
PART 1 - GENERAL

SPEC NOTES

- .1 Use this specification section when a comprehensive specification is required to specify repainting over previously painted or finished exterior surfaces.
- .2 Review all requirements noted herein and carefully choose those that meet project requirements. The Specifier must choose one item from a series of items surrounded with [..] brackets and delete the remainder, including all SPEC NOTES. Items surrounded with (..) brackets are additional information / comments that should be left in the specification.
- .3 Adding or deleting items in this specification must be done with care and caution. The onus of doing so rests with the Specifier who must have a complete and thorough understanding of what is required. Where additional information must be added to this specification the Specifier must ensure that such information is not only accurate but also in accordance with **MPI** requirements.
- .4 The Owner or Consultant shall provide a list of surfaces to be repainted as well as the degree of surface deterioration (DSD) of each surface based on MPI DSD descriptions and assigned ratings and shall issue this information to painters bidding the work. Discrepancies between these surface ratings and painter's site reviews shall be resolved prior to Bid submission.

1.1 Description:

SPEC NOTE: This article (1.1) is not intended to "scope" exterior repainting work but to serve as a general description. The onus of defining the extent of this section of Work remains with the Project General Contractor, who will ensure that the area / scope of responsibility of any particular Subcontractor / supplier is set out in full detail when awarding the repainting subcontract. The extent of this section of Work is also governed by the limits of local trade agreements and conditions. This article should be used in conjunction with 1.2, Related Sections.

- .1 Section Includes: All labor, materials, tools and other equipment, services and supervision required to complete all exterior repainting work as indicated on Finish Schedules and to the full extent of the drawings and specifications.
- .2 Work under this Contract shall also include, but not necessarily be limited to:

SPEC NOTES:

- .1 Delete, revise or add to example selections listed below as required.
- .2 As a general note, where specification numbers are referenced throughout this repainting specification, they should be revised as required by the specifier to suit project specification section number requirements (preferably in accordance with the latest version of the MasterFormat numbering system) and/or where other pertinent specification sections are impacted by work of this section, their numbers should be appropriately inserted as required.
 - .a High pressure washing and abrasive blasting in accordance with the requirements of Section [insert appropriate specification section number]. [**SPEC NOTE:** see 1.2.1 and amend as required.]
 - .b Moisture testing of substrates.
 - .c 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**.
 - .d Specific pre-treatments noted herein or specified in the **MPI Repainting Manual**.
 - .e Sealing / priming surfaces for repainting in accordance with **MPI Repainting Manual** requirements.
- .3 Refer to drawings and schedules (e.g., Finish Schedule) for type, location and extent of exterior repainting required, and include all touch-ups necessary to complete work shown, scheduled or specified.
- .4 This Section along with the drawings forms part of the Contract documents and is to be read, interpreted and coordinated with all other parts.
- .5 Division 0, Section 00700 - General Conditions and Section 00800 - Supplementary Conditions and Division 1, General Requirements form an integral part of this Section of Work. The Painting contractor shall refer to these and all other related parts.

SPEC NOTE: Clauses 1.1.4 and 1.1.5 above may be deleted or revised as required to suit specification and/or form of Contract requirements.

1.2 Related Sections:

- .1 Unless otherwise noted, the following work or conditions are not included under this Section of work:

SPEC NOTES:

- .1 *Delete, revise or add to example selections listed below as required. Also list here any specific exclusions normally assumed to be part of repainting work. Coordinate items with other Sections of Work in the Project Manual.*
- .2 *Work included in other sections may be indicated by listing appropriate sections as below:*
- Section 01500 - Temporary Facilities and Controls
 - Section 09900 - Painting (of new surfaces)
 - Section 09920 - Interior Repainting
 - Section [03300] [09945] - Abrasive Blasting
- .3 *Alternately, work included in other sections may be indicated by general statements as below:*
- .a Scaffolding, platforms and housekeeping services [and temporary weather-proof coverings as well as heating and lighting if required].
 - .b Condition of substrates, correction of DSD-4 defects and deficiencies in substrates which may adversely affect repainting work, except for minimal work performed by this trade and preparation of surfaces to receive paint and finishes under this section of work.
 - .c Painting of new surfaces.
 - .d Repainting of interior surfaces.
 - .f Abrasive blasting of surfaces. Refer to Section [insert appropriate section number]

1.3 Quality Assurance:

- .1 This Contractor shall have a minimum of five (5) years proven satisfactory experience and shall show proof before commencement of work that he will maintain a qualified crew of painters throughout the duration of the work. When requested, Contractor shall provide a list of the last three comparable exterior repainting jobs including, name, location, specifying authority / project manager, start / completion dates and value of the work.
- .2 Only qualified journeypersons, as defined by local jurisdiction, shall be engaged in exterior repainting work. Apprentices may be employed provided they work under the direct supervision of a qualified journeyperson in accordance with trade regulations.
- .3 All materials, preparation and workmanship shall conform to the standards contained in the latest edition of the Master Painters Institute (**MPI**) Maintenance and Repainting Manual (herein referred to as the **MPI** Repainting Manual) as issued by the local **MPI** Accredited Quality Assurance Association having jurisdiction.
- .4 All exterior repainting work shall be inspected by a Paint Inspection Agency (inspector) acceptable to the specifying authority and the local **MPI** Accredited Quality Assurance Association. The painting contractor shall notify the Paint Inspection Agency a minimum of one week prior to commencement of work and provide a copy of the project painting specification, plans and elevation drawings (including pertinent details) as well as a Finish Schedule.
- .5 **All surfaces requiring repainting shall be inspected** by the Painting Subcontractor who shall notify the Consultant, Paint Inspection Agency, and General Contractor in writing of any defects or problems, prior to commencing repainting or after preparation work.
- .6 Where "special" coatings or decorating systems (i.e. textured coatings or non-**MPI** listed products or systems) are to be used in repainting, the paint manufacturer shall provide as part of this work, certification of all surfaces and conditions for specific paint or coating system application as well as on site supervision, inspection and approval of their paint or coating system application as required at no additional cost to the Owner.

SPEC NOTE: Use the above clause (1.3.6) only when special paint or coating systems are used on a project and/or when the involvement of the specific paint / coating manufacturer is warranted. This requirement should be clarified with the manufacturer before such a clause is incorporated into the specification.

1.4 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 Paint Inspection Agency on award of contract and make application for assignment of an Inspector using appropriate forms supplied by the Agency as well as provide a copy of the project repainting specification, drawings, color schedule and list of proposed materials for review purposes prior to commencement of work.
- .4 Fully cooperate at all times with the requirements of the 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:
 - .a 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.
 - .b Retain cleaners, thinners, solvents and excess paint and place in designated containers and ensure proper disposal.
 - .c Return solvent and oil soaked rags used during painting operations for contaminant recovery, proper disposal, or appropriate cleaning and laundering.
 - .d Dispose of contaminants in an approved legal manner in accordance with hazardous waste regulations.
 - .e Empty paint cans are to be dry prior to disposal or recycling (where available).
 - .f 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.

1.5 Mock-Ups:

- .1 When requested by the Consultant or Paint 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** Repainting Manual standards for review and approval. When approved, exterior surface area and/or item shall become acceptable standard of finish quality and workmanship for similar on-site repainting work.

1.6 Submittals:

- .1 All submittals shall be in accordance with the requirements of Section 01300 - Submittals.
- .2 Submit written proof of ability to supply a 100% two (2) year Maintenance Bond, if Paint Association warranty option is not used with Bid Submission.
- .3 Submit list of all painting materials to the Consultant and the Paint Inspection Agency for review prior to ordering materials.
- .4 Submit two sets of Material Safety Data Sheets (MSDS) prior to commencement of work for review and for posting at job site as required.
- .5 Submit certification reports for ecologo paint products used.
- .6 Submit invoice list of all paint materials ordered for project work to Paint Inspection Agency indicating manufacturer, types and quantities for verification and compliance with specification and design requirements if requested.
- .7 Submit work schedule for various stages of work for the Consultant's review and Owner's approval if requested.

- .8 At project completion provide an itemized list complete with manufacturer, paint type and color coding for all colors used for Owner's later use in maintenance.
- .9 At project completion provide properly packaged maintenance materials as noted herein and obtain a signed receipt.

1.7 Product Delivery, Storage and Handling:

- .1 Deliver all painting materials in sealed, original labeled containers bearing manufacturer's name, brand name, type of paint or coating and color designation, standard compliance, materials content as well as mixing and/or reducing and application requirements.
- .2 Store all paint materials in original labeled containers in a secure (lockable), dry, heated and well ventilated single designated area meeting the minimum requirements of both paint manufacturer and authorities having jurisdiction and at a minimum ambient temperature of 45° F (7° C). Only material used on this project is to be stored on site.
- .3 Where toxic and/or volatile / explosive / flammable materials are being used, provide adequate fireproof storage lockers and take all necessary precautions and post adequate warnings (e.g. no smoking) as required.
- .4 Take all necessary precautionary and safety measures to prevent fire hazards and spontaneous combustion and to protect the environment from hazard spills. Materials that constitute a fire hazard (paints, solvents, drop clothes, etc.) shall be stored in suitable closed and rated containers and removed from the site on a daily basis.

SPEC NOTE: *Painting Subcontractor to be provided with adequate storage facilities meeting above requirements by General Contractor.*

- .5 Comply with requirements of authorities having jurisdiction, in regard to the use, handling, storage and disposal of hazardous materials.

1.8 Project / Site Requirements:

- .1 UNLESS specifically pre-approved by the specifying body, Paint Inspection Agency and the applied product manufacturer, perform no exterior repainting work when the ambient air and substrate temperatures are below 50° F (10° C).
- .2 Perform no exterior repainting work unless environmental conditions are within MPI and paint manufacturer's requirements or until adequate weather protection is provided. Where required, suitable weatherproof covering and sufficient heating facilities shall be in place to maintain minimum ambient air and substrate temperatures for 24 hours before, during and after paint application.
- .3 Perform no exterior repainting work when the relative humidity is above 85% or when the dew point is less than 5° F (3° C) variance between the air / surface temperature.
- .4 Perform no exterior repainting work when the maximum moisture content of the substrate exceeds:
 - .a 12 % for concrete and masonry (clay and concrete brick / block).
 - .b 15% for wood.
- .5 Conduct all moisture tests using a properly calibrated electronic Moisture Meter.
- .6 Test concrete and masonry surfaces for alkalinity as required.
- .7 Apply paint only to dry, clean, and adequately prepared surfaces in areas where dust is no longer generated by construction activities such that airborne particles will not affect the quality of finished surfaces.

1.9 Scheduling:

SPEC NOTE: *Delete, revise or add to the example selections below to suit project requirements.*

- .1 Schedule repainting operations to prevent disruption of and by other trades when applicable.
- .2 Schedule repainting operations to prevent disruption of Owner's operations or building occupants. Obtain written authorization from Consultant / Owner for changes in work schedule.
- .3 Phased work shall be in accordance with the requirements of Sections 01010 - Summary of Work and/or 01060 - Special and Regulatory Requirements.

1.10 Guarantee:

- .1 Furnish a [one (1)] [two (2)] year Painting Association Guarantee or a 100% [one (1)] [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 shall warrant that all repainting work has been performed in accordance with **MPI** Repainting Manual requirements.

SPEC NOTE: *Provide a one (1) year Guarantee or one (1) year Maintenance Bond for Budget Grade work and a two (2) year Guarantee or two (2) year Maintenance Bond for Premium Grade work.*

- .2 All exterior repainting work shall be in accordance with **MPI** Repainting Manual requirements and shall be inspected by the Painting Association whether using the Painting Association Guarantee or the Maintenance Bond option. The cost for such Painting Association inspections as well as either the Painting Association Guarantee or Maintenance Bond shall be included in the Base Bid Price.
- .3 Painting Subcontractors choosing the Maintenance Bond option shall provide written proof of their ability to supply same at time of bidding.

1.11 Maintenance Materials:

- .1 At project completion provide [a minimum of [4 liters (1 gallon)]] of each type and color of paint from same production run (batch mix) used in unopened cans, properly labeled and identified for Owner's later use in maintenance. Store where directed.

PART 2 - PRODUCTS

2.1 Materials:

SPEC NOTE: *Delete, revise or add to the example selections below to suit project requirements.*

- .1 All materials (primers, paints, coatings, varnishes, stains, lacquers, fillers, thinners, solvents, etc.) shall be products listed in the latest edition of the **MPI** Approved Product List and shall be from a single manufacturer for each system used.
- .2 Other paint materials such as linseed oil, shellac, turpentine, etc. shall be the highest quality product of an approved manufacturer listed in the **MPI** Approved Product List and shall be compatible with other coating materials as required.
- .3 All materials and paints shall be lead and mercury free.
- .4 Where required, paint products shall meet **MPI** Environmentally Friendly" [E1] [E2] [E3] ratings based on VOC (EPA Method 24) content levels.

SPEC NOTES:

- .1 *The use of water borne versus oil based paints and coatings requires careful evaluation. The release of VOC's and solvent vapours during painting and cleanup, particularly in confined areas and where such vapours may prove offensive to individuals in an occupied facility are a consideration, as well as the oft forgotten residue flushed down the drain during water-borne paint cleanup. Any evaluation must be carefully and dispassionately considered based on actual VOC content of the product used and that released over the life cycle term, on actual site conditions and on long-term durability and life cycle costing requirements.*
- .2 *In assessing the requirements for selection of an environmentally friendly water borne or oil based paint product, total VOC content and life cycle / durability must be considered. Refer to MPI Approved Products Listing for the VOC content level of paint products and to the MPI website (www.paintinfo.com) for current information.*
- .5 All paint materials shall have good flowing and brushing properties and shall dry or cure free of blemishes, sags, air entrapment, etc. Refer to 3.5, Field Quality Control / Standard of Acceptance requirements.
- .6 [Glass Reflective Beads (for pavement marking): of type suitable for application to a wet paint surface for light reflectance. Apply beads at a minimum rate of 0.5 kg/l (5 lbs/g) to a white and/or yellow latex or alkylid zone / traffic marking paint of approved type as listed in the **MPI** Repainting Manual.]
- .8 [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 to either mixed into paint (and mixed constantly to keep material in suspension) or broadcast into first or prime coat as required.]

2.2 Equipment:

- .1 Painting Equipment: to best trade standards for type of product and application.
- .2 Spray-Painting Equipment: of ample capacity, suited to the type and consistency of paint or coating being applied and kept clean and in good working order at all times.

2.3 Mixing and Tinting:

- .1 Unless otherwise specified or pre-approved, all paints shall be ready-mixed and pre-tinted. Re-mix all paint in containers prior to and during application to ensure break-up of lumps, complete dispersion of settled pigment, and color and gloss uniformity.
- .2 Paste, powder or catalyzed paint mixes shall be mixed in strict accordance with manufacturer's written instructions.
- .3 Where thinner is used, addition shall not exceed paint manufacturer's recommendations.
- .4 If required, thin paint for spraying in strict accordance with paint manufacturer's instructions. If directions are not on container, obtain instructions in writing from manufacturer and provide copy of instructions to Consultant.

2.4 Finish and Colors:

- .1 Unless otherwise specified herein, all exterior repainting work shall be done in accordance with **MPI** [Budget] [Premium] Grade requirements.
- .2 Colors shall [match existing] [be as selected by the Consultant from a manufacturer's full range of colors]. [Refer to the Finish Schedule for identification and location] [The schedule will be furnished after award of the Contract, except general requirements shall be as noted herein].

SPEC NOTES:

- .1 *Note that Finish Schedule should include all exterior painted items (e.g. walls, soffits, doors, frames, trim, sills, decks, railings, etc.) and the gloss level. The paint manufacturer and color code number should also be provided if selected by the Designer.*
- .2 *In addition, where more than one color is used on walls within an area this shall also be scheduled.*

Generally and unless otherwise specified herein or noted on Finish Schedules the quantity of colors and finishes shall be based on the following criteria:

SPEC NOTE: Delete, revise or add to the following "example" selections below to suit project requirements.

- .3 Color selection will be based on [four (4)] base colors and [two (2)] accent colors [with a maximum of [one (1)] deep or bright color]. No more than [six (6)] colors will be selected for exterior painting work on this project. Note that this does not include pre-finished items unless specifically scheduled.

SPEC NOTE: Revise number of colors and schemes to suit project requirements.

- .4 Exterior [doors shall be repainted a different color than door frames and trim with walls a different color than either] [doors, frames and trim shall be repainted a different color than walls] [the same color as adjacent walls]. Unless otherwise noted all doors, frames and trim shall be repainted using a G5 (semi-gloss) finish.
- .5 Exterior [window frames (unless pre-finished) including trim and sills shall be repainted [a different color than walls] [the same color as walls] [window frames (unless pre-finished) shall be repainted a different color than window trim and sills and a different color than walls]. Unless otherwise noted all window frames, trim and sills shall be repainted using a G5 (semi-gloss) finish.
- .6 [Exterior parking bay lines, numbers and symbols including barrier free accessible parking bays and pedestrian walkways shall be repainted white or yellow to suit existing color and/or in accordance with the requirements or authorities having jurisdiction.]
- .7 [Provide a slip resistant additive to exterior painted stair treads where noted on the Finish Schedule or where required by authorities having jurisdiction.]

2.5 Gloss / Sheen:

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

Gloss Level	Description	Units @ 60 degrees	Units @ 85 degrees
G1	Matte or Flat finish	0 to 5	10 maximum
G2	Velvet finish	10 maximum	10 to 35
G3	Eggshell finish	10 to 25	10 to 35
G4	Satin finish	20 to 35	35 minimum
G5	Semi-Gloss finish	35 to 70	
G6	Gloss finish	70 to 85	
G7	High-Gloss finish	> 85	

- .2 Gloss level ratings of all painted surfaces shall be as specified herein and as noted on Finish Schedule.

SPEC NOTES:

- .1 *A high gloss finish provides more physical and stain resistance with such painted surfaces appearing to have a "hard" finish. Such glossy finishes, however tend to enhance textures or defects of the surface to which they are applied. Use of higher gloss finishes should be reviewed from the point of view of excessive surface preparation required which might not be warranted for the surface to be coated.*
- .2 *Unless otherwise approved by the painting inspection agency having jurisdiction, the use of deep colors or high contrast accent colors will require a minimum of three or more finish coats over primer to achieve satisfactory hiding results.*
- .3 *Caution should be used when specifying deep colors in high traffic areas, regardless of the surface to which these colors are applied. Deep tinted color in a flat, eggshell, semi-gloss and to some extent high gloss finish will mar easily and leave an unsightly appearance with loss of sheen and with considerable reduction of abrasion resistance. Refer to **MPI** Repainting Manual.*

PART 3 - EXECUTION

3.1 Condition of Surfaces:

- .1 Prior to commencement of repainting work, thoroughly examine (and test as required) all exterior conditions and surfaces scheduled to be repainted and report in writing to the [Consultant] [Owner] [and General Contractor where applicable] any conditions or surfaces that will adversely affect work of this section.
- .2 The degree of surface deterioration (DSD) shall be assessed using the assessment criteria indicated in the **MPI** Maintenance Repainting Manual. In general the **MPI** DSD ratings and descriptions are as follows:

Condition	Description
DSD-0	Sound Surface (may include visual (aesthetic) defects that do not affect film's protective properties).
DSD-1	Slightly Deteriorated Surface (may show fading; gloss reduction, slight surface contamination, minor pin holes scratches, etc.) / Minor cosmetic defects (runs, sags, etc.).
DSD-2	Moderately Deteriorated Surface (small areas of peeling, flaking, slight cracking, staining, etc.).
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 by others).

- .3 Other than the repair of DSD-1 to DSD-3 defects included under this scope of work, structural and DSD-4 substrate defects discovered prior to and after surface preparation or after first coat of paint shall be made good and sanded by others ready for painting, unless otherwise agreed to by the Owner and painter to be included in this Work.
- .4 No repainting work shall commence until all such DSD-4 adverse conditions and defects have been corrected and surfaces and conditions are acceptable to the Painting Subcontractor. The Painting Subcontractor shall not be responsible for the condition of the substrate or for correcting defects and deficiencies in the substrate, which may adversely affect the painting work except for minimal work normally performed by the Painting Subcontractor and as, indicated herein. It shall always, however, be the responsibility of the Painting Subcontractor to see that surfaces are properly prepared before any paint or coating is applied. It shall also be the Painting Subcontractor's responsibility to paint the surface as specified providing that the owner accepts responsibility for uncorrected DSD-4 substrate conditions.

3.2 Preparation of Surfaces:

- .1 Prepare all exterior surfaces for repainting in accordance with MPI Repainting Manual requirements. Refer to the MPI Repainting Manual in regard to specific requirements for the following:

- SPEC NOTE:** *Delete following items that are not required.*
- .a environmental conditions.
 - .b pH testing.
 - .c acid etching.
 - .d rust stain removal.
 - .e mildew removal.
 - .f asphalt surfaces.
 - .g vertical and horizontal concrete surfaces.
 - .h clay and concrete masonry units.
 - .i structural steel and miscellaneous metals.
 - .j steel exposed to high heat.
 - .k galvanized and zinc coated metal.
 - .l aluminum and copper surfaces.
 - .m glue laminated beams and columns.
 - .n dimension and dressed lumber.
 - .o wood doors.
 - .p wood paneling and casework.

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- .q wood decks, floors, stairs and steps.
 - .r wood shingles and shakes.
 - .s stucco.
 - .t canvas and cotton coverings.
 - .u bituminous coated surfaces.
- .2 Where required, pressure wash exterior surfaces prior to repainting in accordance with MPI standards for type of surfaces and recommended pressures to ensure complete removal of all loose paint, stains, dirt, and other foreign matter. This work shall be carried out only by qualified tradesman experienced in pressure water cleaning. The use of water hose cleaning will not be considered satisfactory, unless specifically specified. Allow sufficient drying time and test all surfaces using an electronic moisture meter before commencing work.
- .3 Sand, clean, dry, etch, neutralize and/or test all surfaces under adequate illumination, ventilation and temperature requirements.
- .4 Remove and securely store all miscellaneous hardware and surface fittings / fastenings (e.g. electrical lights, mechanical louvers, door and window hardware (e.g. hinges, knobs, locks, trim, frame stops) and, removable hazard / instruction labels. from wall and soffit surfaces, doors and frames, prior to repainting and replace upon completion. Carefully clean and replace all such items upon completion of repainting work in each area. Do not use solvent or reactive cleaning agents on items that will mar or remove finishes (e.g. lacquer finishes). Doors shall be removed before repainting to paint bottom and top edges and then re-hung.
- .5 Protect all exterior surfaces and areas, including landscaping, walks, drives, all adjacent building surfaces (including glass, aluminum surfaces, etc.) and equipment and any labels and signage from repainting operations and damage with drop cloths, shields, masking, templates, or other suitable protective means and make good any damage caused by failure to provide such protection.

3.3 Application:

- .1 Do not commence repainting 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 [Budget] [Premium] Grade finish requirements.
- .3 Apply primer, paint or stain in a workmanlike manner using skilled and trade qualified applicators as noted under Quality Assurance.
- .4 Apply primer, paint or stain 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, contamination or when the manufacturer's paint specifications require earlier applications.
- .5 Primer, paint or stain coats specified are intended to cover surfaces satisfactorily when applied at proper consistency and in accordance with manufacturer's recommendations.
- .6 Tint each coat of paint progressively lighter to enable confirmation of number of coats.
- .7 Unless otherwise approved by the painting inspection agency, apply a minimum of four coats of paint where deep or bright colors are used to achieve satisfactory results.

SPEC NOTE: *Refer to Spec Notes at beginning of 2.5 in regard to the use of deep colors.*

- .8 Sand and dust between each coat to provide an anchor for next coat and to remove defects (runs, sags, etc.) visible from a distance up to 1000 mm (39").
- .9 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 a following coat is applied.
- .10 To avoid air entrapment in applied coats, apply materials in strict accordance with manufacturer's spread rates and application requirements.

3.4 Exterior Finish / Coating Systems:

PAINT SYSTEM SPEC NOTES:

- .1 *Select appropriate paint system for exterior surfaces to be repainted and delete all other systems not required.*
- .2 *Insert appropriate gloss level rating (G1, G2, etc.) in place of [insert gloss level]. Refer to MPI Approved Product Listings to ensure that desired gloss level is available. Specific paint colors and gloss ratings should be indicated on Finish Schedule.*
- .3 *Where different finishes are required under a specific heading, a reference to applicable materials must be inserted after the finish, e.g.

 *REX 6.3B DSD-1 Alkyd G5 finish for wood doors and frames.
 REX 6.4B DSD-2 Alkyd G4 finish for fascias.**
- .4 *Where both MPI Budget Grade and Premium Grade systems are used, indicate same on Finish Schedule or indicate specific system when it differs from the "typical" grade selected.*
- .5 *Where choice of an "Environmentally Friendly" (i.e., low odor / low VOC) or a "green" product is required, specifier must consult MPI Product Selection Guide and select system / products having desired MPI E1, E2 or E3 rating. This includes non-latex / non-water based paints and finishes which meet EPA Method 24 / MPI criteria.*
- .6 *For individual product selection and evaluations refer to MPI Repainting Manual latest edition of the MPI Approved Product List.*
- .7 *For specific exterior surface preparation requirements refer to the MPI Repainting Manual.*

Repaint exterior surfaces in accordance with the following MPI Repainting Manual requirements:

- .1 **Asphalt Surfaces:** (zone / traffic marking for drive and parking areas, game courts, etc.)
 - REX 2.1A Latex zone / traffic marking finish.
 - REX 2.1B Alkyd zone / traffic marking finish.
- .2 **Concrete Vertical Surfaces:** (including horizontal soffits)
 - REX 3.1A Latex [insert gloss level] finish.
 - REX 3.1B Latex [insert gloss level] [insert texture type] aggregate finish.
 - REX 3.1C Waterborne light industrial [insert gloss level] coating.
 - REX 3.1D Epoxy finish.
 - REX 3.1E Waterborne epoxy finish.
 - REX 3.1F Elastomeric coating.
 - REX 3.1G Water repellent non-paintable finish [for use on surfaces previously coated with similar water repellent].
 - REX 3.1H Water repellent paintable finish.
 - REX 3.1J High-build latex [insert gloss level] finish.
 - REX 3.1K Concrete stain finish.
 - REX 3.1L Latex [insert gloss level] finish (over alkali resistant primer).
 - REX 3.1M Pigmented polyurethane finish.

SPEC NOTE: *The application of water repellent sealers to existing exterior concrete surfaces requires that the concrete surfaces be clean and sound and free of previous coatings detrimental to adhesion or penetration of the new sealer.*

- .3 **Concrete Horizontal Surfaces:** (decks, stairs, parking and court areas, driveways, etc.)
 - REX 3.2A Latex floor paint [gloss] [low gloss] finish.
 - REX 3.2B Latex deck coating.
 - REX 3.2C Epoxy non-slip deck coating.
 - REX 3.2D Alkyd floor enamel [insert gloss level] finish.
 - REX 3.2E Latex zone / traffic marking finish. [for parking or game court lines, etc.]
 - REX 3.2F Alkyd zone / traffic marking finish. [for parking or game court lines, etc.]
 - REX 3.2G Clear floor sealer.
 - REX 3.2H Clear waterborne floor sealer.
 - REX 3.2J Concrete stain finish.

.4 **Cementitious Composition Board Surfaces:** (vertical surfaces, horizontal soffits)

REX 3.3A	Latex [insert gloss level] finish.
REX 3.3B	Alkyd [insert gloss level] finish.
REX 3.3C	Waterborne light industrial [insert gloss level] coating.
REX 3.3D	Waterborne epoxy finish.
REX 3.3E	Epoxy finish.
REX 3.3F	Pigmented polyurethane finish.
REX 3.3G	Latex [insert gloss level] [insert texture type] aggregate finish.
REX 3.3H	High-build latex finish.
REX 3.3J	Latex [insert gloss level] finish (over alkali resistant primer).

.5 **Clay Masonry Units:** (pressed and extruded brick)

REX 4.1A	Latex [insert gloss level] finish.
REX 4.1B	Latex [insert gloss level] [insert texture type] aggregate finish.
REX 4.1C	Waterborne light industrial [insert gloss level] coating.
REX 4.1D	Epoxy finish. [for smooth brick]
REX 4.1E	Waterborne epoxy finish. [for smooth brick]
REX 4.1F	Water repellent non-paintable finish. [for use on surfaces previously coated with similar water repellent]
REX 4.1G	Water repellent paintable finish.
REX 4.1H	High-build latex finish.
REX 4.1J	Pigmented polyurethane finish (over epoxy).

SPEC NOTE: *Note that the application of water repellent sealers over existing exterior clay and concrete masonry surfaces requires that such surfaces be clean and sound and free of previous coatings detrimental to adhesion or penetration of the new sealer.*

.6 **Concrete Masonry Units:** (smooth and split face block and brick).

REX 4.2A	Latex [insert gloss level] finish.
REX 4.2B	Latex [insert gloss level] [insert texture type] aggregate finish.
REX 4.2C	Waterborne light industrial [insert gloss level] coating.
REX 4.2D	Elastomeric coating.
REX 4.2E	Epoxy finish.
REX 4.2F	Waterborne epoxy finish.
REX 4.2G	Pigmented polyurethane finish.
REX 4.2H	Water repellent non-paintable finish. [for use on surfaces previously coated with similar water repellent]
REX 4.2J	Water repellent paintable finish.
REX 4.2K	High-build latex finish.
REX 4.2L	Latex [insert gloss level] finish (over alkali resistant primer).

.7 **Structural Steel and Metal Fabrications:**

REX 5.1A	Quick dry enamel [insert gloss level] finish.
REX 5.1B	Waterborne light industrial [insert gloss level] coating (over epoxy zinc rich primer).
REX 5.1C	Waterborne light industrial [insert gloss level] coating (over alkyd primer).
REX 5.1D	Alkyd [insert gloss level] finish.
REX 5.1E	Waterborne epoxy finish.
REX 5.1F	High build epoxy finish.
REX 5.1G	Pigmented polyurethane finish (over epoxy zinc rich primer and high build epoxy).
REX 5.1H	Pigmented polyurethane finish (over high build epoxy).
REX 5.1J	Aluminum paint finish.
REX 5.1K	Waterborne light industrial [insert gloss level] coating (over waterborne primer).
REX 5.1L	Waterborne light industrial [insert gloss level] coating (over epoxy primer).
REX 5.1M	Pigmented polyurethane [insert gloss level] finish (over epoxy zinc rich primer and epoxy).

- .8 **Steel - High Heat:** (heat exchangers, breeching, pipes, flues, stacks, etc., with temperature range as noted)
- REX 5.2A Heat resistant enamel finish, maximum 400° F (205° C).
 - REX 5.2B Heat resistant aluminum enamel finish, maximum 800° F (427° C).
 - REX 5.2C Inorganic zinc rich coating, maximum 750° F (400° C).
 - REX 5.2D High heat resistant coating, maximum 1100° F (593° C).
- .9 **Galvanized Metal:** (not chromate passivated)
For high contact / high traffic areas (doors, frames, railings, misc. steel, pipes, etc.)
For low contact / low traffic areas (overhead decking, ducts, gutters, flashing, etc.)
- REX 5.3A Latex [insert gloss level] finish.
 - REX 5.3B Alkyd [insert gloss level] finish.
 - REX 5.3C Epoxy finish. [for use in high contact / high traffic areas]
 - REX 5.3D Pigmented polyurethane finish. [for use in high contact / high traffic areas]
 - REX 5.3E Bituminous finish [for use in low contact areas, e.g. unexposed galvanized metal next to concrete, masonry, etc.]
 - REX 5.3F Aluminum paint finish. [for use in low contact / low traffic areas only]
 - REX 5.3G Waterborne light industrial [insert gloss level] coating.
 - REX 5.3H Latex [insert gloss level] finish (over waterborne primer). [do not use flat finish on doors]
 - REX 5.3J Waterborne light industrial [insert gloss level] coating (over waterborne primer).
 - REX 5.3K Polyurethane coating (over waterborne primer).
 - REX 5.3L Waterborne light industrial [insert gloss level] coating.

SPEC NOTES:

- .1 *Particular attention should be paid to the durability of zinc coated surfaces on exterior high contact / high traffic areas such as doors, frames, railings, misc. steel, etc. Do not use REX 5.3E and 5.3F in these areas.*
- .2 *High contact / traffic areas to include doors, frames, railings, misc. steel, pipes, etc.*
- .3 *Low contact / traffic areas to include overhead decking, ducts, pipes, gutters, flashing, misc. steel, etc.*

- .10 **Aluminum:** (unanodized) sash, sills and frames, flashing, posts and railings, downpipes, etc.)
- REX 5.4A Alkyd [insert gloss level] finish.
 - REX 5.4B Pigmented polyurethane finish.
 - REX 5.4C Aluminum paint finish.
 - REX 5.4D Bituminous finish [for unexposed alum. next to concrete, masonry, etc.]
 - REX 5.4E Epoxy finish.
 - REX 5.4F Waterborne light industrial [insert gloss level] coating.
 - REX 5.4G Latex [insert gloss level] finish (over quick dry primer).
- .11 **Copper:** (excluding roofs)
- REX 5.5A Alkyd [insert gloss level] finish.
 - REX 5.5B Pigmented polyurethane finish.
 - REX 5.5C Aluminum paint finish.
 - REX 5.5D Bituminous finish. [for unexposed copper next to concrete, masonry, etc.]
 - REX 5.5E Epoxy finish.
 - REX 5.5F Waterborne light industrial [insert gloss level] coating.
 - REX 5.5G Latex [insert gloss level] finish.
- .12 **Stainless Steel:** (unpolished)
- REX 5.6A Alkyd [insert gloss level] finish.
 - REX 5.6B Pigmented polyurethane finish.
 - REX 5.6C Aluminum paint finish.
 - REX 5.6D Epoxy finish.
 - REX 5.6E Waterborne epoxy finish.
 - REX 5.6F Latex finish.

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- REX 5.6G Waterborne light industrial [insert gloss level] coating.
- .13 **Glue Laminated Beams and Columns:**
- REX 6.1A Latex [insert gloss level] finish (over alkyd primer). [low contact / low traffic areas only]
REX 6.1B Alkyd [insert gloss level] finish.
REX 6.1C Solid color stain finish.
REX 6.1D Semi-transparent stain.
REX 6.1E Clear (two component) polyurethane finish (over stain).
REX 6.1F Pigmented polyurethane finish.
REX 6.1G Varnish [gloss] [semi-gloss] finish.
REX 6.1H Varnish [gloss] [semi-gloss] finish (over stain).
REX 6.1J Two component polyurethane finish (over stain).
REX 6.1K Pigmented fire retardant coating (ULC rated).
REX 6.1L Latex [insert gloss level] finish (over waterborne primer). [low contact / low traffic areas only]
- .14 **Dimension Lumber:** (columns, beams, exposed joists, underside of decking, siding, fencing, etc.)
- REX 6.2A Latex [insert gloss level] finish.
REX 6.2B Waterborne solid color stain finish.
REX 6.2C Alkyd [insert gloss level] finish.
REX 6.2D Solid color stain finish.
REX 6.2E Semi-transparent stain finish.
REX 6.2F Pigmented fire retardant coating (ULC rated).
REX 6.2G Clear two component polyurethane finish.
REX 6.2H Pigmented polyurethane finish.
REX 6.2J Varnish [gloss] [semi-gloss] finish.
REX 6.2K Latex [insert gloss level] transition system finish.
- .15 **Dressed Lumber:** (doors, door and window frames, casings, battens, smooth facias, etc.)
- REX 6.3A Latex [insert gloss level] finish. [do not use flat finish on doors / door frames]
REX 6.3B Alkyd [insert gloss level] finish. [do not use flat finish on doors / door frames]
REX 6.3C Solid color stain finish. [do use on high contact areas or on doors / door frames]
REX 6.3D Semi-transparent stain finish. [do not use on doors / door frames]
REX 6.3E Varnish [gloss] [semi-gloss] finish (over stain).
REX 6.3F Varnish [gloss] [semi-gloss] finish.
REX 6.3G Clear two component polyurethane finish.
REX 6.3H Pigmented polyurethane finish.
REX 6.3J Waterborne light industrial coating.
REX 6.3K Waterborne solid color stain finish. [do not use on doors / door frames]
REX 6.3L Latex [insert gloss level] finish (over latex primer). [do not use flat finish on doors / frames]
- .16 **Wood Paneling:** (plywood siding, fascias, soffits, etc.)
- REX 6.4A Latex [insert gloss level] finish.
REX 6.4B Alkyd [insert gloss level] finish.
REX 6.4C Solid color stain finish.
REX 6.4D Semi-transparent stain finish.
REX 6.4E Pigmented fire retardant coating (ULC rated).
REX 6.4F Clear fire retardant penetrating wood preservative coating (ULC rated).
REX 6.4G Waterborne solid color stain finish.
REX 6.4H Varnish [gloss] [semi-gloss] finish.
REX 6.4J Varnish [gloss] [semi-gloss] finish (over stain).
REX 6.4K Latex [insert gloss level] finish (over latex primer).
- .17 **Wood Decks and Stairs / Steps:** (using spaced lumber)
- REX 6.5A Latex porch and floor [gloss] [low gloss] finish [with anti-skid additive] (over alkyd primer).
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REX 6.5B	Alkyd floor enamel [gloss] [low gloss] finish [with anti-skid additive].
REX 6.5C	Deck stain (for previously stained decks).
REX 6.5D	Non-Slip epoxy deck coating (for plywood decks).
REX 6.5E	Latex deck coating (for plywood decks).
REX 6.5F	Latex porch and floor [gloss] [low gloss] finish [with anti-skid additive] (over latex primer).

SPEC NOTE: *If existing pressure treated wood material is to be stained or painted the chemical formulation of the treatment should be ascertained so that the correct stain or paint can be chosen. If relatively new, obtain this information from the supplier or manufacturer (treatment plant).*

.18 **Wood Shingles and Shakes:** (excluding roofs)

REX 6.6A	Latex [insert gloss level] finish.
REX 6.6B	Alkyd [insert gloss level] finish.
REX 6.6C	Solid color stain finish.
REX 6.6D	Waterborne solid color stain finish.
REX 6.6E	Latex [insert gloss level] finish (over latex primer).
REX 6.6F	Semi-transparent stain finish.

.19 **Fiberglass:** (panels, trims, fabrications, etc.)

REX 6.7A	Latex [insert gloss level] finish.
REX 6.7B	Alkyd [insert gloss level] finish.
REX 6.7C	Waterborne light industrial [insert gloss level] coating.
REX 6.7D	Pigmented polyurethane finish.
REX 6.7E	Waterborne epoxy finish.
REX 6.7F	Epoxy finish.

.20 **Plastic:** (vinyl siding and windows and related trims, ABS / PVA / PVC materials, plastic fabrications, etc.)

REX 6.8A	Latex [insert gloss level] finish.
REX 6.8B	Alkyd [insert gloss level] finish.
REX 6.8C	Waterborne light industrial [insert gloss level] coating.

.21 **Stucco:** (walls and soffits)

REX 9.1A	Latex [insert gloss level] finish
REX 9.1B	Waterborne light industrial [insert gloss level] coating.
REX 9.1C	Elastomeric coating.
REX 9.1D	Epoxy finish.
REX 9.1E	Water repellent paintable finish.
REX 9.1F	High-build latex finish.
REX 9.1G	Waterborne epoxy finish.
REX 9.1H	Water repellent non-paintable finish.
REX 9.1J	Latex [insert gloss level] finish (over alkali resistant primer).

.22 **Canvas and Cotton Coverings:** (pipes, ductwork, etc.)

REX 10.1A	Latex [insert gloss level] finish.
REX 10.1B	Waterborne light industrial [insert gloss level] coating.
REX 10.1C	Alkyd [insert gloss level] finish.
REX 10.1D	Aluminum paint finish.

.23 **Bituminous Coated Surfaces:** (cast iron pipe, concrete, etc.)

REX 10.2A	Latex [insert gloss level] finish.
REX 10.2B	Latex [insert gloss level] [insert texture type] aggregate finish.
REX 10.2C	Alkyd [insert gloss level] finish.
REX 10.2D	Aluminum paint finish.

3.5 **Field Quality Control / Standard of Acceptance:**

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- .1 All surfaces, preparation and paint applications shall be inspected.
 - .2 Repainted exterior surfaces shall be considered to lack uniformity and soundness if any of the following defects are apparent to the Painting Inspection Agency inspector:
 - .a brush / roller marks, streaks, laps, runs, sags, drips, heavy stippling, hiding or shadowing by inefficient application methods, skipped or missed areas, and foreign materials in paint coatings.
 - .b evidence of poor coverage at rivet heads, plate edges, lap joints, crevices, pockets, corners and re-entrant angles.
 - .c damage due to touching before paint is sufficiently dry or any other contributory cause.
 - .d damage due to application on moist surfaces or caused by inadequate protection from the weather.
 - .e damage and/or contamination of paint due to wind blown contaminants (dust, sand blast materials, salt spray, etc.).
 - .3 Repainted exterior surfaces shall be considered unacceptable if any of the following are evident under natural lighting conditions:
 - .a visible defects are evident on vertical surfaces when viewed at 90 degrees to the surface from a distance of 1000 mm (39").
 - .b visible defects are evident on horizontal surfaces when viewed at 45 degrees to the surface from a distance of 1000 mm (39").
 - .c visible defects are evident on soffit and other overhead surfaces when viewed at 45 degrees to the surface
 - .d when the final coat on any surface exhibits a lack of uniformity of sheen across full surface area.
 - .4 Repainted surfaces rejected by the inspector shall be made good at the expense of the Contractor. Small affected areas may be touched up; large affected areas or areas without sufficient dry film thickness of paint shall be repainted. Runs, sags of damaged paint shall be removed by scraper or by sanding prior to application of paint.

3.6 Protection:

- .1 Protect all newly repainted exterior surfaces from rain and snow, condensation, contamination, dust, salt spray and freezing temperatures until paint coatings are completely dry. Curing periods shall exceed the manufacturer's recommended minimum time requirements.
- .2 Erect barriers or screens and post signs to warn, limit or direct traffic away or around work area as required.

3.7 Clean-up:

- .1 Remove all paint where spilled, splashed, splattered or sprayed as work progresses using means and materials that are not detrimental to affected surfaces.
- .2 Keep work area free from an unnecessary accumulation of tools, equipment, surplus materials and debris.
- .3 Remove combustible rubbish materials and empty paint cans each day and safely dispose of same in accordance with requirements of authorities having jurisdiction.
- .4 Clean equipment and dispose of wash water / solvents as well as all other cleaning and protective materials (e.g. rags, drop cloths, masking papers, etc.), paints, thinners, paint removers/strippers in accordance with the safety requirements of authorities having jurisdiction.