

**PART 1 GENERAL****1.01 SECTION INCLUDES**

- A. Ceramic Tile.
- B. Porcelain Tile.
- C. Glass Tile.
- D. Metal Trim.

**1.02 RELATED REQUIREMENTS****1.03 REFERENCE STANDARDS**

- A. ANSI A108/A118/A136.1 - American National Standard Specifications for the Installation of Ceramic Tile (Compendium); 2017.
  - 1. ANSI A108.1a - American National Standard Specifications for Installation of Ceramic Tile in the Wet-Set Method, with Portland Cement Mortar; 2014.
  - 2. ANSI A108.1b - American National Standard Specifications for Installation of Ceramic Tile on a Cured Portland Cement Mortar Setting Bed with Dry-Set or Latex-Portland Cement Mortar; 1999 (Reaffirmed 2010).
  - 3. ANSI A108.1c - Specifications for Contractors Option: Installation of Ceramic Tile in the Wet-Set Method with Portland Cement Mortar or Installation of Ceramic Tile on a Cured Portland Cement Mortar Bed with Dry-Set or Latex-Portland Cement; 1999 (Reaffirmed 2010).
  - 4. ANSI A108.4 - American National Standard Specifications for Installation of Ceramic Tile with Organic Adhesives or Water Cleanable Tile-Setting Epoxy Adhesive; 2009 (Revised).
  - 5. ANSI A108.5 - American National Standard Specifications for Installation of Ceramic Tile with Dry-Set Portland Cement Mortar or Latex-Portland Cement Mortar; 1999 (Reaffirmed 2010).
  - 6. ANSI A108.6 - American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant, Water Cleanable Tile-Setting and -Grouting Epoxy; 1999 (Reaffirmed 2010).
  - 7. ANSI A108.8 - American National Standard Specifications for Installation of Ceramic Tile with Chemical Resistant Furan Resin Mortar and Grout; 1999 (Reaffirmed 2010).
  - 8. ANSI A108.9 - American National Standard Specifications for Installation of Ceramic Tile with Modified Epoxy Emulsion Mortar/Grout; 1999 (Reaffirmed 2010).
  - 9. ANSI A108.10 - American National Standard Specifications for Installation of Grout in Tilework; 1999 (Reaffirmed 2010).
  - 10. ANSI A108.12 - American National Standard for Installation of Ceramic Tile with EGP (Exterior Glue Plywood) Latex-Portland Cement Mortar; 1999 (Reaffirmed 2010).
  - 11. ANSI A108.13 - American National Standard for Installation of Load Bearing, Bonded, Waterproof Membranes for Thin-Set Ceramic Tile and Dimension Stone; 2005 (Reaffirmed 2010).
- B. ASTM F710 - Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring; 2011.
- C. ASTM F1869 - Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride; 2016a.
- D. TCNA (HB) - Handbook for Ceramic, Glass, and Stone Tile Installation; 2015.

**1.04 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Samples for Verification: Provide minimum of three units of each size and color of tile to be provided.

**1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Protect adhesives from freezing or overheating in accordance with manufacturer's instructions.

**1.06 FIELD CONDITIONS**

- A. Do not install solvent-based products in an unventilated environment.

**1.07 EXTRA MATERIALS**

- A. Provide 10 sq. ft of each size, color, and surface finish of tile specified.

**PART 2 PRODUCTS****2.01 TILE**

- A. Basis-of-Design Product: Each tile type is specified in Division 9 "Section "Finish Specifications". Provide only the named product.
- B. TRIM AND ACCESSORIES
  - 1. Tile Trim: Matching bullnose, cove base and cove shapes in sizes coordinated with field tile.
  - 2. Non-Ceramic Trim: Satin brass anodized extruded aluminum, style and dimensions to suit application, for setting using tile mortar or adhesive.
    - a. Applications:
      - 1) Open edges of wall tile.
      - 2) Edges of floor tile that are adjacent to floor finishes other than tile.
    - b. Manufacturers:
      - 1) Schluter-Systems: [www.schluter.com/#sle](http://www.schluter.com/#sle).
- C. ADHESIVE MATERIALS
  - 1. Bonsal American, Inc: [www.sakrete.com](http://www.sakrete.com)
  - 2. Color: Manufacturer's standard color.
    - a. White adhesive at glass tile applications.
- D. GROUTS
  - 1. Manufacturers:
- E. SEALER
  - 1. Manufacturers:
    - a. Stone Tech Professional: [www.stonetechpro.com](http://www.stonetechpro.com).
    - b. Substitutions: See Section 01 6000 - Product Requirements.
  - 2. Natural Look Sealer: Penetrating, water-based stone sealer for stain resistance without altering natural appearance.
    - a. Product: Stone Tech Professional Sealer.

**PART 3 EXECUTION****3.01 EXAMINATION**

- A. Verify that sub-floor surfaces are smooth and flat within the tolerances specified for that type of work and are ready to receive tile.
- B. Verify that wall surfaces are smooth and flat within the tolerances specified for that type of work, are dust-free, and are ready to receive tile.
- C. Verify that sub-floor surfaces are dust-free and free of substances that could impair bonding of setting materials to sub-floor surfaces.
- D. Verify that concrete sub-floor surfaces are ready for tile installation by testing for moisture emission rate and alkalinity; obtain instructions if test results are not within the following limits:
  - 1. Moisture Emission Rate: Not greater than 3 lb per 1000 sq ft per 24 hours, test in accordance with ASTM F1869.
  - 2. Alkalinity (pH): Verify pH range of 5 to 9, test in accordance with ASTM F710.

**3.02 PREPARATION**

- A. Protect surrounding work from damage.
- B. Vacuum clean surfaces and damp clean.

- C. Seal substrate surface cracks with filler. Level existing substrate surfaces to acceptable flatness tolerances.

### **3.03 INSTALLATION - GENERAL**

- A. Install tile, thresholds, and stair treads and grout in accordance with applicable requirements of ANSI A108.1a through ANSI A108.13, manufacturer's instructions, and TCNA (HB) recommendations.
- B. Lay tile to pattern indicated. Do not interrupt tile pattern through openings.
- C. Cut and fit tile to penetrations through tile, leaving sealant joint space. Form corners and bases neatly. Align floor joints.
- D. Place tile joints uniform in width, subject to variance in tolerance allowed in tile size. Make grout joints without voids, cracks, excess mortar or excess grout, or too little grout.
- E. Form internal angles square and external angles bullnosed.
- F. Install non-ceramic trim in accordance with manufacturer's instructions.
- G. Sound tile after setting. Replace hollow sounding units.
- H. Keep control and expansion joints free of mortar, grout, and adhesive.
- I. Prior to grouting, allow installation to completely cure; minimum of 48 hours.
- J. Grout tile joints unless otherwise indicated. Use standard grout unless otherwise indicated.
  - 1. Use nonsanded grout at the following tile products, when specified:
    - a. Glass tile applications
  - 2. Use epoxy grout at the following locations, when part of the work:
    - a. Toilet rooms, including walls and floors
    - b. Lobby floors
- K. At changes in plane and tile-to-tile control joints, use tile sealant instead of grout, with either bond breaker tape or backer rod as appropriate to prevent three-sided bonding.
- L. Sealant: Apply sealant to all tile areas according to sealant manufacturer's instructions.

### **3.04 GROUTING**

- A.

### **3.05 CLEANING**

- A. Clean tile and grout surfaces.

### **3.06 SEALING**

- A. Apply specified sealer according to manufacturer's instructions.

### **3.07 PROTECTION**

- A. Do not permit traffic over finished floor surface for 4 days after installation.

**END OF SECTION**