

**This addendum is an integral part of the plans and specifications and should be read in conjunction therewith. It takes precedence over all requirements of the plans and specifications. The articles not mentioned in this addendum will remain as described in the plans and specifications.**

#### **1.1 SPECIFICATIONS**

- .1 Section 01 29 00—Payment
  - .1 This section has been waived and replaced by the one joint to this addendum.
- .2 Section 03 31 00—Concrete Injection
  - .1 This section has been added.
- .3 Section 23 07 13— Duct Insulation
  - .1 This section has been removed.
- .4 Section 23 31 13.01—Metal Air Ducts—Low Pressure, up to 500 PA
  - .1 This section has been removed.

#### **1.2 BID FORM**

- .1 Reissue of the Bid Form.

#### **1.3 ANSWER TO QUESTIONS AND PART NO. 1 OF THE PWGSC ADDENDUM**

- .1 This document is joint to this addendum.

#### **1.4 CONCRETE SLAB SEALING, SERVICE BUILDING ENTRANCE**

- .1 Applying a water-based sealant with clear satin finish on the service building entrance slab:
  - .1 Surface preparation is of the utmost importance. The area to be covered must be clean, solid, dry, free of dust and dirt, oil, chalking, or any other contaminants. Clean the surface to be sealed as recommended by the sealant manufacturer.
  - .2 Mask the door thresholds, doors, coating, and all other building components that are not to be sealed.
  - .3 Apply sealant by roller and by brush. Follow the manufacturer's instructions, especially regarding the temperature of the application and relative humidity.
  - .4 Do not apply under direct sunlight.

#### **1.5 CONCRETE COLORING**

- .1 Allow for a coloring method for the concrete repairs in the firing rooms (east and west canon).
- .2 A 400mm x 400mm x 100mm sampling shall be prepare, for approval, prior to the repair work.

**1.6 DRAWINGS**

- .1 The M02 drawing, entitled *Ventilation*, has been removed.
- .2 Retransmission drawings C05, C07 et C08.

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**PART 1 GENERAL**

**1.1 UNIT OR LUMP SUM PRICES**

- .1 Each unit or global price is for lump sum payment. The Contractor agrees to carry out the work for the unit price for a gain or a loss. The unit or or global price for work must compensate for all expense, work, disbursements, payments, direct and indirect expenses, mobilizations, demobilizations and all acts, deeds, facts, responsibilities, obligations, omissions and errors on the Contractor' part during the course of this work.
- .2 For the same unit or global price, the Contractor provides the materials, personnel and accessories necessary for execution of the work, unless otherwise indicated.
- .3 The unit or global price also includes the transportation and installation of materials, and the company's general expenses including administration, insurance, contributions and fees, interest, taxes and other incidental expenses. It must include losses and damages that may result from the work, fluctuations in prices and salaries, risks to the company, strikes, delays unattributable to the Departmental Representative, transportation restrictions, accidents and acts of God.

**1.2 LUMP SUM PAYMENT: Definition**

- .1 Where work is determined accurately and detailed fashion and a comprehensive price is agreed upon and accepted by the two parties.

**1.3 UNIT PRICE: Definition**

- .1 Where specifications associated with the work are determined in a precise and detailed fashion and all quantities or certain quantities on the schedule are provided for estimation purposes.

**1.4 MEASUREMENT FOR PAYMENT PURPOSES**

- .1 Site organization:
  - .1 Item – All work shown and described on Demolition/Existing Conditions and in specifications – includes all requirements described in Division 01 – General Requirements of these specifications and Sections 01 41 13 – Selective Site Demolition, 31 11 00 – Clearing and Grubbing, part of 32 01 90.33 – Tree and Shrub Preservation and also included in other work that do not form an integral part of the schedule items.
  - .2 Payment for this item as follows:
    - .1 25% with first monthly payment.
    - .2 50% divided equally among subsequent payments.
    - .3 25% with payment issued with Substantial Completion certificate.
    - .4 Site organization position can not exceed 15% of the total value of the bid

## **1.5 PAYMENT OF RETAINAGE UPON SUBSTANTIAL COMPLETION**

- .1** After issue of substantial completion certificate, proceed as follows:
  - .1 Make application for payment of withheld amount.
  - .2 Produce statement under oath confirming that, except for duly retained payments or contested payments, all payments involving labour, subcontracted work, products, machinery and construction materials and all other debts incurred during the substantial completion phase and for which the Contractor is responsible.
- .2** Upon receipt of the payment request and statement under oath, the Departmental Representative will issue a retainage payment certificate.

## **1.6 FINAL PAYMENT**

- .1** The Contractor must submit a request for final payment when it is deemed that work is completed.
- .2** No later than ten (10) days after receipt of the final payment, the Departmental Representative will inspect the work to confirm compliance. Within seven (7) days following the visit, the Departmental Representative will inform the Contractor of the acceptance or refusal of the request and reasons for refusal as the case may be.
- .3** If the Departmental Representative estimates that the request for final payment is authorized, he will issue a certificate for final payment.

## **1.7 COST BREAKDOWN SCHEDULE**

- .1** Before requesting payment of the first installment, present a detailed breakdown of costs as required by the Representative of the Ministry for the lots at fixed price. Once approved by the Departmental Representative, the breakdown of costs as a basis for calculating interim payments.

## **1.8 MEASUREMENT FOR PAYMENT PURPOSES**

- .1 Demolition, Site Organization and Preparation**
  - .1 Demolition work is payable in a lump sum.
  - .2 Dismantling, recovery and relocation of the cliff fence is not measured for payment purposes. Wood components in poor condition, identified on site by the Departmental Representative, to be replaced is payable by unit cost.
- .2 Cutting-up and Grubbing**
  - .1 Measure selected trees to be cleared, by selective cutting, and grubbing isolated tree stumps as number of isolated trees cleared.
    - .1 Work under this section will be paid on a fixed price basis.
    - .2 Clearing of isolated trees including grubbing or ground level cutting as directed by Departmental Representative.
      - .1 Gauge 0 at 20 cm DBH.
      - .2 Gauge 21 at 40 cm DBH.
      - .3 Gauge 41 and more at DBH.

- .2 Complete grubbing of selected trees, to be measured in units based on number of trees removed.
  - .1 Work listed below will be paid on a unit cost basis.
    - .1 Gauge 0 at 20 cm DBH.
    - .2 Gauge 21 at 40 cm DBH.
    - .3 Gauge 41 and more at DBH.
- .3 Partial grubbing of selected trees, to be measured in units based on number of trees removed.
  - .1 Work listed below will be paid on a unit cost basis.
    - .1 Gauge 0 at 20 cm DBH.
    - .2 Gauge 21 at 40 cm DBH.
    - .3 Gauge 41 and more at DBH.
- .4 The Contractor may not claim costs for work conducted outside the site, nor costs for repairs incurred for storage requirements, vehicle circulation or other management oversights under the Contractor's responsibility.

**.3 Existing trees and shrubs preservation**

- .1 Protective fencing for plants and tree trunks are paid on a lump sum basis.
- .2 Pruning and treatment of injuries to trees are paid in hour units worked and validated by Departmental Representative. One hour of work corresponds to: one certified pruner with 10 years' experience and two apprentices. All material and work is included. Only time worked on site is considered and not time spent disposing of waste off site.

**.4 Earthwork, drainage**

- .1 Cost of landscaping and levelling including removal of material and fill must be itemized in the schedule and include cost of labour, all materials required for complete execution of work including without being limited to removal of topsoil where required, excavation down to rock and projected elevations, transition areas, disposal of waste material, backfilling, loading, transportation, placement and compaction of fill material, as stipulated in the plans and specifications and rules and best practices of the trade.
- .2 Geotextiles will not be measured for payment and must be included in the price of different items of bid.
- .3 Stripping of existing topsoil is not measured for payment.

**.5 Surface Coating**

- .1 Stone dust including excavation, granular foundation and stabilising product are paid on a unit price basis.
- .2 Concrete curbs are paid on a unit price basis and include steel anchoring rods to attach curbs to paved surface.

**.6 Wrought Metal**

- .1 The handrails attached to stairs are payable in a lump sum including hardware.
- .2 The guard rails attached to the retaining walls are payable in a lump sum including hardware.
- .3 The chainlink fence, to be recovered, cleaned and repainted, is payable in a lump sum including new hardware.
- .4 The new type of chain fence section is subject to a unit amount, including hardware.

**.7 Wooden Item**

- .1 The cliff fence, to be recovered and relocated, is payable based on a lump sum including excavation, dismantling, re-installation and all new hardware.
- .2 Replacement parts (posts, crosspieces and other) for the cliff fence are payable by unit price including hardware.
- .3 Wood stairs are payable based on a lump sum basis including granular foundation and all metal attachments and fastenings.
- .4 Wood trim is paid on a unit price basis including granular foundation and all steel attachments.

**.8 Prefabricated concrete**

- .1 Measure concrete paving including bedding, joint filler and PVC edging for lump-sum payment.
- .2 Concrete curbs are paid in on a unit price basis and include steel anchoring rods to attach curbs to paved surface.

**.9 Grassing**

- .1 Hydraulic Seeding
  - .1 Measure hydraulic seeding for unit cost payment, of actual surface area calculated by Departmental Representative.
    - .1 Measurement of hydraulic seeding by square metre must include preparation of surface to be seeded including excavation and placement of material in place, regardless of type, supply and spreading of topsoil 150 mm thick after compaction; uniform seeding of mix over surface to cover.
  - .2 The Contractor may not claim costs for work conducted outside the site, nor costs for repairs incurred for storage requirements, vehicle circulation or other management oversights under the Contractor's responsibility.
  - .3 Preparation of bedding soil for placement of topsoil is not measured for payment

- .2 Lawn turf
  - .1 Grass sod measured based on unit cost, including excavation, soil and maintenance based on grassed surface area, measured and calculated by the Departmental Representative.
  - .2 Square metre price of sod must include preparation of surface including excavation and placement of materials, regardless of type, supply and spreading of planting soil 150 mm thick after compaction; supply and installation of sod; spreading of rooting fertilizer; rolling and watering sod until rooted.
  - .3 Stripping of topsoil will not be measured for payment. It must be included in fill.
  - .4 The Contractor may not claim costs for work conducted outside the site, nor costs for repairs incurred for storage requirements, vehicle circulation or other management oversights under the Contractor's responsibility.
  - .5 Preparation of bedding soil for placement of topsoil is not measured for payment

**.10 Plantation**

- .1 Payment for planting of trees, shrubs, ground cover will be a unit cost, including excavation, topsoil, mulch, maintenance and warranty.
- .2 Spreading and filling trenches with soil is not measured for payment.

**.11 Excavation and Backfill**

- .1 Excavation and backfill of the east entrance
  - .1 Excavation and disposition of the east entrance excavation materials. Supply and placement of MG 20 support cushions. Supply and placement of MG 112 as backfill material.
- .2 Excavation and backfill of the west entrance
  - .1 Excavation and disposition of the west entrance excavation materials. Supply and placement of MG 20 support cushions. Supply and placement of MG 112 as backfill material.

**.12 Concrete**

- .1 Concreting of the east entrance
  - .1 Supply and placement of concrete for new footings including the dispositions necessary for adequate concrete curing. Placement and dismantling of formwork.
- .2 Concreting of the west entrance
  - .1 Supply and placement of concrete for new footings including the dispositions necessary for adequate concrete curing. Placement and dismantling of formwork.
- .3 Crack Injection—Chimneys
  - .1 Preparation of cracks in chimneys and lintels indicated on plans. Supply and placement of SikaFix PU injection grout.

- .4 Concrete Repair—Chimneys
  - .1 Preparation of concrete surfaces to repair on the chimneys. Supply and placement of reinforcing steel. Placement and dismantling of formwork. Supply and placement of concrete including the dispositions necessary for adequate concrete curing.
- .5 Concrete Bushhammering—East Battery
  - .1 Bushhammer concrete surfaces to repair in the east battery room. Provide the necessary equipment for bushhammering of concrete surfaces. Disposition of scrap generated during the bushhammering.
- .6 Concrete Repair—East Battery
  - .1 Preparation of concrete surfaces to repair in the east battery room. Supply and placement of galvanized reinforcing steel. Placement and dismantling of formwork. Supply and placement of concrete including the dispositions necessary for adequate concrete curing.
- .7 Concrete Bushhammering—West Battery
  - .1 Bushhammer concrete surfaces to repair in the west battery room. Provide the necessary equipment for bushhammering of concrete surfaces. Disposition of scrap generated during the bushhammering.
- .8 Concrete Repair—West Battery
  - .1 Preparation of concrete surfaces to repair in the west battery room. Supply and placement of galvanized reinforcing steel. Placement and dismantling of formwork. Supply and placement of concrete including the dispositions necessary for adequate concrete curing.
- .13 Steel**
  - .1 Production and installation of posts (W) and shoring (HSS)
    - .1 Supply and placement of posts and galvanized shoring including the hardware necessary for their placement.
  - .2 Galvanization of posts (W) and shoring (HSS)
    - .1 Proceed with the galvanization of posts and shoring.
  - .3 Rods and concrete anchors
    - .1 Supply and placement of shoring system rods. Supply and placement of concrete anchor rods including the hardware necessary for their placement.
  - .4 Surface preparation and treatment of lead-containing paint (doors and frames)
    - .1 Treatment of lead-containing paint surfaces of doors and door frames. Provide the equipment necessary for the treatment of lead paint. Disposition of scrap generated during the treatment. Preparation of door and door frame surfaces for a new painting.
  - .5 Metalwork painting (doors and frames)
    - .1 Supply and placement of paint on the door and door frame surfaces.

**.14 Wood**

- .1 Supply of wood pieces
  - .1 Provide stringers and spacers required for the implementation of the project including the hardware necessary for their placement. The stringers and spacers must be Douglas fir 6x6 in raw, processed, and incised.
- .2 Installation of wood pieces
  - .1 Placement of wood stringers and spacers (Douglas fir 6x6 in raw, processed, and incised) at the west entrance, at the east entrance, and on places indicated on the plans where the wood pieces are damaged.
- .3 Partial demolition
  - .1 Extraction of spacers damaged by rot on places indicated on the plans. Disposition of scrap during the demolition of the east and west entrances such as wood stringers, concrete slab, and steel frames.

**.15 Architecture for the services building**

- .1 The price submitted for this item includes, but is not limited to, all equipment, tools, labor, and the provision and installation of temporary equipment for the selective demolition required for the work.
- .2 The price submitted includes, but is not limited to, all equipment, tools, labor, and the provision of materials in order to replace the exterior wall and roof cladding. This article includes the supply and installation required for all interior and exterior finishes (walls, doors, floors and ceilings). The price for this item must also include all accessories and appliances, as well as the materials, transportation and installation of the windows.

**.16 Mechanical**

- .1 Service Building Plumbing
  - .1 The work listed hereafter is subject to lump sum prices:
    - .1 Plumbing tests.
    - .2 Connections to existing networks.
    - .3 Piping of water supply, drainage, and venting.
    - .4 Water heater.
    - .5 Tank.
    - .6 Funnel floor drain.
    - .7 Water inlet.
    - .8 Lavatories.
    - .9 Sinks.
    - .10 Urinal.

- .2 Service Building Insulation
  - .1 The work listed hereafter is subject to lump sum prices:
    - .1 Ventilation duct insulation.
    - .2 Exhaust ducts.
    - .3 Exhaust grilles.
    - .4 Exit to the roof.
  - .3 Battery chimney ventilation (allowance)
    - .1 An allowance of \$4,000 is included in the slip of this article. This amount is for the sole purpose of submission. The final cost will be negotiated with the contractor during construction.
    - .2 The following work listed below is the subject of this article:
      - .1 The supply and installation of four gravity turbine fans made of galvanized steel and manufactured as the existing fan. The location of these new fans will be determined on the site.
      - .2 The restoration of the existing fan. The contractor must provide dismantling, transportation to the city of Quebec and back (the exact address will be determined on the site), and reinstallation of the equipment once restored. The restoration work will be carried out by others.

**.17 Electrical**

- .1 Underground Electrical Conduits
  - .1 The underground conduit prices must be, without limitation, subject to the excavation, conduits, TTOG pipes, termination boxes, tunneling, backfilling, surface finishes, and labor.
- .2 Pull boxes
  - .1 The pull boxe prices must be, without limitation, subject to excavation, pull boxes, backfilling, surface finishes, and labor.
- .3 Service Building Electricity
  - .1 The price for service building must include, without limitation, the electrical distribution, indoor/outdoor lightning, as well as labor.

**PART 2 PRODUCT**

**2.1 NOT USED.**

- .1 Not used.

**PART 3 EXECUTION**

**3.1 NOT USED.**

- .1 Not used.

**END OF SECTION**

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**PART 1 GENERALITIES**

**1.1 DESCRIPTION**

- .1 Supply the expertise, labor force, materials, products, equipment, and services necessary to provide and implement the crack repair by injections under pressure of epoxy-based products as described on the plans.

**1.2 RELATED SECTIONS**

- .1 The Contractor is responsible for obtaining a copy of all sections of this specification, even if they seem irrelevant for his/her specialty, otherwise he/she will be deemed to have accepted the clauses and requirements of all sections of this specification. The Contractor must consult the table of contents of the specification to know the complete sections list of the specification.
- .2 Comply with the general requirements and the requirements of all the documents to which it refers.

**1.3 WORK PLAN APPROVAL**

- .1 The Contractor must provide the ministry representative at least 14 days prior to the beginning of work with a work plan in which the products, equipment, and suggested injection method are described in detail.
- .2 The cracks must be injected in accordance with the work plan.

**PART 2 PRODUCT**

**2.1 MATERIALS**

- .1 Injectors
  - .1 The injectors must be “Surface” type.
  - .2 Epoxy for crack injection.
    - .1 Two-component, 100% solid, moisture-insensitive, low-viscosity structural epoxy resin. After the addition of the hardener, the viscosity of the injection product must be lower than 250 cps at about 22 °C. The injection product’s manufacture date must be indicated on the containers and shall be later than March 1<sup>st</sup> of the year of use. The addition of solvent, diluent, or other matter to the injection product is prohibited. All products must be delivered to the site in their original containers and sealed.
    - .2 The Contractor is responsible for selecting the injection product and its performance.
  - .3 Two-component, 100% solid, moisture-insensitive clogging sealant for epoxy resin crack injection.

**PART 3 EXECUTION**

**3.1 CRACK INJECTION**

- .1 Groove the cracks and clean the surfaces using compressed air.
- .2 Place the injection points and seal the points and crack surfaces to be injected in order to prevent resin loss. The distance between the injection points must not be greater than the thickness of the piece to be injected.
- .3 When the sealing has hardened, proceed with the epoxy injection starting from the injection points. Proceed with the injection until the injection material begins to come out at the adjacent injection point.
- .4 Clog the first injection point before moving to the next one.
- .5 When the epoxy resin has hardened, grind the top of the concrete surfaces at the point of sealing to remove the sealant and the epoxy surplus from the surface. The repaired crack surfaces must present a quality finish.
- .6 The crack injection can only be done when the concrete temperature measured in the shade is higher than 15 °C but lower than 30 °C.

**END OF SECTION**



Project : R.078292.001

## **Fort Peninsula Restauration Forillon National Park of Canada, Gaspé (Quebec)**

Objet : ANSWERS TO QUESTIONS /  
ADDENDA #1

August 11 2016

### **Part 1           Answers to questions :**

- 1.1           Engineer stamped for shop drawings sections #024116.01, #072710, #076100, and #076200  
In general, data sheets and shop drawings of commercial products clearly specify the requirements or the standards the product should meet. This allows to know if the product meets the requirements of the project. In the case a product, composition or particular processing is required but not recognized standard to analyse the product or shop drawing exists, the stamp of an engineer is required.
- For section 024116.01, an engineer stamp is always required for temporary installations such as shoring, scaffolding, etc.
- 1.2           Wall and ceilings  
The interior surfaces (walls and ceilings) of the two toilet rooms are natural wood. As indicated on the plans (Note # 1, page A02), bare wood shall be cleaned and covered with a protective fully transparent, waterproof, oil-proof and graffiti-proof coating, in accordance with Section 09 91 00.
- 1.3           Elastomeric membrane position section # 07 31 29 2. paragraph 1.2  
As indicated on plans (page A02 and page A03) the membrane shall be placed on the roof surface and sealed to the metal flashings or installed as membrane flashings and sealed to the metal flashings. The air barrier is on the cedar shingle walls.

### **Part 2           Addenda #1**

- 2.1           Cedar shingle  
Drawings A2 detail 14  
**Replace the following note:**  
Cedar shingle western weather exposure 125mm
- By the following:**  
Cedar shingle Eastern weather exposure 125mm

- 2.2 Air Barrier  
Specifications section 07 27 10  
**Replace paragraph 2.1.1 of Section 07 27 10 by paragraph 2.1.5 of Section 07 31 29:**  
2.1.1 Waterproof membrane: permeable to water vapor, consisting of a weaving son polypropylene laminated to 0.6 mm thick.
- With the following paragraph:**  
2.1.1 Waterproof Sheathing paper: to CAN/CGSB-51.32, single ply type.  
.1 Acceptable products:  
.1 Roofshield by Proctor  
.2 AirOutshield ROOF by rsp  
.3 Attic Wrap dupont  
.4 Substitute materials or product: approved by addendum in accordance with the instruction to Bidders.
- 2.3 Toilet Compartments  
Drawings page A3 drawing 23 and 24  
**Replace the following vertical dimensions:**  
• Spacing between floor and bottom of partition: 100mm  
• Height of partitions: 1830mm
- By the following vertical dimensions:**  
• Spacing between floor and bottom of partition: 300mm  
• Height of partitions: 1470mm
- 2.4 Windows to be preserved  
Specifications section 08 50 00  
**Remove section 08 50 00 of quote.**
- 2.5 Windows to be preserved  
Drawings page A1  
**Replace note on plan 06:**  
Window to be removed
- By the following note:**  
Window to be preserved
- 2.6 Windows to be preserved  
Drawings page A2  
**Replace note on plan 06 :**  
New window, see elevation #18 on the sheet A3.
- By the following note:**  
Clean interior and exterior framing and glazing of the windows.
- 2.7 Windows to be preserved  
Drawings page A3  
**Remove the plan detail #18, #19, and #20.**

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