SECTION 099113 - EXTERIOR PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

A. Section includes surface preparation and the application of paint systems on [**exterior substrates.**] [**the following exterior substrates:**]

1. Concrete.
2. Clay masonry.
3. Concrete masonry units (CMU).
4. Steel.
5. Galvanized metal.
6. Aluminum (not anodized or otherwise coated).
7. Wood.
8. Exterior portland cement plaster (stucco).
9. Exterior gypsum board.

B. Related Requirements:

1. Section 051200 "Structural Steel Framing" for shop priming of metal substrates with primers specified in this Section.
2. Section 099600 "High-Performance Coatings" for special-use coatings.
3. Section 099123 "Interior Painting" for surface preparation and the application of paint systems on interior substrates.
4. Section 099300 "Staining and Transparent Finishing" for surface preparation and the application of wood stains and transparent finishes on exterior wood substrates.

1.3 DEFINITIONS

A. Gloss Level 1: Not more than 5 units at 60 degrees and 10 units at 85 degrees, according to ASTM D 523.

B. Gloss Level 2: Not more than 10 units at 60 degrees and 35 units at 85 degrees, according to ASTM D 523

C. Gloss Level 3: 10 to 25 units at 60 degrees and 10 to 35 units at 85 degrees, according to ASTM D 523.

D. Gloss Level 4: 20 to 35 units at 60 degrees and not less than 35 units at 85 degrees, according to ASTM D 523.

E. Gloss Level 5: 35 to 70 units at 60 degrees, according to ASTM D 523.

F. Gloss Level 6: 70 to 85 units at 60 degrees, according to ASTM D 523.

G. Gloss Level 7: More than 85 units at 60 degrees, according to ASTM D 523.

H. EG: Ethylene Glycol. Ethylene glycol is listed as a hazardous air pollutant (HAP) by the U.S. EPA

I. Blocking: Two painted surfaces sticking together such as a painted door sticking to a painted jamb.

J. RAVOC: Reactivity adjusted VOC 'Reactivity' means the ability of a VOC to promote ozone formation.

K. PDCA: Painting & Decorating Contractors of America www.pdca.org

L. SSPC: Scopes of SSPC Surface Preparation Standards and Specifications. www.sspc.org.

M. Green Wise: Greenwise products are tested in an ISO accredited laboratory to meet environmentally determined performance standards established by Coatings Research Group, Inc.

1.4 ACTION SUBMITTALS

A. Product Data: For each type of product. Include preparation requirements and application instructions.

B. Samples for Initial Selection: For each type of topcoat product.

C. Samples for Verification: For each type of paint system and each color and gloss of topcoat.

1. Submit Samples on rigid backing, no smaller than 7 inches by 10 inches (177.8 mm by 254 mm) or larger than 8.5 inches by 11 inches (215.9 mm by 279.4 mm).
2. Label each Sample for project, architect, general contractor, painting contractor, paint color name and number, paint brand name, "P" number if applicable, and application area.

D. Product List: For each product indicated, include the following:

1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
2. Following the format prescribed in Part 2. PRODUCTS, submit physical properties data and appropriate test results for each proposed product substitution.
3. Printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
4. VOC content.

1.5 MAINTENANCE MATERIAL SUBMITTALS

A. Furnish extra materials that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Paint: 5% percent, but not less than [**1 gal. (3.8 L)**] of each material and color applied.

1.6 QUALITY ASSURANCE

A. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1. Architect will select one surface to represent surfaces and conditions for application of each paint system specified in Part 3.

a. Vertical and Horizontal Surfaces: Provide samples of at least 100 sq. ft. (9 sq. m).
b. Other Items: Architect will designate items or areas required.

2. Final approval of color selections will be based on mockups.

a. If preliminary color selections are not approved, apply additional mockups of additional colors selected by Architect at no added cost to Owner.

3. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Architect specifically approves such deviations in writing.
4. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C) or more than 120 deg F (49 deg C).

1. Maintain containers in clean condition, free of foreign materials and residue.
2. Remove rags and waste from storage areas daily.

1.8 FIELD CONDITIONS

A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 105 degrees F (10 and 41 degrees C).

B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; or at temperatures less than 5 degrees F (3 degrees C) above the dew point; or to damp or wet surfaces.

C. Painting contractor should follow proper painting practices and exercise judgment based on his or her experience and project specific conditions as to when to proceed.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Basis-of-Design Product: Subject to compliance with requirements, provide products listed from Dunn-Edwards Corporation for the paint category indicated, or comparable products by one of the following:

1. Pratt & Lambert.
2. <**Insert manufacturer's name**>.

B. Products: Subject to compliance with requirements, available products that may be incorporated into the Work include, but are not limited to products listed in other Part 2 articles for the paint category indicated.

2.2 PAINT, GENERAL

A. Material Compatibility:

1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.

B. VOC Content: Provide materials that comply with VOC limits of authorities having jurisdiction.

C. LEED Credit: Products that meet LEED requirements are eligible for use on interior substrates. Incorporating LEED materials on exteriors will not contribute to points towards IEQ 4.2.

D. Colorants: The use of colorants containing hazardous chemicals, such as ethylene glycol, is prohibited.

E. Colors: [**As selected by Architect from manufacturer's full range**] [**Match Architect's samples**] [**As indicated in a color schedule**] <**Insert requirements**>.

1. [**10**] [**20**] [**30**] <**Insert number**> percent of surface area will be painted with deep tones.

2.3 BLOCK FILLERS

A. Block Filler, Latex, Interior/Exterior: Dunn-Edwards, Smooth Blocfil Select SBSL00 Smooth Block Filler, MPI #4.

1. Physical Properties:

Physical Properties	Spec
Resin Type	Modified Copolymer
Solids by Volume	50.5% +/-2%
Acrylic Resin	7.8%

VOC	50 g/L
RAVOC	35 g/L
Conforms to	LEED 2009 IEQ Credit 4.2 and CalGreen requirements
Certification	Green Wise

2. Testing:

Test	Results
Topcoat Adhesion per ASTM D 3359 Method B	Minimum #3
Alkali Resistance per MPI #4 Detailed Performance Standard	No signs of blistering, lifting, wrinkling, disintegrating or more than slight color change compared to unexposed

2.4 PRIMERS/SEALERS

A. Primer, Alkali Resistant, Water Based: Dunn-Edwards, Eff-Stop Select ESSL00, MPI #3.

1. Physical Properties:

Physical Properties	Spec
Resin Type	100% acrylic

Solids by Volume	37% +/-2%
Acrylic Resin	21%
EG Free	Yes
VOC	50 g/L
RAVOC	30 g/L
Conforms to	LEED 2009 IEQ Credit 4.2 and CalGreen requirements
Certification	Green Wise

2. Testing: MPI #3 Detailed Performance Standard,

Test	Results
Adhesion to concrete block	Greater than 400 psi
Alkali resistance	Appearance greater than 8
Hiding power	Contrast ratio greater than 92

B. Primer, Alkali Resistant, Water Based: Dunn-Edwards, Eff-Stop Premium ESPR00, MPI #3.

1. Physical Properties:

Physical Properties	Spec
Resin Type	100% Acrylic Epoxy
Solids by Volume	36% +/-2%
Acrylic/Epoxy Resin	12.7%
Prime Pigment	10.2%
EG Free	Yes
VOC	20 g/L
RAVOC	5 g/L

Conforms to:	LEED 2009 IEQ Credit 4.2 and CalGreen requirements
Certification	Green Wise

2. Testing: MPI #3 Detailed Performance Standard,

Test	Results
Adhesion to concrete block	Greater than 400 psi
Alkali resistance	Appearance rating greater than 8
Hiding power	Contrast ratio greater than 92

C. Primer, Bonding, Water Based, Low Odor Zero VOC Ultra-Grip Select UGSL00.

1. Physical Properties:

Physical Properties	Spec
Resin Type	Acrylic
Solids by Volume	37% +/- 2%
Acrylic Resin	12.9%
EG Free	Yes
VOC	1 g/L
RAVOC	1 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements

2. Testing: MPI #3 Detailed Performance Standard,

Test	Results
Adhesion to concrete block	Greater than 400 psi
Alkali resistance	Appearance rating greater than 8
Hiding power	Contrast ratio greater than 92

D. Primer, Bonding, Water Based: Ultra-Grip Premium UGPR00, MPI #17.

1. Physical Properties:

Physical Properties	Spec
Resin Type	Acrylic
Solids by Volume	41% +/- 2%
Acrylic resin	22.8%
Prime pigment	15.1%
EG Free	Yes
VOC	50 g/L
RAVOC	20 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements
Certification	Green Wise

2. Testing: MPI #17 Detailed Performance Standard,

Test	Results
Adhesion to cured enamel per ASTM D 3359	Adhesion greater than 4B
Topcoat adhesion of MPI #147, per ASTM D 3359	Adhesion greater than 4B

E. Primer, Bonding, Water Based: Zero VOC, Ultrashield Multi-Surface ULMS00.

1. Physical Properties:

Physical Properties	Spec
Resin Type	100% acrylic
Solids by Volume	40%
Acrylic Resin	43.3%
Prime pigment	13.7%
EG Free	Yes
VOC	0 g/L
RAVOC	0 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements

2. Testing:

	Results
Pencil hardness per ASTM D 3363	HB
Impact resistance, per ASTM D 2794	Direct: >100 inch/lbs

F. Primer, Bonding, Solvent Based: Rust-Oleum Zinsser Cover Stain, MPI #69, as distributed by Dunn-Edwards.

1. Description: All-purpose oil-based exterior primer-sealer.

G. Wood-Knot Sealer: Rust-Oleum Zinsser BIN, MPI#36, as distributed by Dunn-Edwards..

1. Description: Pigmented shellac.

2.5 METAL PRIMERS

A. Primer, Alkyd, Anti-Corrosive for Metal: Bloc-Rust BRPR00-1 Series, MPI #107.

1. Physical Properties:

Physical Properties	Spec
Resin Type	Waterborne alkyd
Solids by Volume	41% +/- 2%
Alkyd Resin	22.8%
Rust Inhibitive Pigment	5.6%

EG Free	Yes
VOC	30 g/L
RAVOC	15 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements
Certification	Green Wise

2. Testing: MPI #107 Detailed Performance Standard:

Test	Results
Corrosion resistance	No loss of adhesion, through-film rusting, and no more than a few No. 8 blisters after exposure of more than 1008 hours. Undercutting at the scribe shall average not more than 1/4 inch (6 mm)
Topcoat adhesion of MPI #164	Per ASTM D 3359, adhesion greater than 4B
Adhesion to metal	Per ASTM D 3359, adhesion greater than 4B
EPR	3.0

B. Primer, Rust-inhibitive, Water-based: Dunn-Edwards Ultrashield DTM Gray Primer ULDM00 Series.

1. Physical Properties:

Physical Properties	Spec
Resin Type	Acrylic Urethane
Solids by Volume	40
Acrylic Urethane Resin	44.3%
EG Free	Yes
VOC	0 g/L
RAVOC	0 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements

2. Testing:

Test	Results
Cyclical Prohesion per ASTM D 5894, 2 cycles, 672 hours	10 per ASTM D 714 for blistering 10 per ASTM D 1654 for corrosion 10 per ASTM D 610 for rusting Rating 1-10, 10=best
Crosshatch Adhesion per ASTM D 3359-87	5A

C. Primer,Non-Ferrous Metal Dunn-Edwards Ultrashield Glavanized Metal Primer ULGM00

1. Physical Properties:

Physical Properties	Spec
Resin Type	Acrylic Copolymer
Solids by Volume	41.6% +/- 2%
Prime and Reinforcing Pigments	29.2%

EG Free	Yes
VOC	50 g/L
RAVOC	20 g/L
Conformance and Certification	LEED 2009 IEQ Credit 4.2 and CalGreen requirements Green Wise Certification

D. Primer, Galvanized, Water Based: Dunn-Edwards Ultra-Grip Premium UGPR00, MPI #134.

1. Physical Properties:

Physical Properties	Spec
Resin Type	Acrylic
Solids by Volume	41% +/- 2%
Acrylic Resin	22.8%
Prime Pigment	15.1 %
EG Free	Yes
VOC	50 g/L
RAVOC	20 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements
Certification	Green Wise

Test	Results
Adhesion to galvanized	Per ASTM D 3359, adhesion greater than 4B
Humidity	Per ASTM D 3359, adhesion greater than 4B, no evidence of blistering or peeling
Topcoat adhesion of MPI #154	Per ASTM D 3359, adhesion greater than 4B
EPR	3.0

2.6 WOOD PRIMERS

A. Primer, Latex for Exterior Wood: Dunn-Edwards EZ-Prime Premium EZPR00. MPI #6.

1. Physical Properties:

Physical Properties	Spec
Resin Type	Acrylic
Solids by Volume	41% +/- 2%
Acrylic Resin	23.7%
Prime Pigment	14.4%
EG Free	Yes
VOC	50 g/L
RAVOC	20 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements
Certification	Green Wise

2. Testing: MPI #3 Detailed Performance Standard,

Test	Results
Adhesion to concrete block	Greater than 400 psi
Alkali resistance	Appearance rating greater than 8
Hiding power	Contrast ratio greater than 92

2.7 EPOXY PRIMERS

A. Description: For priming concrete or steel surfaces to receive high performance polyurethane topcoats.

2.8 WATER-BASED PAINTS

A. 100% Acrylic, Latex, Exterior Flat (Gloss Level 1): Dunn-Edwards Acri-Hues ACHS10. MPI#10.

1. Physical Properties:

Physical Properties	Spec
Resin Type	100% acrylic
Solids by Volume	39.5% +/- 2%
Acrylic Resin	14.0%
Prime Pigment	14.7%
EG Free	Yes
VOC	40 g/L
RAVOC	20 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements
Certification	Bio-Pruf

2. Testing:

Test	Results
Accelerated Weathering per ASTM D 4587	No blistering, chalking, checking, cracking, flaking, or loss of adhesion after 500 hours
Flexibility over 1/4 inch mandrel per MPI # 10 Detailed Performance Standard	No cracking, peeling, or loss of adhesion
Alkali Resistance per MPI #10 Detailed Performance Standard	No lifting, wrinkling, or disintegration
Biological growth per ASTM D 3273	Surface disfigurement rating of 8 or greater

B. 100% Acrylic Enamel, Latex, Exterior Velvet (Gloss Level 2): Dunn-Edwards Spartashield SSHL20. MPI #214.

1. Performance Properties:

Physical Properties	Spec
Resin Type	100% acrylic
Solids by Volume	39% +/- 2%
Acrylic Resin	17.5%
Prime Pigment	18.4%
EG Free	Yes
VOC	45 g/L
RAVOC	25 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements
Certification	Bio-Pruf, Green Wise

C. 100% Acrylic Enamel, Latex, Exterior Eggshell (Gloss Level 3): Dunn-Edwards Spartashield SSHL30. (MPI #151, 161)

1. Physical Properties:

Physical Properties	Spec
Resin Type	100% acrylic
Solids by Volume	38% +/- 2%
Acrylic Resin	19.3%
Prime Pigment	17.9%
EG Free	Yes
VOC	45 g/L
RAVOC	25 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements
Certification	Bio-Pruf

2. Testing:

Test	Results
Accelerated Weathering per ASTM D 4587	No blistering, chalking, checking, cracking, flaking, or loss of adhesion after 500 hours
Chemical Resistance per MPI #161 Detailed Performance Standard	No signs of lifting, wrinkling, disintegration, or more than slight color change
Early Water Resistance per MPI #161 Detailed Performance Standard	No evidence of washing off, lifting, or wrinkling after 5 minute spray
Biological growth per ASTM D 3273	Surface disfigurement rating of 8 or greater

D. 100% Acrylic Enamel, Latex, Exterior Low Sheen (Gloss Level 4): Dunn-Edwards Spartashield SSHL40**.** MPI #15**.**

1. Physical Properties:

Physical Properties	Spec
Resin Type	100% acrylic
Solids by Volume	37% +/- 2%
Acrylic Resin	22.0%
Prime Pigment	17.5%

EG Free	Yes
VOC	50 g/L
RAVOC	35 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements
Certification	Bio-Pruf, Green Wise

2. Testing:

Test	Results
Accelerated Weathering per ASTM D 4587	No blistering, chalking, checking, cracking, flaking, or loss of adhesion after 500 hours. Gloss retention within 10 units of original and not less than 65 at 60 degrees F (16 degrees C).
Flexibility over 1/4 inch mandrel per MPI # 15 Detailed Performance Standard	No cracking, peeling, or loss of adhesion
Alkali Resistance per MPI #15 Detailed Performance Standard	No lifting, wrinkling, or disintegration
Biological growth per ASTM D 3273	Surface disfigurement rating of 8 or greater

E. 100% Acrylic Enamel, Latex, Exterior Semi-Gloss (Gloss Level 5): Dunn-Edwards Spartashield SSHL50. MPI #11.

1. Physical Properties:

Physical Properties	Spec
Resin Type	100% acrylic
Solids by Volume	38.1% +/- 2%
Acrylic Resin	22.8%
Prime Pigment	21.4%
EG Free	Yes
VOC	45 g/L
RAVOC	30 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements
Certification	Bio-Pruf

2. Testing:

Test	Results
Accelerated Weathering per ASTM D 4587	No blistering, chalking, checking, cracking, flaking, or loss of adhesion after 500 hours.
Chemical Resistance per MPI #163 Detailed Performance Standard	No signs of lifting, wrinkling, disintegration, or more than slight color change
Early Water Resistance per MPI #163 Detailed Performance Standard	No evidence of washing off, lifting, or wrinkling after 5 minute spray

Biological growth per ASTM D 3273	Surface disfigurement rating of 8 or greater

F. 100% Acrylic Enamel, Latex, Exterior, Gloss (Gloss Level 6): Dunn-Edwards Gloss Spartashield SSHL60. MPI #119, 154, 164.

1. Physical Properties:

Physical Properties	Spec
Resin Type	100% acrylic
Solids by Volume	37.6% +/- 2%
Acrylic Resin	25.4%
Prime Pigment	20.5%
EG Free	Yes
VOC	50 g/L
RAVOC	25 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements
Certification	Bio-Pruf

2. Testing:

Test	Results
Accelerated Weathering per ASTM D 4587	No blistering, chalking, checking, cracking, flaking, or loss of adhesion after 500 hours. Gloss retention within 10 units of original and not less than 65 at 60 degrees F (16 degrees C).
Flexibility over 1/8 inch mandrel per MPI # 119 Detailed Performance Standard	No cracking, peeling, or loss of adhesion
Alkali Resistance per MPI #119 Detailed Performance Standard	No lifting, wrinkling, or disintegration
Biological growth per ASTM D 3273	Surface disfigurement rating of 8 or greater

G. 100% Acrylic, Latex, Exterior Flat (Gloss Level 1): Dunn-Edwards Spartashield SSHL10. MPI #10.

1. Physical Properties:

Physical Properties	Spec
Resin Type	100% acrylic
Solids by Volume	41% +/- 2%
Acrylic Resin	12.6%
Prime Pigment	20.3%
EG Free	Yes
VOC	50 g/L
RAVOC	25 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements
Certification	Bio-Pruf, Green Wise

2. Testing:

Test	Results
Accelerated Weathering per ASTM D 4587	No blistering, chalking, checking, cracking, flaking, or loss of adhesion after 500 hours.
Flexibility over 1/4 inch mandrel per MPI # 10 Detailed Performance Standard	No cracking, peeling, or loss of adhesion
Alkali Resistance per MPI #10 Detailed Performance Standard	No lifting, wrinkling, or disintegration
Biological growth per ASTM D 3273	Surface disfigurement rating of 8 or greater

H. Premium Architectural Coating, Exterior, Water Based, eggshell (Gloss Level 3): Dunn-Edwards Spartashield SSHL30. MPI #161.

1. Physical Properties:

Physical Properties	Spec
Resin Type	100% acrylic
Solids by Volume	38% +/- 2%
EG Free	Yes
VOC	45 g/L
RAVOC	25 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements
Certification	Bio-Pruf

2. Testing:

Test	Results
Accelerated Weathering per ASTM D 4587	No blistering, chalking, checking, cracking, flaking, or loss of adhesion after 500 hours.
Chemical Resistance per MPI #161 Detailed Performance Standard	No signs of lifting, wrinkling, disintegration, or more than slight color change.
Early Water Resistance per MPI #161 Detailed Performance Standard	No evidence of washing off, lifting, or wrinkling after 5 minute spray.
Biological growth per ASTM D 3273	Surface disfigurement rating of 8 or greater

I. Premium Architectural Coating, Exterior, Water Based, Semi-Gloss (Gloss Level 5): Dunn-Edwards Spartashield SSHL50. MPI #163.

1. Physical Properties:

Physical Properties	Spec
Resin Type	100% acrylic
Solids by Volume	38.1% +/- 2%

EG Free	Yes
VOC	45 g/L
RAVOC	30 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements
Certification	Bio-Pruf

2. Testing:

Test	Results
Accelerated Weathering per ASTM D 4587	No blistering, chalking, checking, cracking, flaking, or loss of adhesion after 500 hours.
Chemical Resistance per MPI #163 Detailed Performance	No signs of lifting, wrinkling, disintegration, or more than slight color change.

Standard	
Early Water Resistance per MPI #163 Detailed Performance Standard	No evidence of washing off, lifting, or wrinkling after 5 minute spray.
Biological growth per ASTM D 3273	Surface disfigurement rating of 8 or greater

J. 100% Acrylic Enamel, Latex Exterior, Gloss (Gloss Level 6): Dunn-Edwards Gloss Spartashield SSHL60. MPI #119, 154, 164**.**

1. Physical Properties:

Physical Properties	Spec
Resin Type	100% acrylic
Solids by Volume	37.6% +/- 2%
Acrylic resin	25.4%
Prime Pigment	20.5%
EG Free	Yes
VOC	50 g/L
RAVOC	30 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements
Certification	Bio-Pruf

2. Testing:

Test	Results
Scrub Resistance per MPI #164 Detained Performance Standard	4000 scrub cycles without showing any breakthrough of the film
Chemical Resistance per MPI #164 Detailed Performance Standard	No signs of lifting, wrinkling, disintegration, or more than slight color change.
Early Water Resistance per MPI #164 Detailed Performance Standard	No evidence of washing off, lifting, or wrinkling after 5 minute spray.
Accelerated Weathering per ASTM D 4587	No blistering, chalking, checking, cracking, flaking, or loss of adhesion after 500 hours

Biological growth per ASTM D 3273	Surface disfigurement rating of 8 or greater

K. High Performance Zero VOC Architectural Coating. Exterior. Water Based, low sheen (Gloss Level 4): Dunn-Edwards Ultrashield ULSH40 Series.

1. Physical Properties:

Physical Properties	Spec
Resin Type	Acrylic urethane
Solids by Volume	33% +/- 3%
Acrylic Resin	51.6%
Prime Pigment	23.2%
EG Free	Yes
VOC	0 g/L
RAVOC	0g/L
Conforms to	LEED 2009 IEQ Credit 4.2 and CalGreen requirements

2. Testing:

Test	Results
Accelerated Weathering per ASTM D 4587 QUV Type A bulb, 450 hours	93% gloss retention (Gloss Black)
Impact Resistance Per ASTM D2794	>160 lbs (direct)
Conical Flexibility per ASTM D522	>33%
Pencil Hardness per ASTM D3363	3B

L. High Performance Zero VOC Architectural Coating, Exterior, Water Based, Direct-To-Metal, Semi-Gloss (Gloss Level 5): Dunn-Edwards Ultrashield ULDM50 Series.

1. Physical Properties:

Physical Properties	Spec
Resin Type	Acrylic urethane
Solids by Volume	40% +/- 2%
Acrylic Resin	55.5%
Prime Pigment	19.4%
EG Free	Yes
VOC	0 g/L
RAVOC	0 g/L
Conforms to	LEED 2009 IEQ Credit 4.2 and CalGreen requirements

2. Testing:

Test	Results
Conical Flexibility per ASTM D522	180° on 1/2" Mandrel
Cyclical Prohesion per ASTM D5894, 2 cycles, 672 hours	RESULT: 10 per ASTM D714 for blistering RESULT: 10 per ASTM D1654 for corrosion RESULT: 10 per ASTM D610 for rusting Rating 1-10 10=best
Crosshatch Adhesion per ASTM D3359-87	5A
Salt Spray Resistance per ASTM B117, CRS, 30 day cure	>800 hours (@4 mils DFT)

M. High Performance Zero VOC Architectural Coating. Acrylic Urethane Enamel, Latex, Exterior, Gloss (Gloss Level 6): Dunn-Edwards Gloss Ultrashield ULSH60 Series.

1. Physical Properties:

Physical Properties	Spec
Resin Type	Acrylic urethane
Solids by Volume	37% +/- 1%
Acrylic Resin	52.4%
Prime Pigment	23.2%
EG Free	Yes
VOC	0 g/L
RAVOC	0 g/L
Conforms to	LEED 2009 IEQ Credit 4.2 and CalGreen requirements

2. Testing:

Test	Results
Accelerated Weathering per ASTM D 4587 QUV Type A bulb, 450 hours	93% gloss retention (Gloss Black)
Impact Resistance Per ASTM D2794	>160 lbs (direct)
Conical Flexibility per ASTM D522	>33%
Pencil Hardness per ASTM D3363	3B

2.9 HYBRID WATERBORNE URETHANE ALKYD PAINTS

A. Waterborne Urethane Alkyd, Semi-Gloss (Gloss L e v e l 5): Dunn-Edwards Aristoshield Series ASHL50.

1. Physical Properties:

Physical Properties	Spec
Resin Type	Waterborne Urethane Alkyd

Solids by Volume	37.5% +/- 2%
Solids by Weight	54.1% +/- 2%
Prime Pigment	33.4%
EG Free	Yes
VOC	50 g/L

B. Waterborne Urethane Alkyd, High-Gloss (Gloss Level 7): Dunn-Edwards Aristoshield Series ASHL70.

1. Physical Properties:

Physical Properties	Spec
Resin Type	Waterborne Urethane Alkyd
Solids by Volume	39.3% +/- 2%
Solids by Weight	53.0%
Prime Pigment	25.9%
EG Free	Yes
VOC	50 g/L

C. Two Component Polyurethane Semi Gloss, Carboline Carbothane 133 Series aliphatic polyester polyurethane as distributed by Dunn-Edwards, (Gloss Level 3-4).

1. Testing:

Description	Results
Accelerated Weathering per ASTM D 5894	78% gloss retention after 1000 hours
Color Retention per ASTM G 53	< 2 McAdams units, no blistering, rusting, cracking, or chalking
Salt Fog per ASTM B 117	No rusting, or blistering on plane of scribe at 4,000 hours

D. Two component Polyurethane Gloss, Carboline Carbothane 134 Series aliphatic acrylic polyurethane as distributed by Dunn-Edwards (Gloss Level 6).

1. Testing:

Description	Results
Accelerated Weathering per ASTM G 53 / ASTM D 4587 Weather-o-meter	< 5% gloss loss after 3000 hours
Abrasion per ASTM D 4060	70 mg loss after 1000 cycles
Adhesion per ASTM D 4541	2562 psi
Immersion per ASTM D 870	No effects after 30 days

2.10 TEXTURED AND HIGH-BUILD COATINGS

A. Primer for Textured Coating, Latex, Flat: Dunn-Edwards Flex-Prime Select FPSL00. MPI #3.

1. Physical Properties:

Physical Properties	Spec
Resin Type	Modified Copolymer
Solids by Volume	41% +/- 2%
EG Free	Yes
VOC	75 g/L
RAVOC	40 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements

2. Testing: MPI #3 Detailed Performance Standard

Test	Results
Adhesion	Greater than 400 psi
Alkali Resistance	Appearance rating greater than 8
Hiding Power	Contrast ration greater than 92

B. Intermediate Coat for Textured Coating, Latex, Flat: As recommended in writing by topcoat manufacturer.

1. <**Insert, in separate subparagraphs, manufacturer's name; product name or designation**>.

C. Textured Coating, Latex, Flat: Dunn-Edwards Enduralstic EDLX10.

1. Physical Properties:

Physical Properties	Spec
Resin Type	100% Acrylic
Solids by Volume	50.1% +/- 2%
EG Free	Yes
VOC	50 g/L
RAVOC	25 g/L
Conformance	LEED 2009 IEQ Credit 4.2 and CalGreen requirements

D. Primer for Latex, Exterior, High Build: As recommended in writing by topcoat manufacturer.

1. <**Insert, in separate subparagraphs, manufacturer's name; product name or designation**>.

E. Intermediate Coat for Latex, Exterior, High Build: As recommended in writing by topcoat manufacturer.

1. <**Insert, in separate subparagraphs, manufacturer's name; product name or designation**>.

F. Latex, Exterior, High Build:[**MPI #40.**]

1. <**Insert, in separate subparagraphs, manufacturer's name; product name or designation**>.

2.11 FLOOR COATINGS

A. Sealer, Water Based, for Concrete Floors:[**MPI #99.**]

B. Sealer, Solvent Based, for Concrete Floors:[**MPI #104.**]

C. Floor Paint, Latex, Low Gloss (Maximum Gloss Level 3):[**MPI #60.**]

D. Floor Enamel, Alkyd, Gloss (Gloss Level 6):[**MPI #27.**]

2.12 SOURCE QUALITY CONTROL

A. Testing of Paint Materials: Owner reserves the right to invoke the following procedure:

1. Owner may engage the services of a qualified testing agency to sample paint materials. Contractor will be notified in advance and may be present when samples are taken. If paint materials have already been delivered to Project site, samples may be taken at Project site. Samples will be identified, sealed, and certified by testing agency.
2. Testing agency will perform tests for compliance with product requirements.
3. Owner may direct Contractor to stop applying paints if test results show materials being used do not comply with product requirements. Contractor shall remove noncomplying paint materials from Project site, pay for testing, and repaint surfaces painted with rejected materials. Contractor will comply with requirements to use compataible products and systems as described in Paragraph 2.2.A. Contractor will be required to remove rejected materials from previously painted surfaces if, on repainting with complying materials, the two paints are incompatible.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.

B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:

1. Concrete: 12 percent.
2. Masonry (Clay and CMU): 12 percent.
3. Wood: 15 percent.
4. Portland Cement Plaster: 12 percent.
5. Gypsum Board: 12 percent.

C. Portland Cement Plaster Substrates: Verify that plaster is fully cured, including pH testing to determine that alkalinity is within limits established by the manufacturer.

D. Exterior Gypsum Board Substrates: Verify that finishing compound is sanded smooth.

E. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.

F. Proceed with coating application only after unsatisfactory conditions have been corrected.

1. Application of coating indicates acceptance of surfaces and conditions.

3.2 PREPARATION

A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and paint systems indicated.

B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.

1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.

C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.

1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.

D. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.

E. Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces or mortar joints exceeds that permitted in manufacturer's written instructions.

F. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer[**.**] [**but not less than the following:**]

1. SSPC-SP 1. "Solvent Cleaning."
2. SSPC-SP 2, "Hand Tool Cleaning."
3. SSPC-SP 3, "Power Tool Cleaning."
4. SSPC-SP 6/NACE No. 3, "Commercial Blast Cleaning."
5. SSPC-SP 7/NACE No. 4, "Brush-off Blast Cleaning."
6. SSPC-SP 11, "Power Tool Cleaning to Bare Metal."

G. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.

H. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

I. Aluminum Substrates: Remove loose surface oxidation.

J. Wood Substrates:

1. Scrape and clean knots. Before applying primer, apply coat of knot sealer recommended in writing by topcoat manufacturer for exterior use in paint system indicated.
2. Sand surfaces that will be exposed to view, and dust off.
3. Prime edges, ends, faces, undersides, and backsides of wood.
4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.

3.3 APPLICATION

A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Manual."

1. Use applicators and techniques suited for paint and substrate indicated.
2. The number of coats scheduled is the minimum number of coats required. Additional coat(s) shall be applied at no additional cost to the Owner, to completely hide base material, provide uniform color, and to produce satisfactory finish results.
3. Apply coatings without thinning except as specifically required by label directions, or required by these specifications. In such cases, thinning shall be the minimum reduction permitted.
4. Paint surfaces behind movable items same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed items with prime coat only.
5. Paint both sides and edges of exterior doors and entire exposed surface of exterior door frames.
6. Paint entire exposed surface of window frames and sashes.
7. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
8. Priming may not be required on items delivered with prime or shop coats, unless otherwise specified. Touch up prime coats applied by others as required ensuring an even primed surface before applying finish coat.

B. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.

C. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

D. Block Fillers: Provide block fill as scheduled to conform to the following: PDCA Standard P12-05.

1. Level 3 - Premium fill: One or multiple coats of high performance block filler manufactured to be applied at a high dry film build. Block filler shall be back-rolled to eliminate voids and reduce the majority of the masonry profile depth.

E. Painting Fire Suppression, Plumbing, HVAC, Electrical, Communication, and Electronic Safety and Security Work:

1. Paint the following work where exposed to view:
   a. Equipment, including panelboards[and switch gear].
   b. Uninsulated metal piping.
   c. Uninsulated plastic piping.
   d. Pipe hangers and supports.

e. Metal conduit.
f. Plastic conduit.
g. Tanks that do not have factory-applied final finishes.
h. <Insert mechanical items to be painted>

3.4 FIELD QUALITY CONTROL

A. Dry Film Thickness Testing: Owner may engage the services of a qualified testing and inspecting agency to inspect and test paint for dry film thickness.

1. Contractor shall touch up and restore painted surfaces damaged by testing.
2. If test results show that dry film thickness of applied paint does not comply with paint manufacturer's written recommendations, Contractor shall pay for testing and apply additional coats as needed to provide dry film thickness that complies with paint manufacturer's written recommendations.

3.5 CLEANING AND PROTECTION

A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.

B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.

C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.

D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 EXTERIOR PAINTING SCHEDULE

A. Concrete Substrates, Nontraffic Surfaces:

1. Latex System:
   a. Prime Coat: Primer, alkali resistant, water based, Dunn-Edwards Eff-Stop Select ESSL00, MPI #3.
   b. Intermediate Coat: Latex, exterior, matching topcoat.
   c. Topcoat: Latex, exterior flat, Dunn-Edwards Acri-Hues ACHS10 100% acrylic, (Gloss Level 1), MPI #10, 16.
   d. Topcoat: Latex, exterior velvet, Dunn-Edwards Spartashield SSHL20 100% acrylic, (Gloss Level 2), MPI #214.
   e. Topcoat: Latex exterior eggshell, Dunn-Edwards Spartashield SSHL30 100% acrylic, (Gloss Level 3), MPI #161
   f. Topcoat: Latex, exterior, low sheen, Dunn-Edwards Spartashield SSHL40 100% acrylic (Gloss Level 4), MPI #15.
   g. Topcoat: Latex, exterior semi-gloss, Dunn-Edwards Spartashield SSHL50 100% acrylic, (Gloss Level 5), MPI #11, 163.
   h. Topcoat: Latex, exterior gloss, Dunn-Edwards Spartashield SSHL60 100%

acrylic, (Gloss Level 6), MPI #119, 164.

2. Water-Based Premium Architectural Coating System:

   a. Prime Coat: Primer, alkali resistant, water based, Dunn-Edwards Eff-Stop Select ESSL00, MPI #3.
   b. Intermediate Coat: Latex, exterior, matching topcoat.
   c. Topcoat: Premium architectural coating, exterior flat, water based, Dunn-Edwards Spartashield SSHL10, (Gloss Level 1), MPI #10.
   d. Topcoat: Latex, exterior velvet, Dunn-Edwards Spartashield SSHL20 100% acrylic, (Gloss Level 2), MPI #214.
   e. Topcoat: Latex exterior eggshell, Dunn-Edwards Spartashield SSHL30 100% acrylic, (Gloss Level 3), MPI #161
   f. Topcoat: Latex, exterior, low sheen, Dunn-Edwards Spartashield SSHL40 100% acrylic (Gloss Level 4), MPI #15.
   g. Topcoat: Latex, exterior semi-gloss, Dunn-Edwards Spartashield SSHL50 100% acrylic, (Gloss Level 5), MPI #11, 163.
   h. Topcoat: Latex, exterior gloss, Dunn-Edwards Spartashield SSHL60 100% acrylic, (Gloss Level 6), MPI #119, 164.

3. High Performance Zero VOC Architectural Coating: Acrylic urethane System, Single Component:

   a. Prime Coat: Multi-Surface Primer: Dunn-Edwards Ultrashield, ULMS00
   b. Intermediate Coat: High Performance Architectural Coating, exterior matching topcoat.

   c. Topcoat: Zero VOC Acrylic Urethane Low Sheen, Dunn-Edwards Ultrashield ULSH40, (Gloss Level 4).
   d. Topcoat: Zero VOC Acrylic Urethane Semi-Gloss, Dunn-Edwards Ultrashield ULDM50, (Gloss Level 5)
   e. Topcoat: Zero VOC Acrylic Urethane Gloss, Dunn-Edwards Ultrashield ULSH60, (Gloss Level 6).

B. Concrete Substrates, Traffic Surfaces:

C. Clay-Masonry, CMU (without block filler) Substrates:

1. Latex System:

   a. Prime Coat: Alkali resistant primer/sealer, exterior, Dunn-Edwards Eff-Stop Select ESSL00, MPI #3.
   b. Intermediate Coat: Latex, exterior, matching topcoat.
   c. Topcoat: Latex, exterior flat, Dunn-Edwards Acri-Hues ACHS10 100% acrylic, (Gloss Level 1), MPI #10, 16.
   d. Topcoat: Latex, exterior velvet, Dunn-Edwards Spartashield SSHL20 100% acrylic, (Gloss Level 2), MPI #214.
   e. Topcoat: Latex, exterior eggshell, Dunn-Edwards Spartashield SSHL30 100% acrylic, (Gloss Level 3), MPI #161.
   f. Topcoat: Latex, exterior, low sheen, Dunn-Edwards Spartashield SSHL40 100% acrylic (Gloss Level 4), MPI #15.
   g. Topcoat: Latex, exterior semi-gloss, Dunn-Edwards Spartashield SSHL50, (Gloss

Level 5), MPI #11, 163.

h. Topcoat: Latex, exterior gloss, Dunn-Edwards Spartashield SSHL60 100% acrylic, (Gloss Level 6)**,** MPI #119, 164.

2. Water-Based Premium Architectural Coating System:
   a. Prime Coat: Primer, alkali resistant, water based, Dunn-Edwards Eff-Stop Select ESSL00**,** MPI #3.
   b. Intermediate Coat: Latex, exterior, matching topcoat.
   c. Topcoat: Premium architectural coating, exterior flat, water based, Dunn-Edwards Spartashield SSHL10, 100% acrylic (Gloss Level 1), MPI #10.
   d. Topcoat: Latex, exterior velvet, Dunn-Edwards Spartashield SSHL20 100% acrylic, (Gloss Level 2), MPI #214.
   e. Topcoat: Latex exterior eggshell, Dunn-Edwards Spartashield SSHL30 100% acrylic, (Gloss Level 3), MPI #161
   f. Topcoat: Latex, exterior, low sheen, Dunn-Edwards Spartashield SSHL40 100% acrylic (Gloss Level 4), MPI #15.
   g. Topcoat: Latex, exterior semi-gloss, Dunn-Edwards Spartashield SSHL50 100% acrylic, (Gloss Level 5), MPI #11, 163.
   h. Topcoat: Latex, exterior gloss, Dunn-Edwards Spartashield SSHL60 100% acrylic, (Gloss Level 6), MPI #119, 164.

3. High Performance Zero VOC Architectural Coating: Acrylic urethane System, Single Component:

   a. Prime Coat: Multi-Surface Primer: Dunn-Edwards Ultrashield, ULMS00
   b. Intermediate Coat: High Performance Architectural Coating, exterior, matching topcoat.

   c. Topcoat: Zero VOC Acrylic Urethane Low Sheen, Dunn-Edwards Ultrashield ULSH40, (Gloss Level 4).
   d. Topcoat: Zero VOC Acrylic Urethane Semi-Gloss, Dunn-Edwards Ultrashield ULDM50, (Gloss Level 5)
   e. Topcoat: Zero VOC Acrylic Urethane Gloss, Dunn-Edwards Ultrashield ULSH60, (Gloss Level 6).

D. CMU Substrates:

1. Latex System:

   a. Prime Coat: Block filler, latex, interior/exterior, Dunn-Edwards Smooth BLOCFIL Select SBSL00, MPI #4.
   b. Intermediate Coat: Latex, exterior, matching topcoat.
   c. Topcoat: Latex, exterior flat Dunn-Edwards Acri-Hues ACHS10 100% acrylic, (Gloss Level 1)**,** MPI #10, 16.
   d. Topcoat: Latex, exterior velvet, Dunn-Edwards Spartashield SSHL20 100%, (Gloss Level 2), MPI #214.
   e. Topcoat: Latex, exterior eggshell, Dunn-Edwards Spartashield SSHL30 100% acrylic, (Gloss Level 3), MPI #161.
   f. Topcoat: Latex, exterior, low sheen, Dunn-Edwards Spartashield SSHL40 100% acrylic, (Gloss Level 4), MPI #15.
   g. Topcoat: Latex, exterior semi-gloss, Dunn-Edwards Spartashield SSHL50 100% acrylic, (Gloss Level 5)**,** MPI #11, 163.

h. Topcoat: Latex, exterior gloss, Dunn-Edwards Spartashield SSHL60 100% acrylic (Gloss Level 6)**,** MPI #119, 164.

2. Water-Based Premium Architectural Coating System:
   a. Prime Coat: Block filler, latex, interior/exterior, Dunn-Edwards Smooth BLOCFIL Select SBSL00, MPI #4.
   b. Intermediate Coat: Latex, exterior, matching topcoat.
   c. Topcoat: Premium architectural coating, exterior flat, water based, Dunn-Edwards Spartashield SSHL10, (Gloss Level 1), MPI #10.
   d. Topcoat: Latex, exterior velvet, Dunn-Edwards Spartashield SSHL20 100% acrylic, (Gloss Level 2), MPI #214.
   e. Topcoat: Latex exterior eggshell, Dunn-Edwards Spartashield SSHL30 100% acrylic, (Gloss Level 3), MPI #161
   f. Topcoat: Latex, exterior, low sheen, Dunn-Edwards Spartashield SSHL40 100% acrylic (Gloss Level 4), MPI #15.
   g. Topcoat: Latex, exterior semi-gloss, Dunn-Edwards Spartashield SSHL50 100% acrylic, (Gloss Level 5), MPI #11, 163.
   h. Topcoat: Latex, exterior gloss, Dunn-Edwards Spartashield SSHL60 100% acrylic, (Gloss Level 6), MPI #119, 164.

3. High Performance Zero VOC Architectural Coating: Acrylic urethane System, Single Component:

   a. Prime Coat: Block filler, latex, interior/exterior, Dunn-Edwards Smooth BLOCFIL Select SBSL00, MPI #4.
   b. Sealer Coat: Multi-Surface Primer: Dunn-Edwards Ultrashield, ULMS00
   c. Intermediate Coat: High Performance Architectural Coating, exterior, matching topcoat.
   d. Topcoat: Zero VOC Acrylic Urethane Low Sheen, Dunn-Edwards Ultrashield ULSH40, (Gloss Level 4).
   e. Topcoat: Zero VOC Acrylic Urethane Semi-Gloss, Dunn-Edwards Ultrashield ULDM50, (Gloss Level 5)
   f. Topcoat: Zero VOC Acrylic Urethane Gloss, Dunn-Edwards Ultrashield ULSH60, (Gloss Level 6).

E. Steel Substrates:

1. Latex over Alkyd Primer System:
   a. Prime Coat: Alkyd emulsion, anti-corrosive for metal, Dunn-Edwards Bloc-Rust Primer BRPR00**,** MPI #107.
   b. Prime Coat: Shop primer specified in Division 05 Section where substrate is specified.
   c. Intermediate Coat: Latex, exterior, matching topcoat.
   d. Topcoat: Latex, exterior flat, Dunn-Edwards Acri-Hues ACHS10 100% acrylic, (Gloss Level 1)**,** MPI #10, 16.
   e. Topcoat: Latex, exterior velvet, Dunn-Edwards Spartashield SSHL20 100% acrylic, (Gloss Level 2), MPI #214.
   f. Topcoat: Latex, exterior eggshell, Dunn-Edwards Spartashield SSHL30 100% acrylic, (Gloss Level 3), MPI #161.
   g. Topcoat: Latex, exterior, low sheen, Dunn-Edwards Spartashield SSHL40 100% acrylic, (Gloss Level 4), MPI #15.
   h. Topcoat: Latex, exterior semi-gloss, Dunn-Edwards Spartashield SSHL50 100% acrylic, (Gloss Level 5)**,** MPI #11, 163.

i. Topcoat: Latex, exterior gloss, Dunn-Edwards Spartashield SSHL60 100% acrylic (Gloss Level 6)**,** MPI #119, 164.

2. Water-Based Premium Architectural Coating System:

a. Prime Coat: Alkyd emulsion, anti-corrosive for metal, Dunn-Edwards Bloc-Rust Primer BRPR00**,** MPI #107.
b. Prime Coat: Shop primer specified in Division 05 Section where substrate is specified.
c. Intermediate Coat: Premium architectural coating, exterior, water based, matching topcoat.
d. Topcoat: Premium architectural coating, exterior flat, water based, Dunn-Edwards Spartashield SSHL10, 100% acrylic (Gloss Level 1), MPI #10.
e. Topcoat: Latex, exterior velvet, Dunn-Edwards Spartashield SSHL20 100% acrylic, (Gloss Level 2), MPI #214.
f. Topcoat: Latex exterior eggshell, Dunn-Edwards Spartashield SSHL30 100% acrylic, (Gloss Level 3), MPI #161
g. Topcoat: Latex, exterior, low sheen, Dunn-Edwards Spartashield SSHL40 100% acrylic (Gloss Level 4), MPI #15.
h. Topcoat: Latex, exterior semi-gloss, Dunn-Edwards Spartashield SSHL50 100% acrylic, (Gloss Level 5), MPI #11, 163.
i. Topcoat: Latex, exterior gloss, Dunn-Edwards Spartashield SSHL60 100% acrylic, (Gloss Level 6), MPI #119, 164.

3. High Performance Zero VOC Architectural Coating: Acrylic Urethane System, Single Component:
a. Prime Coat: DTM Gray Primer: Dunn-Edwards Ultrashield, ULDM00
b. Intermediate Coat: High Performance Architectural Coating, exterior, matching topcoat.

c. Topcoat: Zero VOC Acrylic Urethane Low Sheen, Dunn-Edwards Ultrashield ULSH40, (Gloss Level 4).
d. Topcoat: Zero VOC Acrylic Urethane Semi-Gloss, Dunn-Edwards Ultrashield ULDM50, (Gloss Level 5)
e. Topcoat: Zero VOC Acrylic Urethane Gloss, Dunn-Edwards Ultrashield ULSH60, (Gloss Level 6).

4. Alkyd Emulsion Enamel System Semi-Gloss:

a. Prime Coat: Ultrashield interior/exterior galvanized metal primer, water based, Dunn-Edwards ULGM00.
b. Intermediate Coat: matching topcoat.
c. Topcoat: Waterborne Urethane Alkyd, interior/exterior, semi-gloss, Dunn-Edwards Aristoshield ASHL50, (Gloss Level 5).

5. Alkyd Emulsion Enamel System High Gloss:
a. Prime Coat: Ultrashield interior/exterior galvanized metal primer, water based, Dunn-Edwards ULGM00.
b. Intermediate Coat: matching topcoat.
c. Topcoat: Waterborne Urethane Alkyd, interior/exterior, semi-gloss, Dunn-Edwards Aristoshield ASHL70, (Gloss Level 7).

F. Galvanized-Metal Substrates:

1. Latex System:

a. Prime Coat: Primer, acrylic copolymer, Ultrashield interior/exterior galvanized metal primer, water based, Dunn-Edwards ULGM00**.**
b. Intermediate Coat: Latex, exterior, matching topcoat.

c. Topcoat: Latex, exterior flat, Dunn-Edwards Acri-Hues ACHS10 100% acrylic, (Gloss Level 1), MPI #10, 16.
d. Topcoat: Latex, exterior velvet, Dunn-Edwards Spartashield SSHL20 100% acrylic, (Gloss Level 2), MPI #214.
e. Topcoat: Latex, exterior eggshell, Dunn-Edwards Spartashield SSHL30 100% acrylic, (Gloss Level 3), MPI #161.
f. Topcoat: Latex, exterior, low sheen, Dunn-Edwards Spartashield SSHL40 100% acrylic, (Gloss Level 4), MPI #15.
g. Topcoat: Latex, exterior semi-gloss, Dunn-Edwards Spartashield SSHL50 100% acrylic, (Gloss Level 5)**,** MPI #11, 163.
h. Topcoat: Latex, exterior gloss, Dunn-Edwards Spartashield SSHL60 100% acrylic, (Gloss Level 6)[**,** MPI #119, 164].

2. Water-Based Premium Architectural Coating System:

a. Prime Coat: Ultrashield interior/exterior galvanized metal primer, water based, Dunn-Edwards ULGM00.
b. Intermediate Coat: Premium architectural coating, exterior, water based, matching topcoat.
c. Topcoat: Premium architectural coating, exterior flat, water based, Dunn-Edwards Spartashield SSHL10, 100% acrylic (Gloss Level 1), MPI #10.
d. Topcoat: Latex, exterior velvet, Dunn-Edwards Spartashield SSHL20 100% acrylic, (Gloss Level 2), MPI #214.
e. Topcoat: Latex exterior eggshell, Dunn-Edwards Spartashield SSHL30 100% acrylic, (Gloss Level 3), MPI #161
f. Topcoat: Latex, exterior, low sheen, Dunn-Edwards Spartashield SSHL40 100% acrylic (Gloss Level 4), MPI #15.
g. Topcoat: Latex, exterior semi-gloss, Dunn-Edwards Spartashield SSHL50 100% acrylic, (Gloss Level 5), MPI #11, 163.
h. Topcoat: Latex, exterior gloss, Dunn-Edwards Spartashield SSHL60 100% acrylic, (Gloss Level 6), MPI #119, 164.

3. Alkyd Emulsion Finish System Semi-Gloss:
a. Prime Coat: Ultrashield interior/exterior galvanized metal primer, water based, Dunn-Edwards ULGM00.
b. Intermediate Coat: matching topcoat.
c. Topcoat: Waterborne Urethane Alkyd, interior/exterior, semi-gloss, Dunn-Edwards Aristoshield ASHL50, (Gloss Level 5).

4. Alkyd Emulsion Finish System High-Gloss
a. Prime Coat: Ultrashield interior/exterior galvanized metal primer, water based, Dunn-Edwards ULGM00
b. Intermediate Coat: matching topcoat.

c. Topcoat: Waterborne Urethane Alkyd, interior/exterior, semi-gloss, Dunn-Edwards Aristoshield ASHL70, (Gloss Level 7)

5. High Performance Zero VOC Architectural Coating: Acrylic urethane System, Single Component:
   a. Prime Coat: DTM Gray Primer: Dunn-Edwards Ultrashield, ULDM00
   b. Intermediate Coat: High Performance Architectural Coating, exterior, matching topcoat.
   c. Topcoat: Zero VOC Acrylic Urethane Low Sheen, Dunn-Edwards Ultrashield ULSH40, (Gloss Level 4).
   d. Topcoat: Zero VOC Acrylic Urethane Semi-Gloss, Dunn-Edwards Ultrashield ULDM50, (Gloss Level 5)
   e. Topcoat: Zero VOC Acrylic Urethane Gloss, Dunn-Edwards Ultrashield ULSH60, (Gloss Level 6)

G. Aluminum Substrates:

1. Latex System:

   a. Prime Coat: Ultrashield interior/exterior galvanized metal primer, water based, Dunn-Edwards ULGM00.
   b. Intermediate Coat: Latex, exterior, matching topcoat.
   c. Topcoat: Latex, exterior flat, Dunn-Edwards Acri-Hues ACHS10 100% acrylic, (Gloss Level 1)**,** MPI #10, 16.
   d. Topcoat: Latex, exterior velvet, Dunn-Edwards Spartashield SSHL20 100% acrylic, (Gloss Level 2), MPI #214.
   e. Topcoat: Latex, exterior eggshell, Dunn-Edwards Spartashield SSHL30 100% acrylic, (Gloss Level 3), MPI #161.
   f. Topcoat: Latex, exterior, low sheen, Dunn-Edwards Spartashield SSHL40 100% acrylic, (Gloss Level 4), MPI #15.
   g. Topcoat: Latex, exterior semi-gloss, Dunn-Edwards Spartashield SSHL50 100% acrylic, (Gloss Level 5)**,** MPI #11, 163.
   h. Topcoat: Latex, exterior gloss, Dunn-Edwards Spartashield SSHL60 100% acrylic, (Gloss Level 6)**,** MPI #119, 164.

2. Water-Based Premium Architectural Coating System:

   a. Prime Coat: Ultrashield interior/exterior galvanized metal primer, water based, Dunn-Edwards ULGM00.
   b. Intermediate Coat: Premium architectural coating, exterior, water based, matching topcoat.
   c. Topcoat: Premium architectural coating, exterior flat, water based, Dunn-Edwards Spartashield SSHL10, 100% acrylic (Gloss Level 1), MPI #10.
   d. Topcoat: Latex, exterior velvet, Dunn-Edwards Spartashield SSHL20 100% acrylic, (Gloss Level 2), MPI #214.
   e. Topcoat: Latex exterior eggshell, Dunn-Edwards Spartashield SSHL30 100% acrylic, (Gloss Level 3), MPI #161
   f. Topcoat: Latex, exterior, low sheen, Dunn-Edwards Spartashield SSHL40 100% acrylic (Gloss Level 4), MPI #15.
   g. Topcoat: Latex, exterior semi-gloss, Dunn-Edwards Spartashield SSHL50 100% acrylic, (Gloss Level 5), MPI #11, 163.
   h. Topcoat: Latex, exterior gloss, Dunn-Edwards Spartashield SSHL60 100%

acrylic, (Gloss Level 6), MPI #119, 164.

3. Alkyd Emulsion Finish CoatSystem:

   a. Prime Coat: Ultrashield interior/exterior galvanized metal primer, water based, Dunn-Edwards ULGM00.
   b. Intermediate Coat: Exterior alkyd enamel matching topcoat.
   c. Topcoat: Waterborne Urethane Alkyd, interior/exterior, semi-gloss, Dunn-Edwards Aristoshield ASHL50, (Gloss Level 5).
   d. Topcoat: Waterborne Urethane Alkyd, interior/exterior, semi-gloss, Dunn-Edwards Aristoshield ASHL50, (Gloss Level 5).

4. Alkyd Emulsion Finish System High-Gloss

   a. Prime Coat: Ultrashield interior/exterior galvanized metal primer, water based, Dunn-Edwards ULGM00
   b. Intermediate Coat: matching topcoat.
   c. Topcoat: Waterborne Urethane Alkyd, interior/exterior, semi-gloss, Dunn-Edwards Aristoshield ASHL70, (Gloss Level 7)

5. High Performance Zero VOC Architectural Coating: Acrylic urethane System, Single Component:
   a. Prime Coat: DTM Gray Primer: Dunn-Edwards Ultrashield, ULDM00
   b. Intermediate Coat: High Performance Architectural Coating, exterior, matching topcoat.
   c. Topcoat: Zero VOC Acrylic Urethane Low Sheen, Dunn-Edwards Ultrashield ULSH40, (Gloss Level 4).
   d. Topcoat: Zero VOC Acrylic Urethane Semi-Gloss, Dunn-Edwards Ultrashield ULDM50, (Gloss Level 5)
   e. Topcoat: Zero VOC Acrylic Urethane Gloss, Dunn-Edwards Ultrashield ULSH60, (Gloss Level 6).

H. Stainless-Steel Substrates:

I. Wood Substrates: Including [**wood trim**] [**architectural woodwork**] [**doors**] [**windows**] [**wood siding**] [**wood fences**] [**wood-based panel products**] [**glued-laminated construction**] [**exposed joists**] [**exposed beams**] [**wood shingles and shakes (excluding roofs)**] <**Insert description**>.

1. Latex System:

   a. Prime Coat: 100% acrylic for exterior wood, Dunn-Edwards EZ-Premium EZPR00**,** MPI #6.
   b. Intermediate Coat: Latex, exterior, matching topcoat.
   c. Topcoat: Latex, exterior flat, Dunn-Edwards Acri-Hues ACHS10 100% acrylic, (Gloss Level 1)**,** MPI #10, 16.
   d. Topcoat: Latex, exterior velvet, Dunn-Edwards Spartashield SSHL20 100% acrylic, (Gloss Level 2), MPI #214.
   e. Topcoat: Latex, exterior eggshell, Dunn-Edwards Spartashield SSHL30 100% acrylic, (Gloss Level 3), MPI #161.
   f. Topcoat: Latex, exterior, low sheen, Dunn-Edwards Spartashield SSHL40 100% acrylic, (Gloss Level 4), MPI #15.

g. Topcoat: Latex, exterior semi-gloss, Dunn-Edwards Spartashield SSHL50, (Gloss Level 5)**,** MPI #11, 163.
h. Topcoat: Latex, exterior gloss, Dunn-Edwards Spartashield SSHL60 100% acrylic, (Gloss Level 6)**,** MPI #119, 164.

2. Water-Based Premium Architectural Coating System:
   a. Prime Coat: 100% acrylic for exterior wood, Dunn-Edwards EZ-Premium EZPR00, MPI#6.
   b. Intermediate Coat: Latex, exterior, matching topcoat.
   c. Topcoat: Premium architectural coating, exterior flat, water based, Dunn-Edwards Spartashield SSHL10, 100% acrylic (Gloss Level 1), MPI #10.
   d. Topcoat: Topcoat: Latex, exterior velvet, Dunn-Edwards Spartashield SSHL20 100% acrylic, (Gloss Level 2), MPI #214.
   e. Topcoat: Latex exterior eggshell, Dunn-Edwards Spartashield SSHL30 100% acrylic, (Gloss Level 3), MPI #161
   f. Topcoat: Latex, exterior, low sheen, Dunn-Edwards Spartashield SSHL40 100% acrylic (Gloss Level 4), MPI #15.

   g. Topcoat: Latex, exterior semi-gloss, Dunn-Edwards Spartashield SSHL50 100% acrylic, (Gloss Level 5), MPI #11, 163.
   h. Topcoat: Latex, exterior gloss, Dunn-Edwards Spartashield SSHL60 100% acrylic, (Gloss Level 6), MPI #119, 164.

3. High Performance Zero VOC Architectural Coating: Acrylic urethane System, Single Component:
   a. Prime Coat: Multi Surface Primer: Dunn-Edwards Ultrashield ULMS00
   b. Intermediate Coat: High Performance Architectural Coating, exterior, matching topcoat.
   c. Topcoat: Zero VOC Acrylic Urethane Low Sheen, Dunn-Edwards Ultrashield ULSH40, (Gloss Level 4).
   d. Topcoat: Zero VOC Acrylic Urethane Semi-Gloss, Dunn-Edwards Ultrashield ULDM50, (Gloss Level 5)
   e. Topcoat: Zero VOC Acrylic Urethane Gloss, Dunn-Edwards Ultrashield ULSH60, (Gloss Level 6).

J. Wood Substrates, Traffic Surfaces: Including [**lumber decking**] [**stairs**] <**Insert description**>.

K. Portland Cement Plaster Substrates:

1. Latex over Alkali-Resistant Primer System:
   a. Prime Coat: Alkali resistant primer/sealer, Dunn-Edwards Eff-Stop Select ESSL00, MPI #3.
   b. Intermediate Coat: Latex, exterior, matching topcoat.
   c. Topcoat: Latex, exterior flat, Dunn-Edwards Acri-Hues ACHS10 100% acrylic, (Gloss Level 1)**,** MPI #10, 16.
   d. Topcoat: Latex, exterior, velvet, Dunn-Edwards Spartashield SSHL20 100% acrylic, (Gloss Level 2), MPI #214.
   e. Topcoat: Latex, exterior, eggshell, Dunn-Edwards Spartashield SSHL30 100% acrylic, (Gloss Level 3), MPI #161.
   f. Topcoat: Latex, exterior, low sheen, Dunn-Edwards Spartashield SSHL40 100% acrylic, (Gloss Level 4), MPI #15.
   g. Topcoat: Latex, exterior semi-gloss, Dunn-Edwards Spartashield SSHL50 100%

acrylic, (Gloss Level 5)**,** MPI #11, 163.

h. Topcoat: Latex, exterior gloss, Dunn-Edwards Spartashield SSHL60 100% acrylic, (Gloss Level 6)**,** MPI #119, 164.

2. Water-Based Premium Architectural Coating System:

a. Prime Coat: Alkali resistant primer/sealer, Dunn-Edwards Eff-Stop Select ESSL00, MPI #3.
b. Intermediate Coat: Latex, exterior, matching topcoat.
c. Topcoat: Premium architectural coating, exterior flat, water based, Dunn-Edwards Spartashield SSHL10, 100% acrylic (Gloss Level 1), MPI #10.
d. Topcoat: Latex, exterior velvet, Dunn-Edwards Spartashield SSHL20 100% acrylic, (Gloss Level 2), MPI #214.
e. Topcoat: Latex exterior eggshell, Dunn-Edwards Spartashield SSHL30 100% acrylic, (Gloss Level 3), MPI #161
f. Topcoat: Latex, exterior, low sheen, Dunn-Edwards Spartashield SSHL40 100% acrylic (Gloss Level 4), MPI #15.

g. Topcoat: Latex, exterior semi-gloss, Dunn-Edwards Spartashield SSHL50 100% acrylic, (Gloss Level 5), MPI #11, 163.
h. Topcoat: Latex, exterior gloss, Dunn-Edwards Spartashield SSHL60 100% acrylic, (Gloss Level 6), MPI #119, 164.

L. Exterior Gypsum Board Substrates:

1. Latex System:

a. Prime Coat: Alkali resistant primer/sealer, Dunn-Edwards Eff-Stop Select ESSL00, MPI #3.
b. Prime Coat: Primer, bonding, water based, Dunn-Edwards Ultra-Grip Premium UGPR00, MPI #17.
c. Intermediate Coat: Latex, exterior, matching topcoat.
d. Topcoat: Latex, exterior flat, Dunn-Edwards Acri-Hues ACHS10 100% acrylic, (Gloss Level 1)**,** MPI #10, 16.
e. Topcoat: Latex, exterior, velvet, Dunn-Edwards Spartashield SSHL20 100% acrylic, (Gloss Level 2), MPI #214.
f. Topcoat: Latex, exterior, eggshell, Dunn-Edwards Spartashield SSHL30 100% acrylic, (Gloss Level 3), MPI #161.
g. Topcoat: Latex, exterior, low sheen, Dunn-Edwards Spartashield SSHL40 100% acrylic, (Gloss Level 4), MPI #15.
h. Topcoat: Latex, exterior semi-gloss, Dunn-Edwards Spartashield SSHL50 100% acrylic, (Gloss Level 5)**,** MPI #11, 163.
i. Topcoat: Latex, exterior gloss, Dunn-Edwards Spartashield SSHL60 100% acrylic, (Gloss Level 6)**,** MPI #119, 164.

2. Water-Based Premium Architectural Coating System:

a. Prime Coat: Alkali resistant primer/sealer, Dunn-Edwards Eff-Stop Select ESSL00, MPI #3.
b. Prime Coat: Primer, bonding, water based, Dunn-Edwards Ultra-Grip Premium UGPR00, MPI #17.
c. Intermediate Coat: Latex, exterior, matching topcoat.

d. Topcoat: Premium architectural coating, exterior flat, water based, Dunn-Edwards Spartashield SSHL10, 100% acrylic (Gloss Level 1), MPI #10.
e. Topcoat: Latex, exterior velvet, Dunn-Edwards Spartashield SSHL20 100% acrylic, (Gloss Level 2), MPI #214.
f. Topcoat: Latex exterior eggshell, Dunn-Edwards Spartashield SSHL30 100% acrylic, (Gloss Level 3), MPI #161
g. Topcoat: Latex, exterior, low sheen, Dunn-Edwards Spartashield SSHL40 100% acrylic (Gloss Level 4), MPI #15.
h. Topcoat: Latex, exterior semi-gloss, Dunn-Edwards Spartashield SSHL50 100% acrylic, (Gloss Level 5), MPI #11, 163.
i. Topcoat: Latex, exterior gloss, Dunn-Edwards Spartashield SSHL60 100% acrylic, (Gloss Level 6), MPI #119, 164.

3. High Performance Zero VOC Architectural Coating: Acrylic urethane System, Single Component:
   a. Prime Coat: Multi-Surface Primer: Dunn-Edwards Ultrashield, ULMS00
   b. Intermediate Coat: High Performance Architectural Coating, exterior, matching topcoat.
   c. Topcoat: Zero VOC Acrylic Urethane Low Sheen, Dunn-Edwards Ultrashield ULSH40, (Gloss Level 4).
   d. Topcoat: Zero VOC Acrylic Urethane Semi-Gloss, Dunn-Edwards Ultrashield ULDM50, (Gloss Level 5)
   e. Topcoat: Zero VOC Acrylic Urethane Gloss, Dunn-Edwards Ultrashield ULSH60, (Gloss Level 6).

END OF SECTION 099113