

Part 1 General

1.1 REFERENCES

- .1 The Master Painters Institute (MPI)
 - .1 Maintenance Repainting Manual 2004, Master Painters Institute (MPI), including Identifiers, Evaluation, Systems, Preparation and Approved Product List.
- .2 Environmental Protection Agency (EPA)
 - .1 Test Method for Measuring Total Volatile Organic Compound Content of Consumer Products, Method 24 (for Surface Coatings).
- .3 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
 - .1 Material Safety Data Sheets (MSDS).
- .4 South Coast Air Quality Management District (SCAQMD), California State
 - .1 SCAQMD Rule 1113-04, Architectural Coatings.

1.2 QUALITY ASSURANCE

- .1 Conform to latest MPI requirements for interior repainting work including cleaning, preparation and priming.
- .2 Materials shall be in accordance with the latest edition of the MPI Approved Product List and shall be from a single manufacturer for each system used.
- .3 Retain purchase orders, invoices and other documents to prove conformance with noted MPI requirements when requested by Departmental Representative.
- .4 Standard of Acceptance: when viewed using final lighting source surfaces shall indicate the following:
 - .1 Walls (doors): no defects visible from a distance of 1000 mm at 90 degrees to surface.
 - .2 Ceilings: no defects visible from floor at 45 degrees to surface.
 - .3 Final coat to exhibit uniformity of colour and sheen across full surface area.
- .5 Mock-ups: construct mock-ups in accordance with Section 01 45 00 - Quality Control .
 - .1 Provide a mock-up in accordance with requirements of Section 01 45 00 - Quality Control to Departmental Representative.

1.3 SUBMITTALS

- .1 Provide product data and manufacturer's installation/application instructions for each paint and coating product to be used in accordance with the requirements of 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 Closeout Submittals:
 - .1 Provide maintenance data for incorporation into manual specified in Section 01 78 00 - Closeout Submittals .
 - .1 Submit records of products used. List products in relation to finish system.

1.4 DELIVERY, HANDLING AND STORAGE

- .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 Store and handle in accordance with manufacturer's recommendations.
 - .3 Store materials and equipment in secure, dry, well-ventilated area with temperature range between 10 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.
 - .4 Fire Safety Requirements:
 - .1 Provide one 9 kg 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 21 - Construction/Demolition Waste Management and Disposal .
 - .2 Paint, stain and wood preservative finishes and related materials (thinners, and solvents) 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 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 Empty paint cans are to be dry prior to disposal or recycling (where available).

- .5 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.

1.5 SITE CONDITIONS

- .1 Heating, Ventilation and Lighting:
 - .1 Do not perform repainting work unless adequate and continuous ventilation and sufficient heating facilities are in place to maintain ambient air and substrate temperatures above 10 degrees C for 24 hours before, during and after paint application and until paint has cured sufficiently.
 - .2 Provide temporary ventilating and heating equipment where permanent facilities are not available or supplemental ventilating and heating equipment if ventilation and heating from existing system is inadequate to meet minimum requirements. Use of gas-fired appliances is not permitted.
 - .3 Do not perform painting work unless minimum lighting level of 323 Lux is provided on surfaces to be painted.
- .2 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 Relative humidity within area to be repainted is above 85 %.
 - .2 Conduct moisture tests using properly calibrated electronic Moisture Meter, except use simple "cover patch test" on concrete floors to be repainted.
 - .3 Do not perform repainting work when maximum moisture content of substrate exceeds:
 - .1 12 % for concrete and masonry (clay and concrete brick/block).
 - .2 15 % for wood.
 - .3 12 % for plaster and gypsum board.
- .3 Surface and Environmental Conditions:
 - .1 Apply paint finish in areas where dust is no longer being generated by related construction operations or when ventilation conditions are such that airborne particles will not affect quality of finished surface.
 - .2 Apply paint to adequately prepared surfaces and to surfaces within moisture limits noted herein.
 - .3 Apply paint when previous coat of paint is dry or adequately cured, unless otherwise pre-approved by specific coating manufacturer.

Part 2 Products

2.1 MATERIALS

- .1 Where required by authorities having jurisdiction, paints and coatings to provide a fire resistant rating.
- .2 Paint materials for repaint systems to be products of single manufacturer.
- .3 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 Color: Blue Bermudas # 2061-30 Benjamin Moore
- .2 Refurbishment of paint systems with two layers, the first layer should be a shade slightly lighter than the finish coat for easy visual reference of each coat.

2.3 MIXING AND TINTING

- .1 Perform colour tinting operations prior to delivery of paint to site. On-site tinting of painting materials is not allowed.
- .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 Thin paint for spraying in accordance with paint manufacturer' instructions. If directions are not on container, obtain instructions in writing from manufacturer and provide copy of instructions to Departmental Representative.
- .4 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 Semi-Gloss finish shall be as specified herein and as noted on Finish Schedule.

2.5 RE-PAINTING SYSTEMS

- .1 For exterior doors :
 - .1 Apply 1 coat, exterior latex mold resistant primer-sealer
 - .2 Apply 2 coats (minimum or until the color of the surface is uniform), exterior latex mold resistant paint, 8 to 14% gloss.
- .2 For exposed plywood panels:
 - .1 Apply 2 coats of intumescent fire proof paint for wood such as 609-114 by Sico or approved replacement product by means of an addendum according to the requirements stated in the General Instructions to Bidders.

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 PREPARATION

- .1 Perform preparation and operations for interior painting in accordance with MPI Maintenance Repainting Manual requirements except where otherwise specified.
- .2 Apply paint materials in accordance with paint manufacturer's written application instructions.
- .3 Clean and prepare interior surfaces to be repainted in accordance with MPI Maintenance Repainting Manual requirements. Refer to MPI Manual in regard to specific requirements and as follows:
 - .1 Wash surfaces with a biodegradable detergent and clean warm water using stiff bristle brush to remove dirt, oil and surface contaminants. Rinse scrubbed surfaces with clean water.
 - .2 Allow surfaces to drain completely and to dry thoroughly. Allow sufficient drying time and test surfaces using an electronic moisture meter before commencing work.
- .4 Prevent contamination of cleaned surfaces by salts, acids, alkalis, other 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 Sand and dust between coats as required to provide adequate adhesion for next coat and to remove defects visible from distance up to 1000 mm.

3.3 EXISTING CONDITIONS

- .1 Prior to commencing work, examine site conditions and existing interior substrates to be repainted. Report in writing to Departmental Representative and General Contractor damages, defects, or unsatisfactory or unfavourable conditions or surfaces that will adversely affect this work.
- .2 Conduct moisture testing of surfaces to be painted using properly calibrated electronic moisture meter, except test concrete floors for moisture using simple "cover patch test" and report findings to Departmental Representative and General Contractor. Maximum moisture content not to exceed specified limits.

3.4 PROTECTION

- .1 Protect existing surfaces and adjacent fixtures and furnishings 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.

- .2 Protect items that are permanently attached such as Fire Labels on doors and frames. If labels are painted, the contractor shall change doors and assume all charges.
- .3 Protect factory finished products and equipment.
- .4 Remove electrical cover plates, light fixtures, surface hardware on doors, bath accessories and surface mounted equipment, fittings and fastenings prior to undertaking re-painting operations. Store items and re-install after painting is completed.
- .5 Move and cover furniture and portable equipment as necessary to carry out repainting operations. Replace as painting operations progress.
- .6 As repainting operations progress, place "WET PAINT" signs in occupied areas to approval of Departmental Representative.

3.5 APPLICATION

- .1 Apply paint by method that is best suited for substrate being repainted using brush roller air sprayer and/or airless sprayer. Conform to manufacturer's application instructions unless specified otherwise. Methods of application as pre-approved by Departmental Representative before commencing work.
- .2 Brush and Roller Application:
 - .1 Apply paint in uniform layer using brush and/or roller 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 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 by intermittent agitation frequently as 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 which 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 continuous manner and allow surfaces to dry and properly 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 Repaint surfaces both above and below sight lines as specified for surrounding surfaces, including such surfaces as tops of interior cupboards and cabinets and projecting ledges.
- .8 Repaint top, bottom, and vertical edges of doors to be repainted.
- .9 Repaint closets and alcoves to match existing, unless otherwise scheduled or noted.

3.6 FIELD QUALITY CONTROL

- .1 Inspection:
 - .1 Advise Departmental Representative when each surface and applied coating is ready for inspection.

3.7 CLEANING

- .1 Proceed in accordance with Section 01 74 11 - Cleaning , supplemented as follows:
 - .1 Remove paint where spilled, splashed, splattered or sprayed as work progresses using means and materials that are not detrimental to affected surfaces.
 - .2 Clean equipment and dispose of wash water used for water borne materials, solvents used for oil based materials as well as other cleaning and protective materials (e.g. rags, drop cloths, and masking papers), paints, thinners, paint removers/strippers in accordance with safety requirements of authorities having jurisdiction and as noted herein.
 - .3 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 recycled or disposed of in manner acceptable to authorities having jurisdiction.
 - .4 Recycle paint and coatings in excess of repainting requirements as specified.

3.8 RESTORATION

- .1 Remove protective coverings and warning signs as soon as practical after operations cease.
- .2 Protect freshly completed surfaces from paint droppings and dust to approval of Departmental Representative. Avoid scuffing newly applied paint.

END OF SECTION