SECTION 09 90 00

PAINTING

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Surface preparation and field painting of the following:
   1. Exposed exterior items and surfaces.
      a. Exposed interior items and surfaces.
      b. Surface preparation, priming and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.
      c. Photoluminescent exit path marking.
   2. Paint exposed surfaces, except where the paint schedules indicate that a surface or material is not to be painted or is to remain natural. If the paint schedules do not specifically mention an item or a surface, paint the item or surface as directed by the Architect. If the schedules do not indicate color or finish, the Architect will select from standard colors and finishes available.
      a. Painting includes field painting of exposed bare and covered pipes and ducts (including color coding), hangers, exposed steel and iron work, and primed metal surfaces of mechanical and electrical equipment.
   3. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels as described in Article 2.05A.
   4. When removing or disturbing existing paint on surfaces that have not been tested by the Authority for lead content, assume that the existing paint contains lead. Take necessary precautions to protect workers. Provide measures to separate paint removal work areas from occupied areas, and clean-up and disposal as specified in Specifications Section S01900 - Existing Premises Work.

1.02 REFERENCE STANDARDS

A. References and industry standards listed in this Section are applicable to the Work. Unless more restrictive criteria or differing requirements are explicitly stated in the Specifications, or mandated by governing codes or regulations, the recommendations, suggestions, and requirements described in the referenced standards shall be deemed mandatory and applicable to the Work.

B. Paint materials shall meet or exceed the requirements of the following standards:

C. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications; 2014.

D. N.Y.S. Department of Environmental Conservation

E. U.S. Department of Labor

F. Occupational Safety and Health Administration (OSHA)

G. Steel Structures Painting Council (SSPC)

H. Paint materials shall meet or exceed the requirements of the following standards:

I. Federal Specifications
   1. Primers, Sealers, Undercoats
      a. Metal Primer for Galvanized surfaces: FS TT-P-001984 / FS TT-P-650-C
      b. Metal Primer Aluminum or Steel surfaces: FS TT-P-57B
      c. Primer Sealer, Latex Base: FS TT-P-650C
      d. Alkyd Primer (Corrosion Inhibiting) Lead and Chromate Free, VOC Complying: FS TT-P664C
      e. Acrylic Primer: TT-P-650-C
      f. Wood Primer, Exterior: FS TT-P-25

2. Finish Paints
    a. Exterior Alkyd Modified Paint; Gloss: FS TT-P-102E,Type II and Type III
    b. Ext. Acrylic Latex Paint; Flat: FS TT-P-19
    c. Gloss Acrylic Latex Enamel: FS TT-P-1511-B
    d. Flat Vinyl Acrylic Latex Interior: TT-P-29J
    e. Semi-Gloss Vinyl Acrylic Latex Enamel, Interior: TT-P-1511-B
    f. Alkyd Odorless Semi-Gloss Enamel: FS TT-E-529
    FS TT-E-509C for white and tints; Class A for deep colors.
    g. Aluminum Paint (Ready Mixed): FS TT-P-38D.
    h. Heat Resistant Semi-Gloss Enamel (400°F max. surface temperature): FS TT-E-496
    i. Asphalt Varnish: FS TT-V-51
    j. Smokestack Black Paint: FS TT-E-496
3. Transparent and Semi Transparent Finishing Systems
    a. Spar Varnish: FS TT-V-121, Water Resisting
    b. Spar Varnish: FS TT-V-119, Phenolic Resin
    c. Stain; Interior Oil Type: FS TT-S-711
    d. Polyurethane Coating (Satin Finish) FS TT-C-001951 Gloss Varnish
4. Floor Finishing Systems
    a. Rubber Base Paint: FS TT-P-91 For use over concrete and masonry
    b. Cement Floor Hardener - Magnesium Zinc and Fluosilicate type as specified in Section 03300 of this Specification.
    c. Urethane Floor Paint: FS TT-C-542, Type II
    d. Polyamide Epoxy Paint FS TT-C535B Type II
5. Lettering Enamel: Interior/Exterior full gloss enamel: FS TT-E-489
    a. Fire Retardant Paint: Latex Fire Retardant Paint: FS TT-P-26P Rated Class A by Underwriters Laboratories.
6. Miscellaneous Materials:
    a. Mineral Spirits (Petroleum Paint Thinner): FS TT-T-291
    b. Color Pigments: Pure, non-fading, finely ground pigments, at least 99 percent passing a 325 mesh sieve. Color pigments that are to be used on masonry, concrete and plaster shall be lime proof - FS-TT-P-381.
    c. Putty: Linseed-Oil type for Wood Sash Glazing -FS-TT-P-791B.
    d. Shellac: Two pound cut shellac, FS TT-S-300
    e. Paste Wood Filler: FS TT-F-336
    f. Plastic Wood Filler: FS TT-F-340C.
    g. Surface Sealer: Pigmented Oil for Plaster & Wallboard - FS-TT-S-179.
    h. Linseed Oil: (Boiled) FS A-A-371A
    i. Linseed Oil: aw) FS A-A-379A
    j. Lacquer (Brushing) Clear and Pigmented: FS-TT-L-26C.
    k. Lacquer, Rubbing, Clear: FS-TT-L-57C
    l. Lacquer, Spraying Clear and Pigmented for Interior and Exterior Use: FS-TT-L-58E.

J. Miscellaneous Standards and Requirements
    1. Turpentine: ASTM D13.

2. Cold Galvanizing Compound: Single component material conforming to ASTM A780 giving 96% pure zinc in the dried film.
3. Cleaning Solvents: Low toxicity; flash point in excess of 100oF.
4. Spackling Compound: ASTM C475.
5. Polyester Filler: Polyester resin base autobody filler standard weight or finishing grade required by conditions; Marson's "White Lightning" and "Topcoat."
6. Photoluminescent Paint: Comply with requirements of the NYC Building Code for exit path markings, including but not limited to testing for brightness, washability, toxicity, radioactivity, and flame spread.
7. Paint system shall be certified and listed by an Approved Agency in accordance with NYC Dept. of Buildings rules, indicating that the materials as regulated by the NYC Building Code are acceptable for the intended use. Test methods shall be stated in the certification. Prior NYC MEA (Materials Equipment Acceptance) approvals are acceptable for materials conforming to current Building Code requirements.

1.03 DEFINITIONS

A. The term "Painting" as used in this Section, means the application of all coatings such as paint, primer, enamel, varnish, shellac, oil, etc. as listed in the Painting Schedules.

B. The term "Painting" also includes preparation of surfaces for such applications, and the clean-up as hereinafter specified.

C. The term "Walls" means all surfaces from floor, or top of base, or top of wainscot, to ceiling or hung ceiling.
   1. Include pilasters, breaks, jambs, reveals, returns, arches.
   2. Include hardboards, pegboards.
   3. Include free standing columns, low partitions.
   4. Include masonry, plaster or gypsum board interiors of wardrobes or closets, cupboards and other enclosed spaces.

D. The term "Ceilings" means the general overhead horizontal surfaces.
   1. Include cornices, arches, soffits, stair soffits.
   2. Include beam and girder haunches.
   3. Include primed metal cover and border strips.
   4. Include metal frame of ceiling lights and ceiling equipment.
   5. Include side faces of hung or furred ceiling.

E. Touching-up bare spots specified for previously primed or painted surfaces is in addition to the coats specified for the paint system.

F. Finishes:
   1. Flat refers to a lusterless or matte finish with a gloss range below 15 when measured at an 85-degree meter.
   2. Satin refers to low-sheen finish with a gloss range between 15 and 35 when measured at a 60-degree meter.
   3. Semigloss refers to medium-sheen finish with a gloss range between 30 and 65 when measured at a 60-degree meter.
   4. Full gloss refers to high-sheen finish with a gloss range more than 65 when measured at a 60-degree meter.

G. Concealed: The term “concealed” refers to surfaces, piping, ducts or conduit which cannot be accessed without moving a building element such as within a chase, wall or ceiling.
   1. Concealed surfaces include walls or ceilings in the following generally inaccessible spaces:
      a. Furred areas.
      b. Ceiling plenums.
      c. Duct shafts.
      d. Elevator shafts.

H. The term “exposed” refers to any item which is not concealed.
   1. The term “exposed to public view” means situated so that it can be seen from eye level from a public location. A public location is that which is accessible to persons not responsible for operation or maintenance of the building.

1.04 SUBMITTALS

A. Product Data
   1. Provide manufacturers' product literature for all materials specified and material manufacturer's printed directions and recommendations for environmental conditions, surface preparation, priming, mixing, reduction, spreading rate, application, storage and VOC content, as applicable for each of the materials specified.

B. Samples
   1. Initial Selection
      Submit manufacturer's color charts for each type of finish for approval by the Project Architect. Verify colors specified with manufacturers' color charts for availability and notify the Project Architect if any discrepancies should occur.
   2. Verification prior to installation
      a. Contractor shall furnish color chips for surfaces to be painted.
      b. Submit two samples of each color and finish selected on 12" x 12" hardboard.
      c. Two samples of finish on concrete masonry and metal surfaces.
   3. Submit samples of stained and varnished wood in triplicate for approval. Samples shall be 4" x 8" samples of the species of wood specified, stained and varnished as required and clearly labeled with type of coating, number of coats applied, etc.
   4. All samples shall be labeled; and include the following information:
      a. Manufacturer's name
      b. Type of paint/stain/hardener
      c. Manufacturer's stock number
      d. Color: name and number
      e. Federal Specification number, as specified
      f. Federal regulations for amount of lead in paint.
      g. VOC content

C. Quality Assurance
   1. Certification that materials for each system are obtained from a single manufacturer.
   2. Certification that Work shall be performed by personnel with a minimum of three years experience who meet the qualifications set forth in OSHA, 29 CFR 1926.62 (Lead In Construction Standard).
   3. Certification that material meets or exceeds the performance requirements of Federal Specifications.
   4. Certification that materials comply with N.Y.C. and N.Y.S. regulations for Volatile Organic Compounds.
   5. For photoluminescent paint system, submit NYC MEA Acceptance Reports or certification of required test results by an Approved Agency.

D. Testing
   1. Toxicity Characteristic Leaching Procedure (TCLP) testing per Article in Part 3 titled “Disposal of Painted Waste and Debris from Existing Buildings”.

E. Guarantee
   1. Provide Guarantee per Article 1.08.

F. Low Emitting Materials Compliance Submittals:
   1. Provide documentation for each coating to be used on the building interior indicating that the coatings comply with low V.O.C. requirements as stated in Specification Section G01600.

1.05 QUALITY ASSURANCE

A. General
   1. All painting materials shall arrive at the job ready-mixed.
   2. Varnish containers shall not exceed 5 gallon capacity.
   3. Remove all rejected materials from the premises immediately.
   4. All thinning and tinting materials shall be as recommended by the manufacturer. Generally, all paints shall not require additional thinning.
   5. Verify that the specified shop prime paint for each applicable item in this Project is compatible with the total coating system, prior to application.
   6. Materials selected for each system type shall be products of a single manufacturer.

B. Qualifications
   1. Work of this Section shall be performed by personnel with a minimum of three years experience in performing this type of Work.
   2. The Contractor shall ensure that all employees meet the qualifications set forth in OSHA, 29 CFR 1926.62 (Lead In Construction Standard).

C. Source Limitations: Obtain block fillers, primers, and undercoat materials for each coating system from the same manufacturer as the finish coats.

D. Regulatory Requirements
   1. N.Y.C. Building Code, latest edition
   2. N.Y.S. Department of Environmental Conservation -Part 205 on "Architectural Surface Coatings" - for (VOC) Volatile Organic Compounds.
   3. Steel Structures Painting Council (SSPC).
   4. U.S. Department of Labor, Occupational Safety and Health Administration, Construction Industry Standards (29 CFR 1926/1910) Revised 10/1/79, Washington, D.C.
   5. Occupational Safety and Health Administration (OSHA) 29 CFR 1926.62 (Lead In Construction Standard).
   6. New York State Department of Environmental Conservation regulations, 6 NYCRR part 364.
   7. New York City Department of Environmental Protection Waste water disposal permitting requirements.

E. Certifications
   1. Federal Specifications: When materials are specified to comply with Federal Specifications, products will be accepted which meet or exceed the performance requirements of such Federal Specifications and comply with all regulations currently in effect.
      a. Indicate that material complies with Federal Specifications by including the Federal Specifications number on the container label or on the product literature, or submit a statement with the Product Data stating that material meets or exceeds the performance requirements of the Federal Specifications.
      b. Photoluminescent paint is required to listed by MEA, OTCR, or have certification of required test results by an Approved Agency.

F. Field Samples
   1. Provide samples of each color and finish, under natural lighting conditions, in a location where each finish is to be applied.
   2. Authority will request review of first completed room, space or item of each color scheme required by the Project Architect for color, texture and workmanship.
   3. First acceptable room, space or item will be used as project standard for each color scheme, or finish.
   4. Primer coat is to be inspected and approved in all locations before any subsequent finish coats are applied.
   5. Provide complete paint system on wall sample specified in Section 09260 - Gypsum Board Assemblies. Wall field sample shall be a corridor wall at least 30 feet long or a

location of equal or greater size as selected by the Authority's representative. Provide lighting at the time of inspection, equivalent to the lighting to be in place upon project completion. The sample will be inspected by the Architect for proper finish. Inspections will occur before and after painting the sample, with the final evaluation occurring after painting.

6. In existing building locations; repair of existing base surface is to be approved prior to commencement of painting.

1.06 DELIVERY, STORAGE, AND HANDLING

A. Delivery
   1. Deliver materials to the site in original, unopened containers bearing manufacturers name and label containing the following information:
      a. Product name or title of material
      b. Manufacturer's stock number, batch number, VOC content in grams per liter and date of manufacture.
      c. Manufacturer's name
      d. Federal Specification number, if applicable.
      e. Federal regulations for amount of lead in paint (less the 0.06% lead in non-volatile ingredients)
      f. Contents by volume for major pigment and vehicle constitutions
      g. Thinning instructions
      h. Application instructions
      i. Color name and number

B. Storage
   1. Authority's Representative will designate space on premises for storage of materials. Contractor shall restrict storage in this area to paint materials and related equipment, and provide the following:
      a. Provide one (1) approved chemical dry fire extinguisher equal to 20 lb. CO_2 rating in all assigned rooms or locations where painting materials are stored. Fire extinguisher shall bear the label of the National Board of Fire Underwriters and tag of most recent inspection.
      b. Provide three (3) standard size red fire pails with clean sand in above locations. At the completion of project, fire extinguishers and pails shall become property of Contractor.
   2. Maintain storage area in clean condition, store materials not in use in tightly covered containers. Remove oily rags, waste and empty containers from site each night.
   3. Provide Authority's Representative with one key for each space if spaces are to be kept locked when not in use.
   4. Protect all materials from freezing.

1.07 FIELD CONDITIONS

A. Environmental Requirements
   1. Comply with manufacturer's recommendations as to environmental conditions under which coatings and coating systems can be applied.
   2. Do not apply finish in areas where dust is being generated or will be generated while the material is drying.
   3. Provide paint and coating products to comply with applicable environmental regulations, VOC requirements and local authorities.
   4. In all areas, spaces and rooms being painted, the Contractor shall ensure that there is adequate ventilation to ensure proper paint drying, along with minimizing paint odors. See Section S01900 also for requirements regarding fumes, ventilation and Material Safety Data Sheets.
   5. The Contractor shall ensure that all requirements of OSHA 29 CFR 1926.62 (Lead in Construction Standard) are adhered to during the project. In addition, the Contractor shall

ensure that proper work area protection and clean-up procedures (as described in this Section) are strictly adhered to during all phases on the project.

1.08 GUARANTEES

A. Adherence of workmanship and materials to Specifications requirements shall be maintained for the one year Contract guarantee period. These requirements shall include the following:
   1. There shall be no evidence of blistering, peeling, crazing, alligatoring, streaking, staining, or chalking.
   2. Dirt shall be removed without blemishing the finish by washing with mild soap and water.
   3. Colors of surfaces shall remain free from serious fading; the variation, if any, shall be uniform.

B. Correct all defects, appearing within the guarantee period, by removal of the defective work and replacement as directed.

C. All corrective measures shall be the Contractor's responsibility, and shall be made at no extra cost to the Authority. The requirements set forth in Part 3 of these Specifications shall be strictly adhered to.

PART 2 PRODUCTS

2.01 MANUFACTURERS

A. Subject to compliance with specified requirements, provide "First Line" or "Top Quality" products of one of the following manufacturers:
   1. 1. Benjamin Moore and Co.
   2. 2. Devoe and Reynolds Co.
   3. 3. Glidden Coatings and Resins.
   4. 4. PPG Industries, Pittsburgh Paints Inc.
   5. 5. Pratt and Lambert
   6. 6. The Sherwin-Williams Co.
   7. 7. Tnemec Company, Inc.
   8. 8. MAB Paints
   9. Carboline
   10. Mercury Paint Corp.

B. Photoluminescent Paint Systems
   1. Defense Holdings Inc., Manassas Park, VA. AfterGlo NYC-MEA Photoluminescent Paint, and White Base Coat Paint.
   2. Co-leash Co.Inc., Tampa, FL. Kryptaglow MEA Group System: MEA Latex Glow Paint #1300A, and MEA White Base Coat #1171, and MEA Clear Top Coat #1102.

2.02 PAINTS AND COATINGS - GENERAL

A. Provide products which meet all N.Y.S. Part 205-VOC requirements for applications outlined herein and comply with low V.O.C. requirements as stated in Specification Section G01600.

B. Provide products which meet all Federal regulations for amount of lead in paint (less than 0.06% lead in non-volatile ingredients).

C. Provide best quality grade of various types of coatings as regularly manufactured by the paint materials manufacturers. Materials not displaying manufacturers' identification as a standard, best-grade product will not be acceptable.

D. Use only thinners approved by paint manufacturers for applications intended and use only within recommended limits.

2.03 COLORS

A. Selection
   1. Paint colors, surface treatments and finishes will be selected by the Project Architect.
   2. Color Schedule will be issued to the Contractor after award of the Contract.
      a. Final acceptance of colors will be from actual job applications.

B. Maximum Number of Colors and Tints

1. Number of colors selected by the Project Architect will not exceed those listed in Schedule below.
2. Tint each undercoat a slightly different shade than the succeeding coat to permit easy identification of the separate coats.
3. In general, Project Architect will vary the color scheme in various rooms, and all other locations so that numerous color schemes will be used throughout the building.
4. The number of paint color and tints which will be used in a project is given in the schedule below. All colors are to be "custom".

		Max. No. of Colors (Deep Tones)	Max. No. of Tints (Pastel or Mid Shades)
5.	Wall and Ceiling Colors	10	20
6.	Corridors and Bathrooms	0	10
7.	Trim Colors (doors, etc.)	10	10
8.	Exterior	5	-

2.04 PAINT SYSTEMS - EXTERIOR

A. New Ferrous Metal

Structural steel, all ferrous metals, and steel window trim.

1st Coat - Touch up with epoxy Polyamide Paint

2nd Coat - Polyamide Epoxy Paint

applied at the rate of -- 4.0 to 6.0 Mils DFT. SSPC-PS Guide 13.01

3rd Coat (Top Coat) - Acrylic Aliphatic Polyurethane applied at rate of -- 1.5 to 2.0 Mils DFT. SSPC-PS Guide 17.00 Type 5.

B. Zinc Coated Metal Exposed to Public View

Provide for all galvanized surfaces (Zinc metallizing) exposed to public view (not just on the exposed face), except chain link fences:

1st Coat - Epoxy polyamide -- 4.0 Mils DFT

2nd Coat - Exterior Aliphatic polyurethane semi-gloss enamel -- 4.0 Mils DFT

C. Zinc Coated Metal

Exterior basketball backstops, scoreboard mounting posts, bleachers.

1st Coat - Epoxy polyamide -- 4.0 Mils DFT

2nd Coat - Exterior Aliphatic polyurethane semi-gloss enamel -- 4.0 Mils DFT

D. Existing steel members embedded in masonry or concrete.

1st Coat - Epoxy polyamide equal to Tnemec Series 135 Chembuild (capable of painting on an SSPC-SP3 surface prep. -- 7 to 9 Mils DFT

E. Existing steel members exposed to view or the elements.

1. Provide the epoxy coat system, except the first coat shall be an Epoxy polyamide equal to Tnemec Series 135 Chembuild (capable of painting on an SSPC-SP3 surface prep.

F. Epoxy Coat System

1st Coat (Primer) - Epoxy organic zinc rich Primer with 85% zinc applied at rate of -- 2.0 to 4.0 Mils DFT. SSPC - PS Guide 12.00 (Organic Zinc Rich).

2nd Coat - Polyamide Epoxy Paint applied at the rate of -- 4.0 to 6.0 Mils DFT. SSPC-PS Guide 13.01

3rd Coat (Top Coat) - Acrylic Aliphatic Polyurethane applied at rate of -- 1.5 to 2.0 Mils DFT. SSPC-PS Guide 17.00 Type 5.

For factory painted items, Manufacturer/Fabricator shall provide touch-up paint in sufficient amount for Project.

-- 5.0 Mils DFT

G. Aluminum - Mill Finished

1st Coat - Aluminum metal primer -- 3.0 Mils DFT

2nd and 3rd Coats - Enamel gloss paint-- 2.0 Mils DFT/each Coat

H. Copper, Exposed

Except roof and flashing.

1st Coat - 1 coat linseed oil rubbed dry.

I. Copper, exposed (where indicated to be painted)

1st Coat - Modified Alkyd Primer -- 2.0 Mils DFT

2nd and 3rd Coats - Exterior Alkyd Gloss Enamel -- 2.0 Mils DFT/each Coat

J. Cast Iron Chimney Cap

1st and 2nd Coats - Smokestack black paint-- 3.0 Mils DFT/each Coat

K. Exterior Woodwork

1st Coat - 1 coat Alkyd Wood Primer-- 2.2 Mils DFT

2nd and 3rd Coats - Alkyd Semi-gloss Exterior Paint -- 2.0 Mils DFT/each Coat

For factory painted items, Manufacturer/Fabricator shall provide touch-up paint in sufficient amount for Project.

2.05 LETTERING (INSCRIPTIONS)

A. Use "Normal Block" letters on all inscriptions.

B. Inscriptions shall have letter heights as indicated below.
   1. Gas Valve: On doors to gas control valve enclosures. (2"high)
   2. On all doors to stair enclosures, doors across corridors and doors between stairs and passages, there shall be painted on the lock stile on the side opposite the pull (both sides of double acting doors), and at the same height as the pull, a black panel full width of stile and 18" high on paneled doors and 5" wide on flush doors. The painting at top and bottom edge of plate shall be extended as is necessary in order to surround the hardware which otherwise will be partly in and partly out of painted area. These painted push plates shall terminate in straight edges.

2.06 PAINT SYSTEMS - INTERIOR

A. Concrete
   1. Semi-Gloss Finish:
      1st Coat - Vinyl Acrylic Latex Primer - Sealer (Flat) -- 1.0 Mils DFT
      2nd & 3rd Coats- Semi-Gloss Vinyl Acrylic Latex Enamel -- 1.3 Mils DFT each coat

B. Interior Concrete Flooring
   1. Semi-gloss Finish:
      1st Coat - Waterborne Epoxy-Amine -- 3.0 to 4.0 Mils DFT
      2nd Coat - Waterborne Epoxy-Amine -- 3.0 to 4.0 Mils DFT
      Equal to Tnemec Series-287 “Enviro-Pox”.

C. Concrete Masonry Units
   1. Semi-Gloss Finish:
      *1st Coat - Vinyl Acrylic Latex Block Filler, or 100% acrylic resin block filler/surfacer as recommended by manufacturer of succeeding coats.
      **1st Coat - Vinyl Acrylic Latex Primer-Sealer (Flat) -- 1.0 Mils DFT
      2nd & 3rd Coats - Semi-Gloss Vinyl Acrylic Latex Enamel-- 1.3 Mils DFT each coat
   2. Gloss Finish:
      *1st Coat - Vinyl Acrylic Latex Block Filler, or 100% acrylic resin block filler/surfacer as recommended by manufacturer of succeeding coats.
      **1st Coat - Vinyl Acrylic Latex Primer-Sealer (Flat) -- 1.0 Mils DFT
      2nd & 3rd Coats - Gloss Acrylic Latex Enamel -- 1.2 Mils DFT each coat
      *Apply filler coat on new and previously unpainted concrete masonry units at a rate to ensure complete coverage with all pores filled. If required, provide in two (2) or more coats.
      ** Spot prime previously painted concrete masonry unit surfaces as needed.

D. Gypsum Drywall and Plaster:
   1. Flat Finish (ceilings only):
      1st Coat - Vinyl Acrylic Latex Primer Sealer (Flat) -- 1.0 Mils DFT
      2nd & 3rd Coats -

Flat Vinyl Acrylic Latex	--	1.3 Mils DFT each coat

2. Semi-Gloss Finish:

1st Coat - Vinyl Acrylic Latex Primer Sealer	--	1.0 Mils DFT
2nd & 3rd Coats - Semi-Gloss Vinyl Acrylic Latex Enamel	--	1.3 Mils DFT each coat

3. Gloss Finish:

1st Coat - Vinyl Acrylic Latex Primer Sealer	--	1.0 Mils DFT
2nd & 3rd Coats - Gloss Acrylic Latex Enamel	--	1.2 Mils DFT each coat

4. For use over existing oil based paints

100% Acrylic Primer Tinted as required to approximate Finish color	- -	1.0 mils DFT
2nd & 3rd Coats - Semi-Gloss Vinyl Acrylic Latex Enamel each coat	--	1.3 Mils DFT
OR		
2nd & 3rd Coats - Gloss Acrylic Latex Enamel	--	1.2 Mils DFT each coat

E. Ferrous Metal:

1. Flat Finish: Metal ceilings, jamb and head sections, coat and hat rack, metal shelves.

*1st Coat - Alkyd Modified Acrylic Rust Preventive Latex Primer	--	1.6 Mils DFT
2nd & 3rd Coats Flat Vinyl Acrylic Latex	--	1.3 Mils DFT each coat

2. Semi-Gloss Finish: Convector enclosures, grilles, access doors, frames, Steel Doors and Frames, Trim, Partitions, Screens, Demountable Office Partitions, Office Railings, Wire mesh work.

*1st Coat - Alkyd Modified Acrylic Rust Preventive Latex Primer	--	1.6 Mils DFT
2nd & 3rd Coats - Semi-Gloss Vinyl Acrylic Latex Enamel	--	1.3 Mils DFT each coat

3. Gloss Finish:

*1st Coat - Alkyd Modified Acrylic Rust Preventive Latex Primer	--	1.6 Mils DFT
2nd & 3rd Coats - Gloss Acrylic Latex Enamel	--	1.2 Mils DFT each coat

* Provide full prime coat on new and previously unpainted surfaces. Spot prime previously painted surfaces, including shop-primed items, as needed. Items shop primed with modified alkyd equal to Tnemec 10-99 primer shall be touched up with same primer. See related specification sections.

F. Zinc-Coated Metal

1. Flat Finish:

1st Coat (New)		- Alkyd Modified Vinyl Acrylic
Latex Primer	--	1.2 Mils DFT
*1st Coat (Repaint) - Alkyd Modified Acrylic Rust		
Preventive Latex Primer		
1.6 Mils DFT		
2nd & 3rd Coats		
Flat Vinyl Acrylic Latex	--	1.3 Mils DFT each coat

2. Semi-Gloss Finish: Railings, wire-mesh work.

1st Coat (New) - Alkyd Modified Vinyl Acrylic		
Latex Primer	--	1.2 Mils DFT
*1st Coat (Repaint) - Alkyd Modified Acrylic Rust		
Preventive Latex Primer		
1.6 Mils DFT		
2nd & 3rd Coats		
Semi-Gloss Vinyl Acrylic Latex		
Enamel	--	1.3 Mils DFT each coat

3. Gloss Finish:

1st Coat (New) - Alkyd Modified Vinyl Acrylic		
Latex Primer	--	1.2 Mils DFT
*1st Coat (Repaint) - Alkyd Modified Acrylic Rust		
Preventive Latex Primer		
1.6 Mils DFT		
2nd & 3rd Coats -		
Gloss Acrylic Latex Enamel	--	1.2 Mils DFT/ each coat

* Spot prime as needed.

G. Painted Woodwork and Hardboard

Wood window trim, chair rails, wood door frames and trim, unless otherwise specified to be stained.

1. Semi-Gloss Enamel Finish:

1st Coat - Vinyl Acrylic Latex		
Enamel Underbody	--	1.1 Mils DFT
2nd & 3rd Coats -		
Semi-Gloss Vinyl Acrylic Latex		
Enamel	--	1.3 Mils DFT/each coat

H. Stained Woodwork (Transparent or semi-transparent finish to match Project Architect's sample).

1. Stained-Varnish Rubbed Finish:

Stain Coat - Oil Type	--	0.9 Mils DFT
1st Coat - Cut Shellac		
Filler Coat -Paste wood filler (for open grain wood)		
2nd & 3rd Coats - Oil Rubbing Varnish		
1.0 Mil		
DFT/each coat		

I. Interior Woodwork

Pant grade wood.

1. Flat Finish:

1st Coat - Vinyl Acrylic Latex

Enamel Underbody	--	1.1 Mils DFT
2nd & 3rd Coats -		
Flat Vinyl Acrylic Latex	--	1.3 Mils DFT/each coat

J. Interior Woodwork
   Oak woodwork (except wood flooring and doors)
   1. 1 Coat Spar Varnish over specified prime coats; 1.1 Mils DFT.

K. Interior Woodwork
   White birch.
   1. 1 Coat Polyurethane clear coating (Satin Finish)

L. Interior Woodwork
   Red or White birch throughout.
   1. Semi Gloss Finish:

1st Coat - Vinyl Acrylic Latex		
Enamel Underbody	--	1.1 Mils DFT
2nd & 3rd Coats -		
Vinyl Acrylic Latex Enamel	--	1.3 Mils DFT each coat

M. Interior Woodwork

1 Coat interior gloss varnish	--	1.0 Mil DFT
1 Coat cabinet rubbing varnish, rub to dull finish with fine pumice and oil.	--	1.0 Mil DFT

N. MEP Equipment and Piping
   See Sections 15501, 15502, 15431 and 16010 for MEP Equipment and Piping painting requirements.

O. Photoluminescent Paint
   1. Epoxy system - “AfterGlo NYC-MEA System”

2 Coats White Base Coat Paint	--	2.0 Mil DFT each coat
2 Coats Photoluminescent Paint	--	3.0 Mil DFT each coat

   2. Latex system - “Kryptaglow MEA System”

2 Coats White Base Coat	--	1.5 to 2.0 Mil DFT each coat
3 Coats Glow Paint	--	3.4 Mil DFT each coat
1 Coat Clear Top Coat	--	1.5 Mil DFT

   3. If necessary, apply photoluminescent paint in greater thicknesses than indicated above to achieve required brightness in accordance with NYC Building Department requirements.

PART 3 EXECUTION

3.01 EXAMINATION

A. Verification of Conditions
   1. The application of painter's finish to any surface shall be taken to indicate that the Contractor considers such surfaces suitable for a first-class finish.
   2. Do not apply painter's finish in any locations until the Work of other Contractors that might damage the new finish is completed.
   3. Notify the Authority in writing regarding Work by others that does not provide a suitable surface for the new finish.
   4. In case of dispute regarding the suitability of any surface, the Authority's decision shall be final and conclusive upon all concerned.

5. Contractor shall check the compatibility of previously painted surface with the new coating by applying a test panel 4 foot wide x wall height. Allow test panel to dry thoroughly; verify proper adhesion before proceeding with painting Work.

3.02 PREPARATION AND APPLICATION - EXISTING BUILDING

A. Protection
   1. In cases where the painting of surfaces involves removal or disturbance of existing paint and the paint is known or assumed to be lead-based paint, the following protection requirements shall apply:
      a. All objects near or adjacent to the surface(s) to be painted shall be moved a minimum of three feet away from that surface(s). Any immovable object, and the floor, within the three foot "work area" shall be covered with one layer of 6-mil polyethylene, sealed on all edges to prevent the penetration of dust and debris. If the ceiling is to be painted, all objects in the room and the floor of the room shall be covered in this manner.
      b. All objects bordering the three-foot work area shall be completely covered with clean cloths, heavy building paper or clean plastic covering.
      c. If, during the removal of existing paint, the Contractor notices paint chips or other debris related to the ongoing work on objects beyond the border of the three foot work area, these objects shall be cleaned by HEPA vacuuming and wet-wiping and then covered as described in (b) above.
      d. For exterior metal surfaces on the building or site the ground beneath the work area shall be surrounded on all sides by a washable construction tarp or 10-mil polyethylene. The covering need not be airtight; however, it must be of adequate size and durability to completely enclose the work area and prevent the dispersal of any paint chips or dust during paint removal activities. Any dust and debris shall be contained in the work area and shall be removed immediately upon generation. Protect from damage landscaping, paving, and other improvements near the building. Protect and seal all windows and openings within the work area with a minimum of 1 layer of 6-mil polyethylene sheeting.
      e. The protection shall remain in place during all paint removal activities.
      f. All protection is to be carefully removed, cleaned or discarded after painting is complete.
   2. In cases where the painting of surfaces does not involve the removal or disturbance of existing paint or the paint is not lead-based as determined by testing by the Authority, the following protection requirements shall apply:
      a. In each area to be painted, cover and protect furniture, equipment and floors from damage with clean cloths, heavy building paper or clean plastic covering secured in place. All protection is to be carefully removed, cleaned or discarded after painting is complete.

B. Removal of Existing Work
   1. Remove wire guards, screens, grilles and similar items as necessary to paint properly all surfaces, windows and doors, behind these items.
      a. These items shall be HEPA vacuumed and wet-cleaned once removed. Once cleaned, the items shall be placed on 6-mil polyethylene sheeting (or equivalent) and covered with a second layer of 6-mil polyethylene sheeting.
      b. If paint is to be removed from these items, the contractor shall ensure that the items are taken to a separate, non-occupied space prior to scraping and repainting.
   2. Remove and paint behind pictures, signs, shades, drapes, furniture, cabinets, lockers and similar items that are not secured to walls.
   3. Unless otherwise specified, radiators, convectors, univents need not be removed providing all visible surfaces of these items and visible surfaces behind them are properly painted.
   4. Carefully mark removed work for identification and replace in the original location unless otherwise directed.

C. Surface Preparation
   1. Gently wet mist the surface to be scraped with water, then remove all loose paint with scraper and putty knife.
   2. Sand existing surfaces to dull sheen and gloss. Before sanding, wet mist the area to be sanded. (Power sanding without a HEPA-filtered vacuum recovery system is not allowed).
   3. Remove dust by washing with water, using damp sponge or cloth.
   4. After washing, spot prime grease and water stains; magic markers marks, crayon marks, lipstick marks, etc; with a quick-drying alcohol base primer sealer to prevent bleeding.
   5. Fill all cracks and holes with appropriate filler material, wet mist and sand flush with adjacent surfaces and spot prime. (Power sanding without a HEPA-filtered vacuum recovery system is not allowed).
   6. Existing paint that was not removed with scraper and which appears to be sound shall receive spackling compound around perimeter high spots and feathered out so that surface is smooth. Repair gouges created by the scraping process and other imperfections in the existing surface with spackling compound to provide a smooth, even finished surface.
   7. Apply number of finish coats specified herein or as many as may be necessary to obtain the proper finish and completely cover the substrate.
   8. Cement Plaster: Coat surfaces to be patched with an approved bonding agent. Patch with an approved mortar patching mix and finish to match texture of adjacent surfaces.
   9. Existing Woodwork:
      a. Prepare surfaces as indicated in Art. 3.02, C., Subparagraphs 1., 2., 3., 4., above.
      b. Puttying: Fill cracks, open joints, nail holes and similar defects in existing woodwork specified to be painted or varnished with putty or plastic filler. Putty stop nail holes in all new woodwork specified to be painted or stained and varnished. Prime or seal all surfaces in contact with new putty. Color interior putty to match the finish.
      c. Touch-Up
         1) Spot prime defects in existing Work and Work primed under other Paragraphs of Work as necessary to produce an even plane in the new finish.
         2) All worn, scaled, blistered, crackled and discolored places in the existing stained and varnished work specified to be revarnished shall be wet-misted prior to being scraped or sanded, then filled and touched up with stain as required to equalize the color. (Power sanding without a HEPA-filtered vacuum recovery system is not allowed).
         3) Touch-up and equalize the color of new woodwork specified to be stained and varnished where damaged, due to job fitting and trimming.
         4) Touch-up all pitch streaks and knots in woodwork with shellac.
   10. Existing Metal:
      a. Prepare surfaces as indicated in Art. 3.02,C., Subparagraphs 1., 2., 3., 4., above.
      b. Machine tool clean exposed steel to an SSPC-SP3 surface preparation.
      c. For steel surfaces exposed to view, repair defects in surfaces to provide for an even plane in the new finish. Use auto-body filler to even out surface and sand smooth.
   11. Wood Sash: Clean and oil pulley stiles of wood sash with one coat of stained, boiled linseed oil at completion of painting of sash.
   12. Glazing Repairs
      a. Cut out loose and cracked putty on doors and windows. Replace cut out and missing putty with elastic glazing compound. If the putty contains asbestos, the Contractor shall abate the putty in accordance with the procedures specified in Section 02081 - Asbestos Abatement.
      b. Prime Surfaces before applying glazing compound.
   13. Galvanized Metal
      a. Remove dust and oil with mineral spirits and wipe dry with clean cloth. Repair welded and abraded surfaces with a 2 mil (dry) minimum thick coating of cold

galvanizing compound in conformance with ASTM A780; comply with manufacturer's application instructions.
b. Repair steel decks and cold-formed metal framing immediately following installation.
c. For hot-dipped galvanized surfaces, allow 6 months of weathering prior to cleaning specified in a. above. Immediately before painting, roughen surface with course sandpaper. Zinc metallized surfaces do not require sanding.

14. Steel Doors and Frames
    a. Fill small dents, pits, and other minor imperfections flush and smooth with polyester filler.
    b. Apply and finish filler in accordance with manufacturer's instructions.
15. Wood
    a. Remove scratches, dirt, stains, raised grain and other surface defects.
    b. Fine sand wood surfaces to be natural finished to remove rough spots, dirt and markings.
    c. Shellac knots, pitch streaks and sap spots before priming coat is applied.
    d. Putty nails, holes and other indentations flush with adjacent surfaces. Color putty to match finish of wood.
    e. Touch-up raw surfaces and edges of primed woodwork resulting from cutting and fitting at the job before the wood is installed. Use same king of material used for shop priming or use type of primer specified for the painting system.
16. Plaster
    a. Scrape and sand plaster nibs smooth. Spackle, smooth, and seal cracks, holes and other defects to provide an even, smooth surface.
17. Gypsum Board: Fill cracks and other blemishes with spackling or patching compound and sand smooth.
18. Concrete and Concrete Unit Masonry: Prepare cementitious surfaces by removing efflorescence, chalk, dust, grease and oils. Concrete and mortar shall be cured as recommended by paint manufacturer.

D. Materials Preparation
1. Mix and prepare painting materials in accordance with the manufacturer's directions.
2. Stir materials before and during application to produce and maintain a mixture of uniform density. Do not stir any film that may form on the surface of materials into the material; remove the film and strain the material before using.
3. Thinning: Use only thinners recommended by the paint manufacturer and use only within the recom-mended or specified limits.

E. Moisture Meter Test
1. Do not apply initial coating until moisture content of surface is within limitations recommended by paint manufacturer.
2. Reading shall be approximately 8% on meter.
3. Test surfaces with moisture meter at various areas e.g.: Top, bottom and middle of wall, especially where piping occurs and at exterior walls, in the presence of the Authority.
4. Moisture content shall be approved by the Authority before any Work is started.

3.03 PREPARATION AND APPLICATION - PHOTOLUMINESCENT PAINT

A. Preparation and application shall conform to methods used to obtain approval for MEA or Approved Agency listing in accordance with the NYC Building Code.

B. Prepare all surfaces in accordance with the manufacturers written recommendations. All surfaces shall be cured, clean, dry, and free of all loose and foreign materials. Prime surfaces as recommended by manufacturer. Etch or sand metal and other surfaces as recommended. Test previously painted surfaces and other surfaces for compatibility and adhesion prior to application.

C. Apply photoluminescent paint as indicated herein and on the Drawings. Apply evenly by brush or roller, and in accordance with the manufacturer’s instructions. Stir and mix thoroughly. Do not thin. Allow paint to dry between coats as recommended.

D. Maintain manufacturer's recommended conditions for temperature, humidity, and air movement until paint is dry and cured.

E. Handrail marking: Paint exit markings on all exit stair handrails in accordance with the NYC Building Code, including but not limited to sections BC 403.16, BC 1026.11, and amendments, and by NYC Local Law 26 of 2004, including Reference Standards RS6, RS6-1 and RS6-1A. Paint in a 1" wide strip, taping the sides to provide a uniform finished appearance

3.04 APPLICATION

A. General
   1. No Work shall be performed where cement or plaster is being applied or is in the process of drying.
   2. No Work shall be performed in spaces that are not broom clean and free of dust and waste.
   3. Apply paint materials to produce smooth finished surfaces, free of brush or roller marks, drops, runs, or sags.
   4. Paint materials shall be kept at a proper and uniform consistency.
   5. Thin only when necessary to achieve best results.
   6. Thinners shall be material recommended by manufacturer of paint, and in quantity as recommended.
   7. Excessive use of thinner as indicated by variation in absorption, lack of "hide", thickness of dry film, mottled or streaky coat, shall be cause for rejection. Correct as directed.
   8. Thinning of varnish or aluminum paint prohibited.
   9. Apply all coats with brush or roller, varying slightly the color of succeeding coats. Spraying will not be permitted.
      a. If recommended by manufacturer, 100% acrylic resin concrete block filler may be spray applied and shall be backrolled as necessary to work material into substrate surface.
   10. Brush out or roll on first or prime coat; work well into surface.
   11. Each coat shall be inspected, approved and dry before proceeding with additional coats.
   12. Allow at least 48 hrs for enamels and exterior oil paint to dry.
   13. The surfaces of interior woods and metals shall be sanded or rubbed between coats to assure smooth finish and proper adhesion of subsequent coats.
   14. Avoid lapping of paint on glass, hardware, or other adjoining surfaces.
   15. Apply no paint to operating units where sliding contact of metals is necessary for proper functioning of unit.
   16. Painting is not required on walls or ceilings in concealed and inaccessible areas.
   17. Moving parts of operating units will not require finish painting unless otherwise required.
   18. Do not paint over any code-required labels, such as Underwriter's Laboratories and Factory Mutual, or any equipment identification, performance rating, name or nomenclature plate.
   19. Finish doors on tops, bottoms and side edges same as exterior faces.

3.05 FIELD QUALITY CONTROL

A. The Authority reserves the right to require the following material testing procedures at any time, and any number of times during period of field painting:
   1. Measurement of dry film thickness (DFT) by use of a dry film thickness gauge in accordance with use and calibration requirements of Structural Steel Painting Council [SSPC], "Method of Measurement of Dry Paint Thickness with Magnetic Gauges".
   2. Engage services of an independent testing laboratory, recommended by the Authority, to sample paint being used. Samples of materials delivered to construction site will be taken, identified and sealed, and certified in presence of Contractor
   3. Testing laboratory will perform appropriate tests for any or all of the following characteristics: Abrasion resistance, apparent reflectivity, flexibility, washability,

absorption, accelerated weathering, dry opacity, accelerated yellowness, recoating, skinning, color retention, alkali resistance and quantitative materials analysis.

4. If test results show that material being used does not comply with specified requirements, Contractor shall be directed to stop painting Work, and remove non-complying paint; repaint surfaces coated with rejected paint; remove rejected paint from previously painted surfaces if, upon repainting with specified paint, the two coatings are non-compatible.
    a. If the samples do not comply with requirements of the Specifications, costs of testing and remediation of rejected work shall be borne by Contractor.
    b. If the tests find that the samples do comply with the requirements of the Specifications, the cost of the testing will be borne by the Authority.

B. The Authority will engage the services of a Special Inspection agency to inspect the installation of the photoluminescent stair markings.

3.06 CLEANING

A. General
1. Contractor shall clean-up behind each paint crew such that painting and clean-up will be a continuous uninterrupted operation. The practice of one general clean-up after completion of all painting will be strictly prohibited. This clean-up will include, but not be limited to the following:
    a. Remove spots or defacement resulting from Work of this Section.
    b. Retouch all damaged surfaces to leave Work in perfect finished condition.
    c. If spots or defacement cannot be satisfactorily removed and retouched, re-finish the surfaces as directed.
    d. Within the three foot work area created for removal and painting where existing paint is known or assumed to be lead-based all objects and surfaces shall be thoroughly HEPA vacuumed, wet-cleaned and HEPA vacuumed again. In rooms where the ceiling has been painted all surfaces and objects in the room shall be cleaned in this manner.
    e. The contractor shall ensure that the objects and surfaces under protective covering are free of any dust or debris created during painting activities. If necessary, these objects and surfaces shall be wet cleaned and HEPA vacuumed.
    f. The contractor shall conduct any cleaning deemed necessary by the independent environmental consultant.
    g. Free all operating units of painted materials and leave them clean and in proper working order.
    h. Remove from premises all surplus paint materials, debris and any other rubbish resulting from the Work.
    i. Leave storage space clean and in condition required for equivalent spaces in project.

3.07 DISPOSAL OF PAINTED WASTE AND DEBRIS FROM EXISTING BUILDINGS

A. Testing
1. Perform Toxicity Characteristic Leaching Procedure (TCLP) testing of all painted waste and debris generated from existing painted objects and surfaces.

B. Storage and Disposal
1. Storage and disposal shall be in accordance with Specifications Section S01900 - Existing Premises Work, Article titled "Disposal of Painted Waste and Debris".

3.08 PROTECTION

A. Provide caution tape and/or locked entryways during paint removal activities in existing buildings to prevent access to the work area from unauthorized personnel.

B. Provide "Wet Paint" signs to protect newly-painted finishes. Remove temporary protective wrappings provided by others for protection of their Work after completion of painting operations.

C. At the completion of Work of other trades, touch-up and restore all damaged or defaced painted surfaces as directed by the Authority.

3.09 SCHEDULE - PAINT SYSTEMS

A. Surfaces not to be painted, unless specifically indicated otherwise:
1. Polished or bright metals: Aluminum, bronze, brass, chrome, nickel, stainless steel, copper.
2. Exterior: Brick, Stone, Masonry, Concrete
3. Glass
4. New galvanized Chain Link Fence Work
5. Galvanized members not exposed to public view
6. Ceramic Materials
7. Factory Pre-Finished Masonry Block.
8. Resilient Flooring Materials; Wood Floors.
9. Terrazzo; Marble; Bluestone
10. Acoustical Tile
11. Chalk Boards; Cork Boards; Bulletin Boards; Plastic Laminate
12. Mechanical Equipment, Steel Shelving, and Cabinets, which are factory finished.
13. General Construction Items with factory applied final finish.
14. Factory finished Wood Doors.
15. Acoustic Tile & Metal Pan Ceiling
16. Pipe and duct Spaces and utility tunnels, including items within the space such as pipes, ducts and conduits.
17. Oil Tank Enclosure including items within the space such as pipes, ducts and conduits.
18. Meter Room including items within the space such as pipes, ducts and conduits.
19. Concealed Ducts, Pipes, and Conduit.
20. Metal Lockers
21. Toilet Compartments
22. Light Fixtures
23. Electrical Distribution Cabinets
24. Foundation Spaces
25. Furred Areas
26. Ceiling Plenums
27. Valve and Damper Operators
28. Mechanical Linkages
29. Sensing Devices
30. Motor and Fan Shafts
31. Light Switch and Electrical Outlet Covers
32. Labels: Do not paint over Underwriters Laboratories (UL), Factory Mutual (FM), or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

B. Interior Finish Schedule - Standard
1. All new and previously unpainted, surfaces shall receive one (1) prime coat and two (2) finish coats unless otherwise specified.
2. All previously painted surfaces shall be spot primed as needed and receive (2) finish coats unless otherwise specified.
3. First or Prime coats shall vary with substrates and are outlined in Article 2.07 - Interior Paint Systems.
4. Finish coats in areas indicated shall have the sheen and gloss levels specified below

	Location	Type
a.	Residential Living rooms, Bedrooms corridors/hallways, closets,	(Semi Gloss)
b.	Entrance Hall/Lobby, Corridors, Laundry	(Semi Gloss)
c.	Residential Bathrooms	(Gloss)

d. All plaster and gypsum board ceilings shall be off white (Flat)
e. All interior plaster, gypsum board, concrete, brick or block surfaces of walls throughout the building not otherwise specified (Semi Gloss)

END OF SECTION