

**First Floor and Mezzanine Restroom Renovations  
Carvel Building  
820 N. French Street; Wilmington, DE 19801  
Contract No. MC1002000432**

**BID FORM**

**SUBCONTRACTOR LIST**

In accordance with Title 29, Chapter 6962 (d)(10)b Delaware Code, the following sub-contractor listing must accompany the bid submittal. The name and address of the sub-contractor **must be listed for each category** where the bidder intends to use a sub-contractor to perform that category of work. In order to provide full disclosure and acceptance of the bid by the *Owner*, **it is required that bidders list themselves as being the sub-contractor for all categories where he/she is qualified and intends to perform such work.** This form must be filled out completely with no additions or deletions.

<u>Subcontractor Category</u>	<u>Subcontractor</u> <u>Subcontractors tax payer ID #</u> <u>or Delaware Business license #</u>	<u>Address (City &amp; State)</u>
1. Carpentry	_____	_____
2. Painting	_____	_____
3. Electrical	_____	_____
4. Plumbing	_____	_____
5. Fire Suppression	_____	_____
6. Flooring	_____	_____
7. HVAC	_____	_____
8. Tile/Flooring	_____	_____
9. Fire Alarm	_____	_____
10. Terrazzo	_____	_____

**SECTION 09 66 13**  
**PORTLAND CEMENT TERRAZZO FLOORING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Cast-in-place terrazzo floor.
- B. Divider strips and termination edging.

**1.02 RELATED REQUIREMENTS**

- A. Section 03 30 00 - Cast-in-Place Concrete: Concrete subfloor with wood float finish.
- B. Section 07 92 00 - Joint Sealants: Sealing joints between terrazzo work and adjacent construction and fixtures.
- C. Section 12 48 13 - Entrance Floor Mats and Frames.

**1.03 REFERENCE STANDARDS**

- A. ANSI A118.3 - American National Standard Specifications for Chemical Resistant, Water Cleanable Tile-Setting and -Grouting Epoxy and Water Cleanable Tile-Setting Epoxy Adhesive.
- B. ASTM C33/C33M - Standard Specification for Concrete Aggregates.
- C. ASTM C150/C150M - Standard Specification for Portland Cement.
- D. ICRI 310.2R - Selecting and Specifying Concrete Surface Preparation for Sealers, Coatings, Polymer Overlays, and Concrete Repair.
- E. NTMA (SPECS) - NTMA Terrazzo Specifications.

**PART 2 PRODUCTS**

**2.01 PORTLAND CEMENT TERRAZZO APPLICATIONS**

- A. Floors: Monolithic Terrazzo.
  - 1. Color(s): Match existing.
  - 2. Aggregate Type: Granite chips.
  - 3. Aggregate Size: No. 1 and 2.

**2.02 PORTLAND CEMENT TERRAZZO FLOORING**

- A. Materials:
  - 1. Portland Cement: ASTM C150/C150M, Type I Normal; white color for topping mix; modified to NTMA higher compressive strength requirements; obtained from single source.
  - 2. Color Pigments For Topping: Non-fading mineral type, alkali-resistant.
  - 3. Terrazzo Sand: ASTM C33/C33M, fine aggregates.
  - 4. Water: Potable.
  - 5. Surface Aggregate: Marble, free of deleterious or foreign matter.
- B. Accessories:
  - 1. Divider Strips: 1/8 inch thick zinc exposed top strip, zinc coated steel concealed bottom strip, with anchoring features.
  - 2. Divider and Control Joint Strip Height: To suit thickness of terrazzo topping, with allowance for grinding.
  - 3. Base Cap: Match divider strips.
  - 4. Foam Filler: Closed cell urethane foam, capable of compression to 50 percent of its thickness with full recovery.
  - 5. Non-Slip Inserts: Provide channel-shaped inserts filled with a mixture of resin and fine, abrasive aggregate.
  - 6. Cleaner: Neutralizing liquid type, pH of 7 to 10.

7. Sealer: Colorless, non-yellowing, penetrating liquid type, pH of 7 to 10; not detrimental to terrazzo components.
8. Subfloor Filler: Latex type.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verify that substrate surfaces are ready to receive work.
- B. Do not begin terrazzo work until concrete substrate has cured 28 days, minimum, and has dried to a maximum moisture content of 12 percent.
- C. Coordinate placement of terrazzo divider strips with location of mechanical and electrical access covers.

#### **3.02 PREPARATION**

- A. Clean substrate of foreign matter.
- B. Remove loose or flaking concrete and repair to form sound, solid substrate.
- C. Prepare concrete surfaces according to ICRI 310.2R.
- D. Remove surface water and thoroughly brush in neat cement slurry bond coat.
- E. Prepare wood subfloor, tape joints, and apply subfloor filler. Isolate terrazzo installation from wood subfloor with slip sheet, lapping edges and ends.

#### **3.03 APPLICATION - MONOLITHIC TERRAZZO**

- A. Saw cut existing floor slab to receive divider and control joint strips and inserts and fill with grout.
- B. Install strips straight and level to locations indicated.
- C. Install non-slip inserts in floors where indicated.
- D. Install recessed floor mat frames.
- E. Slope strips to match floor surface slope to drains.
- F. Install base divider and control joint strips to match floor pattern.
- G. Install terminating cap strip at top of base; attach securely to wall substrate.
- H. Place terrazzo topping mix over slurry coated substrate to a nominal thickness of 1/2 inch.

#### **3.04 CURING**

- A. Begin curing procedures as soon as curing materials can be applied without damaging formed surfaces.
- B. Use curing method in accordance with NTMA instructions.
- C. Close area to construction traffic, allowing undisturbed curing.

#### **3.05 SURFACE FINISHING**

- A. Brush apply terrazzo topping mix slurry to topping surface.
- B. Finish terrazzo in accordance with NTMA instructions.
- C. Grind terrazzo surface with power disc machine; successively sequence using coarse to fine grit abrasive, using a wet method.
- D. Apply grout mix matching matrix color to fill honeycomb exposed during grinding.
- E. After grout has sufficiently cured, grind repaired areas using a fine grit abrasive.
- F. Hand grind base.

**3.06 TOLERANCES**

- A. Maximum Variation from Flat Surface: 1/8 inch in 10 feet.
- B. Maximum Variation from Level (Except Surfaces Sloping to Drain): 1/8 inch.

**3.07 CLEANING**

- A. Scrub and clean terrazzo surfaces with cleaner in accordance with NTMA instructions. Let dry.
- B. Seal and polish surfaces in accordance with NTMA instructions.

**3.08 PROTECTION**

- A. Do not permit construction traffic over finished terrazzo surfaces.

**END OF SECTION**