1.0   GENERAL

1.1   Related *Work and* UBC Guidelines

.1   *Section 01 74 19 Construction Waste Management and Disposal for paint disposal requirements*
.2   Section 09 00 10 Finishes – General Requirements
.3   *Section 05 00 00 Metals*
.4   *Section 05 50 00 Metal Fabrications*
.5   *Section 06 00 10 Wood Structures – General Requirements*
.6   Section 27 05 05 Communication Rooms Design Guidelines
.7   UBC LEED Implementation Guide

1.2   *Related External Documents*

1.   Master Painters Institute (MPI) published Manuals as follows:
      .1   MPI Architectural Painting Specification Manual.
      .2   MPI Maintenance Repainting Manual – for existing surfaces.

1.3   Description

1.   *Work in this section includes* exterior and interior painting.

1.4   *Coordination*

.1   *The Guidelines apply to all work completed within buildings on both UBC Vancouver and UBC Okanagan campuses unless stated otherwise.*
.2   *In instances where conflicts are found between these guidelines and provincial regulations or codes, please notify the UBCV Technical Review Team Architect or UBCO Facilities Management.*
.3   *These guidelines are intended to be read by design consultants and their content integrated into construction drawings and specifications. Construction documents are not to reference the technical guidelines directly.*
.4   *The Coordinating Registered Professional (CRP) is required to coordinate these requirements with other disciplines.*
.5   *Coordinate with UBC Facilities Paint Shop for work carried out by UBC's own forces through the UBC Project Manager or Construction Office Project Coordinator.*
.6   *Coordinate with the UBCV Facilities Technical Review Team Architect for any variance requests.*
.7   *Coordinate with UBC Information Technology (IT) for access to server rooms. Some server rooms are on a special keying system, and can be high security.*

1.5   Submittals

.1   Before Start of Work – for Construction Office projects only
      .1   List of all proposed paint materials for review; color samples for selection; color samples for final approval.
      .2   MSDS Material Data Sheets for review and posting at jobsite.
      .3   Certification reports for Eco-Logo and VOC content.
.2   During Work
      .1   Use MPI Accredited Assurance Association (A.Q.A.) inspector reports, or preferably MPI fully certified Architectural Coatings Inspector.
      .2   Manufacturer Inspectors' reports when required.

  .3 *O&M manual submittals*

    .1 Maintenance data: itemized list c/w manufacturer/distributor name, paint type, color formulation to be provided in the O&M manual.

    .2 *Specified paint systems as listed in the project manual and actual paint systems used.*

    .3 *Warranty as per 1.6.3.*

1.6 Quality Control and Assurance

  .1 Quality Assurance

    .1 Trade Contractor shall be a member of Master Painters and Decorators Association (MPDA). Refer to www.mpda.net.

    .2 Follow MPI Quality Assurance Program including the MPDA Inspection and Guarantee Program.

  .2 Quality Control

    .1 All work to be inspected by an MPI approved/appointed Inspection Agency, acceptable to the Consultant and the MPDA Accredited Assurance Association (A.Q.A.), and paid by the Trade Contractor; MPDA SSI Inspection to be carried out irrespective of type of Guarantee. (Note: on a Consultant-designed project when work of this Section is carried out by UBC's own forces, (generally smaller renovation projects), UBC will arrange and pay for MPI's inspection services only if required).

    .2 When "special" non-MPI products or systems are to be used, the manufacturer to also carry out inspections and certify the work, following the same procedures as set out in the MPI Manual, and paid by the Trade Contractor.

    .3 Inspection to include inspection of surfaces prior to start of work, moisture tests, preparation for painting, primer, completed work, and during and at end of Warranty including expediting correction of defects.

  .3 Warranties

    .1 2-Year MPDA Accredited Quality Assurance Association's 2-year guarantee, or a 100% 2-Year maintenance bond issued by a surety licensed in British Columbia warranting also that painting work has been performed to MPI Manual requirements. The A.Q.A. association's guarantee shall NOT exclude any of the work carried out under this section.

2.0 *DESIGN AND PERFORMANCE REQUIREMENTS*

2.1 *Design Requirements*

  .1 General

    .1 Use products that are listed in MPI Manual Current Approved Product List.

    .2 *All paint systems shall be MPI "premium grade" except as noted.*

    .3

    .4 All products for each paint system applied shall be from same manufacturer for compatibility.

    .5 Primers on steelwork shall provide MPI approved primers suitable for paint systems noted, and suitable for subsequent work carried out by this Section. Coordinate with Sections 05 00 00 Metals and 05 50 00 Metal Fabrications. *Materials such as linseed oil, shellac, turpentine, etc. which are not specifically listed by brand name shall use the highest quality product.*

  .2 *Communications cables must not be painted. They must be masked and protected from paint overspray or direct painting.*

.3   *Wall-mounted plywood back-boards inside all Communications Rooms must be painted. See Section 27 05 05 Communication Rooms Design Guidelines.*

.4   Environmental

    .1   Source

        .1   Preference shall be ISO 9001 2008 registered manufacturers.

    .2   Manufacture

        .1   Select lowest range VOC products from each MPI product category number listed in the MPI Manual current approved product list, preferably "Three-Tree" and Eco-Logo certified.

2.2   Performance Requirements

.1   Durability

    Choose durable paint systems for interior or exterior application uses. Interior applications should consider space usage requirements.

.2   Life Cycle

    .1   Exterior *paint/coating* expectancy shall be minimum 8 years using standard coatings. *Life* expectancy for High Performance Coatings shall be a minimum 15 years.

    .2   *Exterior* silicate-based paints, especially on cementitious-finished heritage buildings *shall be more than 60-year life expectancy.*

    .3   Interior *painting coating life* expectancy is 5-10 years.

3.0   MATERIALS

3.1   *Product Selection*

.1   Materials

    .1   Use MPI approved products except where noted.

    .2   Use paint with *low-* VOC emissions, especially where rooms are continuously occupied.

    .3   In keeping with 2.2.1.2 above and for low-VOC paint systems, interior alkyd systems can be replaced with a water- based light industrial, high performance architectural latex, or a latex system. These systems would be acceptable for UBC's institutional environment. Specific paint systems should be chosen to reflect the intended use of the space.

    .4   Paint shall not contain mercury, lead, hexavalent chromium, or cadmium compounds.

    .5   Use alkyd paints only at high impact areas.

    .6   Use an alkyd water-based paint for handrails, door frames and doors where hand oils could cause paint breakdown.

    .7   *Services in* mechanical, electrical, and similar service rooms or enclosed spaces, and concealed spaces including equipment, piping, pipe insulation, coils, ductwork, conduit, electrical and control panels, access panels, etc. are NOT to be painted, except for pre-finishing carried out by manufacturers and any make-good work.

    .8   *Exposed structural steel ready for painting to be shop finished.* Detailing of steelwork to be carefully coordinated to minimize field touch-ups.

    .9   *Paint system in interiors of mechanical rooms when wall assemblies with steel stud and drywall are used:* INT 9.2A Latex (over latex primer/sealer) Gloss Level 4/5 (satin/semi-gloss).

    .10   Electrical panels, fire hose cabinets, access panels *in building interior: these should* match the colour of adjoining surfaces except as otherwise required by Building and/or Fire Codes.

   .2   *Exterior Paint Systems – for new projects, major renewals and renovations where an architect is on board, project specifications are to include the appropriate exterior paint systems. For Construction Office or BOps Architectural projects where an architect is not present, the following paint systems can be used:*

        .1   EXT 5.1B / Inorganic Zinc Primer + High Performance Acrylic / Gloss / Exposed Structural Steel.

        .2   EXT 5.1 C / W.B. Light Industrial Coating / Gloss / Miscellaneous Metal including railings, guardrails, bollards.

        .3   EXT 5.1G / Zinc Rich Primer + 2-Component Aliphatic Polyurethane / shop finished exposed structural steel; detailing of steelwork carefully coordinated to minimize fieldwork touch-up.

        .4   EXT 5.3 J / W.B. Light Industrial Coating / Gloss / galvanised hollow metal doors and pressed steel frames; roof-top ducting, vents and piping, exterior galvanized metal generally.

        .5   Strong consideration should be given to using potassium silicate-based paints on cementitious surfaces. Silicate-based paints must be unaffected by UV, static dirt-repelling, completely breathable,inorganic/sustainable and must bond chemically with the cementitious substrate.

   .2   Exterior Renovation Work

        .1   Strong consideration should be given to using potassium silicate-based paints on cementitious surfaces. Silicate-based paints must be unaffected by UV, static dirt-repelling, completely breathable, inorganic/sustainable and must bond chemically with the cementitious substrate.

   .3   *Interior Paint systems - – for new projects, major renewals and renovations where an architect is on board, project specifications are to include the appropriate interior paint systems. For Construction Office or BOps Architectural projects where an architect is not present, the following paint systems can be used:*

        .1   INT 3.1A / Latex / Custom / Eggshell / Mechanical, Electrical Rooms, and Service Rooms.

        .2   INT 3.1C / High Performance Acrylic / Eggshell / typical concrete surfaces.

        .3   INT 3.1C / High Performance Acrylic / semi-gloss / concrete in washroom, janitor, and similar rooms.

        .4   INT 3.2H / Latex Zone & Traffic Markings / nosing at stairs, conforming to BC Building Code for the visually impaired; other safety markings required by BC Building Code, authorities having jurisdiction and Worksafe BC.

        .5   INT 4.2A / Latex / Custom / Eggshell / Mechanical, Electrical rooms, and service rooms.

        .6   INT 4.2K / High Performance Acrylic / Eggshell / typical concrete block surfaces.

        .7   INT 4.2D / High Performance Acrylic / semi-gloss / concrete block in washroom, janitor and similar rooms.

        .8   INT 5.1B / High Performance Acrylic / Gloss / Structural Steel.

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.9   INT 5.1E(modified) / W.B. Alkyd / Gloss / Metal Fabrications at contact surfaces such as stairs, railings, trench gratings, trench covers and frames, access doors/panels, elevator doors and frames.

.10   INT 5.3 L (modified) / W.B. Alkyd / Gloss / galvanized hollow metal doors, door and window frames; galvanized metal fabrications.

.11   INT 5.3 H / W.B. Dryfall / flat / steel deck.

.12   INT 6.4 BB / W.B. Alkyd / Gloss / wood trim.

.13   INT 9.2A / Latex / Custom Grade / Eggshell / gypsum board in Mechanical, Electrical Rooms, and service rooms.

.14   INT 9.2B / High Performance Acrylic / Eggshell / typical gypsum board surfaces.

.15   INT 9.2CC / W.B. Alkyd / semi-gloss / gypsum board in washroom, janitor and similar rooms.

.16   INT 9.2A Latex (over latex primer/sealer) Gloss Level 4/5 (satin/semi-gloss) in mechanical rooms.

.4   Interior Renovation Work *(for Construction Office or BOps Architectural Use Only):*
    .1   RIN 5.3B / Water Based Light Industrial Coating / semi-gloss / painted hollow metal doors and pressed steel frames.

    .2   RIN 6.3P / Water Based Light Industrial Coating / semi-gloss / painted wood doors and frames.

.5   *Painted* metal fabrications at or near ground level:
    .1   Sherwin Williams colour SW 7062 – Rock Bottom (UBC Gray) is mandatory for all exterior *painted* metal fabrications on campus*. Coordinate with Section 05 50 00 metal Fabrications for painted* other *exterior* components on the site.

.6   *Interior white paint: In order to reduce paint wastage, all projects are to consider choosing from the following whites where possible:*
    .1   Benjamin Moore Oxford White
    .2   Benjamin Moore Decorators White
    .3   Benjamin Moore Distant Grey
    .4   Benjamin Moore Cloud White

END OF SECTION