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800 Burrard Street, Room 219  
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Vancouver  
British Columbia  
V6Z 0B9  
Bid Fax: (604) 775-9381

**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 -  
Pacific Region  
800 Burrard Street, Room 219  
800, rue Burrard, pièce 219  
Vancouver  
British C  
V6Z 0B9

Title - Sujet Rénovation d'enveloppes de bâtiment	
Solicitation No. - N° de l'invitation EZ899-150058/A	Amendment No. - N° modif. 003
Client Reference No. - N° de référence du client	Date 2014-06-05
GETS Reference No. - N° de référence de SEAG PW-\$PWY-015-7254	
File No. - N° de dossier PWY-4-37023 (015)	CCC No./N° CCC - FMS No./N° VME
Solicitation Closes - L'invitation prend fin at - à 02:00 PM on - le 2014-06-16	Time Zone Fuseau horaire Pacific Daylight Saving Time PDT
F.O.B. - F.A.B. Plant-Usine: <input type="checkbox"/> Destination: <input checked="" type="checkbox"/> Other-Autre: <input type="checkbox"/>	
Address Enquiries to: - Adresser toutes questions à: Chan (PWY), Scarlett	Buyer Id - Id de l'acheteur pwy015
Telephone No. - N° de téléphone (604) 775-9382 ( )	FAX No. - N° de FAX (604) 775-6633
Destination - of Goods, Services, and Construction: Destination - des biens, services et construction: Parks Canada - The Gulf of Georgia Cannery - Richmond, BC	

Instructions: See Herein

Instructions: Voir aux présentes

Delivery Required - Livraison exigée	Delivery Offered - Livraison proposée
Vendor/Firm Name and Address Raison sociale et adresse du fournisseur/de l'entrepreneur	
Telephone No. - N° de téléphone Facsimile No. - N° de télécopieur	
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)	
Signature	Date

Solicitation No. - N° de l'invitation

EZ899-150058/A

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

Amd. No. - N° de la modif.

003

File No. - N° du dossier

PWY-4-37023

Buyer ID - Id de l'acheteur

pw015

CCC No./N° CCC - FMS No/ N° VME

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Les documents français seront disponibles sur demande.

Attached is Addendum No. 1

All other Terms and Conditions remain unchanged.

## ADDENDUM No. 1

BUILDING ENVELOPE REMEDIATION  
Project No. R.060702.001

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The following changes in the tender documents are effective immediately. This addendum will form part of the contract documents.

### 1.0 CHANGES AND CLARIFICATIONS

#### SPECIFICATIONS

- 1.1 Section 00 01 10 TABLE OF CONTENTS  
**ADD Section 08 01 52.71 Wood Window Rehabilitation.**
- 1.2 Section 01 11 55 GENERAL INSTRUCTIONS, 1.01 WORK DESCRIBED BY CONTRACT DOCUMENTS:  
**REVISE 1.01.2.1.9 to read: Window frames and sashes (interior and exterior): removal of existing finish, repair of wood rot, patching and repainting. Temporary removal of sashes , removal of existing linseed putty and re-glazing of existing panes, reinstalling sashes rendering sashes inoperable with fasteners.**
- 1.3 Section 01 56 00 TEMPORARY BARRIERS & ENCLOSURES, 1.4 HOARDING  
**ADD .4 Window openings which have been temporarily removed are to be secured with translucent hoarding to allow for natural light transmission in accordance with 1.06 Weather Enclosures.**
- 1.4 Section 08 01 52.71 WOOD WINDOW REHABILITATION  
**ADD (attached).**
- 1.5 Section 09 91 00 PAINTING  
**REPLACE (attached).**

#### DRAWINGS

- 1.6 Not applicable.

### 2.0 RESPONSE TO CONTRACTOR QUERIES:

Q #1: Is the building permit in place for the work? If not, it is understood that the owner or architect would apply and obtain the building permit. Please confirm.

**A #1: Building Permit is not required by the City of Richmond.**

Q #2: Would the Department Representative arrange for moving of the items currently located in front of the windows on the interior, if required, for the duration of work?

**A #2: No**

Q #3: As per the site meeting, please further clarify the requirements of keynote A300 on the drawings. As discussed at the pre-tender meeting, the replacement or repair of concealed decay/rot conditions to the wood siding or windows, is typically handled for tendering purposes with an allowance or with standard hourly rates.

**A #3: PWGSC contracting does not allow for cash allowance or unit prices. Contractor to include for possible wood rot and replacement. Building Envelope review of existing conditions did not indicate substantial wood rot. Any leftover wood materials to be turned over to Owner and stored where directed.**

Q #4: Will sandblasting be an appropriate and approved method for removal of the existing paint from the vertical wall surfaces, window trim, fascia, etc..

**A #4: Sandblasting is not an appropriate method for paint removal for existing wood. Paint removal is to be completed in the most gentle process possible.**

Q #5: Drawing BE1.0.

Q#5.1: A-300 & A-301: ‘...where existing substrate is not acceptable for repainting, install new douglas fir siding #2 or better of matching profile’. The volume of this work cannot be evaluated prior to having access to the wall area 10’ AFF, and prior to stripping of the existing coating from the surface, as requested in Section 09 91 00, Item 1.01.1.

**A#5.1: Refer to A#03 above.**

Q#5.2: Item #10: prior to removal of security grills and having checked the existing condition of the window frames and sashes, it is impossible to evaluate wood rot to be replaced. It would be advisable to proceed with this work on a time and material basis, based on unit prices, or to include a bid cash allowance.

It was noted during the site visit that some glass panels are broken and must be replaced prior to painting work commences. Does this item require painting of the windows from the interior of the building?

Please provide provision for this work in the tender form (cash allowance, unit price or time and material basis).

**A#5.2: Refer to 1.4 and A#3 above.**

Q#5.3: There are numerous times the term “patch wood” is used in Keynotes. Please provide a definition and clarify the extent of work.

**A#5.3: Refer to 1.4 above.**

Q #6: Vitamin Oil Shed – are we to remove the wharf decking to remediate the bottom row of siding on the South elevation?

**A #6: Contractor to leave wharf decking in place. Bottom row of siding on South elevation not to be included in scope of work.**

Q #7: Lead Foundry Building – are we to remove existing soil at base to access siding?

**A #7: Yes. Contractor is to remove soil where covering wood siding and dispose of off-site. Damaged window(s) will require removal prior to repair. Security grilles of Lead Foundry and Watch shed to be removed and sandblasted off site prior to repainting and reinstallation.**

**END OF ADDENDUM No. 1**

## **1 GENERAL**

### **1.01 SUMMARY OF WORK**

- .1 The buildings are primarily of wood frame structure, the surfaces are wood and require complete stripping of existing coatings, due to excess paint film and extensive failure observed on the buildings.
- .2 Work includes but not necessarily limited to:
  - 1. Surface preparation of substrates as required for acceptance of paint, including cleaning, small crack repair, patching, caulking and making good surfaces and areas to the limits defined under MPI Repainting Manual preparation requirements.
  - 2. Specific pre-treatments noted herein or specified in the MPI Repainting Manual and Architectural Painting Specification Manual.
  - 3. Sealing/Priming surfaces for repainting in accordance with MPI Repainting Manual and Architectural Painting Specification Manual requirements.
- .3 Include all incidental items not specifically noted above but considered part of the finished surface.

### **1.02 RELATED REQUIREMENTS**

- .1 Section 02 83 10 – Lead Base Paint Abatement – Minimum Precautions.
- .2 Section 06 10 00 – Rough Carpentry.

### **1.03 REFERENCES**

- .1 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
  - .1 Material Safety Data Sheets (MSDS).
- .2 The Master Painters Institute (MPI)
  - .1 Maintenance Repainting Manual, current edition, Master Painters Institute (MPI), including Identifiers, Evaluation, Systems, Preparation and Approved Product List.
  - .2 Architectural Painting Specification Manual, 2010 (new siding and fascia).
- .3 National Fire Code of Canada.

### **1.04 QUALITY ASSURANCE**

- .1 Qualifications: qualified journeypersons as defined by local jurisdiction to be engaged in painting work. Apprentices may be employed provide they work under the direct supervision of a qualified journeyperson in accordance with trade regulations.
- .2 Conform to latest MPI requirements for exterior repainting work including cleaning, preparation and priming.
- .3 Materials (primers, paints, 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 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 Schedule repainting operations to prevent disruption by other trades if applicable and by occupants in and about building.
- .7 All repainting work shall be inspected by MPDA Inspection Agency acceptable to the local MPI Accredited Quality Assurance Association. The Contractor to notify MPDA Inspection Agency a minimum of one week prior to commencement of work and provide all documents in accordance with Section 01 33 00 – Submittal Procedures.
- .8 All surfaces requiring repainting to be inspected by Contractor who will notify MPDA Inspection Agency and Departmental Representative in writing of any defects as defined by MPI (DSD4 assessment) or other problems relating to the execution of work, prior to commencing repainting or after preparation work.

#### **1.05 ACTION AND INFORMATIONAL SUBMITTALS**

- .1 Provide duplicate paint colour samples and submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Submit written verification of ability to supply a 100% two (2) year maintenance bond, if Paint Association warranty option is not used with Bid Submission.
- .3 Provide product data and manufacturer's installation/application instructions for paints and coating products to be used.
- .4 Provide certification reports for ecologo paint products used.
- .5 If requested, submit invoice list of all paint materials order to complete work to Paint Inspection Agency indicating manufacturer, types and quantities for verification and compliance with specification.
- .6 If requested, submit work schedule for various stages of the Work to the Departmental Representative.
- .7 Submit MSDS prior to commencement of work for review and posting at job site.
- .8 Quality Assurance Submittals:
  - .1 Manufacturer's Instructions: manufacturer's installation instructions.
- .9 Closeout Submittals:
  - .1 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 Manufacturer's Material Safety Data Sheets.
- .10 Extra Materials:
  - .1 Provide 1 litre of each type and colour of paint from same production run (batch mix) used in unopened cans and properly labeled.

## **1.06 INSPECTION**

- .1 The MPDA Inspection Agency will not be responsible for and will not have control, or supervise the contractor in performance of work.
- .2 The MPDA Inspection Agency will be responsible to observe and report and shall not be responsible for the contractor's failure to carry out the work in accordance with the contract documents.

## **1.07 REGULATORY REQUIREMENTS**

- .1 Conform to work place safety regulations for storage, mixing, application and disposal of all paint related materials to requirements of those authorities having jurisdiction.
- .2 Conform to safety precautions in accordance with the latest requirements to Industrial Health and Safety Regulations, latest edition, of authorities having jurisdiction.
- .3 Notify the MPDA Inspection Agency on award of contract and make application for assignment using MPDA Agency forms, finish schedule and list of MPI Approved Products Intended for Use on the Project for verification purposes prior to commencement of work.
- .4 Cooperate with the requirements of MPDA Paint Inspection Agency in the performance of their duties including providing access and assistance as required to complete inspection work.
- .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 (but not limited to):
  1. Contractor and sub-contractor staff must be trained in spill response and reporting procedures including containment methods for paints and solvents.
  2. Sufficient spill clean-up equipment should be available on-site to adequately handle all potential spill volumes and types.
  3. All transfer of paint from storage and mixing containers into application devices shall be conducted in a location that minimizes the risks of accidentally spilled product entering the Fraser River intertidal zone beneath the cannery complex.
  4. Placing open paint containers within secondary containment vessels with minimum holding capacity of 120% of the paint container is an effective means of minimizing the risk of spillage.
  5. Workers will carry the minimum quantities of paints and solvents in the work area that enables efficient undertaking of the required work.
  6. Paint application equipment must be adjusted to minimize drift.
  7. Cleaning of painting equipment will be conducted in a location which minimizes the risk of paint and solvents entering the receiving environment.
  8. Retain cleaning water for water-based materials to allow sediments to be filtered out.
  9. Retain cleaners, thinners, solvents and excess paint and place in designated containers and ensure proper disposal.
  10. Dispose of waste paint, solvents, solvent and oil soaked rags and contaminants in an approved legal manner in accordance with federal, provincial and municipal hazardous waste regulations. No disposal of waste paint or solvent/paint mixtures is permitted at the Gulf of Georgia Cannery National Historic Site.
  11. 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.



12. Where paint recycling is available, collect waste paint by type and provide for delivery to recycling or collection facility.
13. Empty paint cans are to be dry prior to disposal or recycling (where available).

**1.08 MOCK-UPS:**

- .1 When requested by Departmental Representative or MPDA Inspection Agency, prepare and repaint a designated exterior surface area or item to requirements specified herein, with specified paint or coating showing selected colors, gloss/sheen, texture and workmanship to MPI Manual standards for review and approval. When approved, the exterior surface area and/or item shall become the acceptable standard of finish quality and workmanship for similar on-site repainting work.

**1.09 DELIVERY, STORAGE AND HANDLING**

- .1 Packing, shipping, handling and unloading:
- .2 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 dry chemical 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 reuse and recycling in accordance with Section 01 74 19 - Construction/Demolition Waste Management and Disposal.
  - .2 Paint 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.

#### **1.10 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, Do not perform repainting 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.
    - .7 Environmental conditions are not within the MPI and paint manufacturer's requirements.
- .2 It is the Contractor's responsibility to conduct all required tests such as moisture content, PH tests, air and surface temperature and all other testing prior to the application of any coatings.
  - 1. Perform no exterior repainting work when maximum moisture content of the substrate exceeds 15% for wood.
  - 2. Conduct all moisture tests using a properly calibrated electronic moisture meter.
  - 3. Test surfaces for alkalinity (pH) as required.
- .3 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.

#### **1.11 WARRANTY**

- .1 Project Warranty: Submit in accordance with Section 01 78 00 - Closeout Submittals.
- .2 Furnish a two (2) year Painting Association Guarantee or a 100% two (2) year Maintenance Bond both in accordance with MPI Repainting Manual requirements. The Maintenance Bond shall be obtained from an approved bonding company and will warrant that all painting work has been performed in accordance with MPI Repainting Manual requirements.
- .3 All repainting work shall be in accordance with MPI Repainting and Architectural Painting Specification Manual requirements and shall be inspected by the Painting Association whether using the Painting Association Guarantee or the Maintenance Bond option.
- .4 The cost for such Painting Association inspections, at 5% of the contract value, as well as either the Painting Association Guarantee or Maintenance Bond shall be included in the Base Bid Price awarded to Contractor.
- .5 Manufacturer's warranty is in addition to, and not a limitation of, other rights Departmental Representative may have under Contract Documents.

## **2 PRODUCTS**

### **2.01 MATERIALS**

- .1 Paint materials listed in latest edition of MPI Approved Product List (APL) are acceptable for use on this project.
- .2 Paint materials for repaint systems: products of single manufacturer.
- .3 Use only MPI listed materials.
- .4 Paints, coatings, thinners, solvents, cleaners and other fluids used in repainting to be as follows:
  - .1 Not contain methylene chloride, chlorinated hydrocarbons, toxic metal pigments.

- .2 Be manufactured without compounds which contribute to ozone depletion in upper atmosphere.
- .3 Be manufactured without compounds which contribute to smog in lower atmosphere.
- .4 Be manufactured where matter generating 'Biochemical Oxygen Demand' (BOD) in undiluted production plant effluent discharged to natural watercourse or sewage treatment facility lacking secondary treatment does not exceed 15 mg/L.
- .5 Be manufactured where total suspended solids (TSS) content in undiluted production plant effluent discharged to natural watercourse or sewage treatment facility lacking secondary treatment does not exceed 15 mg/L.
- .5 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).
- .6 Paints and coatings must not be formulated or manufactured with formaldehyde, halogenated solvents, mercury, lead, cadmium, hexavalent chromium or their compounds.
- .7 All paint materials will have good flowing and brushing properties and shall dry or cure free of blemishes, sags, air entrapment, etc.
- .8 Caulking and filling compounds will be as recommended by paint manufacturer.
- .9 Slip Resistant Additives (SRA): rubber aggregate or clean/washed silica sand for use with or as a component part of paint (usually floor/porch/stair enamel) on exterior horizontal surfaces as required to provide slip resistance. Where site applied, material mixed into paint and mixed constantly to keep material in suspension.

## **2.02 EQUIPMENT**

- .1 Painting equipment: to best trade standards for type of product and application.

## **2.03 MIXING AND TINTING**

- .1 Unless specified otherwise, all paints shall be ready-mixed and pre-tinted. 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 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.
- .3 Catalyzed paint mixes shall be mixed in strict accordance with manufacturer's written instructions.

## **2.04 FINISHES AND COLOUR:**

- .1 Unless specified otherwise, all exterior repainting work to be done in accordance with MPI Premium Grade requirements.
- .2 Colours shall be as selected by Departmental Representative and from a manufacturer's full range of colours.
- .3 Provide slip resistant additive to exterior painted stair treads and landings.

## **2.05 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	Unit at 60 Degrees	Units at 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	More than 85	

- .2 Gloss level ratings of repainted surfaces to be selected by Departmental Representative unless indicated otherwise.

## **3 EXECUTION**

### **3.01 MANUFACTURER'S INSTRUCTIONS**

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

### **3.02 EXAMINATION**

- .1 Surfaces requiring repainting: inspected by painting contractor who will notify Departmental Representative in writing of defects or problems, prior to commencing repainting work, or after surface preparation if unseen substrate damage is discovered.
- .2 Where an assessed degree of surface degradation of DSD-1 to DSD-3 before preparation of surfaces for repainting is revealed to be DSD-4 after preparation, repair or replacement of such unforeseen defects discovered are to be corrected, as mutually agreed, before repainting is started.

### **3.03 PREPARATION**

- .1 Perform preparation and operations for exterior painting in accordance with MPI requirements except where specified otherwise.
- .2 Apply paint materials in accordance with paint manufacturer's written application instructions.
- .3 Remove, clean and prepare exterior elements indicated to be repainted in accordance with MPI Maintenance Repainting Manual and Architectural Painting Specification Manual requirements. Refer to MPI Manual in regard to specific requirements and as follows:
- .1 Remove dust, dirt, and surface debris by brushing, wiping with dry, clean cloths.
- .2 Wash surfaces with a biodegradable detergent (and bleach where applicable) and clean warm water using a stiff bristle brush to remove dirt, oil and surface contaminants.
- .3 Rinse scrubbed surfaces with clean water until foreign matter is flushed from surface.

- .4 Allow surfaces to drain completely and to dry thoroughly.
- .5 Use water-based cleaners in place of organic solvents where surfaces will be repainted using water based paints.
- .6 For surfaces not containing lead or PCBs, clean exterior surfaces to ensure complete removal of all paint, stains, dirt and contaminates down to substrate. This work to be completed by qualified tradesman experienced in pressure water cleaning.
- .4 Clean metal surfaces to be repainted by removing rust, dirt, oil, grease and foreign substances in accordance with MPI requirements. Remove such contaminates from surfaces, pockets and corners to be repainted by brushing with clean brushes or brushing/vacuum cleaning as required.
- .5 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.
- .6 Pressure-cleaning or water hose cleaning will not be considered satisfactory. Allow sufficient drying time and test all surfaces using an electronic moisture meter before commencing work.
- .7 Sand and dust between coats as required to provide adequate adhesion for next coat and to remove defects from previously painting (e.g. runs, and sags) that are visible from distance up to 1000 mm.
- .8 Remove all building attachments such as downspouts and signage as required to complete work. Store where directed by Department Representative. Reinstall once painting work complete.
- .9 Wood:
  - 1. All open miter joints and gaps in door frames are to be caulked with paint manufacturer's recommended caulking compound.
  - 2. Existing debris such as paint skins, etc are to be sanded or scraped from the surface prior to coating application. Raised wood fibers are to be scraped or sanded from the surface prior to finish coat application.
  - 3. Brush all bare wood joints at miter joints and cut-ends of lumber with specified MPI primer.
  - 4. Corroded nail heads shall be spot primed with an MPI approved anti-corrosive primer. Protruding nails to be removed or reset.
  - 5. Bare knots shall be sealed with the manufacturer's recommended knot/stain sealer.

### **3.04 EXISTING CONDITIONS**

- .1 Prior to commencing work, examine existing exterior elements to be painted in accordance with ARTICLE 1.10 – AMBIENT CONDITIONS and report in writing to Departmental Representative damages, defects, unsatisfactory or unfavourable conditions of surfaces that will adversely affect this work.
- .2 No painting work to commence until such adverse conditions and defects have been corrected and surfaces and conditions are acceptable to Painting Subcontractor and Departmental Representative.

- .3 Degree of surface deterioration (DSD) to be assessed using MPI Identifiers and Assessment criteria indicated in the MPI Maintenance Repainting Manual. MPI DSD ratings and descriptions are as follows:

Condition Description	
DSD-0	Sound Surface (includes visual (aesthetic) defects that do not affect film's protective properties).
DSD-1	Slightly Deteriorated Surface (indicating fading: gloss reduction, slight surface contamination, minor pin holes and scratches).
DSD-2	Moderately Deteriorated Surface (small areas of peeling, flaking, slight cracking and staining).
DSD-3	Severely Deteriorated Surface (heavy peeling, flaking, cracking, checking, scratches, scuffs, abrasion, small holes and gouges).
DSD-4	Substrate Damage (repair or replacement of surface required).

### **3.05 PROTECTION**

- .1 Re-painting of mechanical elements onsite is acceptable however must be done in controlled environment.
- .2 Protect existing building surfaces and adjacent structures from paint spatters, markings and other damage by suitable non-staining covers or masking. If damaged, clean and restore such surfaces as directed by Departmental Representative.
- .3 Protect factory finished products and equipment.
- .4 Protect general public and building occupants in and about the building.

### **3.06 APPLICATION**

- .1 Do not commence work unless substrates and all environmental conditions are acceptable for the application of products.
- .2 Apply primer, paint or stain in accordance with MPI Painting Manual Premium Grade finish requirements unless otherwise specified.
- .3 Apply paint by method that is best suited for substrate. Conform to manufacturer's application instructions unless specified otherwise.
- .4 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.
- .5 Apply primer and paint within an appropriate time frame after cleaning and preparation to prevent weathering or water staining of substrate or before environmental conditions encourage flash-rusting, rusting or contamination or when the manufacturer's paint specifications require earlier application.
- .6 Primer and paint coats specified are intended to cover surfaces satisfactorily when applied at proper consistency and in accordance with manufacturer's recommendation.
- .7 Tint each coat of paint progressively darker to enable confirmation of number of coats unless approved otherwise by MPDA Inspection Agency.



- .8 Where deep or bright colours are used, allow for the application of additional finish coats to achieve satisfactory results.
- .9 Sand and dust between coats to remove provide anchor for next coat and to remove surface defects such as runs and sags on existing and new coatings where applicable for surface texture.
- .10 Do not apply finishes on exterior surfaces that are not sufficiently dry. Unless manufacturer's directions state otherwise, each coat shall be sufficiently dry and hard before following coat is applied.
- .11 To avoid air entrapment in applied coats, apply materials in strict accordance with manufacturer's spread rates and application requirements.
- .12 Where touch-up painting is undertaken and found to be noticeable, the entire surface will require repainting from break to break or corner to corner.

### **3.07 PRIMING AND BACK PRIMING**

- .1 All woodwork, which is to receive paint finish shall be primed with an MPI approved primer compatible with the finish system.
- .2 Back-prime all wood which is not exposed or painted.
- .3 Top and bottom edges of wood window frames exposed to the exterior shall be coated with the finish system.
- .4 Pre-finished metals shall be primed with MPI approved solvent based bonding primer where applicable.

### **3.08 FIELD QUALITY CONTROL / STANDARD OF ACCEPTANCE**

- .1 All surfaces, preparation and paint applications shall be inspected by the MPDA Inspection Agency.
- .2 Painted exterior and interior surfaces shall be considered to lack uniformity and soundness if any of the following defects are apparent to the MPDA Inspection Agency and not limited to:
  - 1. Brush/roller/tracking, streaks, laps, runs, sags, drips, heavy stippling, hiding or shadowing by inefficient application methods, skipped or missed areas, and foreign materials in paint coatings.
  - 2. Damage due to touching before paint is sufficiently dry or any other contributory cause.
  - 3. Damage due to application on moist surfaces.
  - 4. Damage and contamination of paint due to wind-blown contaminants (dust, sand blast materials, salt spray, etc).
- .3 Painted surfaces shall be considered unacceptable if any of the following are evident under natural lighting conditions.
  - .1 Visible defects are evident on vertical surfaces when viewed at 90 degrees to the surface from a distance not less than 1000mm.
  - .2 Visible defects are evident on horizontal surfaces when viewed at 45 degrees to the surface from distance not less than 1000mm.
  - .3 Visible defects are evident on soffit and other overhead surfaces when viewed at 45 degrees to the surface.



- .4 When the final coat on any surface exhibits a lack of uniformity of sheen across full surface area.
- .4 Painted and repainted surfaces rejected by the Departmental Representative or MPDA Inspection Agency shall be make good at the expense of the contractor.

### 3.09 CLEANING

- .1 Proceed in accordance with Section 01 74 11 - Cleaning.
- .2 Remove paint where spilled, splashed, splattered or s
- .3 prayed as work progresses using means and materials that are not detrimental to affected surfaces.
- .4 Keep work area free from unnecessary accumulation of tools, equipment, surplus materials and debris.
- .5 Remove combustible rubbish materials and empty paint cans each day and safely dispose of same in accordance with requirements of authorities having jurisdiction.
- .6 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.
- .7 Recycle paint and coatings in excess of repainting requirements as specified.

### 3.10 RESTORATION

- .1 Contractor to re-install all temporarily removed items including wood boxes, window sashes, rain leaders and flashings.

### 3.11 EXTERIOR FINISH SCHEDULE:

- .1 Paint and repaint exterior surfaces in accordance with the following MPI Manual Requirements:

#### **REX 5.1 Structural Steel & Metal**

REX 5.1C W.B Light Industrial			Miscellaneous Metals		
Full-Prime	DSD 3	MPI 23	Surface Tolerant Primer		
1 <sup>st</sup> Coat		MPI 163	W.B Light Industrial		G5
2 <sup>nd</sup> Coat		MPI 163	W.B Light Industrial		G5

#### **REX 6.2 Dimension Lumber**

REX 6.2A Latex			Wood Siding		
Full-Prime	DSD 3	MPI 5	Alkyd Stain Blocker		
1st Coat		MPI 15	Exterior Latex		G3/4
2nd Coat		MPI 15	Exterior Latex		G3/4
REX 6.2B Solid Colour Stain			Fencing		

W.B

Full-Prime	DSD 3	MPI 5	Alkyd Stain Blocker	
1st Coat		MPI 15	Solid Colour Stain W.B	N/A
2nd Coat		MPI 15	Solid Colour Stain W.B	N/A

**REX 6.3 Dressed Lumber**

REX 6.3J W.B Light Industrial			Window Sashes Window Frames Fascia Boards Corner Trims Doors/Frames Wood Louvers	
Full Prime	DSD 3	MPI 5	Alkyd Stain Blocker	
1st Coat		MPI 163	W.B Light Industrial	G5
2nd Coat		MPI 163	W.B Light Industrial	G5

**REX 6.4 Wood Paneling**

REX 6.4A Latex			Wall Panels	
Full-Prime	DSD 3	MPI 5	Alkyd Stain Blocker	
1st Coat		MPI 15	Exterior Latex	G3/4
2nd Coat		MPI 15	Exterior Latex	G3/4

**END OF SECTION**

## **1 GENERAL**

### **1.01 RELATED REQUIREMENTS**

- .1 Section 02 83 10 – Lead Base Paint Abatement – Minimum Precautions.
- .2 Section 07 92 00 – Joint Sealants.
- .3 Section 09 91 00 – Painting.

### **1.02 REFERENCES**

- .1 Architectural Woodwork Manufacturers Association of Canada (AWMAC) and Architectural Woodwork Institute (AWI)
  - .1 Architectural Woodwork Quality Standards Illustrated, 8th edition, Version 1.0 2009.

### **1.03 QUALITY ASSURANCE**

- .1 Mock-ups:
  - .1 Prepare one window mock-up of base scope of work for review by Departmental Representative, Parks Canada and Gulf of Georgia Cannery Representatives before proceeding with further Work.
- .2 Notify Departmental Representative 48 hours in advance of required review.
- .3 Approved mock-up becomes standard of acceptance for finished Work.
- .4 Obtain approval of Departmental Representative before installing approved mock-up.
- .5 Approved mock-up may be incorporated in finished work.

### **1.04 QUALIFICATIONS**

- .1 Carry out window rehabilitation work using skilled tradesperson.

### **1.05 DELIVERY, STORAGE AND HANDLING**

- .1 Deliver, store, and handle materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Store windows and hardware in enclosed space with controlled ambient temperature and relative humidity.
- .3 Protect windows from scratches, handling marks and other damage. Wrap windows.
- .4 Waste Management: dispose waste materials in accordance with Section 01 74 19 - Construction/Demolition and Waste Management and Disposal and Section 01 35 43 – Environmental Procedures.

## 1.06 SUBMITTALS

- .1 At commencement of project, the Contractor will be issued drawings identifying each window with a Personal Identification Number (PIN) so that each window is re-installed to its original location. Contractor to provide photo of each window opening frame and window identified with PIN once removed from location.
- .2 The Contractor is to review every penetration through the walls and complete the following table format and submit to the Departmental Representative.

PIN	Condition of Frame (Putty or Dutchman required?)	Condition of Sash	Condition of Glazing	Drip Edge	Repair Class
1					
2					
3					
4					
5					
...					

## 1.07 SITE CONDITIONS

- .1 The Gulf of Georgia Cannery is a functioning museum. To reduce inconvenience to the public, disruptions to displays and existing conditions within the Cannery must be kept to a minimum.
- .2 Lead paint has been identified on the windows and because the removal of the lead paint can be hazardous to human health, the Contractor may elect to repair the windows off site. Windows removed from the site must be labelled so that they are reinstalled in their original location.
- .3 Wood Rot: substantial wood rot was not discovered upon review of the windows at the Gulf of Georgia however some rot may be discovered during scope of work. Repair work for wood rot falls under to the following three categories:
  1. Repair Class 1: Routine Maintenance (most of the windows in the scope of work):
    1. Class 1 repairs are the repairs that are required under the base scope of the work.
  2. Repair Class II: Stabilization:
    1. Class II repairs are repairs that are necessary to halt the initial stages of deterioration of the wood elements of the penetration. Minor repairs with wood putty will be required. The end grain of the wood is then sealed with a penetrating epoxy. Once the wood elements are stabilized, repairs that are required under the base scope of the work are conducted.
  3. Repair Class III: Splices and Parts Replacement:
    1. Class III repairs involve the replacement of a portion of the wood elements of the penetrations must be replaced in order to retain a portion of the original building fabric. Class III repairs are likely to be performed off site.

## **2 PRODUCTS**

### **2.01 MATERIALS**

- .1 Wood Repair Putty: Aqua Set mixed with Mini Fibers and glass bubbles by Coast Fiber-Tek Products Ltd. or approved alternate.
- .2 Penetrating Epoxy: Aquaset Epoxy Sealer or approved alternate.
- .3 Wood Fungicide: Boracol 10-2BD or approved pre-approved alternate.
- .4 Glazing Putty: Bostik Linseed Putty or DAP "33" Glazing Putty.
- .5 Glazing: existing glazing panes to be reinstalled into original frame and locations. Cracked glazing to be replaced to match existing glazing.

### **2.02 FABRICATION**

- .1 Dry fit and assemble window components before completing reassembly.

## **3 EXECUTION**

### **3.01 REPAIR METHODOLOGY**

- .1 Repair Class I: Routine Maintenance (comprises most of the windows in the scope of work):
  - 1. Remove the security grilles from the windows. Store at the location designated by Owner.
  - 2. Remove the operable sashes from the window frames. Where the sashes are adhered to the frames by paint, free by running a utility knife along the length of the seam between the sash and the frame thus gently breaking the paint bond. Trim boards may also be removed from the window frames in this manner. Avoid visible scarring of the wood by gradually prying loose with putty knives, working up and down the joint between wood components that are painted together in small increments.
  - 3. Remove paint finish from interior frames. Care must be taken to remove the paint from the interior stop and the seam where the sill meets the jamb.
  - 4. Remove existing glass panes from sashes gently, protecting from impact or sudden temperature changes for later re-installation. Deteriorated putty should be removed manually, taking care not to damage the wood along the rabbet. The panes must be numbered and removed for cleaning and reused in the same openings. Hardened putty in the rabbets may be softened by heating with a soldering iron at the point of removal. Putty remaining on the glass may be softened by soaking the panes in linseed oil, and then removed with less risk of breaking the glass.
  - 5. The sash may be stripped of paint using appropriate and gentle techniques. After removal of panes, remaining putty may be removed and sash sanded, patched, and treated with a wood preservative.
  - 6. Prior to repainting the window assembly, treat stripped wood with two applications of wood preservative. Allow the wood to dry fully. Fill holes in frames with wood putty and treat the joint between the jamb and the wood sill with penetrating epoxy. Once the epoxy and the putty have fully dried, apply primer to the window and paint as per Section 09 91 00 - Painting.

7. Before reinstalling the existing glass in repainted sashes, a bead of glazing compound (or linseed oil putty) must be laid around the rabbet to cushion and seal the glass. Glazing compound should only be used on wood which has been painted. The pane is then pressed into place and the glazing points are pushed into the wood around the perimeter of the pane.
  8. The glazing compound or putty is applied and beveled to complete the seal. Exterior paint should cover the beveled glazing compound or putty and lap over onto the glass slightly to complete a weather-tight seal. After proper curing time of paint and putty, the sash will be ready for re-installation.
  9. Install contemporary weather-stripping to windows and sash locks installed on the meeting rail.
- .2 Repair Class II: Stabilization:
1. Class II repairs are repairs that are necessary to halt the initial stages of deterioration of the wood elements. Minor repairs with wood putty will be required. The end grain of the wood elements is then sealed with a penetrating epoxy. Once paint is completely removed from the wood elements, wood preservative is required in two separate applications.
  2. Once wood elements are stabilized, proceed with repairs as described in Repair Class I.
  3. Class II repairs will comprise all of the elements of a Class 1 but will make more extensive use of putty. When using any technique of building up or patching a flat surface, the finished surface should be sloped slightly to carry water away from the window and not allow it to puddle.
- .3 Repair Class III: Splices and Parts Replacement:
1. When parts of the frame or sash are so badly deteriorated that they cannot be stabilized there are methods which permit the retention of some of the existing or original fabric. These methods involve replacing the deteriorated parts with new matching pieces, or splicing new wood into existing members.
  2. Repair Class III repairs will require the temporary removal of the windows. Once the Contractor has determined that Class III repairs are necessary, The Contractor will contact the Departmental Representative for the confirmation of his finding. Once the Contractor has received confirmation from the Departmental Representative, the contractor will label the window with its PIN prior to removing it from the site.
  3. Deteriorated portions of a window may be cut out and replaced using Dutchman Repair technique. Dutchman repairs selectively replace only the faulty portion of a window with new material to match adjacent as closely as possible. Dutchman repairs are secured with epoxy and stainless steel pins as required for sound attachment. Wood rot must be completely removed, the wood stabilized with an application of wood preservative and the repair secured in place with epoxy and stainless steel fasteners.

### **3.02 INSTALLATION**

- .1 Reinstall hardware and re-install windows into original locations in accordance with PIN schedule.
- .2 Install windows level, square and plumb.
- .3 Render windows inoperable with fasteners from the interior where indicated. Contractor to confirm fastener type and location.

**3.03 CLEANING**

- .1 Progress Cleaning: clean in accordance with Section 01 74 11 - 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 11 - Cleaning.

**3.04 PROTECTION**

- .1 Protect components from damage during re-installation.
- .2 Repair damage to adjacent materials caused by re-installation.

**END OF SECTION**