SECTION 093000 – TILING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.

1.2 SUMMARY

A. This Section includes the following:

1. Glazed Ceramic Tile in select Toilet Rooms.
2. Glazed Ceramic Tile Base in select Toilet Rooms.

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

1. Division 11 Section "Food Service Equipment" for walk-ins.

1.3 SUBMITTALS

A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.

B. Product data for each type of product specified.

C. Samples for initial selection purposes in form of manufacturer's color charts consisting of actual tiles or sections of tile showing full range of colors (minimum of 90), textures, and patterns (minimum of 50) available for each type and composition of tile indicated. Include samples of grout and accessories involving color selection. Quarry tile work will require dark custom color grout.

D. Samples for verification purposes of each item listed below, prepared on samples of size and construction indicated, products involve color and texture variations, in sets showing full range of variations expected.

1. Full-size units of each type of trim and accessory for each color required.
2. Slate thresholds in 6-inch lengths.

E. Master grade certificates for each shipment, type, and composition of tile, signed by tile manufacturer and Installer.

F. Qualification data for firms and persons specified in "Quality Assurance" article to demonstrate their capabilities and experience. Include list of completed projects with project names, addresses, names of Architects and Owners, plus other information specified.

1.4 QUALITY ASSURANCE

A. Single-Source Responsibility for Tile: Obtain each color, grade, finish, type, composition, and variety of tile from a single source with resources to provide products of consistent quality in appearance and physical properties without delaying progress of the Work.

B. Single-Source Responsibility for Setting and Grouting Materials: Obtain ingredients of a uniform quality from one manufacturer for each cementitious and admixture component and from one source or producer for each aggregate.

C. Installer Qualifications: Engage an experienced Installer who has successfully completed tile installations similar in material, design, and extent to that indicated for Project.

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. Comply with requirement of ANSI A137.1 for labeling sealed tile packages.

B. Prevent damage or contamination to materials by water, freezing, foreign matter, and other causes.

C. Handle tile with temporary protective coating on exposed surfaces to prevent coated surfaces from contacting backs or edges of other units. If despite these precautions coating does contact bonding surfaces of tile, remove coating from bonding surfaces before setting tile.

1.6 PROJECT CONDITIONS

A. Maintain environmental conditions and protect work during and after installation to comply with referenced standards and manufacturer's printed recommendations.

B. Vent temporary heaters to exterior to prevent damage to tile work from carbon dioxide buildup.

C. Maintain temperatures at 50 deg F (10 deg C) or more in tiled areas during installation and for 7 days after completion, unless higher temperatures are required by referenced installation standard or manufacturer's instructions.

PART 2 - PRODUCTS

2.1 PRODUCTS, GENERAL

A. ANSI Standard for Ceramic Tile: Comply with ANSI A137.1 "American National Standard Specifications for Ceramic Tile" for types, compositions, and grades of tile indicated.

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

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

C. 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. Provide selections made by Architect from manufacturer's full range of standard colors, textures, and patterns for products of type indicated.
2. Provide tile trim and accessories that match color and finish of adjoining flat tile.

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

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

2.2 TILE PRODUCTS

A. Basis-of-Design Product: Subject to compliance with requirements, provide products by Dal-Tile Corp or

comparable product by one of the following:

1. American Olean Tile Co., Inc.
2. Buchtal Corp, USA
3. Summitville Tiles, Inc.

C. Glazed Interior Wall & Base Tile: Provide flat tile complying with the following requirements:

1. Nominal Facial Dimensions: 6"x 6"
2. Nominal Thickness: 5/16"
3. Face: Plain with square edge, modified square edge, or cushion edge as selected by Architect, semi-gloss glazed finish, straight joint pattern.
4. Mounting: Factory back-mounted.
5. Base: 6"x 6" cove, bullnose top where no wall tile above.
5. Colors: To be selected from manufacturers' standard.

2.4 SETTING MATERIALS

A. Thin-Set Portland Cement Mortar: Where thin-set portland cement mortar applications are indicated, use the following unless otherwise required.

1. Dry-set portland cement mortar, ANSI A118.1, factory sanded.

B. Latex-Portland Cement Mortar: ANSI A118.4, composition as follows:

1. Prepackaged dry mortar mix composed of portland cement, graded aggregate, and the following dry polymer additive in the form of a re-emulsifiable powder to which only water is added at job site.

a. Dry Polymer Additive: Manufacturer's standard.

2. Latex additive (water emulsion) of type described below, serving as replacement for part or all of gauging water, combined at job site with prepackaged dry mortar mix supplied or specified by latex additive manufacturer.

a. Latex Type: Manufacturer's standard.

2.6 GROUTING MATERIALS

A. Commercial Portland Cement Grout: ANSI A118.6, color as indicated.

B. Dry-Set Grout: ANSI A118.6, color as indicated.

2.7 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.

C. Multipart Pourable Urethane Sealant for Use T: Type M; Grade P; Class 25; Use T.

2.8 MIXING MORTARS AND GROUT

A. Mix mortars and grouts 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.

PART 3 - EXECUTION

3.1 EXAMINATION

A. Examine substrates and areas where tile will be installed, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance of installed tile.

1. Verify that substrates for setting tile are firm, dry, clean, and free from oil or waxy films and curing compounds.

B. Do not proceed with installation until unsatisfactory conditions have been corrected.

3.2 INSTALLATION, GENERAL

A. ANSI Tile Installation Standard: Comply with parts of ANSI 108 series of tile installation standards included under "American National Standard Specifications for the Installation of Ceramic Tile" that apply to type of setting and grouting materials and methods indicated.

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 or 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 adjoining tiles on floor, base, walls, and trim are same size. Lay out tile work and center tile fields in both directions in each space or on each wall area. Adjust to minimize tile cutting. Provide uniform joint widths unless otherwise shown.

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

F. Expansion Joints: Locate expansion joints and other sealant-filled joints, including control, contraction, and isolation joints, where indicated during installation of setting materials, mortar beds, and tile. Do not saw cut joints after installation of tiles.

1. Prepare joints and apply sealants to comply with requirements of Division 7 Section "Joint Sealants."

G. Grout tile to comply with referenced installation standards, using grout materials indicated.

1. Mix and install proprietary components to comply with grout manufacturer's directions.

3.3 FLOOR INSTALLATION METHODS

A. Quarry Tile: Install tile to comply with requirements indicated below for setting-bed method, TCA installation method related to type of subfloor construction, and grout type:

1. Portland Cement Mortar: ANSI A108.1.

a. Bond Coat: Portland cement paste or dust coat on plastic bed or the following thin-set mortar on cured bed, ANSI A108.5, at Contractor's option:

1) Latex-portland cement mortar.
2) Dry-set portland cement mortar.

b. Concrete Subfloor, Interior: TCA F112 (bonded).
c. Grout: Commercial portland cement.

3.4 WALL TILE & BASE, AND INSTALLATION METHODS

A. Install types of tile designated for wall application to comply with requirements indicated below for setting bed methods, TCA installation methods related to subsurface wall conditions, and grout types:

B. Thin-Set Portland Cement Mortar: ANSI A108.5.

1. Masonry, Interior: TCA W202 (with leveling grout).
2. Wood or Metal Studs, Interior: TCA W243.
3. Grout: Dry-set.
4. Color as selected by Architect from manufacturer's standard.

3.5 CLEANING AND PROTECTION

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

1. Unglazed tile may be cleaned with acid solutions only when permitted by tile and grout manufacturer's printed instructions, but no sooner than 14 days 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.

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

C. Provide final protection and maintain conditions in a manner acceptable to manufacturer and installer that ensures that tile is without damage or deterioration at time of Substantial Completion.

1. 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.
2. Prohibit foot and wheel traffic from tiled floors for at least 7 days after grouting is completed.

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

END OF SECTION 093000