

Division 9
Finishes

SECTION 09260

GYPSUM BOARD SYSTEMS

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Metal stud wall framing.
- B. Metal channel ceiling framing.
- C. Gypsum board with taped and sanded joint treatment.

1.2 QUALITY ASSURANCE

- A. Perform work in accordance with ASTM C840, GA-201- gypsum board for walls and ceilings and GA-216- recommended specifications for the application and finishing of gypsum board.

PART 2 - PRODUCTS

2.1 GYPSUM BOARD SYSTEM

- A. Studs and Tracks: ASTM C645; galvanized sheet steel, C shape, gauge as shown on structural drawings
- B. Furring, Framing and Accessories: ASTM C645.
- C. Gypsum Board Types: 5/8 inch thick, maximum permissible length; ends square cut, tapered edges; unless noted otherwise as follows:
 - 1. Standard Type: ASTM C36.
 - 2. Fire Rated Type: ASTM C36, fire resistive, moisture resistant, UL rated.
 - 3. Moisture Resistant Type: ASTM C630.

2.2 MISCELLANEOUS MATERIALS

- A. Provide auxiliary materials for gypsum board construction that comply with referenced standards and recommendations of gypsum board manufacturer.
- B. Steel drill screws complying with ASTM C 1002 for the following applications:
 - 1. Fastening gypsum board to steel members less than 0.03 inches thick.

2. Fastening gypsum board to gypsum board.
- C. Steel drill screws complying with ASTM C 954 for gypsum board to steel members from 0.033 to 0.112 inch thick.
 - D. Corrosion-resistant-coated steel drill screws of size and type recommended by board manufacturer for fastening cementitious backer units.
 - E. Sound Attenuation Blankets: Unfaced mineral-fiber blanket insulation produced by combining mineral fibers of type described below with thermosetting resins to comply with ASTM C 665 for Type I (blankets without membrane facing):
 1. Mineral-Fiber Type: Fibers manufactured from glass.
 - F. Thermal Insulation: Material indicated below.
 1. Foil-faced Mineral-Fiber Batt Insulation: Foil-Faced fiber-fiber batt insulation produced by combining mineral fibers of type described below with thermosetting resins to comply with ASTM C 665.
 - a. Mineral-Fiber Type: fibers manufactured from glass.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrate to which gypsum board assemblies attach or abut, installed hollow metal frames, cast-in-anchors, and structural framing with installer present for compliance with requirements for installation tolerances and other conditions affecting performance of assemblies specified in this section. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 PREPARATION

- A. Ceiling Anchorages: Coordinate installation of ceiling suspension systems with installation of overhead structural assemblies to receive ceiling hangers that will develop their full strength and at spacing required to support ceilings.
 1. Furnish concrete inserts and other devices indicated to other trades for installation well in advance of time needed for coordination with other construction.

3.3 INSTALLING STEEL FRAMING, GENERAL

- A. Steel Framing Installation Standard: Install steel framing to comply with ASTM C 754 and with ASTM C 840 requirements that apply to framing installation.

- B. Install supplementary framing, blocking, and bracing at terminations in gypsum board assemblies to support fixtures, equipment services, heavy trim, grab bars, toilet accessories, furnishings, or similar construction.

Comply with details indicated and with recommendations of gypsum board manufacturer or, if none available, with "Gypsum Construction Handbook" published by United States Gypsum Co.

- C. Isolate steel framing from building structure at locations indicated to prevent transfer of loading imposed by structural movement. Comply with details shown on drawings.
 - 1. Where building structure abuts ceiling perimeter or penetrates ceiling.
 - 2. Where partition framing and wall furring abut structure except at floor.
 - a. Provide slip- or cushion-type joints as detailed to attain lateral support and avoid axial loading.
- D. Do not bridge building expansion and control joints with steel framing or furring members. Independently frame both sides of joints with framing or furring members as indicated.

3.4 INSTALLING STEEL FRAMING FOR SUSPENDED CEILINGS

- A. Suspend ceiling hangers from building structural members and as follows:
 - 1. Install hangers plumb and free from contact with insulation or other objects within ceiling plenum that are not part of supporting structural or ceiling suspension system. Splay hangers only where required to miss obstructions and offset resulting horizontal forces by bracing, countersplaying, or other equally effective means.
 - 2. Where width of ducts and other construction within ceiling plenum produces hanger spacings that interfere with the location of hangers required to support standard suspension system members, install supplemental suspension members and hangers in form of trapezes or equivalent devices. Size supplemental suspension members and hangers to support ceiling loads within performance limits established by referenced standards.
 - 3. Secure wire hangers by looping and wire-tying, either directly to structures or to inserts, eyescrews, or other devices and fasteners that are secure and appropriate for substrate, and in a manner that will not cause them to deteriorate or otherwise fail due to age, corrosion, or elevated temperatures.
 - 4. Secure flat, angle, channel, and rod hangers to structure, including intermediate framing members, by attaching to inserts, eyescrews, or other devices and fasteners that are secure and appropriate for structure as well as for type of hanger involved, and in a manner that will not cause them to deteriorate or fail due to age, corrosion, or elevated temperatures.

5. Do not support ceilings directly from permanent metal forms. Furnish cast-in-place hanger inserts that extend through forms.
 6. Do not attach hangers to steel deck tabs.
 7. Do not attach hangers to steel roof deck. Attach hangers to structural members.
 8. Do not connect or suspend steel framing from ducts, pipes or conduit.
- B. Sway-brace suspended steel framing with hangers used for support.
- C. Install suspended steel framing components in sizes and at spacings indicated but not less than that required by the referenced steel framing installation standard.
1. Wire Hangers: 0.1620- inch (8 gauge) diameter, 4 feet O.C.
 2. Carrying Channels (Main runners): 1-1/2 inch, 4 feet O.C.
 3. Rigid furring Channels (Furring members): 16 inches O.C
- D. Installation tolerances: Install steel framing components for suspended ceilings so that cross-furring members or grid suspension members are level to within 1/8 inch in 12 feet as measured both lengthwise on each member and transversely between parallel members.
- E. Wire-tie or clip furring members to main runners and to other structural supports as indicated.
- F. Grid Suspension System: Attach perimeter wall track or angle where grid suspension system meets vertical surfaces. Mechanically join main beam and cross-furring members to each other and butt-cut to fit into wall track.
- G. For exterior soffits, install cross-bracing and additional framing to resist wind uplift according to details on drawings.

3.5 INSTALLING STEEL FRAMING FOR WALLS AND PARTITIONS

- A. Install runners (tracks) at floors, ceilings, and structural walls and columns where gypsum board stub assemblies abut other construction.
1. Where studs are installed directly against exterior walls, install asphalt felt strips between studs and wall.
 2. Refer to Lightguage framing-section 05400.
- B. Installation Tolerances: Install each steel framing and furring member so that fastening surfaces do not vary more than 1/8 inch from the plane formed by the faces of adjacent framing.

- C. Extend partition framing full height to structural supports or substrates above suspended ceilings. Cut studs 1/2 inch short of full height. Continue framing over frames for doors and openings and frame around ducts penetrating partitions above ceiling to provide support for gypsum board.
 - 1. For STC-rated and fire-resistive-rated partitions requiring partitions to extend to the underside of floor/roof slabs and decks or other continuous solid structural surfaces to obtain ratings, install framing around structural and other members extending below floor/roof slabs and decks, as needed to support gypsum board closures needed to make partitions continuous from floor to underside of solid structure.
- D. Terminate partition framing at suspended ceilings where indicated.
- E. Install steel studs and furring in sizes and at spacings indicated but not less than required by the referenced steel framing installation standard to comply with maximum deflection and minimum loading requirements specified:
 - 1. Single-Layer Construction: Space studs at 16 inches O.C.
- F. Install steel studs so that flanges point in the same direction and so that leading edges or ends of each gypsum board can be attached to open (unsupported) edges of stud flanges first.
- G. Frame door openings to comply with details indicated, with GA-219, and with applicable published recommendations of gypsum board manufacturer. Attach vertical studs at jambs with screws either directly to frames or to jamb anchor clips on doorframes; install runner track section (for cripple studs) at head and secure to jamb studs.
 - 1. Extend vertical jamb studs through suspended ceilings and attach to underside of floor or roof structure above.
- H. Frame openings other than door openings to comply with details indicated or, if none indicated, in same manner as required for door openings.
- I. Install thermal insulation as follows:
 - 1. Erect insulation vertically and hold in place with Z-furring members spaced 24 inches O.C.
 - 2. Except at exterior corners, securely attach narrow flanges of furring members to wall with concrete stud nails, screws designed for masonry attachment, or powder-driven fasteners spaced 24 inches O.C.
 - 3. At exterior corners, attach wide flange of furring members to wall with short flange extending beyond corner; on adjacent wall surface, screw attached short flange of furring channel to web of attached channel. Start from this furring channel with standard width insulation panel and continue in regular manner. At

interior corners, space second member no more than 12 inches from corner and cut insulation to fit.

4. Until gypsum board is installed, hold insulation in place with 10 inch staples fabricated from 0.0625 inch (gauge) diameter tie wire and inserted through slot in web of member.

3.6 APPLYING AND FINISHING GYPSUM BOARD, GENERAL

- A. Gypsum Board Application and Finishing Standards: Install and finish gypsum panels to comply with ASTM C 840 and GA-216.
- B. Install sound attenuation blankets where indicated prior to installing gypsum panels unless blankets are readily installed after panels have been installed on one side.
- C. Install ceiling board panels across framing to minimize the number of abutting end joints and avoid abutting end joints in the central area of each ceiling. Stagger abutting end joints of adjacent panels not less than one framing member.
- D. Install wall/partition board panels to minimize the number of abutting end joints or avoid them entirely. Stagger abutting end joints not more than one framing member in alternate courses of board. At stairwells and other high walls, install panels horizontally with end abutting joints over studs and staggered.
- E. Install gypsum panels with face side out. Do not install imperfect, damaged, or damp panels. Butt panels together for a light contact at edges and ends with not more than 1/16 inch of open space between panels. Do not force into place.
- F. Locate both edge or end joints over supports, except in ceiling applications where intermediate supports or gypsum board back-blocking is provided behind end joints. Position adjoining panels so that tapered edges abut tapered edges, and field-cut edges, and ends. Do not place tapered edges against cut edges or ends. Stagger vertical joints over different studs on opposite sides of partitions. Avoid joints at corners of framed openings where possible.
- G. Attach gypsum panels to steel studs so that the leading edge or end of each panel is attached to open (unsupported) edges of stud flanges first.
- H. Attach gypsum panels to framing provided at openings and cutouts.
- I. Do not attach gypsum panels across the flat grain of wide-dimension lumber including floor joists and headers. Instead, float gypsum panels over these members using resilient channels or provide control joints to counteract wood shrinkage.

- J. Spot grout hollow metal door frames for solid core wood doors hollow metal doors, and doors over 32 inches wide. Apply spot grout at each jamb anchor clip and immediately insert gypsum panels into frames.
- K. Form control joints and expansion joints at locations indicated and as detailed, with space between edges of adjoining gypsum panels, as well as supporting framing behind gypsum panels. Provide vertical control joints spread not more than 30 feet on center in partitions.
1. USG Control Joint No.093: Apply over face of gypsum board where specified. Cut to length with a fine-toothed hacksaw (32 teeth per inch). Cut end joints square, butt together and align to provide neat fit. Attach control joint to gypsum board with fasteners spaced 6 inches o.c. maximum along each flange. Remove plastic tape after finishing with joint compound or veneer finish.
 - a. Leave a 1/2 inch continuous opening between gypsum boards for insertion of surface-mounted joint.
 - b. Interrupt wood floor and ceiling plates with a 1/2 inch gap, wherever there is a control joint in the structure.
 - c. Do not attach gypsum board to steel studs on one side of control joint.
 - d. Provide separate supports for each control joint flange.
 - e. Provide an adequate seal behind control joint where sound or fire ratings are prime considerations.
- L. Cover both faces of steel stud partition framing with gypsum panels in concealed spaces (above ceilings, etc.), except in chase walls that are braced internally.
1. Except where concealed application is indicated or required for sound, fire, air, or smoke ratings, coverage may be accomplished with scraps of not less than 8 sq. ft. in area.
 2. Fit gypsum panels around ducts, pipes, and conduits.
 3. Where partitions intersect open concrete coffers, concrete joists, and other structural members projecting below underside of floor/roof slabs and decks, cut gypsum panels to fit profile formed by coffers, joists, and other structural members; allow 1/4 to 1/2 inch wide joints to install sealant.
- M. Isolate perimeter of non-load-bearing gypsum board partitions at structural abutments, except floors, as detailed. Provide 1/4 inch to 1/2 inch wide spaces at these locations and trim edges with U-bead edge trim where edges of gypsum panels are exposed. Seal joints between edges and abutting structural surfaces with acoustical sealant.

- N. Where STC-rated gypsum board assemblies are indicated, seal construction at perimeters, behind control and expansion joints, openings, and penetrations with a continuous bead of acoustical sealant including a bead at both faces of the partitions. Comply with ASTM C 919 and manufacturer's recommendations for location of edge trim and closing off sound-flanking paths around or through gypsum board assemblies, including sealing partitions above acoustical ceilings.
- O. Space fasteners in gypsum panels according to referenced gypsum board application and finishing standard and manufacturer's recommendations.

3.7 GYPSUM BOARD APPLICATION METHODS

- A. Single-Layer Application: Install gypsum wallboard panels as follows:
 - 1. On ceilings, apply gypsum panels prior to wall/partition board application to the greatest extent possible and at right angles to framing, unless otherwise indicated.
 - 2. On partitions/walls, apply gypsum panels vertically (parallel to framing), unless otherwise indicated, and provide panel lengths that will minimize end joints.
 - 3. On partitions/walls, apply gypsum panels horizontally (perpendicular to framing), unless parallel application is required for fire resistive rated assemblies. Use maximum length panels to minimize end joints.
 - 4. On Z-furring members, apply gypsum panels vertically (parallel to framing) with no end joints. Locate edge joints over furring members.
- B. Wall Tile Substrates: For substrates indicated to receive thin-set ceramic tile and similar rigid applied wall finishes, comply with the following:
 - 1. Install glass-mat water-resistant gypsum backing board panels to comply with manufacturer's installation directions.
- C. Single-Layer Fastening Methods: Applying gypsum panels to supports as follows:
 - 1. Fasten with screws.
- D. Exterior Soffits and Ceilings: Apply exterior gypsum soffit board panels perpendicular to supports, with end joints staggered over supports. Install with 1/4 inch open space where panels abut other construction or structural penetrations.
 - 1. Fasten with corrosion resistant screws.

3.8 INSTALLING TRIM ACCESSORIES

- A. General: For trim accessories with back flanges, fasten to framing with the same fasten gypsum board. Otherwise, fasteners used to fasten gypsum board. Otherwise, fasten trim accessories according to accessory manufacturer's directions for type, length, and spacing of fasteners.

- B. Install corner beads at all external corners.
- C. Install edge trim where edge of gypsum panels would otherwise be exposed or semiexposed. Provide edge trim type with face flange formed to receive joint compound except where other types are indicated.
 - 1. Install LC-bead where gypsum panels are tightly abutted to other construction and back flange can be attached to framing or supporting substrate.
 - 2. Install L-bead where edge trims can only be installed after gypsum panels are installed.
 - 3. Install U-bead where indicated.
 - 4. Install aluminum edge trim and other accessories where indicated.
- D. Install control joints at locations approved by Architect for visual effect.

3.9 FINISHING GYPSUM BOARD ASSEMBLIES

- A. General: Apply joint treatment at gypsum board joints (both directions); flanges of corner bead, edge trim, and control joint; penetrations; fastener heads, surface defects, and elsewhere as required to prepare gypsum board surfaces for decoration and levels of gypsum board finish indicated.
- B. Prefill open joints, round or beveled edges, and damaged areas using setting type joint compound.
- C. Apply joint tape over gypsum board joints except those with trim accessories having concealed face flanges not requiring taping to prevent cracks from developing in joint treatment at flange edges.
- D. Apply joint tape over gypsum board joints and to trim accessories with concealed face flanges as recommended by trim accessory manufacturer and as required to prevent cracks from developing in joint compound at flange edges.
- E. Levels of gypsum board finish: Provide the following levels of gypsum board finish per GA-214.
 - 1. Level 0: No taping, finishing, or accessories required. This level of finish shall be used in temporary construction only.
 - 2. Level 1: joints and interior angles shall have tape embedded in joint compound. Surface shall be free of excess joint compound. Tool marks and ridges are acceptable. This finish level shall be used in plenum areas above ceilings, in attics, in areas where the assembly is concealed.

3. Level 2: joints and interior angles shall have tape embedded in joint compound and one separate coat of joint compound applied over joints compound. Tool marks and ridges are acceptable. This finish level shall be used where water resistant gypsum backing board (ASTM C630) is used as a substrate for tile only.
4. Level 3: Joints and interior angles shall have tape embedded in joint compound and two separate coats of joint compound applied over joints, angles fastener heads, and accessories. Joint compound shall be smooth and free of tool marks and ridges.

Note: It is recommended that the prepared surface be coated with a primer/sealer prior to the application of final level shall be used in areas which are to receive heavy textured, thick (1/8 inch or greater) wall coverings.

5. Level 4: Joints and interior angles shall have tape embedded in joint compound and three separate coats of joint compound shall be smooth and free of tool marks and ridges. Note: Prepare surface to be coated with a primer/sealer prior to the application of final finishes. This finish level shall be used where textured finishes, wall coverings, and painted finishes are to be applied.

3.10 CLEANING AND PROTECTION

- A. Promptly remove any residual joint compound from adjacent surfaces.
- B. Provide final protection and maintain conditions, in manner suitable to installer that ensures gypsum board assemblies remain without damage or deterioration at time of substantial completion.

END OF SECTION 09260

SECTION 09300

TILE

PART 1 - GENERAL

1.1 SUMMARY

- A. The work required under this Section consists of Tile Work, accessories and related items necessary to complete the Work.

1.2 SUBMITTALS

- A. Submit in accordance with Division 1 requirements.
- B. One copy of manufacturer's prepared sample board showing actual piece of each available variety of each required tile type and two (2) copies of printed type facsimiles (such as page from full color product catalog) of each piece.
- C. Manufacturer's published complete product data for each required grout type along with three (3) copies of chart showing available grout colors.

1.3 QUALITY ASSURANCE

- A. Work done under this Section of the Specifications shall be performed by mechanics skilled and experienced in the class of Work involved. Workmanship shall be in accordance with best trade practices, and surface shall be true to line and free from waves and other imperfections. Joints between tiles shall be maintained uniform and even and properly grouted.

1.4 PROJECT COLORS AND PATTERNS

- A. Colors, surface textures, and other appearance characteristics shall be as selected by the Architect. Selections shall be made from among manufacturer's standard products, regardless of differing price groupings. All color group categories shall be available for selection.
- B. Grout: Submit color samples for Architect's review.
- C. Submit for Architect's selection, three (3) sets of colors from one of the manufacturers specified. Provide samples of each type of tile as specified.

1.5 EXTRA STOCK

- A. Upon completion of Work, the Contractor under this Section shall deliver extra tile, consisting of not less than two (2) percent of the total quantity of each type, size, pattern

and color installed to the Owner for use in future repair and maintenance Work. Furnish tile in original boxes, properly marked.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Products of the following manufacturers will be acceptable, providing their products equal or exceed the type and quality of the specified products and meeting the other specification requirements.

1. Pet-Mal Supply Company (516) 867-4573 (Stone Flooring)
2. American Olean Tile Co., Inc. Lansdale, Pennsylvania.
3. Summitville Tiles, Inc., Summitville, Ohio.
4. Dal-tile Corporation, Dallas, Texas.
5. Tile Showcase (617) 426-6515.
6. Gres Porcelanico

B. Manufacturers of mortars and grouts:

1. American Olean Tile Co., Inc.
2. H.B. Fuller Co.
3. Laticrete International, Inc.
4. Mapei Corporation.
5. Summitville Tiles, Inc.
6. Upco Co. Div., Emhart Corporation.

C. Color Selections: Architect will select ceramic tile colors from color Group 1 selections.

2.2 CERAMIC TILE

A. Provide standard grade ceramic glazed wall tile conforming to ANSI 137.1 (latest edition).

1. Provide 18" x 18" square porcelain travertine by 5/16" thick matte glazed tile, Tesero, Aztec Madrid Series, GRES PORCELANICO or approved equivalent.
2. Provide 8" x 8" square porcelain travertine by 5/16" thick matte glazed, tile, Tesero, Aztec Madrid Series, GRES PORCELANICO or approved equivalent.

B. Glazed Wall Tile Trim.

1. Furnish size, color and shade to match field tile.
2. Provide bullnose wainscot cap where required.

3. Provide standard, bullnose top, cover base at tile floors.
4. Provide squarer top, set-on type, cover base at other floors.
5. Provide square edges at inside corners.
6. Provide bullnose edges at outside corners and jambs.
7. 1/8" grout line.

2.3 STONE TILE

- A. Not used.

2.4 SETTING MATERIALS

- A. Portland Cement: ASTM C150 Type 1.
- B. Latex-Portland Cement Mortar: ANSI A118.4.
- C. Hydrated Lime: ASTM C206 or C207 Type S.
- D. Sand: ASTM C144.
- E. Water: Clean and drinkable.
- F. Metal Lath: ANSI A42.4, expanded, painted, 2.5 lb./sq.yd. minimum.
- G. Dry-Set Mortars: ANSI 118.1.
- H. Organic Adhesive: ANSI A136.1, type as follows:
 1. Kitchen and Bathroom Locations: Type 1.
 2. Dry Areas: Type II.

2.5 GROUTING MATERIALS

- A. Commercial portland cement grout, complying with ANSI A118.6.
- B. Color as selected by Architect.

2.6 MISCELLANEOUS MATERIAL

- A. Latex Underlayment: Quick set type, as recommended by membrane Manufacturer, as required to provide positive drainage to floor drains.

PART 3 - EXECUTION

3.1 INSPECTION

- A. Prior to installing tile, inspect new surfaces which are to receive tile covering. Notify the Architect in writing of defects or conditions that will interfere with or prevent a satisfactory tile installation. Do not proceed with installation until such defects or conditions have been corrected.
- B. The starting of installation Work in a room or space shall imply acceptance of the surfaces to receive the tile in that space.

3.2 LAYOUT

- A. Determine locations of movement joints before starting tile work.
- B. Lay out tile work so as to minimize cuts less than one-half tile in size.
- C. Locate cuts in both walls and floors so as to be least conspicuous.
- B. Lay out tile wainscots to next full tile beyond dimensions shown.
- C. Align wall joints to give straight, uniform grout lines, plumb and level.
- D. Align floor joints to give straight uniform grout lines parallel with walls.
- E. Make joints between tile sheets same width as joints within sheets so extent of each sheet is not apparent in finished Work.

3.3 WORKMANSHIP

- A. Supply first-class Workmanship in tile work.
- B. Use products in strict accordance with recommendations and directions of manufacturer.
- C. Proportion mixes in accordance with latest ANSI standard specifications.
- C. Smooth exposed cut edges.
- D. Be sure cut edges are clean before installing tiles.
- E. Fit tile carefully against trim and accessories, also around pipes, electrical boxes and other built-in fixtures so that escutcheons, plates and collars will completely overlap cut edges.
- F. When using glazed sheets, minimize tearing sheets apart by drilling pipe holes as much as possible.
- G. Be sure tile work is free of grout film upon completion.

3.4 SETTING METHODS

- A. Method and typical detailing for tile Work shall be in accordance with the following TCA alphanumeric method, listing from the “1995 Handbook for Ceramic Tile Installation” by the Tile Council of America.
- B. Concrete Subfloors:
 - 1. Thick-set Method: TCAF112 cement mortar, bonded with Tile Installation Specification ANSI A108.1.
 - 2. Thin-set Method: TCA F113 dry-set mortar with Tile Installation Specification ANSI A 108.5.
- C. Walls:
 - 1. Masonry (Cement Mortar Bond Method): TCA W211 - 95 cement mortar, bonded with Tile Installation Specification ANSI A 108.1.
 - 2. Gypsum Board (Thin-set Method): TCA W 223 organic adhesive; with the Tile Installation Specification ANSI A 108.4.

3.5 GROUTING

- A. Grouting shall be installed in accordance with ANSI A 108.10 (A108.6 for epoxy) and the manufacturer’s recommended procedures and precautions during application and cleaning.
- B. Rinse tile work thoroughly with clean water before and after using chemical cleaners.

3.6 PROTECTION

- A. The Contractor shall make provisions as necessary to protect the tile against damage of any kind after installation. Damaged tile that appears in the finish Work prior to turning the building over to the Owner is to be repaired or replaced by the Contractor without further cost to the Owner. Protect adjoining areas and surfaces and clean up everything at completion. Remove scrap, debris and surplus material as it accumulates.
- B. Cleaning: Upon completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.
- C. Unglazed tile may be cleaned with acid solution only when permitted by tile and grout manufacturer’s printed instructions, but no sooner than 14 days after installation.
- D. Remove temporary wax coating from quarry tile, using methods recommended by manufacturers of tile and grout. Apply sealer as specified above.

- E. When recommended by tile manufacturer, apply a protective coat of neutral protective cleaner to completed tile walls and floors. Protect installed tile work with kraft paper or other heavy covering during construction period to prevent staining, damage and wear.
- F. Prohibit foot and wheel traffic from using tiled floors for at least seven (7) days after grouting is completed.
- G. Leave finished installation clean and free of cracked, chipped, broken, unbonded or otherwise defective tile work.
- H. Before final inspection, remove protective coverings and rinse neutral cleaner from tile surfaces.

2.7 WATERPROOFING AND SHOWER PAN MEMBRANES

- A. Install in strict accordance with manufacturer's written installation instructions.

END OF SECTION 09300

SECTION 09680

CARPET

PART 1 - GENERAL

1.1 PRODUCT

- A. Carpet Allowance: \$18.00 per yard; including carpet, pad, labor to install, and tax.

END OF SECTION 09680

SECTION 09900

PAINTING

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. Surface preparation and field application of paints and coatings.

1.2 SYSTEM DESCRIPTION

- A. Conform to latest edition of Southern Standard Building Code for flame and smoke rating requirements for products and finishes.

1.3 SUBMITTALS

- A. Product Data: Provide data on all finishing products.

1.4 ENVIRONMENTAL REQUIREMENTS

- A. Store and apply materials in environmental conditions required by manufacturer's instructions.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Manufacturers
 - 1. Benjamin Moore
 - 2. PPG
 - 3. Sherwin Williams
 - 4. Elastomeric
 - 5. Approved equivalents
- B. Coatings: Ready mixed except field catalyzed coatings of good flow and brushing properties, capable of drying or curing free of streaks or sags.
- C. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials required to achieve the finishes specified.

2.2 FINISHES

- A. Refer to finish schedule.

PART 3 - EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Verify that substrate conditions are ready to receive Work.
- B. Measure moisture content of porous surfaces using an electronic moisture meter. Do not apply finishes unless moisture content is less than 12 percent.
- C. Correct minor defects and clean surfaces which affect work of this section.
- D. Remove electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.
- E. Gypsum Board Surfaces: Fill minor defects with latex compounds. Spot prime defects after repair.
- F. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.
- G. Concrete and Unit Masonry Surfaces Scheduled to Receive Paint Finish: Remove foreign matter. Remove oil and grease with a solution of tetra-sodium phosphate, rinse well and allow to dry.
- H. Uncoated Ferrous Surfaces: Remove scale by wire brushing, sandblasting, clean by washing with solvent. Apply treatment of phosphoric acid solution. Prime paint after repairs.
- I. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust, hand clean, clean surfaces with solvent. Prime bare steel surfaces.
- J. Interior Wood Items Scheduled to Receive Paint Finish: Wipe off dust and grit prior to priming. Seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after primer has dried; sand between coats.
- K. Interior Wood Items Scheduled to Receive Transparent Finish: Wipe off dust and grit prior to sealing, seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes and cracks after sealer has dried; sand lightly between coats.
- L. Exterior Wood Scheduled to Receive Paint Finish: Remove dust, grit, and foreign matter. Seal knots, pitch streaks, and sappy sections. Fill nail holes with tinted exterior calking compound after prime coat has been applied.

- M. Exterior Wood Scheduled to Receive Transparent Finish: Remove dust, grit, and foreign matter; seal knots, pitch streaks, and sappy sections with sealer. Fill nail holes with tinted exterior calking compound after sealer has been applied.

3.2 APPLICATION

- A. Apply products in accordance with manufacturer's instructions.
- B. Sand transparent finishes lightly between coats to achieve required finish.
- C. Where clear finishes are required, tint fillers to match wood.
- D. Back prime interior and exterior wood work scheduled to receive paint finish with primer paint.
- E. Back prime interior woodwork scheduled to receive stain or varnish finish with gloss varnish reduced 25 percent with mineral spirits.

3.3 FINISHING MECHANICAL AND ELECTRICAL EQUIPMENT

- A. Refer to Section 15000 and Section 16000 for schedule of color coding, identification banding of equipment, ductwork piping, and conduit.
- B. Color code items in accordance with requirements indicated.
- C. Paint shop primed equipment.
- D. Remove unfinished louvers, grilles, covers, and access panels and paint separately. Paint dampers exposed behind louvers, grilles, convector and baseboard cabinets to match face panels.
- E. Prime and paint insulated and exposed pipes, insulated and exposed ducts, hangers, brackets, collars and supports, except where items are prefinished.
- F. Paint interior surfaces of air ducts, and convector and baseboard heating cabinets that are visible through grilles and louvers with one coat of flat black paint, to limit of sight line.
- G. Paint exposed conduit and electrical equipment occurring in finished areas except prefinished surfaces.
- H. Paint both sides and edges of plywood backboards.
- I. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

3.4 CLEANING

- A. As work proceeds, promptly remove finishes where spilled, splashed, or spattered.

3.5 SCHEDULE - SHOP PRIMED ITEMS FOR SITE FINISHING

- A. Metal Fabrications (Section 05500): Exposed surfaces of lintels, elevator pit ladders, and steel stairs.

3.6 SCHEDULE - EXTERIOR SURFACES

- A. Wood - Transparent:
 - 1. Two coats of stain.
 - 2. Two coats of sealer.
- B. Pavement Markings:
 - 1. One coat of paint, white.
- C. Steel - Shop Primed:
 - 1. Touch-up with alkyd primer.
 - 2. Two coats of alkyd enamel, semi-gloss.
- D. Steel - Galvanized:
 - 1. One coat of galvanize primer.
 - 2. Two coats of alkyd enamel, semi-gloss.

3.7 SCHEDULE - INTERIOR SURFACES

- A. Wood - Painted:
 - 1. One coat of alkyd primer sealer.
 - 2. Two coats of alkyd enamel, gloss.
- B. Wood - Transparent:
 - 1. Filler coat (for open grained wood only).
 - 2. Two coats of stain.
 - 3. One coat of sealer.
 - 4. Two coats of varnish.
- C. Steel - Unprimed:
 - 1. One coat of alkyd primer.

2. Two coats of alkyd enamel, gloss.
- D. Steel - Primed:
1. Touch-up with original primer.
 2. Two coats of alkyd enamel, gloss.
- E. Gypsum Board
1. One coat of latex tinted primer.
 2. Two coats of latex paint.
- F. Stucco:
1. One coat of elastomeric primer.
 2. Two coats of elastomeric paint.

3.8 SCHEDULE - COLORS

To be provided by Owners.

END OF SECTION 09900

