers or office for employees or supervision.

Please refer to WORK RESTRICTIONS Specification 01 14 00 Section 1.1.3 WORK RESTRICTIONS which states that contractor Field Supervisor is allowed to use the exterior perimeter road (using contractor provided vehicle) to perform supervisory duties.

This may be beneficial for the purposes of enabling Field Supervisor to perform supervisory duties, with the use of cell phones and/or laptop as well; being that the perimeter road is outside the institution, there is not a restriction for electronics.

If Field Supervisor chooses to perform supervisory duties inside the security fence, there is no guarantee any electronics aside from a camera, will be authorized by the institution; please cross reference SECURITY REQUIREMENTS Specification 01 35 13.

2.9 **Question #9:** What is the expectation for cleanliness at the end of each work day?

**Answer:** CLEANING Specification 01 74 00 Section 1.1 PROJECT CLEANLINESS states that Contractor shall leave Work area completely clean at the end of each day to the satisfaction of the Departmental Representative.

Contractor shall assign each employee a personal waste collector (i.e. a bucket) when performing any work that will produce refuse, as per section 1.1.8 of CLEANING Specification 01 74 00.

If an area is found to be not cleaned, and thus poses a threat to the safety and security of CSC staff and inmates, contractor will be required to immediately direct forces to clean the area to the satisfaction to the Departmental Representative. Please cross reference SECURITY REQUIREMENTS Specification 01 35 13 section 1.21.1.1 STOPPAGE OF WORK.

2.10 **Question #10:** Will we be able to use a vehicle for hauling material around site to the work areas?

**Answer:** It is acceptable for contractor to use a utility vehicle (i.e. gator) to bring material from laydown(s) to work area(s) as per WORK RESTRICTIONS Specification 01 14 00 section 1.1.4.

2.11 **Question #11:** Will it be acceptable to leave equipment inside the fence at the end of a work day (Scizzor lifts / man lifts / etc.)?

**Answer:** Have to bring outside the gate at the end of each work day, contractor responsible for safely securing equipment from theft and damage.

2.12 **Question #12:** Is powder coating or electrostatic painting required for this job?

**Answer:** No.

2.13 **Question #13:** What needs to be painted black on this job?

**Answer:** Other than the existing crash bar and the new crash bar locking system, the only items that need to receive black paint on this job are the post cap welds on the exterior and interior perimeter

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fences which need to be painted to match the existing black colour of the posts. Refer to Section 32 31 13 – Chain Link Fences and Gates for required black paint system.

2.14 **Question #14:** What needs to receive galvanized touch-up (silver coloured) paint on this job?

**Answer:** Refer to Section 09 01 90 62 – Exterior Repainting for exterior and interior perimeter fence barb (post) arm repainting work. Also refer to drawings and Section 32 31 13 – Chain Link Fences and Gates for required welding touch-ups other than exterior and interior perimeter fence locations which are to receive black paint touch-ups.

2.15 **Question #15:** Can you describe in more detail what scope of work for Exterior Perimeter Fence (EPF) & the Interior Perimeter Fence (IPF)?

**Answer:** SUMMARY OF WORK Specification 01 11 00 Section 1.13 states that for the EPF & IPF, any demolition work that takes place over a day must be installed with new the same day; both of these fences must be left secure at the end of the work shift (i.e. fully installed assembly). So any section that is worked on, any given day, must be replaced that same day.

EPF work is to take place the first season.

IPF work is to take place the second season.

The scope of work for both EPF and IPF are identical, and is captured succinctly in the legend on drawing A0.0

2.16 **Question #16:** Can you describe in more detail what scope of work for the sally port fencing (SF1 & SF2)?

**Answer:** SUMMARY OF WORK Specification 01 11 00 Section 1.4.1.6 states that for the SF1 & SF2, similar to EPF & IPF, any section that is worked on any given day must be replaced that same day. Furthermore, as stated in that section, the work must be scheduled at least 6-weeks in advance and must take place without causing disruptions to the facility. It shall be assumed (as this is the primary entrance/exit to the facility) that the work must take place over several ½ days over a few weekends (i.e. Saturday AM, Sunday AM) or for several full work shifts after 5pm on a weekday.

The scope of work for both SF1 and SF2 are identical, and is captured succinctly in the legend on drawing A0.0

2.17 **Question #17:** Drawing A3.0 shows a Type 2 secure temporary fence near DF1 fence installation, can you expand on this requirement?

**Answer:** A type 2 secure temporary fence is required when work is being performed on DF1 as per TEMPORARY BARRIERS AND ENCLOSURES Specification 01 56 00 Section 1.3.1.2

Further requirements are expanded on as follows:

Contractor shall initially only replace the 2.5 of intersecting fence for DF1, erect the Type 2 security fence to completely isolate the 2.5 of intersecting fence being replaced, and coordinate the local security specialist firm to coil the FDS onto the temporary fence.

Once contractor has completed the installation of the new 2.5 intersecting fence for DF1, contractor shall coordinate with local security specialist firm to uncoil the FDS off of the temporary security fence, onto the new 2.5 intersecting fence.

Contractor shall then ensure the temporary security fence is re-routed so as to be at least 2.5m away from the IPF, when isolating the remainder of DF1 for work being performed.

2.18 **Question #18:** Can you please provide more clarification on what the constraints will be for garbage bin placement?

**Answer:** When garbage bins are located inside the security fence, they must be closed with a secure lid and locked when not in use.

Garbage bins are not allowed to be staged in no-man's land (in between EPF & IPF) unless it is temporary for the day-use only. Garbage bins in no-man's land must be removed before the end of each work day.

EPF principal garbage bin will be located outside of the perimeter fence. It is acceptable for contractor to assume they will be able to use the fire exit gate (south of the main gate near T1, where the crash bar is being replaced) to haul EPF waste to the garbage bin outside of the perimeter fence.

All remaining garbage bins are acceptable to be staged in the laydown areas defined in the contract documents, or in line with the same restrictions as porta-pottie placements as defined in the contract documents, as long as the garbage bins within the perimeter fence are closed and locked while not in use.

### 3. SPECIFICATIONS

3.1 Table of Contents:

- 1) Add Drawing A2.3 – Cremona Bolt Details to list of drawings.
- 2) Revise Section 09 01 90 62 - Exterior Repainting page number to 10.
- 2) Revise Section 09 91 13 - Exterior Painting page number to 8.

3.2 Section 01 11 00 – Summary of Work:

- 1) Add new Article 1.19. To read as follows:

#### 1.19 SEASONAL EXECUTION

.1 Work on this project is to take place according to the following seasonal restrictions:

.1 2018: no work past October 15th.

.2 2019: no work before April 15th and no work past October 15th.

3.3 Section 01 35 13 – Security Requirements:

- 1) See attached revised section complete with changes to work hours and overtime to match answers to question #3 above.

3.4 Section 09 01 90 62 – Exterior Repainting:

- 1) See attached revised and simplified section.

3.5 Section 09 91 13 – Exterior Painting:

- 1) Delete Sub-paragraph 2.2.2 (post cap weld colour requirements). Refer instead to Section 32 31 13 – Chain Link Fences and Gates for perimeter fence post cap weld painting requirements.
- 2) Delete Paragraph 2.5.2 (Galvanized Metal exterior painting system EXT 5.3B). Refer instead to Section 32 31 13 – Chain Link Fences and Gates for perimeter fence post cap weld painting requirements.

3.6 Section 32 31 13 – Chain Link Fences and Gates:

- 1) See attached revised section with following changes:
  - a) Revisions to subparagraph 2.1.7.1: calling for welding of bolts to nuts or thread damage to bolts at tension bar band locations to prevent removal of nuts.
  - b) New black touch-up paint system for exterior and interior perimeter fence post cap welds only.

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#### **4. DRAWINGS**

- 4.1 A0.0 – Cover sheet, Project Information & Drawing List:
  - 1) See attached revised drawing.
- 4.2 A1.1 – Overall Site Plan:
  - 1) See attached revised drawing.
- 4.3 A2.0 – Fence & Gate Elevations:
  - 1) See attached revised drawing.
- 4.4 A2.1 – Fence & Gate Details:
  - 1) See attached revised drawing.
- 4.5 A2.2 – Fence & Gate Details:
  - 1) See attached revised drawing.
- 4.6 A2.3 – Cremone Bolt Details:
  - 1) See attached revised drawing.
- 4.7 A3.0 - .Site Plan – Existing Utility Layout & Proposed Contractor Staging:
  - 1) See attached revised drawing.

**END OF AMENDMENT**

**Part 1            General**

**1.1                PURPOSE**

- .1        To ensure that both the construction project and the institutional operations may proceed without undue disruption or hindrance and that the security of the Institution is maintained at all times.

**1.2                DEFINITIONS**

- .1        "Contraband" means:
  - .1        an intoxicant, including alcoholic beverages, drugs and narcotics,
  - .2        a weapon or a component thereof, ammunition for a weapon, and anything that is designed to kill, injure or disable a person or that is altered so as to be capable of killing, injuring or disabling a person, when possessed without prior authorization,
  - .3        an explosive or a bomb or a component thereof,
  - .4        currency over \$25, when possessed by an inmate without prior authorization, and
  - .5        any item not described in paragraphs (1) to (4) that could jeopardize the security of a Penitentiary or the safety of persons, when that item is possessed without prior authorization
- .2        "Unauthorized Smoking Items" means all smoking items including, but not limited to, cigarettes, cigars, tobacco, chewing or snuffing tobacco, cigarette making machines, matches and lighters.
- .3        "Commercial Vehicle" means any motor vehicle used for the shipment of material, equipment and tools required for the construction project.
- .4        "CSC" means Correctional Service Canada.
- .5        "Construction employees" means persons working for the general Contractor, the sub-contractors, equipment operators, material suppliers, testing and inspection companies and regulatory agencies.
- .6        "Departmental Representative" means the Public Works and Government Services Canada (PWGSC) or the Correctional Service Canada (CSC) project manager depending on project.
- .7        "Perimeter" means the fenced or walled area of the institution that restrains the movement of the inmates.
- .8        "Construction zone" means the area as shown on the contract drawings where the contractor will be allowed to work. This area may or may not be isolated from the security area of the institution.

**1.3                PRELIMINARY PROCEEDINGS**

- .1        Prior to the commencement of work, the Contractor will meet with the Departmental Representative to:
  - .1        Discuss the nature and extent of all activities involved in the Project.
  - .2        Establish mutually acceptable security procedures in accordance with this instruction and the institution's particular requirements.

- .2 The Contractor will:
  - .1 Ensure that all construction employees are aware of the CSC security requirements.
  - .2 Ensure that a copy of the CSC security requirements is always prominently on display at the job site.
  - .3 Co-operate with institutional personnel in ensuring that security requirements are observed by all construction employees.

#### **1.4 CONSTRUCTION EMPLOYEES**

- .1 Departmental Representative may request a list of the names with date of birth of all construction employees to be employed on the construction site and a security clearance form for each employee. (*Institutional Access CPIC Clearance Request form CSC/SCC 1279*).
- .2 If CPIC is requested, allow two (2) weeks for processing of security clearances. Construction employees will not be admitted to the Institution without a valid security clearance in place and a recent picture identification such as a provincial driver's license. Security clearances obtained from other CSC institutions are not valid at the institution where the project is taking place.
- .3 The Departmental Representative may require that facial photographs be taken of construction employees and these photographs be displayed at appropriate locations in the institution or in an electronic database for identification purposes. The Departmental Representative requires that Photo ID cards be provided for all construction workers. ID cards will then be left at the designated entrance to be picked upon arrival at the institution and shall be displayed prominently on the construction employees clothing at all time while employees are at the institution.
- .4 Entry to Institutional Property will be refused to any person there may be reason to believe may be a security risk.
- .5 Any person employed on the construction site will be subject to immediate removal from Institutional Property if they:
  - .1 appear to be under the influence of alcohol, drugs or narcotics.
  - .2 behave in an unusual or disorderly manner.
  - .3 are in possession of contraband.
- .6 Half-an-hour (0.5) allowance to be made for screening each instance of personnel at the beginning of the work shift, and for any re-entries throughout the work shift.
  - .1 Any personnel to arrive at site at an unscheduled time or otherwise arrive on site for an unscheduled reason (i.e. late for shift, drop-in or unexpected site visit, etc.) shall allow for one (1) hour for security screening and escort to area of work

#### **1.5 VEHICLES**

- .1 All unattended vehicles on CSC property shall have windows closed; doors and trunks shall be locked and keys removed. The keys shall be securely in the possession of the owner or an employee of the company that owns the vehicle.
- .2 The Departmental Representative may limit at any time the number and type of vehicles allowed within the Institution.
- .3 Drivers of delivery vehicles for material required by the project shall require security clearances and must remain with their vehicle the entire time that the vehicle is in the

Institution. The director may require that these vehicles be escorted by Institutional staff or Commissionaires while in the Institution.

- .4 If the Departmental Representative permits trailers to be left inside the secure perimeter of the Institution, these trailer doors will be locked at all times. All windows will be securely locked when left unoccupied. All trailer windows shall be covered with expanded metal mesh. All storage trailers inside and outside the perimeter must be locked when not in use.

## **1.6 PARKING**

- .1 The parking area(s) to be used by construction employees will be designated by the Departmental Representative. Parking in other locations will be prohibited and vehicles may be subject to removal.

## **1.7 SHIPMENTS**

- .1 All shipments of project material, equipment and tools shall be addressed in the Contractor's name to avoid confusion with the institution's own shipments. The Contractor must have his own construction employees on site to receive any deliveries or shipments. CSC staff will NOT accept receipt of deliveries or shipments of any material equipment or tools.

## **1.8 TELEPHONES**

- .1 There will be no installation of telephones, Facsimile machines and computers with Internet connections permitted within the perimeter of the institution unless prior approval of the Departmental Representative is received.
- .2 The Departmental Representative will ensure that approved telephones, Facsimile machine and computers with Internet connections are located where they are not accessible to inmates. All computers will have an approved password protection that will stop an Internet connection to unauthorized personnel.
- .3 Wireless cellular and digital telephones, including but not limited to devices for telephone messaging, pagers, smart phones, telephone used as 2-way radios, are not permitted within the perimeter of the Institution unless approved by the Departmental Representative. If wireless cellular telephones are permitted, the user will not permit their use by any inmate. Cellular telephones approved by the Departmental Representative must be signed in and out of the institution.
- .4 The Departmental Representative may approve and limit the use of two-way radios.

## **1.9 WORK HOURS AND OVERTIME**

- .1 Hours of work preferred by the institution are 7 am to 3 pm, Monday to Friday.
- .2 Acceptable hours of work are 7 am to 7 pm, Monday to Friday.
- .3 Contractor must seek approval on a week by week basis for any work past 4pm weekdays, or for any weekend work.
- .4 If after hours work (after 4pm weekdays) and/or weekend work has been authorized, Contractor shall completely and always avoid NW quadrant of site (plan view photo 22 near main gate, to plan view photo 5 near ceremonial yard) either inside the main security fence (IPF) or in the no-man's-land in between IPF & EPF. This requirement is for the safety and security of CSC staff and inmates.

### **1.10 TOOLS AND EQUIPMENT**

- .1 Maintain on site a complete list of all tools and equipment to be used during the construction project. Make this inventory available for inspection when required.
- .2 Throughout the construction project maintain up-to-date the list of tools and equipment specified above.
- .3 Keep all tools and equipment under constant supervision, particularly power-driven and cartridge-driven tools, cartridges, files, saw blades, rod saws, wire, rope, ladders and any sort of jacking device.
- .4 Store all tools and equipment in approved secure locations.
- .5 Lock all toolboxes when not in use. Keys to remain in the possession of the construction employees of the Contractor.
- .6 Scaffolding shall be secured and locked when not erected and when erected, shall be secured in a manner agreed upon with the Departmental Representative.
- .7 All missing or lost tools or equipment shall be reported immediately to the Departmental Representative.
- .8 The Departmental Representative will ensure that the security staff members carry out checks of the Contractor's tools and equipment against the list provided by the Contractor. These checks may be carried out at the following intervals:
  - .1 At the beginning and conclusion of every construction project.
  - .2 Weekly, when the construction project extends longer than a one week period.
- .9 Certain tools/equipment such as cartridges and hacksaw blades are highly controlled items. The contractor will be given at the beginning of the day, a quantity that will permit one day's work. Used blades/cartridges will be returned to the Departmental Representative at the end of each day. All power "shot", Ram-set, Hilti or any other power-driven tool must have all cartridges accounted for including those which have been used. The correct count of these tools must be verified entering and leaving the institution at the beginning and end of each day. All broken blades and tools must be accounted for and broken tools are not to be thrown away. Particular attention must be given to power driven tools, files, saw blades, rod saws, wire, rope and ladders. Tool kits must be locked when the area is unattended.
- .10 If propane or natural gas is used for heating the construction, the institution will require that an employee of the contractor supervise the construction site during non-working hours.

### **1.11 SECURITY HARDWARE**

- .1 Turn over all removed security hardware to the Departmental Representative of the Institution for disposal or for safekeeping until required for re-installation.

### **1.12 PRESCRIPTION DRUGS**

- .1 Employees of the Contractor who are required to take prescription drugs during the workday shall obtain approval of the Departmental Representative to bring a one-day supply only into the Institution.

**1.13 SMOKING RESTRICTIONS**

- .1 Contractors and construction employees are not permitted to smoke inside correctional facilities or outdoors within the perimeter of a correctional facility and must not possess unauthorized smoking items within the perimeter of a correctional facility.
- .2 Contractors and construction employees who are in violation of this policy will be requested to immediately cease smoking or dispose of any unauthorized smoking items and, if they persist, will be directed to leave the institution.
- .3 Smoking is only permitted outside the perimeter of a correctional facility in an area to be designated by the Departmental Representative.

**1.14 CONTRABAND**

- .1 Weapons, ammunition, explosives, alcoholic beverages, drugs and narcotics are prohibited on institutional property.
- .2 The discovery of contraband on the construction site and the identification of the person(s) responsible for the contraband shall be reported immediately to the Departmental Representative.
- .3 Contractors should be vigilant with both their staff and the staff of their sub-contractors and suppliers that the discovery of contraband may result in cancellation of the security clearance of the affected employee. Serious infractions may result in the removal of the company from the Institution for the duration of the construction.
- .4 Presence of arms and ammunition in vehicles of contractors, sub-contractors and suppliers or employees of these will result in the immediate cancellation of security clearances for the driver of the vehicle.

**1.15 SEARCHES**

- .1 All vehicles and persons entering institutional property may be subject to search.
- .2 When the Departmental Representative suspects, on reasonable grounds, that an employee of the Contractor is in possession of contraband or unauthorized items, he may order that person to be searched.
- .3 All employees entering the Institution may be subject to screening of personal effects for traces of contraband drug residue.

**1.16 ACCESS TO AND REMOVAL FROM INSTITUTIONAL PROPERTY**

- .1 Construction personnel and commercial vehicles will not be admitted to the institution after normal working hours, unless approved by the Departmental Representative.

**1.17 MOVEMENT OF VEHICLES**

- .1 Escorted vehicles (including but not limited to material deliveries) should avoid entering or leaving the institution through the vehicle access gate during the following hours:
  - .1 07:00 to 07:30 hrs
  - .2 11:00 to 11:30 hrs
  - .3 16:00 to 16:30 hrsVehicle entry/exit shall always plan for 1 hour to pass through security screening.
- .2 The contractor shall advise the Departmental Representative twenty four (24) hours in advance to the arrival on the site of heavy equipment such as concrete trucks, cranes, etc.

- .3 Vehicles being loaded with soil or other debris, or any vehicle considered impossible to search, must be under continuous supervision by CSC staff or Commissionaires working under the authority of the Departmental Representative.
- .4 Commercial vehicles will only be allowed access to institutional property when their contents are certified by the Contractor or his representative as being strictly necessary to the execution of the construction project.
- .5 Vehicles shall be refused access to institutional property if, in the opinion of the Departmental Representative, they contain any article which may jeopardize the security of the institution.
- .6 Private vehicles of construction employees will not be allowed within the security perimeter of medium or maximum security institutions without the authorization of the Departmental Representative. Contractor's employees will park their vehicles in a designated area outside the perimeter of the institution.
- .7 With the approval of the Departmental Representative, certain equipment may be permitted to remain on the construction site overnight or over the weekend. This equipment must be securely locked, with the battery removed. The Departmental Representative may require that the equipment be secured with a chain and padlock to another fixed object.

#### **1.18 MOVEMENT OF CONSTRUCTION EMPLOYEES ON INSTITUTIONAL PROPERTY**

- .1 Subject to the requirements of good security, the Departmental Representative will permit the Contractor and his employees as much freedom of action and movement as is possible.
- .2 However, notwithstanding paragraph above, the Departmental Representative may:
  - .1 Prohibit or restrict access to any part of the institution.
  - .2 Require that in certain areas of the institution, either during the entire construction project or at certain intervals, construction employees only be allowed access when escorted by a member of the CSC security staff or a commissionaire.
- .3 During the lunch and coffee/health breaks, all construction employees will remain within the construction site. Construction employees are not permitted to eat in the officer's lounge or the dining room of the institution.

#### **1.19 SURVEILLANCE AND INSPECTION**

- .1 Construction activities and all related movement of personnel and vehicles will be subject to surveillance and inspection by CSC security staff members to ensure that established security requirements are met.
- .2 CSC staff members will ensure that an understanding of the need to carry out surveillance and inspections, as specified above, is established among construction employees and maintained throughout the construction project.

#### **1.20 STOPPAGE OF WORK**

- .1 The Departmental Representative may order at any time that the contractor, his employees, sub-contractors and their employees to not enter or to leave the work site immediately due to a security situation occurring within the Institution. The contractor's

site supervisor shall note the name of the CSC staff member giving this instruction, the time of the request and obey the order as quickly as possible.

- .1 If security situation occurrence is as a result of contractor activities (missing or unaccounted for tool, missing or unaccounted for consumable, debris or waste not cleaned in a work area, etc.) then the contractor shall follow direction of Departmental Representative to use own forces to rectify the situation (find missing or unaccounted for tool, find or determine cause of unaccounted for consumable, clean debris or waste in a work area, etc.)
- .2 The contractor shall advise the Departmental Representative of any security situation interruption of the work within 24 hours.

### **1.21 CONTACT WITH INMATES**

- .1 Unless specifically authorized, the contractor is not encouraged to come into contact with inmates, to talk with them, to receive objects from them or to give them objects. Any construction employee doing any of the above without permission will be removed from the site and his security clearance revoked.
- .2 It is to be noted that cameras are not allowed on CSC property except if required for photographic history of the project. In this case, the contractor will be asked to use a designated memory card for the project.
- .3 Notwithstanding the above paragraph, if the Departmental Representative approves of the usage of cameras, it is strictly forbidden to take pictures of inmates, of CSC staff members or of any part of the Institution other than those required as part of this contract.

### **1.22 COMPLETION OF CONSTRUCTION PROJECT**

- .1 Upon completion of the construction project or, when applicable, the takeover of a facility, the Contractor shall remove all remaining construction material, tools and equipment that are not specified to remain in the Institution as part of the construction contract.

## **Part 2 Products**

### **2.1 NOT USED**

- .1 Not Used.

## **Part 3 Execution**

### **3.1 NOT USED**

- .1 Not Used.

**END OF SECTION**

**Part 1 General**

**1.1 REFERENCE STANDARDS**

- .1 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
  - .1 Material Safety Data Sheets (SDS).
- .2 The Master Painters Institute (MPI)
  - .1 Maintenance Repainting Manual 2004, Master Painters Institute (MPI), including Identifiers, Evaluation, Systems, Preparation and Approved Product List.
- .3 National Research Council Canada (NRC)
  - .1 National Fire Code of Canada 2015 (NFC).
- .4 Society for Protective Coatings (SSPC)
  - .1 SSPC SP2 - Hand Tool Cleaning.
  - .2 SSPC SP3 – Power Tool Cleaning.

**1.2 QUALITY ASSURANCE**

- .1 Qualifications:
  - .1 Contractor: to have a minimum of five years proven satisfactory experience. When requested, provide list of last three comparable jobs including, job name and location, specifying authority, and project manager.
- .2 Conform to latest MPI requirements for exterior repainting work including cleaning, preparation and priming.
- .3 Materials (primers, paints, coatings, varnishes, stains, lacquers, fillers, thinners, and solvents) to be in accordance with the latest edition of the MPI Approved Product List and to be from a single manufacturer for each system used.
- .4 Paint materials such as linseed oil, shellac, and turpentine, to be the highest quality product of an approved manufacturer listed in MPI Maintenance Repainting Manual and shall be compatible with other coating materials as required.
- .5 Retain purchase orders, invoices and other documents to prove conformance with noted MPI requirements when requested by Departmental Representative.
- .6 Standard of Acceptance:
  - .1 No defects visible from a distance of 1000 mm at 90 degrees to surface.
  - .2 Final coat to exhibit uniformity of colour and uniformity of sheen across full surface area.
- .7 Inspections:
  - .1 The barb (post) arm repainting work portion of this section is to be inspected by a MPI Accredited Paint Inspection Agency (inspector) acceptable to specifying authority and local Painting Contractor's Association. The painting contractor will notify Paint Inspection Agency a minimum of one week prior to commencement of work and provide a copy of project painting specification,

- plans and elevation drawings (including pertinent details) as well as Finish Schedule.
- .2 The Independent Paint Inspection Agency will be paid for by the Contractor.
- .3 Cooperate with the inspection firm and provide access to areas of work.
- .4 Refer to FIELD QUALITY CONTROL OF BARB (POST) ARM REPAINTING WORK article in Part 3 for further requirements and details.
- .8 Mock-ups:
  - .1 Provide mock-ups in accordance with requirements of Section 01 45 00- Quality Control to the Departmental Representative and the Paint Inspection Agency.
    - .1 Prepare one mock-up of a barb (post) arm showing rust removal as per the requirements of the PREPARATION article in Part 3 for review and approval by the Paint Inspection Agency.
    - .2 Use approved mock-up with rust removed for demonstration of specified galvanized paint system application for review and approval by the Paint Inspection Agency.
  - .2 When approved, the prepared surfaces and/or items shall become the acceptable standard of finish quality and workmanship for similar on-site exterior repainting work.

### **1.3 SCHEDULING**

- .1 Submit schedule minimum of 48 hours in advance of proposed operations. Submit work schedule for various stages of painting to Departmental Representative for review.
- .2 Paint occupied facilities in accordance with approved schedule. Schedule operations to approval of Departmental Representative such that painted surfaces will have dried and cured sufficiently before occupants are affected.
- .3 Obtain written authorization from Departmental Representative for changes in work schedule.
- .4 Schedule repainting operations to prevent disruption by other trades if applicable and by occupants in and about work area.

### **1.4 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Provide submittals in accordance with Section 01 33 00- Submittal Procedures.
- .2 Provide samples in accordance with Section 01 33 00- Submittal Procedures.
  - .1 Submit full range colour sample chips for review and selection. Indicate where colour availability is restricted.
- .3 Provide product data and manufacturer's installation/application instructions for paints and coating products to be used.
- .4 Provide WHMIS Material Safety Data Sheets (SDS) in accordance with Section 02 81 01- Hazardous Materials for paints and coating materials to be used.
- .5 Quality Assurance Submittals:
  - .1 Manufacturer's Instructions: manufacturer's installation instructions.
- .6 Closeout Submittals:

- .1 Provide maintenance data for incorporation into manual specified in Section 01 78 00- Closeout Submittals.
- .2 Provide records of products used. List products in relation to finish system and include following:
  - .1 Product name, type and use (i.e. materials and location).
  - .2 Manufacturer's product number.
  - .3 Colour code numbers.
  - .4 MPI Environmentally Friendly classification system rating.
  - .5 Manufacturer's Material Safety Data Sheets.

## **1.5 MAINTENANCE**

- .1 Extra Materials:
  - .1 Provide maintenance materials in accordance with Section 01 78 00- Closeout Submittals.
  - .2 Crash bar: provide a one (1) litre can each of paint and primer used to repaint crash bar.

## **1.6 DELIVERY, STORAGE AND HANDLING**

- .1 Packing, shipping, handling and unloading:
  - .1 Deliver, store and handle materials in accordance with Section 01 61 00- Common Product Requirements, supplemented as follows:
    - .1 Deliver and store materials in original containers, sealed, with labels intact.
    - .2 Labels to indicate:
      - .1 Manufacturer's name and address.
      - .2 Type of paint or coating.
      - .3 Compliance with applicable standard.
      - .4 Colour number in accordance with established colour schedule.
    - .3 Remove damaged, opened and rejected materials from site.
    - .4 Store and handle in accordance with manufacturer's recommendations.
    - .5 Store materials and equipment in secure, dry, well-ventilated area with temperature range between 7 degrees C to 30 degrees C. Store materials and supplies away from heat generating devices and sensitive products above minimum temperature as recommended by manufacturer.
    - .6 Keep areas used for storage, cleaning and preparation, clean and orderly to approval of Departmental Representative. Upon completion of operations, return areas to clean condition to approval of Departmental Representative.
    - .7 Remove paint materials from storage in quantities required for same day use.
    - .8 Comply with requirements of Workplace Hazardous Materials Information System (WHMIS) regarding use, handling storage, and disposal of hazardous materials.

- .9 Fire Safety Requirements:
  - .1 Provide one 9 kg Type ABC fire extinguisher adjacent to storage area.
  - .2 Store oily rags, waste products, empty containers and materials subject to spontaneous combustion in ULC approved, sealed containers and remove from site daily.
  - .3 Handle, store, use and dispose of flammable and combustible materials in accordance with National Fire Code of Canada.
- .2 Waste Management and Disposal:
  - .1 Separate waste materials for recycling in accordance with Section 01 74 19- Waste Management and Disposal.
  - .2 Paint, stain and wood preservative finishes and related materials are hazardous products and are subject to regulations for disposal. Information on these controls can be obtained from Provincial Ministries of Environment and Regional levels of Government.
  - .3 Materials that cannot be reused must be treated as hazardous waste and disposed of in an appropriate manner.
  - .4 Place materials defined as hazardous or toxic waste, including used sealant and adhesive tubes and containers, in containers or areas designated for hazardous waste.
  - .5 To reduce the amount of contaminants entering waterways, sanitary/storm drain systems or into the ground the following procedures shall be strictly adhered to:
    - .1 Retain cleaning water for water-based materials to allow sediments to be filtered out. In no case shall equipment be cleaned using free draining water.
    - .2 Retain cleaners, thinners, solvents and excess paint and place in designated containers and ensure proper disposal.
    - .3 Return solvent and oil soaked rags used during painting operations for contaminant recovery, proper disposal, or appropriate cleaning and laundering.
    - .4 Dispose of contaminants in an approved legal manner in accordance with hazardous waste regulations.
    - .5 Empty paint cans are to be dry prior to disposal or recycling (where available).
    - .6 Close and seal tightly partly used cans of materials including sealant and adhesive containers and store protected in well ventilated fire-safe area at moderate temperature.
  - .6 Where paint recycling is available, collect waste paint by type and provide for delivery to recycling or collection facility.
  - .7 Set aside and protect surplus and uncontaminated finish materials: for verifiable re-use or re-manufacturing.

## 1.7 AMBIENT CONDITIONS

- .1 Temperature, Humidity and Substrate Moisture Content Levels:

- .1 Unless specifically pre-approved by specifying body, Paint Inspection Agency and, applied product manufacturer, perform no painting work when:
  - .1 Ambient air and substrate temperatures are below 10 degrees C.
  - .2 Substrate temperature is over 32 degrees C unless paint is specifically formulated for application at high temperatures.
  - .3 Substrate and ambient air temperatures are expected to fall outside paint manufacturer's prescribed limits.
  - .4 Relative humidity is above 85 % or when dew point is less than 3 degrees C variance between air/surface temperature.
  - .5 Rain or snow is forecast to occur before paint has thoroughly cured.
  - .6 It is foggy, misty, raining or snowing at site.
- .2 Conduct moisture tests using properly calibrated electronic Moisture Meter, except test existing painted concrete floors for moisture using simple "cover patch test" on failed areas.
- .2 Application Requirements:
  - .1 Apply paint finish in areas where dust is no longer being generated by related construction operations or when wind conditions are such that airborne particles will affect quality of finished surface.
  - .2 Apply paint to adequately prepared surfaces and to surfaces within moisture limits noted.
  - .3 Apply paint when previous coat of paint is dry or adequately cured, unless otherwise pre-approved by specific coating manufacturer.
  - .4 Apply paint finishes when conditions forecast for entire period of application fall within manufacturer's recommendations.
  - .5 Do not apply paint when:
    - .1 Temperature is expected to drop below 10 degrees C before paint has thoroughly cured.
    - .2 Substrate and ambient air temperatures are expected to fall outside MPI or paint manufacturer's limits.
    - .3 Surface to be painted is wet, damp or frosted.
  - .6 Provide and maintain cover when paint must be applied in damp or cold weather. Heat substrates and surrounding air to comply with temperature and humidity conditions specified by manufacturer. Protect until paint is dry or until weather conditions are suitable.
  - .7 Schedule repainting operations such that surfaces exposed to direct, intense sunlight are scheduled for completion during early morning.
  - .8 Remove paint from areas which have been exposed to freezing, excess humidity, rain, snow or condensation. Prepare surface again and repaint.

**Part 2 Products**

**2.1 MATERIALS**

- .1 Paint materials listed in latest edition of MPI Approved Product List (APL) are acceptable for use on this project unless specified otherwise.
- .2 Paint materials for repaint systems: products of single manufacturer.
- .3 Paints and coatings must be manufactured and transported in a manner that steps of processes, including disposal of waste products, will meet requirements of applicable governmental acts, by-laws and regulations including, for facilities located in Canada, Fisheries Act and Canadian Environmental Protection Act (CEPA).
- .4 Paints and coatings must not be formulated or manufactured with formaldehyde, halogenated solvents, mercury, lead, cadmium, hexavalent chromium or their compounds.

**2.2 COLOURS**

- .1 Crash Bar: match existing black crash bar colour to Departmental Representative's approval.

**2.3 MIXING AND TINTING**

- .1 Perform colour tinting operations prior to delivery of paint to site. On-site tinting of painting materials is allowed with Departmental Representative's written permission.
- .2 Mix paste, powder or catalyzed paint mixes in accordance with manufacturer's written instructions.
- .3 Where thinner is used, addition not to exceed paint manufacturer's recommendations. Do not use kerosene or such organic solvents to thin water-based paints.
- .4 Thin paint for spraying in accordance with paint manufacturer's instructions. If directions are not on container, obtain instructions in writing from manufacturer and provide copy of instructions to Departmental Representative.
- .5 Re-mix paint in containers prior to and during application to ensure break-up of lumps, complete dispersion of settled pigment, and colour and gloss uniformity.

**2.4 GLOSS/SHEEN RATINGS**

- .1 Paint gloss: defined as sheen rating of applied paint, in accordance with following MPI gloss/sheen standard values:

Gloss Level Category	Units @ 60 Degrees	Units @ 85 Degrees
G1 - matte finish	0 to 5	maximum 10
G2 - velvet finish	0 to 10	10 to 35
G3 - eggshell finish	10 to 25	10 to 35
G4 - satin finish	20 to 35	minimum 35
G5 - semi-gloss finish	35 to 70	
G6 - gloss finish	70 to 85	
G7 - high gloss finish	85	

- .2 Gloss level ratings of repainted surfaces as specified.

## **2.5 EXTERIOR PAINTING SYSTEMS**

- .1 REX 5.1 - Structural Steel and Metal Fabrications: repaint steel components of existing crash bar as indicated and as specified in Section 01 11 00 – Summary of Work.
  - .1 REX 5.1D – Alkyd, G6 finish.

## **2.6 SPECIAL FINISHES**

- .1 Galvanizing Touch-up Paint System:
  - .1 Refer to Section 32 31 13 - Chain Link Fences and Swing Gates.
  - .2 Locations:
    - .1 For repainting of existing barb (post) arm along exterior and interior perimeter fences.

## **Part 3 Execution**

### **3.1 MANUFACTURER'S INSTRUCTIONS**

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheets.

### **3.2 EXAMINATION**

- .1 MPI Accredited Paint Inspection Agency inspection requirements: see QUALITY CONTROL article in Part 1 above and FIELD QUALITY CONTROL OF BARB (POST) ARM REPAINTING WORK below.
- .2 Where "special" repainting or recoating system applications (i.e. elastomeric coatings) or non-MPI listed products or systems are to be used, paint or coating manufacturer to provide as part of work, certification of surfaces and conditions for specific paint or coating system application as well as on site supervision, inspection and approval of their paint or coating system application as required at no additional cost to Departmental Representative.

### **3.3 PREPARATION**

- .1 Perform preparation and operations for exterior painting in accordance with MPI Maintenance Repainting requirements except where specified otherwise:
- .2 Apply paint materials in accordance with paint manufacturer's written application instructions.
- .3 Clean metal surfaces to be repainted by removing rust, dirt, oil, grease and foreign substances in accordance with MPI requirements unless indicated otherwise. Remove such contaminants from surfaces, pockets and corners to be repainted by brushing with clean brushes, blowing with clean dry compressed air, or brushing/vacuum cleaning as required.
  - .1 Remove rust on existing EPF and IPF barb (post) arms to SSPC SP2 (Hand Tool Cleaning) requirements. Refer to drawings and QUALITY CONTROL article in Part 1 above for more information.

- .2 Remove rust on existing crash bar to SSPC SP3 (Power Tool Cleaning) requirements. Refer to drawings for more information.
- .4 Prevent contamination of cleaned surfaces by salts, acids, alkalis, corrosive chemicals, grease, oil and solvents before priming and between applications of remaining coats. Touch-up, spot prime, and apply primer, paint, or pre-treatment as soon as possible after cleaning and before deterioration occurs.
- .5 Crash Bar: do not apply paint until prepared surfaces have been accepted by Departmental Representative.

### 3.4 PROTECTION

- .1 Protect existing building surfaces and adjacent structures from paint splatters, markings and other damage by suitable non-staining covers or masking. If damaged, clean and restore such surfaces as directed by Departmental Representative.
- .2 Protect passing pedestrians in and about painting area.
- .3 As painting operations progress, place "WET PAINT" signs in pedestrian and vehicle traffic areas to approval of Departmental Representative.

### 3.5 APPLICATION

- .1 Apply paint by method that is best suited for substrate being repainted using roller, brush, airless sprayer and/or air sprayer. Conform to manufacturer's application instructions unless specified otherwise. In each case method of application to be as pre-approved by Departmental Representative before commencing work.
- .2 Brush and Roller Application:
  - .1 Apply paint in a uniform layer using roller and/or brush of types suitable for application.
  - .2 Work paint into cracks, crevices and corners.
  - .3 Paint surfaces and corners not accessible to brush using spray, daubers and/or sheepskins. Paint surfaces and corners not accessible to roller using brush, daubers or sheepskins.
  - .4 Brush and/or roll out runs and sags, and over-lap marks. Rolled surfaces to be free of roller tracking and heavy stipple unless approved by Departmental Representative.
  - .5 Remove runs, sags and brush marks from finished work and repaint.
- .3 Spray Application:
  - .1 Provide and maintain equipment that is suitable for intended purpose, capable of properly atomizing paint to be applied, and equipped with suitable pressure regulators and gauges.
  - .2 Keep paint ingredients properly mixed in containers during paint application either by continuous mechanical agitation as frequently necessary.
  - .3 Apply paint in uniform layer, with overlapping at edges of spray pattern.
  - .4 Back roll spray applications and brush out runs and sags immediately.
  - .5 Use brushes to work paint into cracks, crevices and places that are not adequately painted by spray.

- .4 Use dipping, sheepskins or daubers when no other method is practical in places of difficult access and when specifically authorized by Departmental Representative.
- .5 Apply paint coats in a continuous manner and allow surfaces to dry and cure between coats for minimum time period as recommended by manufacturer. Minimum dry film thickness of coats not less than that recommended by manufacturer. Repaint thin spots or bare areas before next coat of paint is applied.
- .6 Sand and dust between coats to remove visible defects.
- .7 Finish surfaces both above and below sight lines as specified for surrounding surfaces, including such surfaces as projecting ledges.

### **3.6 FIELD QUALITY CONTROL OF BARB (POST) ARM REPAINTING WORK**

- .1 The Paint Inspection Agency is to carry out spot inspections on 5% of the total number of repainted barb (post) arms along the exterior and interior perimeter fences after the final coat of the specified galvanized paint system has been applied. If some of the repainted arms do not pass the inspection, they are to be cleaned and painted again as specified and the Departmental Representative is to be notified in writing. The spot inspection process is to be repeated until all the spot inspections are successful. Paint Inspection Agency to issue final report to Departmental Representative upon completion of the successful spot inspections.

### **3.7 CLEANING**

- .1 Proceed in accordance with Section 01 74 00- Cleaning.
- .2 Remove paint where spilled, splashed, splattered or sprayed as work progresses using means and materials that are not detrimental to affected surfaces.
- .3 Keep work area free from unnecessary accumulation of tools, equipment, surplus materials and debris.
- .4 Remove combustible rubbish materials and empty paint cans each day and safely dispose of same in accordance with requirements of authorities having jurisdiction.
- .5 Clean equipment and dispose of wash water used for water borne materials, solvents used for oil based materials as well as cleaning and protective materials (e.g. rags, drop cloths, and masking papers), paints, thinners, paint removers/strippers in accordance with the safety requirements of authorities having jurisdiction and as specified.
- .6 Clean painting equipment in leak-proof containers that will permit particulate matter to settle out and be collected. Sediment remaining from cleaning operations to be disposed of in manner acceptable to authorities having jurisdiction.
- .7 Recycle paint and coatings in excess of repainting requirements as specified.

### **3.8 RESTORATION**

- .1 Clean and re-install hardware items removed before undertaken painting operations.
- .2 Remove protective coverings and warning signs as soon as practical after operations cease.
- .3 Remove paint splashings on affected exposed surfaces. Remove smears and spatter immediately as operations progress, using compatible solvent.

- .4 Protect freshly completed surfaces from paint droppings and dust to approval of Departmental Representative. Avoid scuffing newly applied paint.
- .5 Restore areas used for storage, cleaning, mixing and handling of paint to clean condition as approved by Departmental Representative.

**END OF SECTION**

**Part 1 General**

**1.1 REFERENCE STANDARDS**

- .1 ASTM International
  - .1 ASTM A53/A53M-10, Standard Specification for Pipe, Steel, Black and Hot-Dipped, Zinc-Coated Welded and Seamless.
  - .2 ASTM A90/A90M-09, Standard Test Method for Weight of Coating on Iron and Steel Articles with Zinc or Zinc-Alloy Coatings.
  - .3 ASTM A121-07, Standard Specification for Zinc-Coated (Galvanized) Steel Barbed Wire.
  - .4 A653/A653M-10, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
  - .5 ASTM A123/A123M-09, Standard Specification for Zinc (Hot Dip Galvanized) coatings on Iron and Steel Products.
- .2 Canadian General Standards Board (CGSB)
  - .1 CAN/CGSB-138.1-96, Fabric for Chain Link Fence.
  - .2 CAN/CGSB-138.2-96, Steel Framework for Chain Link Fence.
  - .3 CAN/CGSB-138.3-96, Installation of Chain Link Fence.
- .3 Corrections Service Canada (CSC)
  - .1 Technical Criteria for Correctional Institutions – 2015.
- .4 CSA Group (CSA)
  - .1 CSA A23.1/A23.2-09, Concrete Materials and Methods of Concrete Construction/Test Methods and Standard Practices for Concrete.

**1.2 PERFORMANCE REQUIREMENTS**

- .1 Perform work to requirements of Correctional Service Canada's Technical Criteria for Correctional Institutions unless noted otherwise.

**1.3 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Submit in accordance with Section 01 33 00- Submittal Procedures.
- .2 Product Data:
  - .1 Submit manufacturer's instructions, printed product literature and data sheets for concrete mixes, fences, posts and gates and include product characteristics, performance criteria, physical size, finish and limitations.
- .3 Shop Drawings:
  - .1 Submit shop drawings for the following:
    - .1 All new fencing and fencing components including:
      - .1 Sweat Lodge fencing (DF6 & DF7).

- .2 Typical detail of 2.5 meter fence section between new strain post and IPF including new strain post.
- .3 DF2 fence where existing gate is being removed and replaced with fencing.
- .4 Concrete post foundation details.
- .5 New swing gates complete with gate posts, fittings, hardware and cremone bolts.
- .6 Custom single and double post arm details.
- .7 Typical barbed tape concertina (BTC) and barbed wire installation details.
- .8 Typical line post and rail connection details.
- .9 Typical chain link fence fabric installation details.

#### **1.4 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store and handle materials in accordance with Section 01 61 00- Common Product Requirements and with manufacturer's written instructions.
- .2 Delivery and Acceptance Requirements: deliver materials to site in original factory packaging, labelled with manufacturer's name and address.
- .3 Storage and Handling Requirements:
  - .1 Store materials in accordance with manufacturer's recommendations.
  - .2 Store and protect fence and gate materials from damage.
  - .3 Replace defective or damaged materials with new.
- .4 Packaging Waste Management: remove for reuse and return by manufacturer of crates, pallets, padding, packaging materials as specified in Construction Waste Management Plan in accordance with Section 01 74 19- Waste Management and Disposal.

#### **1.5 QUALITY ASSURANCE**

- .1 Mock-ups:
  - .1 Construct mock-ups in accordance with Section 01 45 00- Quality Control.
  - .2 Construct mock-up of:
    - .1 New 2.5 meter section of fence complete with strain post at IPF.
    - .2 New line post with custom arm and new tie wires.
  - .3 Mock-up used:
    - .1 To judge quality of work and proper interpretation of contract documents.
  - .4 Construct mock-up where directed by Departmental Representative.
  - .5 Allow 24 hours for inspection of mock-up by Departmental Representative before proceeding with work.
  - .6 When accepted by Departmental Representative, mock-up to demonstrate minimum standard for this work. Mock-up may remain as part of finished work.
  - .7 Start work only upon receipt of written approval of mock-up by Departmental Representative.

**Part 2 Products**

**2.1 MATERIALS**

- .1 Concrete mixes and materials: in accordance with Section 03 30 00 09 - Cast-in-Place Concrete - Short Form.
- .2 Chain-link fence fabric: to CAN/CGSB-138.1.
  - .1 Wire size: 4.8 mm minimum.
  - .2 Size of mesh: 50.8 mm.
  - .3 Height of fence fabric: as indicated.
  - .4 Barbed edges: top and bottom.
  - .5 Average mass of zinc coating: not less than 610 g/sq. m. of uncoated wire.
  - .6 Breaking tensile strength: 10,000 N minimum.
- .3 Posts, braces and rails: to CAN/CGSB-138.2 unless noted otherwise, galvanized steel pipe, standard weight. Dimensions and spacing as indicated.
- .4 Tie wire fasteners: galvanized steel wire, 3.7 mm diameter (9 gauge) galvanized steel wire, to secure chain link fabric to bottom rail, top rail and line posts at 300 mm spacing. Provide minimum 3 full twists at back (non-inmate side of posts and rails). Bend twisted wire ties back to face of posts and rails.
- .5 Tension bar: to ASTM A653/A653M, galvanized steel, used for holding the ends of the fence fabric at strain posts, corner and gate posts, to be 5 mm x 20 mm x full height of fence fabric.
- .6 Swing Gate frames: to ASTM A53/A53M, galvanized steel pipe, pipe dimensions as indicated, pipe welded and drained.
  - .1 Fabricate gates as indicated with electrically welded joints, and hot-dip galvanized after welding.
  - .2 Fasten fence fabric to gate with barbed edges at top and bottom.
  - .3 Furnish pedestrian swing gates with galvanized malleable iron hinges, latch and latch catch with provision for padlock which can be attached and operated from either side of installed gate.
  - .4 Furnish vehicle swing gates with the number of galvanized malleable iron hinges indicated and a three-point locking heavy-duty galvanized steel cremone bolt as indicated.
- .7 Fittings and hardware: to CAN/CGSB-138.2.
  - .1 Tension bar bands: 3 mm x 20 mm minimum, galvanized steel, spaced vertically at 300 mm o.c. Complete with 6 mm diameter zinc coated nuts and bolts with nuts welded to bolts or threads damaged after install to prevent removal of nuts. Touch up with galvanizing touch-up paint.
  - .2 Post caps to provide waterproof fit, to fasten securely over posts and to carry top rail.
  - .3 Custom overhang tops to provide waterproof fit and to hold a custom galvanized steel arm projecting as indicated to hold barbed wire overhang (note: projecting steel arms also called 'barb arms' and 'post arms' on drawings).

- .1 Line post tops to hold top rails.
- .4 Include custom galvanized steel arm with recesses to hold 2 strands of barbed wire configured as follows:
  - .1 Location and spacing of recesses: as indicated.
  - .2 Length of galvanized steel arm: as indicated.
  - .3 Galvanized steel arm projection angle: as indicated.
  - .4 The end of each arm must be able to support a 113.4 kg (250 lbs) load.
- .8 Barbed wire: for concertina coil support at fence top, two barbed wires stretched and fixed to galvanized steel arms as indicated, to consist of two strands of 2.5 mm (12 gauge) diameter galvanized steel wire with 4 point barbs at 130 mm spacing, to ASTM A121.
- .9 Barbed Tape Concertina (B.T.C.): 20 x 0.5 mm galvanized tape clenched around a 2.5 mm diameter spring steel galvanized core wire to form a concertina coil with a nominal exterior coil diameter of 710 mm. The coil, when installed, shall have a minimum diameter of 635 mm. The barbed concertina shall have a 20 mm long blade type barbs measured from tip to tip of the blade, and barb clusters shall be spaced approximately 45 mm on centre. The concertina shall be formed by clipping adjacent loops of single helical coils together at a minimum of three (3) points on the circumference. Clips shall be galvanized. The resulting coil, when stretched, shall form a cylindrical pattern. The loop spacing shall not exceed 230 mm.
- .10 Privacy Slats: Vinyl strips, sized to fit fabric weave, colour to match existing.
- .11 Galvanizing Touch-up Paint System: Make good corrosive protection after welding where burnt by welding operations and where removed to facilitate welding operations, using zinc touch-up primer and finish coat. Use as per manufacturer's instructions.
  - .1 Acceptable products:
    - .1 Primer Coat: Sprayon WL740 Zinc Rich Galvanizing Compound or approved equal.
    - .2 Finish Coat: Krylon Industrial Tough Coat Acrylic Enamel or approved equal.
      - .1 Colour: Silver Zinc.
  - .2 For all touch-up work on chain link fences and gates unless noted otherwise.
- .12 Black Touch-up Paint System for Exterior and Interior Perimeter Post Cap Welds Only:
  - .1 Acceptable products:
    - .1 Primer Coat: Sprayon WL740 Zinc Rich Galvanizing Compound or approved equal.
    - .2 Finish Coat: Krylon Industrial Tough Coat Acrylic Enamel or approved equal.
      - .1 Colour: black to match existing fence posts and caps.

## 2.2 FINISHES

- .1 Galvanizing:
  - .1 For chain link fabric: to CAN/CGSB-138.1 Grade 3.

- .2 For pipe: 550g/m2 minimum to ASTM A90.
- .3 For barbed wire: to CAN/CGSB-138.2.
- .4 For other fittings: to ASTM A123/A123M.

### **Part 3 Execution**

#### **3.1 FENCES TO BE REMOVED AND REBUILT**

- .1 Refer to Section 01 11 00 – Summary of Work.

#### **3.2 EXAMINATION**

- .1 Verification of Conditions: verify conditions of substrate previously installed under other Sections or Contracts are acceptable for fence and gate installation in accordance with manufacturer's written instructions.
  - .1 Visually inspect substrate in presence of Departmental Representative.
  - .2 Inform Departmental Representative of unacceptable conditions immediately upon discovery.
  - .3 Proceed with installation only after unacceptable conditions have been remedied and after receipt of written approval to proceed from Departmental Representative.

#### **3.3 PREPARATION**

- .1 Grading:
  - .1 Remove debris and correct ground undulations along fence line to obtain smooth uniform gradient between posts.
    - .1 Provide clearance between bottom of fence and ground surface of 50 mm unless indicated otherwise.

#### **3.4 ERECTION OF FENCE**

- .1 Erect fence along lines as indicated and to CAN/CGSB-138.3 unless noted otherwise.
- .2 Excavate post holes to dimensions and depth indicated.
- .3 Space line posts as indicated, measured parallel to ground surface..
- .4 Install straining posts, corner posts, end posts and gates posts as indicated.
  - .1 Install gate posts on both sides of gate openings.
- .5 Place concrete in post holes then embed posts into concrete to depths specified.
  - .1 Extend concrete 50 mm above ground level and slope to drain away from posts.
  - .2 Brace to hold posts in plumb position and true to alignment and elevation until concrete has set.
- .6 Install fence fabric after concrete has cured, minimum of 5 days.
- .7 Install overhang tops and caps.

- .8 Install top and bottom rails. Secure top rail to posts through post top holes and bottom rail to post sleeves. Ensure expansion and contraction is provided for top and bottom rails. Secure waterproof caps and overhang tops.
- .9 Lay out fence fabric to inmate side of posts. Stretch tightly and fasten to end, corner, gate and straining posts with tension bar secured to post with tension bar bands spaced at 300 mm intervals. Ensure distance between tension bar and posts does not exceed 13 mm.
  - .1 Fence fabric shall be pulled taut before fixing in place. Tautness, when fixed in place, is to be established by pull tests. The application of a 12 kg perpendicular pull at the midpoint of the mesh panel (midpoint of posts/rails) shall show a displacement of no more than 30 mm from the fence at rest plane.
- .10 Secure fabric to top rails, line posts and bottom rail with tie wires:
  - .1 Give tie wires three complete rotation twists at back (non-inmate side) of posts and bend into post.
- .11 Install barbed wire strands as indicated.
- .12 The barbed tape concertina is to be supported and tied at 230 mm spacing onto each of the barbed wire strands.

### **3.5 INSTALLATION OF GATES**

- .1 Install gates as indicated.
- .2 Level ground between gate posts and set gate bottom as indicated above ground surface.

### **3.6 PRIVACY SLATS**

- .1 Install new privacy slats to match existing where existing fencing and gates are being demolished and replaced with new at DF1.

### **3.7 RESEATING AND WELDING OF BARB (POST) ARM CAPS TO POSTS ALONG EXTERIOR AND INTERIOR PERIMETER FENCES**

- .1 Re-seat existing barb (post) arm caps along exterior and interior perimeter fences.
- .2 Weld caps to posts with a minimum of two 20 mm long 6 mm wide welds, opposite one another.

### **3.8 BARB (POST) ARM REPAINTING ALONG EXTERIOR AND INTERIOR PERIMETER FENCES**

- .1 Refer to Section 09 01 90 62 - Exterior Repainting.

### **3.9 TOUCH UPS**

- .1 Touch-up galvanized surfaces and welds with Galvanizing Touch-up Paint System where burned by field welding unless noted otherwise.

### **3.10 TOUCH-UPS FOR EXTERIOR AND INTERIOR PERIMETER POST CAP WELDS ONLY**

- .1 Touch-up welds around black exterior and interior perimeter fence post caps with Black Touch-up Paint System specified in Part 2 above.

**3.11 CLEANING**

- .1 Progress Cleaning: clean in accordance with Section 01 74 00- Cleaning.
  - .1 Leave Work area clean at end of each day.
- .2 Final Cleaning: upon completion remove surplus materials, rubbish, tools and equipment in accordance with Section 01 74 00- Cleaning.
- .3 Waste Management: separate waste materials for recycling in accordance with Section 01 74 19 - Waste Management and Disposal.
  - .1 Remove recycling containers and bins from site and dispose of materials at appropriate facility.

**END OF SECTION**





**KEY LEGEND**  
 ○ 188.2 mm (7 1/2") OLD CORNER AND GATE POSTS  
 ○ 73 mm (2 7/8") OLD LINE POSTS  
 ○ 114.3 mm (4 1/2") OLD STRAIN POSTS









