

SECTION 09250

GYPSUM WALLBOARD

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. The work includes furnishing all labor, materials and equipment required to complete the Gypsum Wallboard work as shown on the Drawings and as specified herein.
- B. Work Included: The work of this Section shall include, but is not limited to the following:
 - 1. Gypsum wallboard walls & ceilings
 - 2. Water resistant gypsum wallboard;
 - 3. Type "X" fire rated gypsum wallboard;
 - 4. Taping and texturing of all gypsum wallboard.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Regular Gypsum Wallboard: Shall be 5/8" thick as noted on the Drawings, with tapered long edges conforming to ASTM C-36, as manufactured by US Gypsum Co., Georgia-Pacific Corp., Flintkote Co., National Gypsum Co., or approved equal.
- B. Moisture-Resistant Gypsum Wallboard: Moisture-Resistant (MR) Gypsum Wallboard: Shall be 5/8" thick as noted on the Drawings, water-resistant gypsum wallboard conforming to ASTM C-630, as manufactured by US Gypsum Co., Georgia-Pacific Corp., Flintkote Co., National Gypsum Co., or approved equal.
- C. Type "X" Gypsum Wallboard: Shall be 5/8" thick, type "X" fire-rated, gypsum wallboard with long edges tapered, conforming to ASTM C-36, Type X, as manufactured by US Gypsum Co., Georgia-Pacific Corp., Flintkote Co., National Gypsum Co., or approved equal.

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- D. Screws: Flathead screws, shouldered, specially designed for use with power driven tools, not less than 1" long, with self tapping threads and self drilling points.
- E. Accessories: Casing bead, etc. and install per manufacturer's recommendation.
- F. Adhesive: Shall be high-strength, waterproof, rubber base adhesive in conformance with ASTM C557 and American Plywood Assoc. Specification AFG-01.

PART 3 EXECUTION

3.1 EXECUTION

- A. Surface Conditions:
 - 1. Inspection: Prior to installation of the work of this Section, carefully inspect the installed work of all trades and verify that all such work is complete to the point where this installation may properly commence. Verify that gypsum drywall may be installed in strict accordance with all pertinent codes and regulations, the manufacturer's recommendations as accepted by the Engineer, and the original design.
 - 2. Discrepancies: Do not install gypsum drywall until all unsatisfactory conditions have been corrected.
- B. Installation:
 - 1. General: All gypsum wallboard shall be installed in strict accordance with the manufacturers' recommendations following the best practices of the trade.
 - 2. Install the gypsum wallboard with the separate boards in moderate contact but not forced into place. At internal and external corners, conceal the cut edges of the board by the overlapping covered edges of the abutting boards. Stagger the boards so that the corners of any four boards will not meet at a common point except in vertical corners.
 - 3. Install water-resistant gypsum wallboard in all wall and ceiling areas exposed to water or to potential water damage and as shown on Drawings.
 - 4. Ceilings: Install 5/8" gypsum wallboard to ceilings with the long dimension of the wallboard at right angles to the supporting members, except that wallboard may be installed with the long dimension parallel to supporting

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members that are spaced on center when attachment members are provided at end joints.

5. Walls: Install the gypsum wallboard at right angles to framing members. Make end joints, where required, over framing members.
6. Attachments:
 - a. Screws: Gypsum wallboard shall be attached with specified screws with clutch-controlled power screwdrivers spaced in accordance with 2003 IBC.

C. Joint Treatment:

1. General:
 - a. Inspect all areas to be joint treated, ascertaining that the gypsum wallboard fits snugly against supporting framework.
 - b. In areas where joint treatment and compound finishing will be performed, maintain a temperature of not less than 55 Degrees F. for 24 hours prior to commencing treatment, for the entire period of treatment, and until joint and finishing compounds have dried.
 - c. Provide a minimum drying time of 24 hours between coats, with additional drying time in poorly ventilated areas.
 - d. Embedding Compound: Apply to Gypsum wallboard joints and fastener heads in a thin uniform layer. Spread the compound not less than 3" wide at joints, center the reinforcing tape in the joint, and embed the tape in the compound. Then spread a thin layer of compound over the tape. After this treatment has dried, apply a second coat of embedding compound to joints and fastener heads, spreading in a thin uniform coat to not less than 6" wide. When thoroughly dry, sandpaper to obtain uniformly smooth surfaces, taking all necessary care to not scuff the paper surface of the wallboard.
2. Finishing Compound: After embedding compound is thoroughly dry and has been completely sanded, apply a coat of finishing compound to not less than 25-cm (12") wide. When thoroughly dry, sandpaper to obtain uniformly smooth surfaces, taking all necessary care to not scuff the paper surface of the wallboard.

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3.2 CORNER TREATMENT

- A. Internal Corners: Treat as specified for joints, except that the reinforcing tape shall be folded lengthwise through the middle and fitted neatly into the corner.
- B. External Corners:
 - 1. Install a corner bead fitting neatly over the corner and secure with the same type fasteners used for applying the wallboard, spacing the fasteners approximately 6" on centers and driving through the wallboard into the framing or furring member.
 - 2. After the cornerpiece has been secured into position, treat the corner with joint compound and reinforcing tape as specified for joints, feathering the joint compound from 8" to 10" on each side of the corner.
- C. Other Metal Trim:
 - 1. General: The Drawings do not purport to show all locations and all requirements for metal trim in connection with the work of this Section. Carefully study the Drawings and the installation; provide in place all metal trim normally recommended by the Manufacturer of the gypsum wallboard used.
 - 2. Installation: Install the metal trim in strict accordance with the Manufacturer's recommended methods of installation, providing not less embedment and finishing than specified above for corner treatment.
- D. Textured Coatings:
 - 1. General: Do not proceed with this work until all surfaces are properly prepared; surfaces shall be primed prior to texture coating, and shall be acceptable to receive the specified coatings.
 - 2. Provide a light "Orange Peel" texture coating for all interior walls, and ceilings.
- E. Cleaning Up: Use all necessary care during execution of this portion of the work to prevent scattering of Gypsum wallboard scraps and dust and to prevent tracking of joint and finishing compound onto floor surfaces. At completion of each segment of installation in a room or space, promptly pick up and remove from the working area all scraps, debris and surplus material of this Section.

END OF SECTION

SECTION 09310

CERAMIC TILES

PART 1 GENERAL

1.01 DESCRIPTION OF WORK

- A. Furnish and Install
 - 1. Ceramic floor tile.
 - 2. Ceramic wall tile.

1.02 REFERENCES

- A. This section references the latest edition of the following documents. They are a part of this section as specified and modified. In a case of conflict between the requirements of this section and those of the listed documents, the requirements of this section shall prevail.

<u>Reference</u>	<u>Title</u>
ANSI 108.1-1976	Glazed Wall Tile, Ceramic Mosaic Tile, Quarry Tile and Paver Tile Installed with Portland Cement Mortar
ANSI 108.5-1976	Ceramic Tile Installed with Dry-Set Portland Cement Mortar or Latex-Portland Cement Mortar
ANSI 118.4-1973	Latex-Portland Cement Mortar
ANSI 137.1-1980	Ceramic Tile
Tile Council of America (TCA)	1985 Handbook for Ceramic Tile Installation

1.03 SUBMITTALS

- A. Samples: Submit complete samples of tile and grout for color selection by the Owner in accordance with Section 01340.

1.04 DELIVERY, STORAGE AND HANDLING

- A. General: Comply with Section 01600. Deliver tile in unopened, grade sealed packages. Deliver mortar mixes and grouts in unopened containers. Store materials in a clear, dry area.

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1.05 PROJECT CONDITIONS

- A. Environmental Conditions: Do not install tile set in Portland cement mortar when the ambient temperature is below 50°F. Comply with minimum temperature requirements of bonding and grouting materials manufacturers.
- B. Protection: Protect adjoining work surfaces before tile work begins.

PART 2 PRODUCTS

2.01 TILE

- A. Ceramic Wall Tile: 4-1/4" x 4-1/4", ANSI 137.1 buff body, approximately 5/16" thickness, cushion edges with bright glaze finish. Colors as selected by Owner from manufacturer's standard color selection.
- B. Accessory Pieces: Provide bullnose tile pieces at all outside corners or exposed edges. Provide matching cover base.

2.02 SETTING AND GROUTING MATERIALS

- A. Portland Cement Mortar: 1:3 Portland cement/sand gauged with Laticrete 3701 admix or accepted substitute. Mix as recommended by manufacturer. Bond Coat: Neat Portland cement gauged with tile setting liquid.
- B. Latex-Portland Cement Mortar (Thin-Set): ANSI 118.4, 1:1 Portland cement/sand gauged with tile setting liquid.
- C. Grout: Drybond grout and joint filler gauged with admix. Mix as recommended by manufacturer. Color as selected by Owner.

2.03 EXPANSION JOINT SEALANT

- A. Floors: Two component self-leveling sealant complying with FS TT-S-00227E. Color to match floor grout.

PART 3 EXECUTION

3.01 INSPECTION

- A. Inspection: Before proceeding, examine surfaces to receive tile, setting beds or accessories for defects or conditions adversely affecting quality and execution of the installation. Report unsatisfactory conditions to the Owner in writing.
- B. Acceptance: Beginning of installation means acceptance of substrates by installer.

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3.02 INSTALLATION

- A. Wall Tile and Base - Installation Over Gypsum Board: Install wall tile using the thin set method. Install, grout, clean, protect in conformance with TCA Handbook method W243 and ANSI 108.5 using latex Portland cement mortar.

3.03 CLEANING AND SEALING

- A. Just prior to occupancy of the building, clean glazed ceramic tile with a 2% to 5% solution of muriatic acid and flush with clean water. When tile and joints are completely clean of cement, scum and dirt, apply manufacturer approved sealer to floors only.
- B. Apply sealer according to manufacturer's recommendations in sufficient Coats to produce an even glaze over entire floor area. Exercise care to avoid damage to adjoining surfaces.

3.04 EXTRA STOCK

- A. Maintenance Materials: Provide the Owner, at the completion of the job, with sufficient whole tiles to provide coverage of at least 10% of tiled area for each color of tile used.

END OF SECTION

SECTION 09510

SUSPENDED ACOUSTICAL CEILING SYSTEM

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. The work includes furnishing all labor, materials and equipment required to complete the Suspended Acoustical Ceiling System work as shown on the Drawings and as specified herein.
- B. Work Included: The work of this Section shall include, but is not limited to the following:
 - 1. Install acoustical ceiling tile and exposed suspension system as indicated on Drawings.

1.2 SUBMITTALS

- A. Submit samples of each product specified for acceptance prior to installation in accordance with SECTION 01340.

1.3 REFERENCES

- 1. ASTM C635 - Standard Specifications for Metal Suspension Systems for Acoustical Tile and Lay-in Panels.
- 2. ASTM C636 - Recommended Practice for Installation of Metal Suspension System for Acoustical Tile and Lay-in Panels.
- 3. CISCA Ceiling Systems Installation Handbook.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Ceiling Tile:
 - 1. 2x4 Lay-in Acoustical Tile: Shall be No. 703, White, "Cortega", 24" x 48" x 5/8", Angled Tegular ceiling tile, kerfed to appear as 24" x 24", by Armstrong., or approved equal.
- B. Suspension system:
 - 1. Suspension System: Shall be "Prelude", 15/16" exposed tee grid system, white, as manufactured by Armstrong, or approved equal.

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PART 3 EXECUTION

3.1 GENERAL

- A. Inspection:
1. Examine areas to receive materials for conditions which will adversely affect installation. Provide written report of discrepancies to General Contractor and Engineer.
 2. Do not start work until unsatisfactory conditions are corrected.
 3. Work to be Concealed: Verify work above ceiling suspension system is complete and installed in manner which will not affect layout and installation of suspension system components.
- B. Field dimensions shall be verified prior to installation.
- C. Suspension System: System shall be installed in accordance with ASTM C363, CISCA installation standards, 2003 IBC and any other applicable code requirements.
1. Arrange suspension system and orient, as shown on Reflected Ceiling Plan.
 2. Provide and install wall moldings as necessary to support and conceal all tile edges not carried by "T" bar system.
 3. Provide adequate ties & bracing to suspend the main and cross runners from metal framing and provide required lateral force bracing in accordance with 2003 IBC.
- D. Lay-In Acoustical Tile: Install acoustical panels in coordination with suspension system, with edges concealed by support of suspensions members.
- E. Cleaning and Protection: Clean exposed surfaces of acoustical ceiling, including trim, edge molding and suspension members; comply with manufacturer's instructions for cleaning and touch-up of minor finish damage. Remove and replace work which cannot be successfully cleaned and repaired to permanently eliminate evidence of damage.
- F. Extra Tile: Installer shall leave one extra box of acoustical tile for Owner.

END OF SECTION

SECTION 09665

RESILIENT FLOORING

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. The work includes furnishing all labor, materials, equipment and appliances required to complete the Resilient Flooring work as indicated on the Drawings and as specified herein.

1.2 SUBMITTALS

- A. Samples of resilient flooring and rubber cove base shall be submitted for acceptance of patterns and colors in accordance with SECTION 01340.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Resilient Flooring: Shall be vinyl composition tile (VCT), 1/8" gauge, 12" x 12", Excelon Tile meeting Federal Specification SS-T-312B(1) Type IV, as manufactured by Armstrong, or approved equal. Color and pattern to be selected by Owner from manufacturer's standard product line.
- B. Rubber Cove Base: Shall be 4" high rubber cove base equal to that manufactured by Roppe Rubber Corp. Color to be selected by Engineer from manufacturer's standard product line.
- C. Rubber Stair Tread, Risers & Stringers: Shall be 1/8" rubber Maxxi-Treads with matching risers and stringers, as manufactured by Mercer Products, Co., or approved equal. Colors as selected by Owner from manufacturer's standard colors.
- D. Adhesive and Leveling Compound: Shall be as specified by the manufacturer for the specific type of surface on which the flooring or base is to be installed.

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PART 3 EXECUTION

3.1 GENERAL

- A. Delivery: Materials shall be delivered to the site in the original packages or containers with the seals unbroken and with the manufacturer's brand name marked thereon.
- B. Preparation of Surfaces: Installation of finished flooring shall not begin until work of all other trades (including work of painter) has been completed. Subfloor shall be dry, cleaned of all grease, oil, dirt and foreign matter and swept clean. Commencement of this work implies acceptance of the subfloor underlayment surface.

3.2 APPLICATION

- A. Vinyl Composition Tile (VCT): Shall be laid symmetrically about centerline of rooms working toward walls. Border tiles shall be scribed to wall, cut and fitted in place after field tile has been laid. Lines between tiles shall be straight and joints close. Tiles shall be cut to fit snugly around pipes and shall be installed so line of grain is in one direction.
- B. Rubber Base: Shall be installed after resilient flooring has been installed. Base shall be firmly cemented to wall with adhesive as recommended by manufacturer.
- C. Rubber Stair Tread, Risers & Stringers: Shall installed using adhesive as recommended by manufacturer.

3.3 CLEANING AND WAXING

- A. Immediately after the installation of the flooring is completed, the surface of the flooring shall be thoroughly cleaned. All spots of adhesive shall be removed with a clean cloth, dampened with an approved cleaner, as recommended by the manufacturer of the flooring. All flooring, after proper cleaning, shall be finished with one coat of wax, applied in accordance with manufacturer's specifications.

END OF SECTION

SECTION 09680

CARPETING

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. The work includes furnishing all labor, materials and equipment required to complete the carpeting work as shown on the Drawings and specified herein.

1.2 SUBMITTALS

- A. Submit samples of all carpet in accordance with SECTION 01340 for review, acceptance and selection of patterns and colors prior to ordering of carpet material. Submittal shall include detailed material data and information on carpet manufacturer.
- B. Warranty: The carpet shall carry a 15-year non-prorated limited warranty.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Carpeting
 - 1. Carpeting: Shall be INFINITY Powerbond RS Condensed vinyl cushion 6' Roll goods, as manufactured by Collins & Aikman Corporation, or approved equal. Color and pattern shall be selected by Owner from manufacturer's standard product line.
- B. Carpet Adhesive: Shall be RS Style adhesive system, Microencapsulated Tackifier applied to 100% of backing at time of manufacturing, as provided by Collins & Aikman or approved equal, for installation and in accordance with manufacturer's written installation instructions.
- C. Transition Strips: Provide metal transition strips at all transitions between carpet and VCT.

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PART 3 EXECUTION

3.1 GENERAL

- A. Delivery of Materials: Materials shall be delivered to the site in the original packages or containers with the seals unbroken and with the manufacturer's brand name marked thereon.

3.2 PREPARATION OF SURFACES

- A. Inspection and Preparation: Contractor shall inspect concrete sub-floor. Fill in holes and depressions as necessary for smooth, level subbase.
- B. Installation of carpeting shall not begin until work of all other trades, including work of painter, has been completed. Sub-floor shall be dry, cleaned of all grease, oil, dirt, and foreign matter, and swept clean. The area in which carpet is to be installed shall have a temperature of 65 to 70 degrees F. for at least 72 hours prior to start of work. Commencement of this work implies acceptance of the sub-floor surface by the carpet installer.

3.3 APPLICATION

- A. General
 - 1. Installer shall be certified Powerbond Contractor endorsed by Collins & Aikman.
 - 2. Application: All carpet shall be a direct glue-down application.
- B. Installation
 - 1. Scribe the carpet accurately to all vertical and adjacent horizontal surfaces.
 - 2. Align the lines of carpet as woven, using no fill strips less than 6" in width, laying all carpet in the same direction unless specifically otherwise directed by the Engineer.
 - 3. Locate seams out of traffic to the maximum extent practical.

3.4 CLEANING

- A. Immediately after the installation is completed, the surface of the carpeting shall be thoroughly cleaned. All spots of adhesive removed with an approved cleaner, as recommended by the manufacturer of the carpet.

END OF SECTION

SECTION 09900

PAINING

PART 1 GENERAL

1.1 DESCRIPTION OF WORK

- A. The work includes furnishing all labor, materials and equipment required to complete the Painting work as shown on the Drawings and as specified herein.
- B. Work Included: The work of this Section shall include, but is not limited to the following:
 - 1. All gypsum wallboard walls and ceilings;
 - 2. Staining and clear coating of all interior wood trim;
 - 3. All exposed interior and exterior metal not prefinished, including all hollow metal doors and frames, coiling doors, bollards, and flashing;
 - 4. Sealing of interior CMU walls (See SECTION 04200 for exterior CMU);
 - 5. Touchup of all prefinished materials and equipment;
 - 6. Painting of exposed bare and covered pipes and ducts, and of hangers, exposed steel and iron work, and primed metal surfaces of equipment installed under the mechanical and electrical work, except as otherwise indicated. Coordinate with DIVISIONS 15 and 16 installers for color-coding, if any;
 - 7. Painting of mechanical grilles, registers, louvers (except aluminum), and panel covers and frames for electrical work and systems;
 - 8. Painting roof and exterior wall mounted equipment including aluminum and factory finished items.
 - 9. Staining of all exterior wood siding and trim.
- C. Work Excluded: The following is a list of the related items of work not included in the Section:
 - 1. Prefinished materials and equipment;

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2. Shop Priming: Unless otherwise specified, surface preparation and shop priming of ferrous metal items is included under the various sections for this work.
3. Mechanical and Electrical Work: Pipe and raceway identification taping or stenciled painting is specified in DIVISIONS 15 and 16.
4. Finished Metal Surfaces: Metal surfaces of anodized aluminum, factory painted aluminum, stainless steel, chromium plate, copper, bronze, and similar finished materials will not require finish painting, unless otherwise indicated.
5. Operating Parts and Labels: Moving parts of operating units, mechanical and electrical parts, such as valve and damper operators, linkages, sinkages, sensing devices, motor, and fan shafts will not require finish painting unless otherwise indicated.
6. Primary and secondary framing of pre-engineered metal building.

1.2 QUALITY ASSURANCE

- A. Preparation and application of materials shall be in strict accordance with the paint manufacturer's recommendations. Prior to beginning work, applicators shall provide to the Engineer personal resumes indicating a minimum of 5 years of similar experience on similar projects.
- B. Coordination of Work: Review other sections of these specifications in which prime paints are to be provided to ensure compatibility of total coatings system for various substrates. Upon request from other trades, furnish information or characteristics of finish materials provided for use, to ensure compatible prime coats are used.

1.3 SUBMITTALS

- A. Submit the following in accordance with SECTION 01340:
 1. Six (6) copies of product data for Engineer's review and acceptance. Submittal shall be made prior to delivery of any paint material to the site.
 2. Complete color chips of all colors prior to ordering material, for acceptance and selection by the Owner.

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3. Prepare 12" X 12" samples of each color and sheen selected for acceptance by the Owner. When possible, apply finishes on identical type materials to which they will be applied on the job.
 - a. Identify each sample as to finish, formula, color name number sheen name, and gloss units.

1.4 REFERENCES

- A. Structural Steel Painting Council (SSPC)
- B. Architectural Specification Manual (ASM). Specification Manual for paint, wall covering and gypsum wallboard finishing.

1.5 DELIVERY STORAGE & HANDLING:

- A. Coordinate with the Engineer for determining specific areas intended for use for delivery and storage of all painting products.

1.6 ENVIRONMENTAL REQUIREMENTS:

- A. All painting product storage and disposal shall be in strict accordance with local codes and federal regulations.

PART 2 PRODUCTS

2.1 GENERAL

- A. Have available touch-up factory finish paint for use on in-place components to allow touch-up to restore original finish.
- B. Provide barrier coats over incompatible primers or remove and re-prime as required. Notify the Engineer in writing of any anticipated problems using specified coating systems with substrates primed by others.
- C. Miscellaneous Materials: Miscellaneous materials such as linseed oil, thinners, turpentine driers, colors, paste fillers, etc., if any, shall be the product of the same manufacturer of the paint used for this project. Such materials as are not manufactured by the paint manufacturer shall be of the best grade available; approval for use of such materials must be obtained from the Engineer before being used.
- D. Colors: All colors shall be as selected by the Owner from the manufacturer's standard colors. Colors used at sites within the jurisdictional boundaries of the US Forest Service (USFS) shall be subject to USFS approval. Undercoats shall be of

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slightly different color to permit identification. All colors shall be incorporated into the paint at the plant. No color mixing will be permitted at the job site unless specifically allowed by the Engineer.

2.2 MATERIALS

- A. Paint: All paint for architectural finishes, unless specified otherwise, shall be the standard product of one of the following manufacturers:

Behr Process Corp.	E. I. Dupont Co.
Sherwin-Williams Co.	Glidden Co.
Fabrikem Chemicals International	Olympic Stain
Parker Paint Mfg. Co.	Pittsburgh Paint Co
Preservative Paint.	Pratt & Lambert Co.
Rodda Paint	Tnemec Company

- B. Paint for mechanical (DIVISION 15) and electrical (DIVISION 16) systems is based on the products of Tnemec Company.

2.3 FINISH SCHEDULE

- A. Wallboard

1. Interior:
 - a. Stain: Semi-transparent stain.
 - b. Finish: Clear semi-gloss polyurethane.
2. Exterior:
 - a. Stain: Semi-transparent stain.

- B. Wood

1. Primer: Alkyd wood primer
2. Paint: Alkyd semi-gloss interior enamel

- C. Metal

1. Ferrous:
 - a. Primer: Modified Alkyd rust-inhibitive primer.
 - b. Paint: Exterior alkyd gloss enamel.
2. Galvanized:
 - a. Primer: Oil-alkyd metal primer.
 - b. Paint: Exterior alkyd gloss enamel.

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3. Aluminum:
 - a. Primer: Acid etch
 - b. Paint: Exterior alkyd gloss enamel.

D. Concrete Masonry

1. Sealer:
 - a. Sealer: Fabrishield 653 Siloxane/Quartz Water Repellent as manufactured by Fabrikem Chemicals International, or approved equal.

Prime-A-Pell 200 manufactured by Chemprobe
2. Epoxy:
 - a. Primer: Acrylic Latex Block Filler (Tnemec Series 55 Tnemecrete
 - b. Paint: Pitt-Glaze Water Based Acrylic Epoxy Enamel by PPG, or approved equal

2.4 FINISH SCHEDULE - MECHANICAL SYSTEMS

A. Exposed Pipe (Metal)

1. Primer: Series 161 Fast Cure Epoxy
2. Paint: Series 73 Endurashield

B. Exposed Pipe (PVC)

1. Paint: Series 73 Endurashield

C. Valves

1. Primer: Series N27 Typoxy (If these are sweating pipes then the coal tar should be removed via abrasive blasting SP7 Sweep Blast)
2. Paint: Series 73 Endurashield

D. Pumps

1. Primer: Series N27 Typoxy (If these are sweating pipes then the coal tar should be removed via abrasive blasting SP7 Sweep Blast)
2. Paint: Series 73 Endurashield

PART 3 EXECUTION

3.1 GENERAL

- A. All materials to be delivered to site in unopened containers bearing the manufacturer's label specifying the name and the quality, grade and description of the contents. The materials shall be applied in strict accordance with the manufacturer's directions, and they shall not be reduced or adulterated except as specified herein or directed and then only in accordance with the manufacturer's directions.
- B. Applications
1. Apply each coat at proper consistency.
 2. Each coat of paint is to be slightly darker than preceding coat unless otherwise approved by the Engineer.
 3. Sand lightly between coats to achieve required finish.
 4. Do not apply finishes on surfaces that are not sufficiently dry.
 5. Allow each coat of finish to dry before following coat is applied, unless directed otherwise by manufacturers.
 6. Where clear finishes are required, ensure tint fillers match natural wood color. Work fillers well into the grain before set. Wipe excess from the surface.
 7. Backprime exterior woodwork, which is to receive paint finish, with exterior primer paint.
 8. Backprime interior woodwork, which is to receive paint or enamel finish, with enamel undercoater paint.
 9. Backprime interior and exterior woodwork, which is to receive stain and/or varnish finish, with gloss varnish reduced 25 percent with mineral spirits.
 10. Prime top and bottom edges of metal doors with enamel undercoat when they are to be painted.
- C. Mechanical and Electrical Equipment
1. Refer to mechanical and electrical sections with respect to painting and finishing requirements, color-coding, identification banding of equipment, ducting, piping and conduit.

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2. Remove grilles, covers, and access panels for mechanical and electrical systems from location and paint separately to match adjoining wall or ceiling.
3. Furnish and install new identification markings for mechanical or electrical equipment if existing markings are painted over or spattered.
4. Paint exposed conduit and electrical equipment occurring in finished areas. Color to match adjacent surfaces.

D. Surface Preparation

1. Gypsum Wallboard: Shall have all cracks and holes or other imperfections filled with patching plaster or spackle, and smoothed off to match adjoining surfaces. All surfaces to receive paint shall be thoroughly dry before any sealer or paint is applied.
2. Wood: Shall be sanded and dusted clean. Spot coat knots, pitch streaks and sappy sections with sealer. Screw holes, cracks, or other defects, shall be carefully plugged & puttied after primer has dried, and all edges and joints shall be caulked.
3. Ferrous Metal: Remove chalking, blistering, cracking, flaking and peeling primer, dust, dirt, grease, oil, loose rust scale and other foreign matter by scrapers, wire brush, sandpaper, steel wool, sandblasting or other accepted means. Final cleaning shall be done not less than 30 minutes nor more than 5 hours prior to application of paint to allow for adhesion of subsequent paint layers.
4. Galvanized Metal: Remove dirt and grease with mineral spirits and wipe dry with clean cloths. Final cleaning shall be done not less than 30 minutes nor more than 5 hours prior to application of paint.
5. Aluminum (Primed): Remove dirt and grease with solvent and wipe dry with clean cloths. Final cleaning shall be done not less than 30 minutes nor more than 5 hours prior to application of paint.
6. Aluminum (Unprimed): Prepare surface similar to galvanized metal then acid etch surface with clear phosphoric acid (Preservative Paint No. 28-56 or approved equal).
7. Concrete Masonry (CMU): CMU must be free from dirt, loose or excess mortar, and thoroughly dry. Painting may proceed in 30 days under normal drying conditions.
8. Exposed Pipe (metal): Follow requirements of SSPC SP6.

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9. Exposed Pipe (PVC): Roughen by hand sanding then cleaned for removal of all loose material, dust and other deleterious materials.
10. Valves: Follow requirements of SSPC SP6
11. Pumps, etc: Follow requirements of SSPC SP1

3.2 PAINT SCHEDULE

A. Finishes

Surface	Material	Coverage Rate
Wallboard:	Primer	1 Coat @ MDF 1.0 Mil
	Finish	2 Coats @ MDF 1.0 Mils
Interior Unfinished: Wood	Stain	1 Coat
	Sealer	1 Coat @ MDF 1.1 Mils
	Finish	2 Coats @ MDF 0.85 Mils
Exterior Unfinished: Wood	Stain	2 Coats 250 - 300 SF/Gal.
	Metal (Ferrous, Shop Primed)	Primer
Metal (Ferrous, not Shop Primed)	Paint	MDF 2.5 Mils
	Primer	MDF 2.0 Mils
Metal (Non-Ferrous, Galvanized and Aluminum)	Paint	MDF 2.5 Mils
	Primer	Touch-up
Interior CMU: Sealer	Primer	Touch-up
	Paint	MDF 2.5 Mils
Interior CMU: Two Part Epoxy	Sealer	See Mfg. Specs.
	Primer	1 Coat @ MDF 12.5 Mils
	Paint	2 Coats @ MDF 4.5 Mils

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B. Mechanical Systems

Surface	Material	Coverage Rate
Exposed Pipe (Metal)	Primer	1 Coat @ MDF 4.0
	Paint	1 Coat @ MDF 3.0
Exposed Pipe (PVC)	Paint	1 Coat @ MDF 3.0
Valves	Factory Applied Primer	
	Tie-Coat	1 Coat @ MDF 3.0
	Paint	1 Coat @ MDF 3.0
Pumps	Factory Applied Primer	
	Tie-Coat	1 Coat @ MDF 3.0
	Paint	1 Coat @ MDF 3.0

3.3 PROTECTION

- A. Take necessary precautions to protect this work and work of other trades. Furnish and place sufficient drop cloths to fully protect all parts of the work during execution of this contract. The Contractor shall be held fully responsible for paint droppings. Paint droppings shall be entirely removed, or damaged surfaces shall be repaired in a manner acceptable to the Engineer.
- B. Remove electrical plates, surface hardware, fittings and fastening, prior to painting operations. These items are to be carefully stored, cleaned and replaced on completion of work in each area. Do not use solvent to clean hardware that may remove permanent lacquer finish.

3.4 CLEANING

- A. All rubbish, waste or surplus materials shall be removed from time to time, and all hardware, floors, or other adjacent work shall be cleaned up when so directed.
- B. Hardware and other unpainted metal surfaces shall be cleaned, using lacquer thinner or paint remover. No edged tools or abrasives will be permitted. The use of thinners and solvents on hardware or other finished materials shall be done with care so as to avoid possible damage or removal of protective coatings or finishes.

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3.5 RIGHT OF REJECTION

- A. No work will be accepted which shows laps, stains, flat or glossy spots or imperfections in surface over which paint or other finish is applied.

END OF SECTION