09310 – CERAMIC TILE

PART 1 - GENERAL

1.1 STIPULATIONS

A. The specifications sections “General Conditions”, “Special Requirements”, and “General Requirements” form a part of this section by this reference thereto and shall have the same force and effect as if printed herewith in full.

1.2 SUMMARY OF WORK

A. Extent of tile work is indicated on the Drawings and in finish schedule.

B. Types of tile work in this Section include the following:

1. Glazed ceramic and unglazed ceramic porcelain mosaic tile.
2. Sealing expansion and other joints in tile work with elastomeric joint sealers is work of this Section.

1.3 QUALITY CONTROL

A. Source of Materials: Provide materials obtained from one source for each type and color of tile, grout, and setting materials.

B. Comply with ADA and ANSI for friction coefficients

C. Conform to TCA Handbook for Ceramic Tile Installation for thinset applications.

1.4 SUBMITTALS

A. Product Data: Submit manufacturer’s technical information and installation instructions for materials required, except bulk materials.

B. Samples for Initial Selection Purposes: Submit manufacturers color charts consisting of actual tiles or sections of tile showing full range of colors, textures and patterns available for each type of tile indicated. Include samples of grout and accessories colors for Professional’s selection, from full range of manufacturers’ colors.

C. Samples for Verification Purposes: Submit the following:

D. Samples for each type of tile and for each color and texture required, not less than 12" square, on plywood or hardboard backing and grouted.

E. Full size samples of each type of trim and accessory for color selection by Professional.

F. Certification: Furnish Master Grade Certificates for each shipment and type of tile, signed by manufacturer and Installer.
1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver and store packaged materials in original containers with seals unbroken and labels intact until time of use. Prevent damage or contamination to materials by water, freezing, foreign matter or other causes.

1.6 PROJECT CONDITIONS

A. Maintain environmental conditions and protect work during and after installation to comply with referenced standards and manufacturers’ printed recommendations.

B. Maintain temperatures at not less than 50 degrees F (10 deg. C) in tiled areas during installation and for 7 days after completion, unless higher temperatures are required by referenced installation standard or manufacturers’ instructions.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
   1. Dal-Tile Corp.
   2. American Olean Tile Col, Inc.
   3. Summitville

2.2 PRODUCTS, GENERAL


B. Furnish tile complying with "Standard Grade" requirements unless otherwise indicated.

C. ANSI Standard for Tile Installation Materials: Comply with ANSI standard referenced with products and materials indicate for setting and grouting.

D. Colors, Textures and Patterns: For tile, grout and other products requiring selection of colors, surface textures or other appearance characteristics, provide products to match characteristics indicated or, if not otherwise indicated, as selected by Professional from manufacturer’s standards.

E. Provide tile trim and accessories, which match color and finish of adjoining flat tile.

F. Mounting: Where factory-mounted tile is required provide back- or edge-mounted tile assemblies as standard with manufacturer unless another mounting method is indicated.

G. Where tile is indicated for installation in wet areas, do not use back-or edge-mounted tile assemblies unless tile manufacturer specified that this type of mounting is suitable for these kinds of use and has been successfully used on other project.

2.3 TILE PRODUCTS

A. Floor Tile
   1. Dal-Tile; Continental Slate – English Grey
2. Or approved equal by the Professional

B. Wall Tile:
   1. Dal-Tile; Continental Slate – English Grey
   2. Or approved equal by the Professional

C. Temporary Wax Coating: Protect exposed surfaces of quarry tile against adherence of mortar and grout by precoating with wax to produce a continuous film. Use wax, which is approved by manufacturers of both tile and grout as being compatible with their materials and with the cleaning method required to remove wax without damage to tile or grout. Apply wax in manner to avoid coating unexposed tile surfaces and edges; handle tile to prevent waxed surfaces from contacting backs or edges of other units.

D. Trim Units: Provide tile trim units to match characteristics of adjoining flat tile and to comply with the following requirements;
   1. Size: Coordinated with sizes and coursing of adjoining flat tile, where applicable.
   2. Shapes: As follows, selected from manufacturers standard shapes.
   3. Base for Thinset Mortar Installations: Cove
   4. Internal Corners: Filed-butted square corners, except use cove base and cap angle pieces designed to member with stretcher shapes. Apply sealant at corners for expansion/contraction.

2.4 STONE THRESHOLDS

A. General: Provide granite which is uniform in color and finish, fabricated to sizes and profiles indicated or required to provide transition between tile surfaces and adjoining finished floor surfaces. Fabricate thresholds to heights indicated, but not more than ½” above adjoining finished floor surfaces, with transition edges beveled on a slope of no greater than 1:2. Must comply with ADA requirements.

2.5 SETTING MATERIALS

A. Latex-Portland Cement Mortar: ANSI A118.4 composed as follows:
   1. Prepackaged dry mortar mix incorporating dry polymer additive in the form of a re-emulsifiable powder to which only water is added at the job site.

2.5 GROUTING MATERIALS

A. Provide Grout as recommended and selected by tile manufacturer form the following types:
   1. Prepackaged dry grout mix incorporation dry polymer additive in the form of a re-emulsifiable powder to which only water is added at job site.

B. Color as selected by Professional from manufacturers standards.
2.6 ELASTOMERIC SEALANTS

A. Elastomeric Sealant Standard: Provide manufacturers standard chemically curing, elastomeric sealant of base polymer indicated which complies with ASTM C 920 requirements, including those for Type, Grade, Class and Uses.

B. Compatibility: Provide sealants, joint fillers and other related materials that are compatible with one another and with joint substrates under conditions of service and application, as demonstrated by testing and field experience.

C. Colors: Provide colors of exposed sealants to match colors of grout in tile adjoining sealed joints, unless otherwise indicated.

D. One-Part Mildew Resistant Silicone Sealant: Type 5; Grade NS; Class 25; Uses NT, G, A, and as applicable to nonporous joint substrates indicated, O; formulated with fungicide for sealing interior joints in and around ceramic tile, showers, sinks, and plumbing fixtures.

E. Acceptable Products: Subject to compliance with requirements, products which may be incorporated in the work include, but are not limited to, the following;

   1. Dow Corning 786; Dow Corning Corp.
   2. SCE 1702; General Electric Co.
   3. 863 #345 White: Pecora Corp.

2.7 MISCELLANEOUS MATERIALS

A. Tile Cleaner: Product specifically acceptable to manufacturer of tile and grout manufacturer for application indicated and as recommended by National Tile Promotion Federation, 112 North Alfred St., Alexandria, VA 22134 or Ceramic Tile Institute, 700 N. Virgil Ave., Los Angeles, CA 90029.

B. Trowelable underlayments and Patching Compounds: Latex-modified, Portland-cement based formulation provided or approved by manufacturer of tile setting materials for installations indicated.

2.8 MIXING MORTARS AND GROUT

A. Mix mortars and grouts to comply with requirements of referenced standards and manufacturers for accurately proportioning of materials, water or additive content, mixing equipment and 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.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine surfaces to receive tile work and conditions under which tile will be installed. Do not proceed with tile work until surfaces and conditions comply with requirements indicated in referenced tile installation standard.
3.2 INSTALLATION, GENERAL

A. ANSI Tile Installation Standard: Comply with applicable parts of ANSI 108 series of tile installation standards included under "American National Standard Specifications for the Installation of Ceramic Tile".

B. TCA Installation Guidelines: TCA "Handbook for Ceramic Tile Installation"; comply with TCA installation methods indicated or, if not otherwise indicated, as applicable to installation conditions shown.

C. Extend tile work into recesses and under or behind equipment and fixtures, to form a complete covering without interruptions, except as otherwise shown. Terminate work neatly at obstructions, edges and corners without disrupting pattern of joint alignments.

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, fixtures and other penetrations so that plates, collars, or covers overlap tile.

E. Jointing Pattern: Unless otherwise shown, lay tile in grid pattern. Align joints when adding tiles on floor, base, walls and trim are same size. Layout tile work and center tile fields in both directions in each space. Adjust to minimize tile cutting. Provide uniform joint widths, unless otherwise shown.

F. For tile mounted in sheets make joints between sheets same width as joints within tile sheet so that extent of each sheet is not apparent in finished work.

G. Expansion Joints: Locate expansion joints and other sealants filled joints, including control, contraction and isolation joints, above & inline with control joints in slabs & walls.

H. Prepare joints and apply sealants to comply with requirements or referenced standards and sealant manufacturer.

I. Grout tile: to comply with the requirements of the following installation standards:

J. For ceramic tile grouts (latex-portland cement grouts) comply with ANSI A 108.10.

K. Stone Thresholds: Install stone thresholds at locations indicated; set in same type of setting bed as abutting field tile unless otherwise indicated.

L. Set thresholds in latex-portland cement mortar

M. For Ceramic Tile “thinset”, install per TCA method F113-2K.

3.3 WALL TILE INSTALLATION METHODS

A. Install types of tile designated for wall application to comply with TCA installation methods related to subsurface wall conditions, and grout types.

B. At Stud walls use cement board backer Comply with TCA method W244-sK.

C. Grout: Latex-portland cement.
D. Use bridge mesh if floor tile occurs at slab control joint.

3.4 CLEANING AND PROTECTION

A. Cleaning: Upon completion of placement and grouting, clean all ceramic tile surfaces so they are free of foreign matter.

B. Unglazed tile may be cleaned with acid solutions only when permitted by tile and grout manufacturer's printed instructions, but not sooner than 1 day after installation. Protect metal surfaces, cast iron and vitreous plumbing fixtures from effects of acid cleaning. Flush surface with clean water before and after cleaning.

C. Finished Tile Work: Leave finished installation clean and free of cracked, chipped, broken, unbonded, or otherwise defective tile work.

D. Protection: When recommended by tile manufacturer, apply a protective coat of metal 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.

E. Prohibit foot and wheel traffic from using tiled floors for at least 7 days after grouting is completed.

F. Before final inspection, remove protective coverings and rinse neutral cleaner from tile surfaces.

G. At substantial completion, provide owner with complete maintenance and cleaning data for every type of tile used.

END OF SECTION