

SECTION 09310 - CERAMIC TILE

PART 1 - GENERAL

1.01 DESCRIPTION:

- A. Work under this section is subject to requirements of the Contract Documents including the General Conditions and Supplementary Conditions and applicable portions of Division 1 - General Requirements.
- B. The work consists of all labor, material and equipment necessary and required to complete all ceramic tile as shown on the drawings and specified herein.

1.02 RELATED WORK SPECIFIED ELSEWHERE:

- A. Gypsum Board: Section 09250.
- B. Toilet and Bath Accessories: Section 10800.
- C. Cast-In-Place Concrete: Section 03300.

1.03 QUALITY ASSURANCE

- A. Tile manufacturing standard: ANSI 137.1 Furnish tile complying with standard grade requirements, unless indicated otherwise.
- B. Provide materials obtained from one source for type and color of tile, grout and setting materials.

1.04 SUBMITTALS

- A. Product Data: Submit manufacturer's technical information and installation instructions for materials required, except bulk materials. Include certifications and other data to show compliance with these specifications
- B. Samples:
 - 1. For initial selection of colors submit manufacturer's color charts consisting of actual tiles or sections of tiles showing full range of colors available, for each type of tile specified. Include samples of grout and accessories requiring color selection.
 - 2. For verification purposes submit the following:
 - a. Samples for each type of tile and color required, not less than 12 inches square, on plywood or hardboard backing and grouted.
- C. Certification: Furnish Master Grade Certificate for each type of tile, signed by manufacturer and installer.

1.05 DELIVERY, HANDLING AND STORAGE

- A. Deliver packaged materials and store in original containers with seals unbroken and labels intact until time of use, in accordance with manufacturer's instructions.

1.06 JOB CONDITIONS

- A. Maintain environmental conditions and protect work during and after installation in accordance with references, standards and manufacturer's printed recommendations.

1.07 EXTRA MATERIALS

- A. Deliver extra materials to Owner. Furnish extra materials that match products installed as described below, packaged with protective covering for storage and identified with labels clearly describing contents.
1. Tile and Trim Units: Furnish quantity of full size units equal to 3 percent of amount installed, for each type, composition, color, pattern and size.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturer: Provide products by the following for each type of tile:
- a. Virginia tile
 - b. Stone source
 - c. Ann Sacks
 - d. Urban Armelogy
 - e. Atlas Concorde

2.02 PRODUCTS, GENERAL

- A. Colors, Textures and Patterns: Where manufacturer's standard products are indicated for tile, grout and other products requiring selection of colors, surface textures, patterns and other appearance characteristics, provide specific products or materials complying with the following requirements:
1. Match color, texture and pattern indicated by reference to manufacturer's standard designations for these characteristics.
 2. Provide tile trim and accessories that match color and finish of adjoining flat tile.
- B. Factory Blending: For tile exhibiting color variations within the ranges selected during sample submittals, blend tile in factory and package accordingly so that tile units taken from one package show the same range in colors as those taken from other packages and match approved samples.

2.03 TILE PRODUCTS

- A. Porcelain Tile Floor and Base: Shall be porcelain mosaic, all-purpose edge with non-slip surface. Tile shall be of sizes and colors and patterns as shown on the drawings. Provide all trim shapes of same material and finish as required, including 5 inch high cove base.
- B. Porcelain Tile: Shall be glazed ceramic tile, matte finish, cushion edge. Tile shall be of sizes, colors and patterns selected on the drawings. Provide trim shapes of same material and finish as required.
- C. Glass Tile: Shall be 100% solid glass of sizes. Colors and patterns selected on the drawings.

2.04 MORTAR AND GROUT

- A. Dry-Set Mortar: Shall comply with the requirements of ANSI A 118.4. Dry-set mortar shall be one of the following:
1. Custom Building Products Master-Blend Thin-Set Mortar and Acrylic Mortar Admix.
 2. Bostik Inc., Tile Mate 760 with Hydroment 425 Latex.

- B. Water: Shall be potable.
- C. Floor Grout: Shall be a specially compounded mixture of selected aggregate, Portland Cement, water retaining agents, and colorfast pigment additives for grouting joints in tile units; colors shall be as selected by Architect from manufacturer's standard colors. Grout shall be one of the following:
 - 1. Bostik's Hydroment Ceramic Tile Grout.
 - 2. Custom Building Products Polyblend Grout.
- D. Wall Grout: Shall be one of the following; colors shall be as selected by the Architect from manufacturer's standard colors:
 - 1. Custom Building Products Polyblend Non-Sanded.
 - 2. Bostik's Tile Mate Dry Tile Grout.
- E. Organic Adhesives: Shall comply with the requirements of ANSI A 136.1; shall be Type 1; shall be one of the following:
 - 1. Bostik's Hydroment Multipurpose Ceramic Tile Mastic.
 - 2. Custom Building Products Relinband.

2.05 MIXING MORTARS AND GROUT

- A. Mix mortars and grout to comply with requirements of referenced standards and manufacturers including those for accurate proportioning of materials, water or additive content; type of mixing equipment, selection of mixer speeds, mixing containers, mixing time and other procedures needed to produce mortars and grouts of uniform quality with optimum performance characteristics for application indicated.

2.06 ELASTOMERIC SEALANTS

- A. General: Provide manufacturer's standard chemically curing, elastomeric sealants of base polymer indicated that comply with requirements of Division 7 Section "Joint Sealers", including ASTM C 920 as referenced by type, grade, class and uses.
- B. Colors: Provide colors of exposed sealants to match colors of grout in tile adjoining sealed joints unless otherwise indicated.

2.07 MISCELLANEOUS MATERIALS

- A. Metal Edge Strips: Zinc alloy or stainless steel terrazzo strips, 1/8 inch wide at top edge with integral provision for anchorage to mortar bed or substrate unless otherwise indicated.
- B. Temporary Protective Coating: Provide product indicated below that is formulated to protect exposed surfaces of tile against adherence of mortar and grout, is compatible with tile and mortar/grout products, and is easily removable after grouting is completed without damaging grout or tile.
 - 1. Grout release in form of manufacturer's standard proprietary liquid coating that is specially formulated and recommended for use as a temporary protective coating for tile.
- C. Urethane Waterproofing and Tile-Setting Adhesive: Manufacturer's standard proprietary product consisting of one-part liquid-applied urethane in a consistency suitable for trowel application and intended for use as both waterproofing and tile-setting adhesive in.
 - 1. Urethane Waterproofing and Tile-Setting Adhesive.
 - a. "Hydroment Ultra-Set"; Bostik Construction Products Div.

PART 3 - EXECUTION

3.01 INSPECTION

- A. Examine the sub-surfaces and the conditions under which ceramic tile is to be installed and notify the Contractor in writing of any conditions detrimental to the proper and timely completion of the work. Do not proceed with the work until unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Blending: For tile exhibiting color variations within the ranges selected during sample submittals verify that tile has been blended in factory and packaged accordingly so that tile units taken from one package show the same range in colors as those taken from other packages and match approved samples. If not factory blended, either return to manufacturer or blend tiles at project site before installing..
- B. Field Applied Temporary Protective Coating: Where indicated under tile type or needed to prevent adhesion or staining of exposed tile surfaces by grout, protect exposed surfaces of tile against adherence of mortar and grout by pre-coating them with a continuous film of temporary protective coating indicated below, taking care not to coat unexposed tile surfaces:
 - 1. Petroleum paraffin wax or grout release.

3.03 TILE INSTALLATION STANDARDS

- A. ANSI Standards: Comply with applicable requirements of the following, except as otherwise indicated.
 - 1. ANSI A108.5: Tile installed with dry-set Portland Cement mortar or latex Portland Cement mortar.
 - 2. ANSI A108.4: Tile installed with organic adhesive.

3.04 INSTALLATION

- A. Workmanship shall be first-class in every respect. Except as shown or noted otherwise, tile units shall be laid in a straight-joint pattern, and joints shall be 1/16 inch wide. All work and materials between subsurface and finished surfaces shall be by this Contractor.
- B. Properly mix mortar in accordance with manufacturer's directions. Place tile on fresh mortar and beat or press in to form complete contact. Periodically raise a tile to insure that full contact is being made. As the work progresses, make adjustments of out-of-line units, and wipe mortar smears from surface.
- C. Extend tile work into recesses to form a complete covering without interruptions, except as otherwise shown. Terminate work neatly at obstructions, edges, and corners without disruption of pattern or joint alignment.
- D. Accurately form intersections and returns. Perform cutting and drilling of tile without marring visible surfaces. Carefully grind cut edges of tile abutting trim, finish, or built-in items for straight aligned joints. Fit tile closely to electrical outlets, piping, and fixtures so that plates, collars, or covers overlap tile.
- E. Floor Tile: Lay tile from center marks established with principal walls, discounting minor offsets, so that tile at opposite sides of room are of equal width. Adjust as necessary to avoid use of cut widths less than 1/2 tile at room perimeters. Lay tile square to room axis, unless shown otherwise.
- F. Wall Tile: Wall tile shall cover walls to height indicated on drawings. Tile shall be set in vertical stack pattern, unless otherwise shown on drawings.
- G. Grouting of Joints: Mix and apply grout in accordance with manufacturer's directions.

Completely fill joints. Remove excess grout leaving joint flush with surface of adjacent units.

1. For ceramic tile grouts, sand-Portland Cement, dry-set, commercial Portland Cement and latex Portland Cement grouts, comply with ANSI A108.10.
- H. Expansion and Control Joints: Provide openings for joints where shown and to comply with details, or, if not shown and detailed, to comply with recommendations in TCA Handbook for Tile Installation.
- I. Metal Edge Strips: Install at locations indicated or where exposed edge of tile flooring meets carpet or other flooring that finishes flush with top of tile.
- J. Install waterproofing in compliance with waterproofing manufacturer's instructions to produce a waterproof membrane of uniform thickness bonded securely to substrate.
1. Do not install tile over waterproofing until waterproofing has cured and been tested to determine that it is watertight.

3.05 CLEANING AND PROTECTION

- A. Cleaning:
1. Clean grout and setting materials from face of tile while materials are workable. Leave tile face clean and free of all foreign matter. Acid-based compounds or abrasive compounds shall not be used.
- B. Protection:
1. When recommended by tile manufacturer, apply a protective coat of neutral protective cleaner to completed tile walls.
 2. Protect installed tile work with Kraft paper or other heavy covering during the construction period to prevent damage and wear.
 3. Before final inspection, remove protective coverings and rinse neutral cleaner from all tile surfaces.

END OF SECTION 09310

