DIVISION 9
FINISHES

09300 CERAMIC TILE

Part 1 – General

1.1 WORK

A. Provide all labor and materials required to complete the tile work as listed on the Scope, and as specified herein.
B. When work involves repair and removal of plaster, drywall, or other painted components in excess of 2 square feet total, work shall comply with Section 01810 Lead Dust Hazards.

1.2 QUALITY STANDARDS

A. Provide experienced, well-trained workers competent to complete the work as specified.
B. All work shall comply with manufacturer’s instructions and governing building codes.
C. Provide a certified lead abatement supervisor and certified lead abatement workers per Section 01810 Lead Dust Hazards, if work will involve the removal or disturbance of painted components in excess of 2 square feet.

1.3 SUBMITTALS

A. Do not start work until Owner has approved and signed the Owner’s Selection Sheet (Appendix A).
   • Supply Owner with samples of standard tile color, pattern, and style selections.
   • Provide a copy of the Owner’s written color selection to Agency.
   • Submit to Owner manufacturer’s flooring care and cleaning instructions, and warranty.

1.4 MATERIALS HANDLING

A. Provide all materials required to complete the work.
   • Deliver and transport materials to avoid damage to the product or to any other work.
   • Return any products or materials delivered in a damaged or unsatisfactory condition.
   • Materials and products shall be new and delivered materials will be certified by the manufacturer to be as specified.
   • Packaging must be sealed with clear manufacturer and identification markings.
B. Store ceramic tile and related materials in work area:
   • Protected from weather or moisture.
   • Protected from construction damage.
   • Protected from occupant traffic.

PART 2 – MATERIALS

2.1 TILE AND ACCESSORIES

A. Tile:
   • Shall comply with Tile Council of America Specification 137.1.
   • Colors, textures, and patterns will be as selected by the Owner from standard and readily available local suppliers.
   • Tile shall be selected for use per manufacturer’s instructions.
   • Delivered tile shall match samples selected by Owner.
   • Floor tile shall have coefficient of friction not less than 0.50 as per ASTM F489, ASTM F609.
B. Provide all accessory shapes to complete the work as listed of the Scope and as specified herein.

2.2 SETTING MATERIALS

A. Comply with Tile Council of America “Handbook for Ceramic Tile Installation”.
B. Latex-portland cement mortar as per ANSI A118.4.
C. Organic Adhesive as per ANSI A136.1.
   • Type I where subject to extended water exposure.
   • Type II at all other locations.

2.3 GROUT

A. Comply with Tile Council of America “Handbook for Ceramic Tile Installation”.
B. Colors will be selected by Owner from standard colors available from approved manufacturers.
C. Portland cement grout:
   • Use mixture of portland cement and other materials manufactured for this purpose.
   • Grout must comply with tile manufacturer’s instructions.

2.4 OTHER MATERIALS

A. Provide all other materials, required for a complete, proper installation.
B. Adhesive, sealant, and grout as per applicable trade standards and tile manufacturer’s instructions.
   • Delivered in new unopened containers.
   • With correct color additives.
C. Provide non-corrosive lath:
   • Zinc-coated
   • Lapped
   • Tied with zinc-coated fasteners.
D. Tile backer board – cement boards:
   • Installed as an underlayment for wall tile.
   • Minimum thickness ½ inch.
   • Installed per manufacturer’s instructions.
E. Install all necessary waterproofing per manufacturer’s instructions including all:
   • Primer.
   • Felt.
   • Waterproof membrane.
   • Sealant.
   • Waterproof sheet metal work.
   • Underlayment.

PART 3 – INSTALLATION

3.1 PREPARATION

A. Keep work surfaces and working environment:
   • Clean.
   • Dry.
   • Well lighted.
   • Well ventilated.
   • Free of airborne construction dust.
   • At comfortable working temperature per manufacturer’s instructions.
B. For accessories and other work:
   • Provide supports for fixtures and related construction including wall blocking, backing, inserts, and anchors.
   • Premark and double-check locations for accessories to be installed.
   • Set accessories in place before beginning tile work.
   • Put in place and properly position, work of related trades such as electrical boxes, switches, stub ups, drains, and other plumbing.
C. Install all support framing, furring, and backing plumb, square, aligned, and secured so that surfaces will not move or deflect.
D. Prepare floors for tiling so the finish floor will be either perfectly level or slope properly to drains.
E. Work preparation:
   • Install backer board (cement board) securely, in line with surrounding wall plane.
   • Install waterproofing and backing that will absolutely block water leakage.
• Install control joints and edge strips.
• Securely fasten all components.
• Sized and shaped exactly to fit finished tile work.
• Set layout start points to achieve tile patterning that is symmetrical, complete, planned for minimal and balanced tile cutting.
• Include trim, edge, and base shapes with materials that match other tiles and are free of irregularities.

3.2 INSTALLATION

A. Work standards and conditions:
• Comply with Tile Council of America “Handbook for Ceramic Tile Installation”.
• Comply with manufacturer’s instructions.
• Work temperature must be as per instructions of materials manufacturers.

B. Limits of tile application:
• Extend tile into recesses and under and behind future equipment or fixtures.
• Tile must be installed as a complete, uninterrupted covering.
• Edges and corners must be terminated neatly without disruption of pattern or joint alignment.
• Terminate tile neatly at obstructions or penetrations of other work.

C. Joint pattern:
• Lay tile in standard grid unless otherwise specified in Scope.
• Align joints of adjoining same size tiles on floor, base, walls, and trim.
• In tile layout, center field tile in both directions on floors or walls.
• Adjust layout and pattern to minimize tile cutting.
• Joint widths must be consistent and uniform.

D. Patching existing tile:
• Match existing size, pattern, shape, and layout as closely as possible.
• Tile shall match as closely as possible the size, thickness, shape, finish, and color of surrounding tile.
• Grout shall match as closely as possible to existing grout, in color and type.

E. Provide expansion and joint controls:
• As instructed by the Tile Council of America “Handbook for Ceramic Tile Installation”.

F. Standards of work quality:
• Fit special border tiles squarely without cuts.
• Perfectly match tiles pieces with other tile work, trim, bases, tile accessories.
• Prepare tile according to manufacturer’s instructions, presoak, dry surfaces, clean, etc.
• Plan and install correct patterning that’s symmetrical, complete, square to floor or wall.
• Apply tile surface smoothly and free of irregularities, humps, and dips.
• Install tile joints straight, level horizontally, aligned and exact vertically and uniform in size.
• Use extra care at difficult areas such as corners, fixture locations, around wall openings and recesses, at penetrations such as floor drains, door and window trim.
• Make tile cuts minimal, uniform, not smaller than half a tile.
• Complete grouted or thin-set adhesion so no tiles can be pulled loose.
• Do not allow tile at door thresholds to interfere with closure.
• Do not use broken or cracked tiles.

3.3. PROTECTION, CLEANING, AND REPAIR

A. Completely protect finished tile, and allow no damage to the work.
B. Cleaning:
• Wash tile surfaces with clean water before and after cleaning.
• Use cleaning solutions and materials as per manufacturer’s instructions.
• Do not use acidic cleaners near finish metal or other vulnerable surfaces.
• Remove excess corrosive cleaning solutions from site, do not empty into building drains.

C. Repair and replace defective work. Reject tiles and replace if:
• Chipped.
• Scratched.
• Cracked.
• Popped up.
- Loose.
- Stained.
- Miss-aligned.

D. Repair or replace all defective and non-conforming work as directed by Inspector. All repairs shall be undetectable.

END OF SECTION – 09300 CERAMIC TILE