

STANDARD SPECIFICATION
JANUARY 2010

DIVISION 9

SECTION 9C CERAMIC / PORCELAIN TILE

9C.01 GENERAL: Comply with all of the Contract Documents.

9C.02 SCOPE OF WORK: Refer to "Division Scope of Work"

9C.03 WORK NOT INCLUDED

A. The following items are excluded from the work of this Section:

1. Shower rods - Section 15B.
2. Caulking - Section 7D.

9C.04 MANUFACTURERS

A. Provide ceramic or porcelain tiles as manufactured by Crossville Porcelain Tile, American Olean Tile, Wenczel Tile Company or approved equal as determined by Architect/Engineer.

9C.05 MATERIALS

A. Glazed Wall Tile:

1. "Standard Grade" units, complying with ANSI A137.1. cushion edge units. Size 4 1/4" x 4 1/4" for Bathrooms, other areas, size and patterns shall be as shown on drawings, colors as selected by Architect/Engineer from manufacturer's standards.

B. Unglazed Ceramic Mosaic Floor Tile:

1. "Standard Grade" vitreous units, complying with ANSI A137.1. Size, 4 1/4" x 4 1/4", cushion edge. Color to be selected by Architect/Engineer from manufacturer's standards.

C. Trim and Special Shapes:

1. Rounded external corners, and trim shapes at head, jamb and sills of material and finish as glazed wall tile, and as follows:
 - a. Base: Sanitary cove units;
 - 1) Public restrooms – Rounded top edge cove base
 - 2) Apartment bathroom – Square top edge cove base

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- b. Cap: Surface bullnose;
 - 1) 2" x 6" bullnose.
 - 2) 4" x 4" bullnose.
 - 3) ½" x 6" flat liners
 - 4) ½" x 6" rounded liners
- c. Internal Corners: Field butted square.
- d. External Corners: Equal legs rounded edge.

D. Bathroom Accessories:

- 1. Provide flange type vitreous china or porcelain accessories in colors selected from the manufacturer's standard range.
 - a. Soap dish with washcloth holder (at bathtub)
 - b. Towel brackets with square plastic towel bar.
 - c. Paper holder with plastic roller.

E. Marble:

- 1. Marble thresholds shall be 1 3/4" thick by 4" wide Grade A first quality, with honed finish, free from cracks, chips, stains or other defects, uniform in tone and coloring as selected by Architect/Engineer. Threshold shall have beveled edge, 2:1, to provide adjustment in differences in floor level.
- 2. Marble used for repairs shall match existing.

F. Portland Cement Grout: (Ceramic Tile)

- 1. As specified in the ANSI A108.10 series of materials and installation specifications for latex Portland cement grout.

G. Epoxy Grout: (Quarry Tile)

- 1. As specified in the ANSI A108.6 series of materials and installation specifications for epoxy grout.

H. Mortar Bed Underlayment (Quarry Tile and Ceramic Mosaic Floor Tile)

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1. Mortar shall be composed of one (1) part Portland cement and six (6) parts sand by volume.
 2. Portland cement shall comply with ASTM C-150, Type 1.
 3. Sand conforming to ASTM C-144.
- I. Waterproofing Membrane (Bathrooms)
1. Membrane shall be 15 lb. roofing felt.
- J. Reinforcement for Mortar Bed Underlayment (Ceramic Tile Stair Treads and Ceramic Mosaic Floor Tile)
1. Reinforcement shall be 2" x 2" x 16 gauge welded wire mesh or 3.5 lb. galvanized expanded metal lath.
- K. Organic Tile Adhesive (Ceramic Tile)
1. Comply with ANSI A136.1.
- L. Latex - Portland cement Mortar Adhesive (Ceramic Tile)
1. Comply with ANSI A118.4.

9C.06 CERAMIC TILE INSTALLATION

- A. Ceramic Wall Tile
1. Ceramic wall tile in bathrooms, public halls and vestibules in mastic adhesive shall be installed in accordance with the manufacturer's written instructions, and shall comply with ANSI A108.4. Prime wall surfaces and seal raw edges prior to adhesive application.
- B. Ceramic Mosaic Floor Installation
1. Ceramic mosaic floor tile in areas as per Finish Schedule shall conform to ANSI Specifications A108.5-1988. Ceramic Tile shall be set with dry-set or latex Portland cement mortar bond coat on cement mortar bed underlayment.
- C. Grouting and Pointing
1. Grout all joints to their full depth. After cleaning, re-grout where necessary, remove excess grout, particularly at cushion edges, to leave clear cut outline of tile and perfectly clean without the use of acid solution.

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9C.07 WORKMANSHIP

- A. No tiling shall be done until verification that all necessary grounds have been provided, piping has been tested and all work of others is in proper condition to precede with work of this Section. Tile wainscots shall be installed to ceiling height above finished floor at tub surrounds and 4'-0" at all other bathroom walls. See Finish Schedule or details for height of tile for other areas.
- B. Over new plywood sub-floor, provide new waterproofing membrane over entire bathroom floor area.
- C. Over waterproofing membrane install 1 1/2" thick cement mortar bed reinforced with welded wire mesh, properly level so that the finish ceramic floor tile level shall be at required floor elevation.
- D. All tile work shall be laid out symmetrically and accurately. Tiles shall be set so that no tile less than half size will be used at ends or over tub. Size sanitary base accordingly. Ceramic tile floor shall be set on cement mortar bed underlayment. After tile has set, joints shall be grouted.
- E. Tiles shall be set to adhere fully and permanently to underlayment or backing.
- F. No joint in wall, base or floor tile shall be wider than 1/16" and joints shall be of uniform width in each of the floor and wall tile, and shall run continuous accepted. At completion of setting marble saddles, clean all exposed faces. Do not use acids or strong caustics.
- G. Center accessories over plumbing fixtures. All accessories to be installed in accordance with manufacturers printed instructions.
- H. If bathroom window is located partly or completely within wall tile area (wainscot), provide tile and all necessary corner and edge tile trimmings around window casing and window sill to window frame.
- I. All necessary and required cutting, drilling, fitting, grinding etc., shall be done to accommodate the work of this Section. Cutting and drilling shall be done accurately and neatly without marring surface.
- J. General:
 - 1. Comply with ANSI A108.1, ANSI A108.5 and the "Handbook for Ceramic Tile Installation" of the Tile Council of America except as otherwise directed by Architect/Engineer or specified herein.

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- K. Install saddles in AO 1000 Type 1 Marble Adhesive (ANSI A 136.1). Set saddles level and cut true and tight to door frames. Any imperfect or patched type work will not be accepted. At completion of setting marble saddles, clean all exposed faces. Do not use acids or strong caustics.
- L. Porcelain toilet accessories shall be installed as follows: Provide five (5) 1/4" holes drilled into gypsum board or tile backer board, one at each corner and one at the center where accessories are to be installed. Provide silicone caulking bed of sufficient amount to install accessories and to penetrate the holes provided.

9C.08 CLEANING AND PROTECTION

- A. All materials shall be stored in such a manner as to afford ample protection.
- B. Adhesive, surface primer and sealer shall be stored, handled and used in strict accordance with the directions of the manufacturer.
- C. All exposed surfaces of tile shall be thoroughly pointed and cleaned after setting, care being exercised to avoid damage to or spoilage of surrounding materials. Saddles shall be protected and kept clean.
- D. Any damaged material shall be replaced as directed by Architect/Engineer.
- E. After cleaning, floor tile shall be protected with non-staining saw dust.

9C.09 SAMPLES AND CERTIFICATE OF QUALITY

- A. Submit two samples of each kind, color, size and shape of tile to be used and a sample of caulking to be used, for Architect's/Engineer's approval.
- B. Provide certificate of quality of tile and adhesive to Architect/Engineer.

9C.10 GUARANTEES

- A. Guarantee all items of work furnished and installed under this Section for (1) one year, in addition to manufacturer's standard warranties. All guarantees to be from the date, when **Final Certificate of Occupancy** is issued from Department of Buildings.
- B. Provide one (1) box of each type and color of tile for future replacement, delivered to the Owner.

END OF SECTION