

SECTION 09260 - GYPSUM BOARD SYSTEMS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Division 9 - Interior Painting.

1.2 SUMMARY

- A. Section Includes:
 - 1. Metal support systems.
 - 2. Gypsum wallboard.
 - 3. Acoustic insulation.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's product data for systems required, including installation instructions and data sufficient to show compliance with requirements.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: At locations indicated on drawings, provide fire-rated assemblies tested in accordance with ASTM E 119 and acceptable to authorities for ratings required. Provide assemblies as listed in the following:
 - 1. Underwriters Laboratories Inc.'s (UL) "Fire Resistance Directory" - shown on Sheet T-I.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original and unopened packages, containers, or bundles, with brand names and manufacturer's labels intact and legible.
- B. Store materials in dry location, fully protected from weather and direct exposure to sunlight.
- C. Stack gypsum board products flat and level, properly supported to prevent sagging or damage to ends and edges.
- D. Store corner bead and other metal and plastic accessories to prevent bending, sagging, distortion, or other mechanical damage.

1.6 PROJECT CONDITIONS

- A. Temperature: Maintain temperature in areas of installation between 50 and 70 degrees F for at least 24 hours before installation begins and for not less than 48 hours after joint finishing has been completed.
- B. Ventilation: Provide controlled ventilation during joint finishing operations, to eliminate excessive moisture. Avoid drafts during hot, dry weather to prevent excessively fast drying of joint compound.

PART 2 - PRODUCTS

2.1 FRAMING MATERIALS

- A. General: Select size and gage of framing members and establish spacing to comply with requirements of ASTM C 754 unless otherwise specifically indicated.
 - 1. Maximum deflection: L/240 at 5 lbf per square foot.
- B. Studs and Tracks: ASTM C 645, steel with protective coating.
 - 1. Nominal depth: 3-1/2 inches.
 - 2. Thickness: 0.0179 inch (25 gage), except 0.039 inch (20 gage) at framing for all doorways, where heavy items are supported by stud partition, and at other locations indicated.
- C. Framing Members: ASTM C 645, steel with protective coating.
 - 1. Hat shaped except as otherwise noted.
- D. Furring Fasteners/Connectors: Manufacturer's recommended system for specific application indicated, complying with ASTM C 754.
- E. Manufacturers: Products of the following manufacturers, provided they comply with requirements of the contracted documents, will be among those considered acceptable:
 - 1. Dale/Incor
 - 2. Dietrich Industries, Inc.
 - 3. Gold Bond Building Products, a National Gypsum Division.
 - 4. Marino/Ware
 - 5. Unimast (formerly part of USG)
 - 6. USG Corporation
 - 7. Georgia Pacific Corporation
 - 8. Domtar Gypsum Company.

2.2 GYPSUM BOARD

- A. Gypsum Wallboard: ASTM C 36; maximum lengths available.
 - 1. Regular, except as otherwise indicated.
 - 2. Fire-resistant type (Type X), where required for fire-resistant rated assemblies.
 - 3. Edges: Tapered.
 - 4. Thickness: 5/8 inch.
- B. Manufacturers: Products of the following manufacturers, provided they comply with requirements of the contract documents, will be among those considered acceptable:
 - 1. Centex American Gypsum
 - 2. Domtar Gypsum
 - 3. Georgia Pacific Corporation
 - 4. Gold Bond Building Products, a National Gypsum Division
 - 5. USG Corporation.

2.3 TRIM AND ACCESSORIES

- A. General: Except as otherwise specifically indicated, provide trim and accessories by manufacturer of gypsum board materials, made of galvanized steel or zinc alloy and configured for concealment in joint compound.

1. Include corner beads, edge trim, and other trim units necessary for project conditions. Provide accessories as required in order to achieve details indicated, whether or not specific accessories are shown on the drawings.
- B. Control Joints: Provide manufacturer's standard one-piece control joints of zinc alloy or other noncorrosive metal.

2.4 JOINT TREATMENT

- A. General: Provide products produced or recommended by manufacturer of gypsum boards. Comply with ASTM C 475 and with manufacturer's recommendations for specific project conditions.
- B. Joint Tape: Manufacturer's standard paper type.
- C. Joint Compound: Vinyl-based ready-mixed type for interior use, and as follows:
 1. All-purpose type, for both embedding tape and as topping.

2.5 MISCELLANEOUS MATERIALS

- A. General: Provide miscellaneous materials as produced or recommended by manufacturer of gypsum products.
- B. Screws: ASTM C 1002; self-drilling type; lengths as recommended by gypsum board manufacturer for project conditions. Comply with ASTM C 954 for fastening gypsum wallboard to steel members from 0.033 to 0.112 inch thick.
- C. Sound Attenuation Blankets: ASTM C 665, Type I; unfaced, semirigid mineral fiber mat; thickness as required for wall construction and STC rating indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Inspection: Verify that project conditions and substrates are appropriate to begin installation of work of this section.

3.2 INSTALLATION OF METAL FRAMING

- A. General: Comply with provisions of ASTM C 754 except where exceeded by other requirements.
- B. Steel Studs:
 1. General: Install tracks and studs in accordance with manufacturer's recommendations and as follows:
 - a. Stud spacing: 16 inches on center.
 2. Door openings: Comply with recommendations of USG Corporation's "Gypsum Construction Handbook"; reinforce openings as required for size and weight of doors, using a minimum of two side-by-side studs on each side of opening.
 - a. At openings in fire-rated partitions, comply with requirements of governing authorities for framing.
 3. Partition heights: Extend studs from floor to underside of structure above, unless otherwise indicated.
 4. Partial height partitions: Extend studs to height indicated bracing as required to assure stability.

5. Blocking and bracing: Install blocking and bracing as recommended by manufacturer for adequate support of wall-mounted items installed as work of other sections.

3.3 INSTALLATION OF GYPSUM BOARD

- A. General: Comply with ASTM C 840 and GA-216 except where exceeded by other requirements.
 1. Wherever possible, install gypsum board to minimize butt end joints.
 2. Install wallboards in a manner which will minimize butt end joints in center of wall area. Stagger vertical joints on opposite sides of walls.
 3. Butt all joints loosely, with maximum of 1/16 inch between boards.
 4. Place wrapped edges adjacent to one another; do not place cut edges or butt ends adjacent to wrapped edges.
 5. Support all edges and ends of each board on framing or by solid substrate, except that long edges at right angles to framing members in non-fire-rated construction may be left unsupported.
- B. Installation on Metal Framing:
 1. Single-layer application: Install gypsum board by means of screw attachment.
 - a. On walls and partitions, plan installation so that leading edge or end of gypsum board is attached to open end of stud flange first.

3.4 INSTALLATION OF TRIM AND ACCESSORIES

- A. General: Comply with manufacturer's recommendations for installation of trim items. Install trim units for concealment in joint finishing compound. Wherever possible, fasten metal trim items to substrate with same fasteners used to install gypsum board products.
- B. Corner Bead: Install metal corner bead at all external corners.
- C. Edge Trim: Install edge trim at locations indicated and wherever edge of gypsum board would otherwise be exposed.
- D. Control Joints: Install one-piece control joints at required locations. Do not remove tape until finishing operations are complete.

3.5 FINISHING

- A. General: Comply with ASTM C 840 and GA-216 except where exceeded by other requirements.
 1. Do not mix joint compounds except as specifically recommended by manufacturer.
- B. Finish gypsum board in each area in accordance with the following level of finish per GA-212, except where indicated otherwise on the drawings.
 1. Level 4: Embed tape in joint compound at all joints and interior angles. Provide three separate coats of compound at all joints, angles, fastener heads, and accessories. Provide smooth surfaces free of tool marks and ridges.
- C. Joint Treatment: Tape and finish joints in accordance with manufacturer's instructions for compound used, using proper hand tools designed for the purpose.
 1. Avoid raising nap of face paper when sanding; carefully sponge down any areas roughened by sanding process.
- D. Penetrations: Fill cutouts and openings around fixtures and penetrations with joint compound.

3.6 CLEANING

- A. Promptly remove any residual gypsum drywall materials from adjacent or adjoining surfaces, leaving spaces ready for subsequent finishing operations and decorating.

END OF SECTION 09260

SECTION 09261 – FIBEROCK INTERIOR PANELS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Division 9 - Interior Painting.

1.2 SUMMARY

- A. Section Includes:
 - 1. Metal support systems.
 - 2. Gypsum wallboard.
 - 3. Acoustic insulation.

1.3 SUBMITTALS

- A. Product Data: Submit manufacturer's product data for systems required, including installation instructions and data sufficient to show compliance with requirements.

1.4 QUALITY ASSURANCE

- A. Regulatory Requirements: At locations indicated on drawings, provide fire rated assemblies tested in accordance with ASTM E 119 and acceptable to authorities for ratings required. Provide assemblies as listed in the following:
 - 1. Underwriters Laboratories Inc.'s (UL) "Fire Resistance Directory" - shown on Sheet T-I.

1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials in original and unopened packages, containers, or bundles, with brand names and manufacturer's labels intact and legible.
- B. Store materials in dry location, fully protected from weather and direct exposure to sunlight.
- C. Stack gypsum board products flat and level, properly supported to prevent sagging or damage to ends and edges.

1.6 PROJECT CONDITIONS

- A. Temperature: Maintain temperature in areas of installation between 50 and 70 degrees F for at least 24 hours before installation begins and for not less than 48 hours after joint finishing has been completed.
- B. Ventilation: Provide controlled ventilation during joint finishing operations, to eliminate excessive moisture. Avoid drafts during hot, dry weather to prevent excessively fast drying of joint compound.
- C. Allow panels to acclimate to the temperature and humidity conditions at the jobsite prior to installation.

PART 2 - PRODUCTS

2.1 FRAMING

- A. Steel or wood wall framing to receive fiberock interior panels shall be structurally sound and in general compliance with all code requirements.
- B. Damaged and excessively bowed studs shall be replaced before installation of fiberock panels.
- C. For fire – resistant or abuse-resistant construction, steel framing must be 20-gauge or heavier with corrosion resistant metal coating equivalent to G40-hot-dipped galvanized.

2.2 INTERIOR PANELS

- A. Aqua-Tough Panels by USG 5/8" thickness, 48" width, and lengths of 8' to 12'.
- B. Equal products by Georgia Pacific or approved equal

2.3 JOINT REINFORCMENT

- A. Untiled areas – Sheetrock Brand Joint tape, Sheetrock Brand Durabond Setting Type Joint Compound.

2.4 FASTNERS

- A. Hot-dipped galvanized roofing nails for wood framing.
- B. Type S buglehead screws for 25 ga. steel framing
- C. Corrosion-resistant Type S-12 buglehead screws for 20-14 ga. steel framing.

2.5 ADHESIVES/MORTARS

- A. Meeting ASTM C557.73: multiple purpose adhesives.
- B. Meeting ANSI A136.1: Type 1 organic adhesive.
- C. Meeting ANSI A118.4: Latex modified Portland cement mortar.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Inspection: Verify that project conditions and substrates are appropriate to begin installation of work of this section.

3.2 FRAMING

- A. Space wood and steel framing a maximum of 24' o.c.
- B. Framing shall be designed not to exceed L360 deflection for tile and L240 for flexible finishes like paint.

3.3 INSTALLATION PANELS

- A. Cut panels to size with a utility knife and straight edge. Use a power saw only if equipped with a dust-collection device.
- B. Position all ends and edges of panels over framing members, except when joints are at right angles to framing members, as in perpendicular applications or when end joints are back-blocked.
- C. Install panels vertically whenever possible, end joints should be loosely fit. Install panels a minimum of 3/8" above floor. Stagger end joints in successive courses with joints on opposite sides of a partition placed on different studs.
- D. Attach panels to framing supports by spacing fasteners not less than 3/8" from edges and ends of panels and drive as recommended for specified fastening method. Drive fasteners in field of panels first, working toward ends and edges.
 - 1. Wood framing – use corrosion-resistant Type W or Type S buglehead screws or hot-dipped galvanized roofing nails. Fasteners must be of sufficient length to ensure a minimum 3/4" penetration into wood framing.
 - 2. Steel Framing – use corrosion –resistant Type S or Type S-12 buglehead screws for 20-12 ga steel framing. When using 25 ga. steel framing fasteners should be spaced no greater than 8" o.c. Fasteners must be of sufficient length to ensure a minimum of 3/8" penetration into steel framing.

3.4 CEILING

- A. Panel Application – center end or edge joints on framing. Stagger end joints in successive courses. Fit ends and edges closely but not forced together. Fasten boards to framing using recommended fastener.
- B. Corner Bead: Install metal corner bead at all external corners.
- C. Edge Trim: Install edge trim at locations indicated and wherever edge of gypsum board would otherwise be exposed.
- D. Control Joints: Install one-piece control joints at required locations. Do not remove tape until finishing operations are complete.

3.5 JOINT FINISH

- A. For Untiled Areas – Embed Sheetrock Joint Tape in Durabond setting – type joint compound and wipe with a joint knife, leaving a thin coating of joint compound over all joints and interior angles. Complete to level of finish specified in project requirements.

3.6 CLEANING

- A. Promptly remove any residual materials from adjacent or adjoining surfaces, leaving spaces ready for subsequent finishing operations and decorating.

END OF SECTION 09261

SECTION 09511 - ACOUSTICAL PANEL CEILINGS

PART 1 - GENERAL

1.1 Summary

- A. Work included in this section:
 - 1. Suspended acoustical tile and grid

1.2 Standards

- A. Acoustical Ceiling Unit Standard: ASTM E 1264.
- B. Acoustical Suspension System Standard: ASTM C 635 for materials.
- C. Surface Burning Characteristics:
 - 1. 25 or less for flame spread, 50 or less for smoke developed, per ASTM E 84.
- D. Fire-Resistance-Ratings:
 - 1. As determined per ASTM E 119 and as indicated by reference to design designations in UL "Fire Resistance Directory".

1.3 Submittals:

- A. In addition to submission of product data for each type of acoustical ceiling unit and suspension system required, submit the following:
 - 1. 6-inch square samples of each type of acoustical unit required.
 - 2. Set of 12-inch long samples of exposed runners and moldings.

1.4 Extra Material: Provide the Owner with 2 unopened cartons of extra acoustical units of each type.

1.5 Warranty: Acoustical units displaying warping, shrinking, sagging, or discoloration shall be corrected during one year guarantee period.

PART 2 - PRODUCTS

2.1 Mineral-Base Panels - Water Felted, with Painted Finish: Type III, Form 2 units per ASTM E 1264 complying with the following:

- A. Fissured and Perforated, and as follows:
 - 1. Color/Light Reflectance Coefficient: White/LR 0.75.
 - 2. Noise Reduction Coefficient: NRC 0.55.
 - 3. Ceiling Sound Transmission Class: CSTC 35.
 - 4. Edge Detail: Square.
 - 5. Size: 24 inches by 24 inches by 5/8 inch.
- B. Products: Subject to compliance with requirements, provide one of the following or pre-approved equal:
 - 1. Mineral Base Panels - Water Felted, with Painted Finish and Perforated and Fissured Pattern, Non-Fire Resistant Rated

2.2 Non-Fire-Resistance-Rated Direct-Hung Suspension Systems: As follows, with hangers, attachment devices, and edge moldings and trim as indicated.

- A. Wide-Faced Capped Double-Web Steel Suspension System: Runners roll-formed from pre-painted or electrolytic zinc-coated cold-rolled steel sheet, with pre-finished 15/16 inch-wide metal caps on flanges, and as follows:
1. Structural Classification: Intermediate-Duty System.
 2. End condition of cross runners: butt-edge type.
 3. Finish: Steel sheet painted white.

2.3 MANUFACTURER

- A. Subject to compliance with requirements, provide products of one of the following:
1. Armstrong World Industries, Inc.
 2. Chicago Metallic Corporation.
 3. National Rolling Mills, Inc.
 4. USG Interiors, Inc.

PART 3 - Execution

3.1 General

- A. Install acoustical ceiling systems to comply with below, per manufacturer's instructions, and CISCA "Ceiling Systems Handbook."
1. ASTM C 636.

3.2 Layout

- A. Balance ceiling borders on opposite sides, using more-than-half-width acoustical units.

3.3 Suspension System

- A. Secure to building structure, with hangers spaced 4'-0" along supported members.

3.4 Edge Moldings

- A. Secure to substrate with screw anchors spaced 16 inches o.c. Miter corner joints.
- B. Cope exposed edges of intersecting exposed suspension members to produce flush intersections.

END OF SECTION 09511

SECTION 09660 - RESILIENT TILE FLOORING/SHEET VINYL

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Vinyl Composition Tile
 - 2. Commercial Sheet Vinyl
 - 3. Vinyl Base

1.2 SUBMITTALS

- A. Comply with the requirements of section 01340.
- B. Product Data: Submit technical data from each manufacturer of resilient products required.
- C. Initial Samples: Submit manufacturer's standard color selection samples for resilient products required, including all available colors and patterns.

1.3 PROJECT CONDITIONS

- A. Environmental Requirements: At least 48 hours prior to beginning work, move resilient flooring materials to areas of installation and maintain at minimum 70 degrees F until 48 hours after completing installation and at minimum 55 degrees F thereafter.
- B. Sequencing: Do not begin installation of resilient flooring products until painting has been completed for each area.
- C. Existing Conditions: Do not install resilient flooring on concrete substrates until testing has been conducted to assure that moisture levels are acceptable.

1.4 MAINTENANCE

- A. Extra Materials: At time of completing installation, deliver stock of maintenance materials to the owner. Furnish products matching those actually installed, packaged for storage and clearly labeled.
- B. Resilient tile: 1 carton of each variety installed.
- C. Vinyl base: 10 feet of each variety installed.

PART 2 - PRODUCTS

2.1 VINYL COMPOSTION TILE

- A. Standard: FS SS-T-312, Type IV; 12 inches by 12 inches.

- B. Manufacturers: Products of the following manufacturers, provided they comply with requirements of the contract documents, will be among those considered acceptable:
 - 1. Armstrong World Industries, Inc.
 - 2. Azrock Industries Inc.
 - 3. Congoleum
 - 4. Tarkett, Inc.
- C. Composition 1: Free of asbestos.
- D. Gage: 1/8 inch.

2.2 COMMERCIAL SHEET VINYL

- A. Standard: ASTM F 1303-90, Type 11, Grade1, 6 foot width minimum
- B. Manufacturer: Products of the following manufacturers, provided they comply with the requirements of the contract documents, will be among those considered acceptable:
 - 1. Armstrong World Industries, Inc.
 - 2. Congoleum Corporation
 - 3. Azrock Industries, Inc.
 - 4. Tarkett
- C. Gage: .080 inches thick color throughout body.

2.3 RESILIENT BASE MATERIALS

- A. Vinyl Wall Base: FS SS-W-40, Type II, and as follows:
 - 1. Manufacturers: Products of the following manufacturers, provided they comply with requirements of the contract documents, will be among those considered acceptable:
 - a) Flexco Company.
 - b) Johnsonite, Inc.
 - c) The R. C. Musson Rubber Company.
- B. Height: 4 inches.
- C. Style: Standard toe base.
- D. Corners: Preformed or molded units matching base in color and finish.

2.4 MISCELLANEOUS ACCESSORIES

- A. Resilient Edge Strips: Solid rubber or vinyl edging, in tapered or rounded profile, nominally 1 inch in width and 1/8 inch in thickness.
- B. Color: Matching flooring.
- C. Adhesive: Type recommended by manufacturer of resilient product for specific substrate conditions.

2.5 COLORS AND PATTERNS

- A. Provide colors and patterns of resilient flooring materials as selected by the architect from manufacturer's standard product line.

PART 3 - EXECUTION

3.1 GENERAL INSTALLATION REQUIREMENTS

- A. Comply with manufacturer's published recommendations for installation in each area, extending resilient flooring into spaces which are partially concealed. Cut and fit tightly to fixtures, pipes, and other obstructions, as well as to walls and partitions.
- B. Tightly adhere resilient flooring to substrate with no open joints or cracks, and without raised or blistered areas. Spread adhesive evenly, so that final installation will be without telegraphed markings from adhesive or substrate.
- C. Verify conditions ready to receive all work of this section. Do not proceed until unsatisfactory conditions are corrected.

3.2 TILE INSTALLATION

- A. Layout: Establish center of each space and lay tile from center point, so tiles at each edge will be not less than 1/2 tile and equal in width.
- B. Matching: In each space, use tiles from same production run, and lay tiles in same sequence as removed from cartons. Discard broken, chipped, or otherwise damaged tiles.
- C. Lay tile square to room axis.
- D. Lay tile to achieve monolithic appearance, with pattern in all tiles oriented in same direction.

3.3 INSTALLATION OF RESILIENT BASE

- A. Apply resilient base securely in locations indicated, using maximum lengths available.

3.4 INSTALLATION OF MISCELLANEOUS ACCESSORIES

- A. Resilient Edge Strips: At locations shown on drawings, or where otherwise required to protect edge of resilient flooring, install resilient edge strips securely with recommended adhesive, to achieve tightly butted joint.

3.5 CLEANING

- A. Initial Cleaning: Remove excess and waste materials promptly, and sweep or vacuum clean resilient flooring as soon as installation has been completed in each area. After adhesive has had adequate time to set, mop each area with damp mop and mild detergent.

- B. Final Cleaning: Remove scuff marks, excess adhesive, and other foreign substances, using only cleaning products and techniques recommended by manufacturer of resilient products. The contractor shall provide final waxing and buffing at the completion of the project.
- C. Provide Owner with manufacturer's standard cleaning procedures.

END OF SECTION 09660

SECTION 09900 - PAINTING

PART 1 - GENERAL

1.1 Summary:

- A. This Section includes surface preparation, painting, and finishing of exposed interior and exterior items and surfaces.
 - 1. Surface preparation, priming, and finish coats specified are in addition to shop-priming and surface treatments specified under other sections.

- B. Paint exposed surfaces whether or not colors are designated in the schedules, except where a surface or material is specifically indicated not to be painted or is to remain natural. Where an item or surface is not specifically mentioned, paint the same as similar adjacent materials or surfaces. If color or finish is not designated, the Architect will select from standard colors or finishes available.

- C. Painting is not required on prefinished items, finished metal surfaces, concealed surfaces, operating parts, and labels.
 - 1. Prefinished items not to be painted include the following factory-finished components:
 - a) Window units.
 - b) Solid Plastic Toilet Partitions
 - c) Acoustic materials.
 - d) Finished mechanical and electrical equipment.
 - e) Light fixtures.
 - f) Switchgear.
 - g) Distribution cabinets.
 - 2. Concealed surfaces not to be painted include wall or ceiling surfaces in the following generally inaccessible areas:
 - a) Foundation spaces.
 - b) Furred areas.
 - c) Utility tunnels.
 - d) Pipe spaces.
 - e) Duct shafts.
 - 3. Finished metal surfaces not to be painted include:
 - a) Anodized aluminum.
 - b) Stainless steel.
 - c) Chromium plate.
 - d) Copper.
 - e) Bronze.
 - f) Brass.
 - 4. Operating parts not to be painted include moving parts operating equipment such as the following:
 - a) Valve and damper operators.
 - b) Linkages.
 - c) Sensing devices.
 - d) Motor and fan shafts.
 - 5. Labels: Do not paint over Underwriter's Laboratories, Factory Mutual or other code-required labels or equipment name, identification, performance rating, or nomenclature plates.

1.2 Related Work

A. Related Documents:

1. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification sections, apply to this section.

B. Related Sections: The following sections contain requirements that relate to this section:

1. Division 6 Section "Architectural Woodwork" for shop priming architectural woodwork.
2. Division 8 Section "Steel Doors and Frames" for shop priming steel doors and frames.
3. Division 15 and 16: Painting mechanical and electrical work is specified in Divisions 15 and 16, respectively.
4. Division 4 Section: "Concrete Unit Masonry" for painted CMU.

1.3 Definitions

- A. "Paint" includes coating systems materials, primers, emulsions, enamels, stains, sealers and fillers, and other applied materials whether used as a prime, intermediate, or finish coats.

1.4 Submittals

- A. Comply with requirements of section 01340

- B. Product Data: Manufacturer's technical information, label analysis and application instructions for each material proposed for use.

1. List each material and cross-reference the specific coating and finish system and application. Identify each material by the manufacturer's catalog number and general classification.

- C. Samples for initial color selection in the form of manufacturer's color charts.

- D. Samples for verification purposes: Provide samples of each color and material to be applied, with texture to simulate actual conditions, on representative samples of the actual substrate. Define each separate coat, including block fillers and primers. Use representative colors when preparing samples for review. Resubmit until required sheen, color, and texture are achieved.

1. Provide a list of material and application for each coat of each sample. Label each sample as to location and application.
2. Submit samples on the following substrates for the Architect's review of color and texture only:
 - a) Concrete: Provide two 4-inch-square samples for each color and finish.
 - b) Concrete Masonry: Provide two 4 x 8 inch samples of masonry, with mortar joint in the center, for each finish and color.
 - c) Stained or Natural Wood: Provide two 4 x 8 inch samples of natural and stained wood finish on actual wood surfaces.
 - e) Ferrous Metal: Provide two 4 inch square samples of flat metal and two 8 inch long samples of solid metal for each color and finish.

1.5 Quality Assurance

- A. Single Source Responsibility: Provide Primers and undercoat paint produced by the same manufacturer as the finish coats.
- B. Coordination of Work: Review other sections in which primers are provided to ensure compatibility of the total systems for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
 - 1. Notify the Architect of problems anticipated using the materials specified.
- C. Material Quality: Provide the manufacturer's best quality trade sale paint material of the various coating types specified. Paint material containers not displaying manufacturer's product identification will not be acceptable.
 - 1. Proprietary names used to designate colors or materials are not intended to imply that products named are required or to exclude equal products of the manufacturers.
 - 2. Federal Specifications establish a minimum quality level for paint materials, except where other product identification is used. Provide written certification from the manufacturer that materials provided meet or exceed these criteria.
 - 3. Products that comply with qualitative requirements of applicable Federal Specifications, yet differ in quantitative requirements, may be considered for use when acceptable to the Architect. Furnish material data and manufacturer's certificate of performance to Architect for proposed substitutions.

1.6 Delivery, Storage, and Handling

- A. Deliver materials to the job site in the manufacturer's original unopened packages and containers bearing manufacturer's name and label and the following information:
 - 1. Product name or title of material
 - 2. Product description (generic classification or binder type).
 - 3. Federal Specification number, if applicable.
 - 4. Manufacturer's stock number and date of manufacture.
 - 5. Contents by volume, for pigment and vehicle constituents.
 - 6. Thinning instructions.
 - 7. Application instructions.
 - 8. Color name and number.
- B. Store Materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 degrees F (7 degrees C). Maintain containers used in storage in a clean condition, free of foreign materials and residue.
 - 1. Protect from freezing. Keep storage area neat and orderly. Remove oil rags and waste daily. Take necessary measures to ensure that workers and work areas are protected from fire and health hazards resulting from handling, mixing, and application.

1.7 Job Conditions

- A. Apply water-based paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 50 degrees F (10 degrees C) and 90 degrees F (32 degrees C).
- B. Apply solvent-thinned paints only when the temperature of surfaces to be painted and surrounding air temperatures are between 45 degrees F (7 degrees C) and 95 degrees F (35 degrees C).

- C. Do not apply paint in snow, rain, fog, or mist, when the relative humidity exceeds 85%, at temperatures less than 5 degrees F (3 degrees C) above the dew point, or to damp or wet surfaces.
1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by the manufacturer during application and drying periods.

PART 2 - Products

2.1 Manufacturers

- A. Manufacturer: Subject to compliance with requirements, provide product's of one of the following:
1. Devoe and Reynolds Co. (Devoe).
 2. The Glidden Company (Glidden).
 3. Benjamin Moore and Co. (Moore).
 4. PPG Industries, Pittsburgh Paints (Pittsburgh).
 5. Pratt and Lambert (P & L).
 6. The Sherwin-Williams Company (S-W).
 7. Duron Paints.
- B. Masonry Block Filler
1. Higher-Performance Latex Block Filler: Heavy-duty latex block fillers used for filling open textured interior and exterior concrete masonry block before application of top coats:
 - a) Devoe: 52901 Bloxfil Acrylic Latex Block Filler.
 - b) Glidden: 5317 Ultra-Hide Acrylic Latex Block Filler.
 - c) Moore: Moorcraft Block Filler #145.
 - d) Pittsburgh: 6-7 Latex Masonry Block Filler.
 - e) P & L: Pro-Hide Plus Block Filler.
 - f) S-W: Heavy -Duty Block Filler B42W46.
 - g) Duron: Block Kote Latex Block Filler 08-126.
 2. Block Filler over concrete or concrete masonry block under epoxy emulsion finish:
 - a) Devoe: 52901 Bloxfil Acrylic Latex Block Filler.
 - b) Glidden: 5317 Ultra-Hide Block Filler.
 - c) Pittsburgh: 16-90 High Performance Acrylic Block Filler.
 - d) S-W: Heavy-Duty Block Filler B42W46.
 - e) Tnemec: 63-1500 Filler and Surfacer.
 - f) Duron: Block Kote Latex Block Filler 08-126.
- C. Primers
1. Interior Flat Latex-Based Paint: Flat latex paint used as a primer over concrete and masonry under alkyd flat and semigloss enamel:
 - a) Devoe: 36XX Wonder-Tones Latex Flat Wall Paint.
 - b) Glidden: 5300 Ultra-Hide Flat Wall Paint.
 - c) Moore: Moore's Latex Quick-Dry Prime Seal #201.
 - d) Pittsburgh: 80 Line Wallhide Flat Latex Paint.
 - e) P & L: Vapex Latex Flat Wall Finish.
 - f) S-W: Pro-Mar 200 Latex Flat B30W200.
 - g) Duron: Delux Flat Vinyl Latex 38 series.

2. Latex-Based Interior White Primer: Latex-based primer coating used on interior gypsum drywall under a flat latex paint or an alkyd semigloss enamel.
 - a) Devoe: 50801 Wonder-Tones Latex Primer and Sealer.
 - b) Glidden: 5019 PVA Primer.
 - c) Moore: Moore's Latex Quick-Dry Prime Seal #201.
 - d) Pittsburgh: 6-2 Quick-Dry Latex Prime Sealer.
 - e) P & L: Latex Wall Primer Z30001.
 - f) S-W: Pro-Mar 200 Latex Wall Primer B28W200.
 - g) Duron: Drywall Primer Sealer 18-004.
3. Synthetic, Rust-Inhibiting Primer: Quick-drying, rust-inhibiting primer for priming ferrous metal on the exterior under full-gloss and flat alkyd enamel and on the interior under flat latex paint or odorless alkyd semigloss or alkyd gloss enamels:
 - a) Devoe: 14920 Bar-Ox Quick-Dry Metal Primer, Red.
 - b) Glidden: 5210 Glid-Guard Universal Fast-Dry Metal Primer.
 - c) Moore: Ironclad Retardo Rust-Inhibitive Metal Primer.
 - d) Pittsburgh: 6-208 Red Inhibitive Metal Primer.
 - e) P & L: Effecto Rust-Inhibiting Primer.
 - f) S-W: Kem Kromik Metal Primer B50N2/B50W1.
 - g) Duron: Dura Clad Metal Primer 33-250/33-104.

D. Undercoat Materials

1. Interior Enamel Undercoat: Ready-mixed enamel for use on the interior as an undercoat over a primer on concrete or masonry under an odorless semigloss enamel:
 - a) Devoe: 8801 Velour Alkyd Enamel Undercoat.
 - b) Glidden: 4200 Spred Ultra Semi-Gloss Enamel.
 - c) Moore: Moore's Alkyd Enamel Underbody #217.
 - d) Pittsburgh: 6-6 Speedhide Quick-Dry Enamel Undercoater.
 - e) P & L: E6 Enamel Undercoat.
 - f) S-W: Pro-Mar 200 Latex Wall Primer B28W200.
 - g) Duron: Alkyd Enamel Undercoater 04-005.
2. Interior Enamel Undercoat: Ready-mixed enamel for use as an undercoat cover over wood and hardboard under an odorless alkyd semigloss enamel or full gloss alkyd enamel:
 - a) Devoe: 8801 Velour Alkyd Enamel Undercoat.
 - b) Glidden: 310 Glidden Wood Undercoater.
 - c) Moore: Moore's Alkyd Enamel Underbody #217.
 - d) Pittsburgh: 6-6 Speedhide Quick-Dry Enamel Undercoater.
 - e) P & L: Interior Trim Primer.
 - f) S-W: Pro-Mar 200 Alkyd Enamel Undercoater B49W200.
 - g) Duron: Alkyd Enamel Undercoater 04-005.
3. Interior Enamel Undercoat: Ready-mixed enamel for use as an undercoat over a primer on ferrous or zinc-coated metal under an interior alkyd semigloss enamel or a full-gloss alkyd enamel:
 - a) Devoe: 8801 Velour Alkyd Enamel Undercoat.
 - b) Glidden: 4200 Spred Ultra Semi-Gloss Enamel.
 - c) Moore: Moore's Alkyd Enamel Underbody #217.
 - d) Pittsburgh: 6-6 Speedhide Quick-Dry Enamel Undercoater.
 - e) P & L: Interior Trim Primer.
 - f) S-W: Pro-Mar 200 Alkyd Enamel Undercoater B49W200.
 - g) Duron: Alkyd Enamel Undercoater 04-005.

E. Exterior Finish Paint Material

1. Exterior Acrylic Emulsion: Quick-drying, flat, acrylic paint for use on the exterior over concrete, stucco, masonry (including concrete masonry block), and mineral-fiber-reinforced cement-panel surface)s:
 - a) Devoe: 15XX Wonder-Shield Exterior Acrylic Latex Flat House Paint
 - b) Glidden: 3525 Spred Glide-On.
 - c) Moore: Moore's Flat Exterior Latex Masonry & House Paint # 105.
 - d) Pittsburgh: 72 Line Sun-Proof Acrylic Latex House Paint.
 - e) P & L: Vapex Latex Flat House Paint.
 - f) S-W: A-100 Acrylic Latex Flat Exterior Finish A6 Series.
 - g) Duron: Dura Kote Acrylic Latex Paint - 06 Series.
2. Alkyd Gloss Enamel: Weather-resistant, air-drying, high gloss enamel for use on the exterior over prime-coated wood.:
 - a) Devoe: 70XX Mirrolac Interior/Exterior Alkyd Gloss Enamel.
 - b) Glidden: 4500 Glid-Guard Industrial Enamel.
 - c) Moore: Impervo High-Gloss Enamel #133.
 - d) Pittsburgh: 54 Line Quick-Dry Enamel.
 - e) P & L: Effecto Enamel.
 - f) S-W: Industrial Enamel B-54 Series.
 - g) Duron: Dura Clad Alkyd Gloss Enamel 12 series.

F. Interior Finish Paint Material

1. Interior Semigloss Odorless Alkyd Enamel: Low-odor, semigloss, alkyd enamel for use over a primer and undercoat on concrete, masonry (including concrete masonry block), plaster, wood, and hardboard and both ferrous and zinc-coated (galvanized) metal surfaces and over a primer on gypsum-drywall:
 - a) Devoe: 26XX Velour Alkyd Semigloss Enamel.
 - b) Glidden: 4200 Spred Ultra Semigloss Enamel.
 - c) Moore: Moore's Satin Impervo Enamel #235.
 - d) Pittsburgh: 27 Line Wallhide Semigloss Enamel.
 - e) P & L: Cellu-Tone Alkyd Satin Enamel.
 - f) S-W: Classic 99 Semigloss Enamel A40 Series.
2. Concrete sealer (base bid)
 - a) Thoro: Thoroshield or approved equal manufacturer suitable for kennels.
3. Epoxy coating on concrete floor in kennel area
 - a) Anti-Hydro International: A-H Sure Step or approved equal by DuraFlex, General Polymers suitable for kennel or approve equal.
 - b) Gray color, non-slip - installation as per manufacturers recommendations.
 - c) Submit for approval prior to installation.
 - d)
4. Epoxy Paint on concrete masonry: waterbased epoxy gloss coating on concrete masonry
 - a) Devoe: Tru-Glaze - WB 4408
 - b) Equals by Glidden, Pittsburgh or approved equal.

G. Miscellaneous Wood Finishing Materials

1. Oil-Type Interior Wood Stain: Slow-penetrating oil-type wood stain for general use on interior wood surfaces under varnishes or wax finishes:

- a) Devoe: 96XX Wonder Woodstain Alkyd Stain.
 - b) Glidden: 1600 Woodmaster Oil Stain.
 - c) Moore: 241 Moore's Interior Wood Finishes Penetrating Stain.
 - d) Pittsburgh: 77-302 Rez Medium Tint Base.
 - e) P & L: S-Series Tonetic Wood Stain.
 - f) S-W: Oil Stain A-48 Series.
 - g) Duron: Oil Stain 28-012.
2. Polyurethane: Provide satin polyurethane as recommended by the coating manufacturer for use on interior stained and natural-finished woodwork.

Part 3 - EXECUTION

3.1 Examination

- A. Examine substrates and conditions under which painting will be performed for compliance with requirements for application of paint. Do not begin paint application until unsatisfactory conditions have been corrected.
 - 1. Start of painting will be construed as the Applicator's acceptance of surfaces and conditions within a particular area.

3.2 Preparation

- A. General Procedures: Remove hardware and hardware accessories , plates, machine surfaces, lighting fixtures, and similar items in place that are not to be painted, or provide surface-applied protection prior to surface preparation and painting. Remove these items if necessary for complete painting of the items and adjacent surfaces. Following completion of painting operations in each space or area, have items reinstalled by workers skilled in the trades involved.
 - 1. Clean surfaces before applying paint or surface treatments. Remove oil and grease prior to cleaning. Schedule cleaning and painting so that dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- B. Surface Preparation: Clean and prepare surfaces to be painted in accordance with the manufacturer's instructions for each particular substrate condition and as specified.
 - 1. Provide barrier coats over incompatible primers or remove and reprime. Notify Architect in writing of problems anticipated with using the specified finish-coat material with substrates primed by others.
 - a) Cementitious Materials: Prepare concrete, concrete masonry block, cement plaster, and mineral-fiber-reinforced cement panel surfaces to be painted. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to remove glaze. If hardeners or sealers have been used to improve curing, use mechanical methods of surface preparation.
 - b) Use abrasive blast-cleaning methods if recommended by the paint manufacturer.
 - c) Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause blistering and burning of finish paint, correct this condition before application. Do not paint surfaces where moisture content exceeds that permitted in manufacturer's printed directions.
 - d) Clean concrete floors to be sealed or painted with a 5 percent solution of muriatic acid or other etching cleaner. Flush the floor with clean water to

remove acid, neutralize with ammonia, and rinse.; allow to dry and vacuum before painting.

- e) Wood: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Sand surfaces exposed to view smooth and dust off.
- f) Scrape and clean small, dry, seasoned knots and apply a thin coat of white shellac or other recommended knot sealer before application of primer. After priming, fill holes and imperfections in finish surfaces with putty or plastic wood filler. Sand smooth when dried.
- g) Prime, stain, or seal wood to be painted immediately upon delivery. Prime edges, ends, faces, undersides and backsides of wood, including cabinets, counters, cases, and paneling.
- h) When transparent finish is required, backprime with spar varnish.
- i) Backprime paneling on interior partitions where masonry, plaster, or other wet wall construction occurs on backside.
- j) Seal tops, bottoms, and cutouts of unprimed wood doors with a heavy coat of varnish or sealer immediately upon delivery.
- k) Ferrous Metals: Clean non-galvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with recommendations of the Steel Structures Painting Council.
- l) Touch up bare areas and shop-applied prime coats that have been damaged. Wire-brush, clean with solvents recommended by the paint manufacturer, and touch up with the same primer as the shop coat.

- C. Materials Preparation: Carefully mix and prepare paint materials in accordance with the manufacturer's directions.
 - 1. Maintain containers used in mixing and application of paint in a clean condition, free of foreign materials and residue.
 - 2. Stir material before application to produce a mixture of uniform density; stir as required during application. Do not stir surface film into material. Remove film and, if necessary, strain material before using.
 - 3. Use only thinners approved by the paint manufacturer, and only within recommended limits.

3.3 Application

- A. Apply paint in accordance with manufacturer's directions. Use applicators and techniques best suited for substrate and type of material being applied.
- B. Do not paint over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to formation of a durable paint film.
- C. Paint colors, surface treatments, and finishes are indicated in "schedules".
- D. Provide finish coats that are compatible with primers used.
- E. The number of coats and film thickness required is the same regardless of the application method. Do not apply succeeding coats until the previous coat has cured as recommended by the manufacturer. Sand between applications where sanding is required to produce an even smooth surface in accordance with the manufacturer's directions.
- F. Apply additional coats when undercoats, stains, or other conditions show through final coat of paint until paint film is of uniform finish, color, and appearance. Give special

attention to ensure that surfaces, including edges, corners, crevices, welds, and exposed fasteners, receive a dry film thickness equivalent to that of flat surfaces.

- G. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, convector covers, covers for finned tube radiation, grilles, and similar components are in place. Extend coatings in these areas as required to maintain the system integrity and provide desired protection.
- H. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Paint surfaces behind permanently fixed equipment or furniture with prime coat only before final installation of equipment.
- I. Paint interior surfaces of ducts, where visible through registers or grilles, with a flat, nonspecular black paint.
- J. Paint back sides of access panels and removable or hinged covers to match exposed surfaces.
- K. Finish exterior doors on tops, bottoms, and sides edges same as exterior faces.
- L. Sand lightly between each succeeding enamel or varnish coat. Omit primer on metal surfaces that have been shop-primed and touch up painted.

3.4 Scheduling Painting: Apply first coat to surfaces that have been cleaned, pretreated, or otherwise prepared for painting as soon as practicable after preparation and before subsequent surface deterioration.

- A. Allow sufficient time between successive coats to permit proper drying. Do not recoat until paint has dried to where it feels firm, and does not deform or feel sticky under moderate thumb pressure and where application of another coat of paint does not cause lifting or loss of adhesion of the undercoat.
- B. Minimum Coating Thickness: Apply block fillers to concrete masonry block at a rate to ensure complete coverage with pores filled.
- C. Block Fillers: Apply block fillers to concrete masonry block at a rate to ensure complete coverage with pores filled.
- D. Prime Coats: Before application of finish coats, apply a prime coat of material as recommended by the manufacturer to material that is required to be painted or finished and has not been prime coated by others. Recoat primed and sealed surfaces where evidence of suction spots or unsealed areas in first coat appears, to assure a finish coat with no burn through or other defects due to insufficient sealing.
- E. Pigmented (Opaque) Finishes: Completely cover to provide an opaque, smooth surface of uniform finish, color, appearance, and coverage. Cloudiness, spotting, holidays, laps, brush marks, runs, sags, ropiness, or other surface imperfections will not be acceptable.
- F. Transparent (Clear) Finishes: Use multiple coats to produce a glass-smooth surface film of even luster. Provide a finish free of laps, cloudiness, color irregularity, runs, brush marks, orange peel, nail holes, or other surface imperfections.
- G. Completed Work: Match approved samples for color, texture, and coverage. Remove, refinish, or repaint work not in compliance with specified requirements.

3.5 Cleaning

- A. Cleanup: At the end of each work day, remove empty cans, rags, rubbish, and other discarded paint materials from the site.
- B. Upon completion of painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping, using care not to scratch or damage adjacent finished surfaces.

3.6 Protection

- A. Protect work of other trades, whether to be painted or not, against damage by painting. Correct damage by cleaning, repairing or replacing, and repainting, as acceptable to Architect. 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.
- B. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.7 Exterior Paint Schedule

- A. General: Provide the following paint systems for the various substrates indicated.
- B. Concrete (Other than concrete masonry units):
 - 1. Lusterless (Flat) Acrylic Finish: 2 coats with total dry film thickness not less than 2.5 mils.
 - a) First Coat: Exterior Acrylic Emulsion (FS TT-P-19).
 - b) Second Coat: Exterior Acrylic Emulsion (FS TT-P-19).
- C. Ferrous Metal: Primer is not required on shop-primed items.
 - 1. Full-Gloss Alkyd Enamel: 2 finish coats over primer.
 - a) Primer: Synthetic Rust-Inhibiting Primer (FS TT-P-664).
 - b) First Coat: Alkyd Gloss Enamel (FS TT-E-489).
 - c) Second Coat: Alkyd Gloss Enamel (FS TT-E-489).

3.8 Interior Paint Schedule

- A. General: Provide the following paint systems for the various substrates, as indicated.
- B. Masonry
 - 1. Semigloss Enamel Finish: 3 coats with total dry film thickness not less than 3.5 mils, excluding filler coat.
 - a) Block Filler: High-performance Latex Block Filler.
 - b) Undercoat: Interior Enamel Undercoat (FS TT-E-543).
 - c) Finish Coat: Interior Semigloss Odorless Alkyd Enamel (FS TT-E-509) Acrylic Coating.
 - 2. Epoxy Paint:
 - a) Block Filler: Bloxfil 4000
 - b) Primer: Tru-Glaze-WB 4030
 - c) Finish Coat: Tru-Glaze-WB 4408

- C. Gypsum Drywall Systems:
1. Odorless Semigloss Alkyd Enamel Finish: 3 coats with total dry film thickness not less than 2.5 mils.
 - a) Primer: Interior Latex-Based White Primer (FS TT-P-650).
 - b) First Coat: Interior Semigloss Odorless Alkyd Enamel (FS TT-E-509).
 - c) Second Coat: Interior Semigloss Odorless Alkyd Enamel (FS TT-E-509).
- D. Stained Woodwork:
1. Stained-Wax Polished Finish: 4 finish coats over stain.
 - a) Stain Coat: Oil-Type Interior Wood Stain (FS TT-S-711).
 - b) First Coat: Cut Shellac (FS TT-S-300).
 - c) Second Coat: Satin Polyurethane.
 - d) Third Coat: Satin Polyurethane.
 - e) Fourth Coat: Satin Polyurethane.
- E. Ferrous Metal:
1. Semigloss Enamel Finish: 2 coats over primer with total dry film thickness not less than 2.5 mils.
 - a) Primer: Synthetic Rust-Inhibiting Primer (FS TT-P-664).
 - b) Undercoat: Interior Enamel Undercoat (FS TT-E-543).
 - c) Finish Coat: Interior Semigloss Odorless Alkyd Enamel (FS TT -E-509).
- F. Concrete Floor:
1. Concrete sealer: 1 coat with uniform thickness.
 2. Epoxy coating: 1 coat with uniform thickness.

End of Section 09900