

**SECTION 09 91 00  
PAINTING FINISHING**

**PART 1 - GENERAL**

**1.01 GENERAL REQUIREMENTS**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specifications Sections, apply to this Section.

**1.02 WORK INCLUDED**

- A. All labor, materials, equipment, and services necessary to complete painting and finishing as shown on the drawings and specified herein, including but not limited to, the following:
- B. Finish coat, all painted hollow metal, and primer coats where necessary.
- C. Incidental painting and touching up of exterior and interior surfaces as required to produce proper finish for painted surfaces, including touch up of factory finished items.
- D. Repair of exterior and interior surfaces damaged during or patched during construction.
- E. Add Alt: Electrostatic painting of aluminum storefronts as shown on Drawings.

**1.03 RELATED WORK**

- A. Shop priming is required on some, but not all of the items scheduled to be field painted, refer to other Sections of work for complete description:
  - 1. Section 01 73 29 Cutting and Patching
  - 2. Section 04 20 00 Concrete Masonry Units
  - 3. Section 05 50 00 Metal Fabrications
  - 4. Section 08 11 19 Stainless Steel Entrance Doors

**1.04 QUALITY ASSURANCE**

- A. Qualification of Painters: Use only qualified painters for the mixing and application of paint on exposed surfaces.
- B. Paint Coordination: Provide finish coats which are compatible with the prime paints used. Provide barrier coats over incompatible primers or remove and re-prime as required.
- C. All paints must conform to the Volatile Organic Compounds (VOC) standards of prevailing codes and ordinances and must be free of lead.

**1.05 SUBMITTALS**

- A. Materials List
  - 1. Before any paint materials are delivered to the job site, submit to NYCHA a complete list of all materials proposed to be furnished and installed under this portion of the work.
  - 2. Product data for each paint system specified, manufacturer's technical information, including label analysis and instructions for handling storage and application and thinning instructions, contents by volume for major pigment and vehicle constituents. Certification that product complies with regulations controlling VOC's.

**1.06 SAMPLES**

- A. Manufacturer's Color Charts. Accompanying the materials list, submit to the Architect copies of the full range of colors available in each of the proposed products.
- B. Samples of each of the selected colors and glosses painted onto 12" x 12" x 1/4" thick material; whenever possible, the material for Samples shall be the materials as that on which the coating will be applied in the work.
- C. Submit data indicating that paint meets Performance Standards specified herein.

**1.07 PRODUCT HANDLING**

- A. Deliver all paint materials to the job site in their original unopened containers with all labels intact and legible at time of use and the following information:

1. Product name and title of material.
2. Product description.
3. Manufacturer's stock # and date of Manufacture.
4. Contents by volume, for pigment and vehicle constituents.
5. Thinning instructions.
6. Applications instructions.
7. Color name and number.

#### **1.08 PROTECTION**

- A. Store only the approved materials at the job site, and store only in a suitable and designated area restricted to the storage of paint materials and related equipment.
- B. Use all means necessary to ensure the safe storage and use of paint materials and the prompt and safe disposal of waste.
- C. Use all means necessary to protect paint materials before, during and after application and to protect the installed work and materials of all other trades. Protect from freezing.
- D. Replacements: In the event of damage, immediately make all repairs and replacements necessary.

#### **1.09 EXTRA STOCK**

- A. Upon completion of this portion of the Work, deliver to the Owner an extra stock of paint equaling ten (10) percent of each color and gloss used in each coating material used, but not less than five (5) gallons, with all such extra stock tightly sealed in new, clearly unopened labeled containers.

#### **1.10 JOB CONDITIONS**

- A. Apply water-base paints only when the temperature of surfaces to be painted and the surrounding air temperatures are between 50 degrees Fahrenheit. and 90 degrees Fahrenheit., unless otherwise permitted by the paint manufacturer's printed instructions.
- B. Apply solvent-thinned paints only when the temperature of surfaces to be painted and the surrounding air temperatures are between 45 degrees Fahrenheit. and 95 degrees Fahrenheit., unless otherwise permitted by the paint manufacturer's printed instructions.
- C. Do not apply paint in snow, rain, fog or mist; or when the relative humidity exceeds eighty five (85) percent; or to damp or wet surfaces; unless otherwise permitted by the paint manufacturer's printed instructions, and with the approval of NYCHA.
- D. Painting may be continued during inclement weather only if the areas and surfaces to be painted are enclosed and heated within the temperature limits specified by the paint manufacturer during application and drying periods.

### **PART 2 - PRODUCTS**

#### **2.01 PAINT MANUFACTURERS**

- A. Provide best quality and grade painting products by Benjamin Moore, PPG, MAB, Glidden, Tnemec, Sherwin Williams, Pratt & Lambert or other approved equal. Comply with number of coats and required minimum mil thicknesses as specified herein.

#### **2.02 MATERIALS**

#### **2.03 PROVIDE UNDERCOAT PAINT PRODUCED BY THE SAME MANUFACTURER AS THE FINISH COATS. USE ONLY THINNERS APPROVED BY THE PAINT MANUFACTURER, AND USE ONLY TO RECOMMENDED LIMITS.**

#### **2.04 COLORS AND GLOSSES: FINAL COAT COLOR SHALL BE AS SELECTED BY THE ARCHITECT. ALL FINAL COATS SHALL BE GLOSSY FINISH EXCEPT WHERE NOTED.**

- A. Driers, Spackling Compound, Patching Plaster, etc.: Best quality, of approved manufacture.
- B. Galvanizing Cleaner: Porter Prep No. 99, applied per manufacturer's instructions.

- C. Galvanizing Primer, if required: Acrylic Zinc Dust Primer applied per manufacturer's instructions.

## **2.05 GENERAL STANDARDS**

### **2.06 SURFACES SHALL BE PAINTED OR FINISHED AS SPECIFIED BELOW. THE ARCHITECT RESERVES THE RIGHT TO CHANGE THE FINISHES WITHIN THE RANGE OF FLAT, SEMI-GLOSS OR GLOSS.**

- A. Extent of painting shall be as noted on Drawings or as determined by Architect. In general, entire wall shall be painted, except where noted.
- B. All paints and similar materials must be delivered in the original containers with the seals unbroken and label intact and with the manufacturer's instructions printed thereon.
- C. All painting materials shall bear identifying labels on the containers with the manufacturer's instructions printed thereon.
- D. Paint shall not be badly settled, caked or thickened in the container, shall be readily dispersed with a paddle to a smooth consistency and shall have excellent application.
- E. Colors are as selected or approved by the Architect. Paint shall arrive on the job color-mixed, except where noted or approved.
- F. All thinning and tinting materials shall be as recommended by the manufacturer for the particular material thinned or tinted.
- G. It shall be the responsibility of the Contractor to see that all mixed colors match the color selection made by NYCHA prior to application of the coating. Any deviation from approved colors will have to be re-done, at no additional expense.

## **2.07 PERFORMANCE STANDARDS**

- A. Paint used must conform to the following minimum performance standards:
- B. Exterior Acrylic Enamel: To be used on doors, frames, moldings, glazing stops, etc., in both exterior and interior applications, except where noted.
  - 1. Fire Retardance: Fire Retardant Class "A" on non-combustible surfaces: ASTM E84 Tunnel test, Flame Spread: 0. Smoke Developed: 20.
  - 2. Adhesion: Cross Cut Tape Test: ASTM 3359. Results: 100% retention; passes 5B.
  - 3. Flexibility: ASTM D-1737. Passes 1/4" mandrel when bent 180 deg.
  - 4. Exterior Exposure: Panels exposed at 45 deg. south at Largo, Florida for 12-month retained 65% of original gloss.
  - 5. Applicable Standards: Exceeds all performance requirements of TT-E-489G, Type 1, Enamel, Alkyd, Gloss.
  - 6. Exterior Exposure: Exposed facing both north and south in northeast exposure for 6 years with excellent color retention and mildew resistance.
  - 7. Applicable Standards: Exceeds performance standards of Federal Specification TT-P-19C Exterior, Acrylic Emulsion Paint.
  - 8. Flexibility: Passes Federal Specification TT-E-509B, Federal Test Method Standard 141a, Method 6221.
  - 9. Scrubability Factor: Over 1000 cycles in accordance with ASTM D2486-79.
  - 10. Wet To Dry Opacity: The difference in hiding between the wet paint applied and the final dried film is not greater than .02 opacity units in accordance with Federal Specification TT-P-29J, paragraph 3.3.3 Type II.
  - 11. Wall Uniformity: Shall be free of lap marks when applied to large smooth surfaces.
- C. Interior Acrylic Enamel: For use on all non-door and non-storefront framing interior metal items to be painted.
  - 1. Fire Retardance: Fire Retardant Class "A" on non-combustible surfaces: ASTM E84 Tunnel Test. Flame Spread: 0. Fuel Contributed: 0. Smoke Developed: 15.
  - 2. Flexibility: Passes Federal Specification TT-E-509B, Federal Test Method Standard 141a, Method 6221.

3. Scrubability Factor: Over 1000 cycles in accordance with ASTM D2486-79.
4. Wet To Dry Opacity: The difference in hiding between the wet paint applied and the final dried film is not greater than .02 opacity units in accordance with Federal Specification TT-P-29J, paragraph 3.3.3 Type II.
5. Wall Uniformity: Shall be free of lap marks when applied to large smooth surfaces.

## **2.08 SCHEDULE OF FINISHES**

- A. Exterior Non-Galvanized Ferrous Metal
  1. First Coat: Metal Primer or Touch-Up Shop Primer
  2. Second Coat: Acrylic Enamel Gloss Paint
  3. Third Coat: Acrylic Enamel Gloss Paint
- B. Exterior Galvanized Ferrous Metal
  1. First Coat: Galvanized Metal Primer
  2. Second Coat: Acrylic Enamel Gloss Paint
  3. Third Coat: Acrylic Enamel Gloss Paint
- C. Interior Ferrous Metal and Primed Non-Ferrous Metal
  1. First Coat: Metal Primer, or Touch-Up Shop Primer
  2. Second Coat Acrylic Gloss Paint; type as selected by the Architect
  3. Third Coat: Same as Second Coat
- D. Surfaces Not Specifically Specified: primer and two (2) top coats, suitable types as approved by Architect.

## **PART 3 - EXECUTION**

### **3.01 GENERAL WORKMANSHIP REQUIREMENTS**

- A. Examine the areas and conditions where painting and finishing are to be applied and notify the Architect of conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions are corrected to permit proper installation of the work.
- B. Only skilled mechanics shall be employed. Application may be by brush or roller. Spray application only upon acceptance from NYCHA in writing.

### **3.02 THE CONTRACTOR SHALL FURNISH NYCHA A SCHEDULE SHOWING WHEN HE/SHE EXPECTS TO HAVE COMPLETED THE RESPECTIVE COATS OF PAINT FOR THE VARIOUS AREAS AND SURFACES. THIS SCHEDULE SHALL BE KEPT CURRENT AS THE JOB PROGRESSES.**

- A. The Contractor shall protect his/her work at all times, and shall protect all adjacent work and materials by suitable covering or other method during progress of his/her work. Upon completion of the work, the Contractor shall remove all paint and varnish spots from floors, glass and other surfaces. The Contractor shall remove from the premises all rubbish and accumulated materials of whatever nature not caused by others and shall leave the work in clean, orderly and acceptable condition.
- B. Remove and protect hardware, accessories, device plates, lighting fixtures, and factory finished work, and similar items, or provide ample in place protection. Upon completion of each space, carefully replace all removed items by workers skilled in the trades involved.
- C. All materials shall be applied under adequate illumination, evenly spread and flowed on smoothly to avoid runs, sags, holidays, brush marks, air bubbles and excessive roller stipple. Only perfectly smooth final coats will be accepted.
- D. Coverage and hide shall be complete. When color, stain, dirt or undercoats show through final coat of paint, the surface shall be covered by additional coats until the paint film is of uniform finish, color, appearance and coverage, at no additional cost to NYCHA.
- E. All coats shall be dry to manufacturer's recommendations before applying succeeding coats.

- F. All suction spots or “hot spots” in cement after the application of the first coat shall be touched up before applying the second coat.
- G. Where spray painting is permitted, the Contractor shall finish one hundred (100) square feet by spraying a sample of the finish upon the request of NYCHA prior to completing the area.

### **3.03 PREPARATION OF SURFACES**

- A. The Contractor shall be held wholly responsible for the finished appearance and satisfactory completion of painting work. Properly prepare all surfaces to receive paint, which includes cleaning, sanding, and touching-up of all prime coats applied under other Sections of the work. Broom clean and vacuum all spaces before painting is started. All surfaces to be painted or finished shall be perfectly dry, clean and smooth.
- B. Perform all preparation and cleaning procedures in strict accordance with the paint manufacturer’s instructions and as herein specified, for each particular substrate.
- C. Clean surfaces to be painted before applying paint or surface treatments. Remove oil and grease with clean cloths and cleaning solvents prior to mechanical cleaning. Program the cleaning and painting so that dust and other contaminants from the cleaning process will not fall in wet, newly painted surfaces.

### **METAL SURFACES**

- A. Bare Metal: Thoroughly clean off all foreign matter such as grease, rust, scale and dirt before priming coat is applied. Clean surfaces, where solder flux has been used, with benzene. Clean surfaces by flushing with mineral spirits. For aluminum surfaces, wipe down with an oil free solvent prior to application of any pre-treatment.
- B. Shop Primed Metal: Clean off foreign matter as specified for “Bare Metal”. Prime bare, rusted, abraded and marred surfaces with approved primer after proper cleaning of surfaces. Sandpaper all rough surfaces smooth.
- C. Galvanized Metal: Scarify surface with 60 to 100 mesh sandpaper. Clean with galvanize cleaner, then thoroughly wash with clear water.
- D. Metal Filler: Fill dents, cracks, hollow places, open joints and other irregularities in metal work to be painted with an approved metal filler suitable for the purpose and meeting the requirements of the related Section of work; after setting, sand to a smooth, hard finish, flush with adjoining surface.

### **4.02 TESTING FOR MOISTURE CONTENT: CONTRACTOR SHALL TEST ALL NON-METALLIC SURFACES TO BE PAINTED FOR MOISTURE CONTENT USING A RELIABLE ELECTRONIC MOISTURE METER. CONTRACTOR SHALL ALSO TEST LATEX TYPE FILLERS FOR MOISTURE CONTENT BEFORE APPLICATION OF TOPCOATS OF PAINT. DO NOT APPLY ANY PAINT OR SEALER TO ANY SURFACE OR TO LATEX TYPE FILLER WHERE THE MOISTURE CONTENT EXCEEDS SEVEN (7) PERCENT AS MEASURED BY THE ELECTRONIC MOISTURE METER.**

### **4.03 TOUCH-UP: PRIME PAINT ALL PATCHED PORTIONS IN ADDITION TO ALL OTHER SPECIFIED COATS.**

### **4.04 MATERIALS PREPARATION**

- A. Mix and prepare painting materials in strict accordance with the manufacturer’s directions.
- B. Store materials not in actual use in tightly covered and sealed containers. Maintain containers used in storage, mixing, and application of paint in a clean condition, free of foreign materials and residue.
- C. Stir all materials before application to produce a mixture of uniform density, and as required during the application of the materials. Do not stir any film which may form on the surface into the material. Remove the film and, if necessary, strain the material before using.

- D. Tint each undercoat a lighter shade to facilitate identification of each coat where multiple coats of the same material are to be applied. Tint undercoats to match the color of the finish coat, but provide sufficient difference in shade to distinguish each separate coat.

#### **4.05 APPLICATION**

- A. General
- B. Apply paint in accordance with manufacturer's directions. Use brushes best suited for the type of material being applied. Use rollers of carpet, velvet back, or high pile sheep's wool as recommended by the paint manufacturer for material and texture required.
- C. The number of coats and paint film thickness required is the same regardless of the application method. Do not apply succeeding coats until the previous coat has completely dried. Sand between each enamel or varnish coat application with fine sandpaper, or rub surfaces with pumice stone where required to produce an even, smooth surface in accordance with the coating manufacturer's directions.
- D. Apply additional coats when undercoats, stains, or other conditions show through the final coat of paint, until the paint film is of uniform finish, color and appearance. Give special attention to insure that all surfaces, including edges, corners, crevices, welds, and exposed fasteners receive a film thickness equivalent to that of flat surfaces
- E. Paint Thickness: The Contractor shall follow the following minimum dry film (MDF) thickness requirements in the application of two (2) coat and three (3) coat work. The MDF for three (3) coat work shall not be less than 5.0 mils total. The MDF for two (2) coat work shall not be less than 3.0 mils total. The MDF for each coat shall not be less than 1.5 mils. The MDF specified is predicated on average surface roughness.

#### **4.06 SCHEDULING PAINTING**

- A. Apply the first coat material to surfaces that have been cleaned, pre-treated or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.
- B. Allow sufficient time between successive coatings to permit proper drying. Do not re-coat until paint has dried to where it feels firm, does not deform or feel sticky under moderate thumb pressure, and the application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.

#### **4.07 PRIME COATS: RE-COAT PRIMED AND SEALED WALLS AND CEILINGS WHERE THERE IS EVIDENCE OF SUCTION SPOTS OR UNSEALED AREAS IN FIRST COAT, TO ASSURE A FINISH COAT WITH NO BURN-THROUGH OR OTHER DEFECTS DUE TO INSUFFICIENT SEALING.**

- A. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance and coverage.
- B. "Touching-Up" of Factory Finishes: The Contractor shall use the factory finished material manufacturer's recommended paint materials to repair abraded, chipped, or otherwise defective surfaces which are damaged during the course of construction.

#### **4.08 PROTECTION**

- A. Protect work of other trades and all adjacent surfaces, whether to be painted or not, against damage by the painting and finishing work. Leave all such work undamaged. Correct any damages by cleaning, repairing or replacing, and repainting, as acceptable to NYCHA.
- B. Provide "Wet Paint" signs as required to protect newly painted finishes. Remove temporary protective wrappings provided by others for protection of their work after completion of painting operations.

#### **4.09 CLEAN UP**

- A. During the progress of the work, remove from the site all discarded paint materials, rubbish, cans and rags at the end of each workday.

- B. Upon completion of painting work, clean window glass and other paint spattered surfaces.  
Remove spattered paint by proper methods of washing and scraping, using care not to scratch or otherwise damage finished surfaces.
- C. At the completion of work of other trades, touch-up and restore all damaged or defaced painted surfaces.

**END OF SECTION 09 91 00**