



SECTION 06415

CONCRETE COUNTERTOPS

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Concrete countertops and trim.
- B. Concrete vanities.
- C. Concrete sinks.
- D. Concrete fireplace surrounds.
- E. Concrete tub surrounds.
- F. Concrete furniture.
- G. Concrete stair treads.
- H. Concrete window sills.

1.2 RELATED SECTIONS

- A. Section 03300 - Cast-In-Place Concrete.
- B. Section 04220 - Masonry Units.
- C. Section 06100 - Rough Carpentry.
- D. Section 07900 - Joint Sealers.
- E. Section 09252 - Cementitious Backer Board.

1.3 REFERENCES

- A. ASTM International (ASTM):
 1. ASTM B 117 - Standard Practice for Operating Salt Spray (Fog) Apparatus.
 2. ASTM C 39 - Standard Test Method for Compressive Strength of Cylindrical Concrete Specimens.
 3. ASTM C 297 - Standard Test Method for Flatwise Tensile Strength of Sandwich Constructions.
 4. ASTM C 1185 - Standard Test Methods for Sampling and Testing Non-Asbestos Fiber- Cement Flat Sheet, Roofing and Siding Shingles, and Clapboards.
 5. ASTM C 1186 - Standard Specification for Flat Fiber-Cement Sheets.
 6. ASTM D 2247 - Standard Practice for Testing Water Resistance of Coatings in 100 Percent Relative Humidity.
 7. ASTM E 84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 8. ASTM G 155 - Standard Practice for Operating-Xenon Arc Light Apparatus for Exposure of Nonmetallic Materials.

1.4 PERFORMANCE REQUIREMENTS

- A. Countertops: Products shall meet or exceed the following performance characteristics:
 - 1. Accelerated Weathering: ASTM G 155, passed, 2,000 hours; no deleterious effects, no cracking, checking, crazing, erosion, rusting, blistering, peeling or delaminating.
 - 2. Freeze/Thaw Resistance: ICC AC 219, passed, 10 cycles; no deleterious effects, no cracking, checking, crazing, erosion, rusting, blistering, peeling or delaminating.
 - 3. Water Absorption: ASTM C 1185, < 4%, passed; no deleterious effects, no cracking, checking, crazing, erosion, rusting, blistering, peeling or delaminating.
 - 4. Tensile Adhesion: ASTM C 297, 25 PSI, Minimum 15 PSI.
 - 5. Water Resistance: ASTM D 2247, passed, passed 14 days; no deleterious effects, no cracking, checking, crazing, erosion, rusting, blistering, peeling or delaminating.
 - 6. Salt Spray: ASTM B 117, no deleterious effect, passed at 300 hours; no deleterious effects, no cracking, checking, crazing, erosion, rusting, blistering, peeling or delaminating.
 - 7. Surface Burning Characteristics: ASTM E 84, 0 Flame Spread/ 0 Smoke Develop, passed.
 - 8. Compressive Strength: ASTM C 39, < 7,000 PSI, passed.
 - 9. Flexural Strength: ASTM C 1185/1186, <1,560 PSI, passed.

1.5 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
 - 4. Cleaning and maintenance instructions.
- C. Shop Drawings: Include project-specific details.
- D. Verification Samples: For each finish product specified, two hand-size samples of colors, textures and shapes to be used on the project.
- E. Warranty: Copy of manufacturer's standard warranty.

1.6 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 years experience with concrete countertops, with a formal, written internal quality control program.
- B. Installer Qualifications: Minimum 2 years experience with similar products, and acceptable to the countertop manufacturer.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver all materials in their original sealed containers bearing manufacturer's name and identification of product.
- B. Protect liquid materials from freezing temperatures, 32 degrees F (0 degrees C) and temperatures in excess of 90 degrees F (32 degrees C). Store covered, out of direct sunlight.
- C. Protect Envision Concrete Countertop Mix and other dry powder type materials from moisture and humidity. Store under cover and off the ground in a dry location.

1.8 PROJECT CONDITIONS

- A. Maintain ambient and surface temperatures above 40 degrees F (4 degrees C) during application and drying period, minimum 24 hours after application of Envision Concrete Countertops.
- B. Provide supplementary heat for installation in temperatures less than 40 degrees F (4 degrees C).
- C. Provide protection for countertop surfaces until inspection is complete.

1.9 COORDINATION/SCHEDULING

- A. Sequence work to provide protection of construction materials from weather deterioration and proper sequencing for installation.
- B. Coordinate installation with specific trades including substrate and or cabinet contractors. Coordinate with trades attaching surface-mounted objects on countertops.

1.10 WARRANTY

- A. Manufacturer's Warranty: Provide manufacturer's standard written limited materials warranty, one year.
- B. Contractor's Warranty: Provide Contractor's standard written labor warranty, two years.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Envision Concrete Countertop Certified Manufacturer, list available from Tuscan Stoneworx; 165 N. 1330 W, Suite C-4, Orem, UT 84057. ASD. Toll Free Tel: (888) 368-9494. Fax: (801) 734-6959. Email: info@tuscanstoneworx.com. Web: <http://www.envisionconcretecountertops.com>
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 CONCRETE COUNTERTOPS

- A. Concrete Countertops: Envision Concrete Countertops by Tuscan Stoneworx complying with the following:
 - 1. Type: Factory pre-fabricated limestone-based concrete countertops composed of minerals, cement, resin, reinforcing fibers and admixtures. Meet criteria specified in Paragraph: Performance Requirements.
 - 2. Casting: Individual pieces cast using HDO, melamine, rubber or fiberglass manufactured molds.
 - 3. Size and Configuration: As indicated on the Drawings.
 - 4. Thickness: Foam core with 1 inch of Envision Concrete Countertop Mix.
 - 5. Thickness: _____.
 - 6. Thickness: As indicated on the Drawings.
 - 7. Thickness: As selected by Architect from manufacturer's full range of standard options.
 - 8. Integral Color: _____.
 - 9. Integral Color: As indicated on the Drawings.
 - 10. Integral Color: As selected by Architect from manufacturer's full range of standard options.
 - 11. Finish: Veined.

12. Finish: Polished.
 13. Finish: Sanded.
 14. Finish: Trowel.
 15. Finish: As indicated on the Drawings.
 16. Finish: As selected by Architect from manufacturer's full range of standard options.
 17. Inlays: _____.
 18. Inlays: Match Architect's sample.
 19. Inlays: As indicated on the Drawings.
 20. Inlays: As selected by Architect from manufacturer's full range of standard options.
 21. Edge: _____.
 22. Edge: Match Architect's sample.
 23. Edge: As selected by Architect from manufacturer's full range of standard options.
- B. Accessories: Acceptable to the countertop manufacturer and as follows.
1. Standard Base Adhesive: Liquid Nails Construction Adhesive.
 2. Joining Materials: Envision Filler.
 3. Attachment Adhesives: Construction adhesive recommended by manufacturer.
 4. Surface Sealer: Envision Sealer.

PART 3 EXECUTION

3.1 SUBSTRATE INSPECTION

- A. Verify substrate is listed on manufacturer's list of approved substrates.
- B. Check dimensions of substrate surfaces, including but not limited to length, width, height, radiuses, and angles, that supporting surface, as built, will accept the countertop as manufactured.
- C. Report deviations from the requirements of project specifications or other conditions that might adversely affect the countertop installation to the Architect. Do not start work until deviations are corrected.

3.2 SUBSTRATE PREPARATION

- A. Remove surface contaminants on concrete and concrete masonry surfaces, including but not limited to form release oils, dust, paint, and waterproofing.
- B. Level surfaces to comply with required tolerances in this specification.

3.3 INSTALLATION

- A. General: Install in strict accordance with manufacturer's recommendations including the following.
 1. Inspect countertops and trim as delivered to ensure that materials are as specified.
 2. Dry fit all adjoining pieces, and install using adhesive, filler and dowels as necessary.
 3. Comply with drawings and manufacturer's drawings for location of pieces and joints.
 4. Use diamond saw or diamond grinding if required for field-fitting.
 5. Comply with adhesive manufacturer's preparation and installation instructions.
 6. Adhere countertop to substrate using construction adhesive. Maintain temperatures above 40 degrees F (9 degrees C) for at least 24 hours.
 7. Apply sealer in accordance with manufacturer's recommendations.

3.4 PROTECTION AND CLEANING

- A. Protect installed materials from dust, dirt, precipitation, freezing, damaged, spilled materials, and continuous high humidity until they are fully dry.
- B. Remove temporary protective coverings and excess materials and dispose of properly.
- C. Clean countertops prior to final acceptance in accordance with manufacturer's recommendations, including mild soaps and water. Heavy abrasives and ammoniated cleansers are not acceptable.

END OF SECTION