

**SECTION 06651
SOLID SURFACE FABRICATION****1.1 SUMMARY OF THE SOLID SURFACE FABRICATION WORK**

- A. The solid surface fabrication work is comprised of furnishing and installing all solid surface fabrications of monolithic solid thermoset plastic, consisting of, but not limited to, sheet work, lavatory bowls, sinks, shower pans, shower walls, and accessories, all as shown on the drawings and as required to complete the work in this contract. The solid surface fabrication work includes the following:

1. Tub and shower walls
2. Shower bases
3. Wall cladding/wainscoting
4. Wall base
5. Chair rails
6. Window sills
7. Shower partitions
8. Toilet partitions
9. Specialty countertops
10. Reception area stations
11. Table tops
12. Bar tops
13. Kitchen countertops
14. Kitchen countertops with sink(s)
15. Kitchen island tops
16. Kitchen island tops with sink(s)
17. Vanity tops
18. Vanity tops with bowl(s)
19. Cold cafeteria surfaces
20. Hot cafeteria surfaces
20. Coved splashes
21. Color inlays

1.2 SOLID SURFACE FABRICATION SUBMITTALS

- A. Shop drawings shall be supplied by the solid surface fabricator and shall include:
1. Scale and full size details for fabricated items
 2. Locations for cutouts
 3. Locations for faucet drillings
 4. Locations for accessories
 5. Edge details
 6. Requirements for blocking and/or other support
- B. LEED Submittals:
1. Provide manufacturer's product data to support LEED Credits
 2. Provide manufacturer's documentation of certifications relating to sustainable attributes
- C. Food service installations
1. Provide documentation of manufacturer's compliance with NSF/ANSI Standard 51

1.3 DELIVERY, STORAGE AND HANDLING OF SOLID SURFACE FABRICATION MATERIALS

- A. Deliver fabricated work in protective packing to minimize any potential damage to work prior to installation.
- B. Do not deliver any materials to site until areas are ready to receive them for installation.
- C. Store all materials indoors in a dry area away from extreme temperatures and sunlight.
- D. Handle all solid surface fabricated materials in such a way as to prevent damage to other finished surfaces.

1.4 QUALITY ASSURANCE FOR FABRICATION AND INSTALLATION OF SOLID SURFACE FABRICATION MATERIALS

- A. Fabricator Qualifications: All work shall be fabricated and installed by a fabrication professional who has been accredited by the International Surface Fabricators Association or who has demonstrated proficiency in the types of work required by this project. The fabrication professional shall have a minimum of five (5) years of solid surface fabrication experience and have completed a minimum of two (2) solid surface fabrication projects of similar scope and size to the solid surface fabrication and installation work of this project.
- B. Source Quality Control: Obtain and provide materials for all solid surface fabrications from a single manufacturer of solid surface material with not less than five (5) years of successful experience in supplying principal materials for solid surface fabrication installations. Provide secondary and/or alternate materials only as recommended by the manufacturer of the primary solid surface materials.
 - 1. Pre-installation Conference: Approximately one week prior to the scheduled commencement of the solid surface fabrication installation, a meeting shall be held at the project site with the accredited fabrication professional, the Owner and all other applicable trade representatives, to coordinate the solid surface fabrication work.
 - 2. Applicable Standards:
 - a. American National Standards Institute (ANSI)
 - b. American Society for Testing Materials (ASTM)
 - c. National Electrical Manufacturers Association (NEMA)
 - d. ISFA (ISSFA-2-01)
 - e. NSF International
 - 3. Allowable Tolerances:
 - a. Variation in component size: plus or minus 1/8" (3 mm).
 - b. Location of openings: plus or minus 1/8" (3 mm) from location indicated.

1.5 WARRANTY FOR BASIX® SOLID SURFACE FABRICATION AND INSTALLATION

- A. The manufacturer shall provide a limited warranty that the materials provided under this section shall not develop visible defects or otherwise fail due to manufacturing defects within a period of ten (10) years from the date of acceptance by the Owner.

- B. Conditions not covered by manufacturer warranty:
1. Failure of joints, seams or of any adhesive, caulk or other accessory, failure or degradation of decorative edge treatments including seam appearance.
 2. Failure of solid surface fabricator and installer to comply with manufacturer's fabrication, installation instructions or use and maintenance instructions.
 3. Any products moved from it's original place of installation.

SOLID SURFACE FABRICATION PRODUCTS

2.1 SOLID SURFACE FABRICATION MATERIALS

- A. Acceptable Products: Basix®.
- B. Material: Cast, mineral-filled, homogeneous, non-porous, decorative surface alloy, comprised of polyester and acrylic components conforming to ISSFA-2-01.
- C. Finish: Surface finish shall be manufacturer's standard matte finish, or an appropriate finish selected by the architect. Fabricator will supply a sample of the finish to be approved by the architect prior to fabrication of the product.

2.2 SOLID SURFACE FABRICATION

A. **Vertical Surfaces:**

1. Tub and Shower Walls: $\frac{1}{4}$ " (6 mm) [$\frac{1}{2}$ " (12 mm)] thick, standard panels of: Basix® applied to [existing, sound ceramic tile] [moisture-resistant, gypsum wallboard] [cementitious board] with $\frac{1}{16}$ " (1.5 mm) [$\frac{1}{8}$ " (3 mm)] wide [butt joints] [reveal joints, $\frac{1}{8}$ " deep x $\frac{1}{4}$ " wide reveal] [joint size and type as indicated on the drawings], sealed with silicone sealant matching color of Basix® unless otherwise indicated. [Hard seam and batten between panel joints.] Use silicone sealant to adhere panels to substrate. Provide panels to height as indicated on the drawings or in schedules. Provide sloped or coved top edge where panels stop short of ceiling. Provide silicone sealant joint top and bottom of panels and wherever panels adjoin adjacent materials; provide [clear] [colored to match color of Basix®] silicone sealant for joints unless otherwise noted.
2. Wall Cladding/Wainscoting: $\frac{1}{4}$ " (6 mm) [$\frac{1}{2}$ " (12 mm)] thick, standard panels of Basix® applied to [existing, sound plaster] [gypsum wallboard] [other solid substrates], with $\frac{1}{16}$ " (1.5 mm) [$\frac{1}{8}$ " (3 mm)] wide [butt joints] [reveal joints, $\frac{1}{8}$ " deep x $\frac{1}{4}$ " wide reveal] [joint size and type as indicated on the drawings], sealed with silicone sealant matching color of Basix® unless otherwise indicated. [Hard seam and batten between panel joints.] Provide tooled silicone sealant joint top and bottom of panels and wherever panels adjoin adjacent materials. Use silicone sealant to adhere panels to substrate.
3. Wall Base: $\frac{1}{2}$ " (13 mm thick Basix® to size and shape, and with edge details as indicated on the drawings. Provide wall base using Basix® approved adhesive.
4. Chair Rails: $\frac{1}{2}$ " (13 mm) thick Basix® to size and shape, and with edge details as indicated on the drawings. Provide chair rails using Basix® approved adhesive.

B. Horizontal Surfaces:

1. Specialty Countertops: 1/2" (12 mm) Basix® to size and shape, and with edge details as indicated on the drawings. [Provide countertops complete with specified bowl.] [Provide countertops complete with specified sinks.] Provide countertops with inconspicuous joints using Basix® approved adhesive. Surfaces shall not be affected by Class I reagents.
2. Reception Area Stations: Horizontal surfaces of 1/2" (12 mm) thick Basix® with edge details as indicated on the drawings. [Provide countertop complete with specified bowl.] [Provide countertops complete with specified sinks.] Provide countertop with inconspicuous joints using Basix® approved adhesive. Vertical surfaces shall be of [1/4" (6 mm)] [1/2" (12 mm)] thick Basix® with edge details as indicated on the drawings. Provide vertical facing using Basix® approved adhesive, 1/16" (1.5 mm) wide [using Basix® approved adhesive, 1/8" (3 mm) wide] [butt joints, sealed with silicone sealant matching color of Basix®, unless otherwise indicated] [reveal joints, 1/8" deep x 1/4" wide reveal sealed with silicone sealant matching color of Basix® unless otherwise indicated] [Joint size and type as indicated on the drawings, sealed with silicone sealant matching color of Basix®, unless otherwise indicated].
3. Table Tops: Horizontal surfaces of 1/2" (12 mm) thick Basix® with edge details as indicated on the drawings. Provide tabletops using Basix® approved adhesive.
4. Bar Tops: Horizontal surfaces of 1/2" (12 mm) thick Basix® with edge details as indicated on the drawings. [Provide bar top complete with bar/utility sink.] [Under mount bar/utility sink.] [Seam mount bar/utility sink.] [Flush mount bar/utility sink.] Provide bartops using Basix® approved adhesive.
5. Kitchen Countertop: Horizontal surfaces of 1/2" (12 mm) thick Basix® with edge details as indicated on the drawings. Provide kitchen countertops using Basix® approved adhesive.
6. Kitchen Countertops with Sink: Horizontal surfaces of 1/2" (12 mm) thick Basix® with edge details as indicated on the drawings, complete with [Under mount] [Seam mount] [Flush mount] sink. Provide [single bowl] [double bowl] kitchen sink. Provide kitchen countertops using Basix® approved adhesive.
7. Kitchen Island Top: Horizontal surfaces of 1/2" (12 mm) thick Basix® with edge details as indicated on the drawings. Provide kitchen island countertops using Basix® approved adhesive.
8. Kitchen Island Top with Sink: Horizontal surfaces of 1/2" (12 mm) thick Basix® with edge details as indicated on the drawings, complete with [Under mount] [Seam mount] [Flush mount] sink. Provide [single bowl] [double bowl] kitchen sink. Provide kitchen island countertops using Basix® approved adhesive.
9. Vanity Top: Horizontal surfaces of 1/2" (12 mm) thick Basix® with edge details as indicated on the drawings. Provide vanity tops using Basix® approved adhesive.
10. Window Sills: 1/2" (12 mm) thick Basix® to size, shape and tolerances, and with edge details as indicated on the drawings. Provide window sills with inconspicuous joints using Basix® approved adhesive.

11. Vanity Tops with Bowls: Horizontal surfaces of 1/2" (12 mm) thick Basix[®] with edge details as indicated on the drawings, complete with [under mount] [seam mount] vanity bowl. Provide vanity tops with using Basix[®] approved adhesive.

C. Commercial Food Service Countertops:

1. Cold Cafeteria Surfaces: Horizontal surfaces of 1/2" (12 mm) thick Basix[®] with edge details as indicated on the drawings. Provide cold cafeteria surfaces using Basix[®] approved adhesive.
2. Provide expansion joints in countertop as per details.
3. Make cutouts to template as furnished by manufacturer. Radius corners of all cutouts to a minimum of 1/2" inside radius. Corner reinforcements are required.
4. Reinforce edges and cutouts as recommended by manufacturer.
5. Provide insulation between Basix[®] and adjacent cold surfaces.
6. Thermally isolate hot applications from cold: follow manufacturer's method and recommendations.
7. Hot Cafeteria Surfaces: Horizontal surfaces of 1/2" (12 mm) thick Basix[®] with edge details as indicated on the drawings. Provide hot cafeteria surfaces using Basix[®] approved adhesive.
8. Provide expansion joints in countertop as detailed on the drawings.
9. Make cutouts to templates furnished by manufacturer. Radius corners of all cutouts to a minimum of 1/2" inside radius. Corner reinforcements are required.
10. Reinforce edges and cutouts as recommended by manufacturer.
11. Thermally isolate hot applications from cold following manufacturer's methods and recommendations.
12. Provide Insulation: between Basix[®] and adjacent hot water pans, food warmers and other hot surfaces or equipment.
13. Provide venting of cabinets: as indicated on the drawings. [Architect must design and specify.]

D. Specialty Fabrications:

1. Coved Splashes: Vertical backsplash or side splash surfaces of 1/2" (12 mm) thick Basix[®] with edge details as indicated on the drawings, complete with integral cove at base of splash. Provide coved splashes using Basix[®] approved adhesive.
2. Color Inlay: Custom inlaid vertical or horizontal surfaces of 1/2" (12 mm) thick Basix[®] with design details, patterns and color combinations as indicated on the drawings

2.3 ACCESSORY PRODUCTS

- A. Sealants: When required, sealants shall be 100% silicone and shall be matched to sheet color unless otherwise noted.
- B. Adhesives:
 - Flexible adhesive shall be 100% silicone and shall be matched to Basix® sheet color.
 - Rigid structural adhesive shall be Basix® seam adhesive as manufactured by Basix® International or approved by same.
- C. Sink/Bowl mounting hardware: Provide hardware for mounting sinks and bowls as approved by manufacturer. Provide bowl clips, panel inserts and fasteners for attachment of sinks and bowls as required and as recommended by the solid surface manufacturer.

EXECUTION OF SOLID SURFACE FABRICATION AND INSTALLATIONS

3.1 PREPARATION OF SOLID SURFACE FOR INSTALLATION

- A. Observe all recommended and required safety precautions including, but not limited to, eye protection, hearing protection, skin protection and adequate ventilation.
- B. Maintain clean work surfaces during seaming and other joint work.
- C. Fabricate and install work at temperatures above sixty-five (65) degrees F.

3.2 FABRICATION OF SOLID SURFACE MATERIAL

- A. Fabrication shall be performed by an ISFA accredited fabricator or who has demonstrated proficiency in the types of work required by this project.
- B. Shop fabricated components to greatest extent practicable to sizes and shapes indicated, in accordance with approved shop drawings.
- C. Special techniques: Comply with the manufacturer's recommendations for the use of specific types of stationary equipment and stationary tools. Site fabrication and finishing processes shall be in accordance with the manufacturer's recommendations for working with the solid surface fabrication materials.
- D. Form seams between components, unless otherwise indicated, using solid surface manufacturer's standard seam adhesive. Adhesive shall be color coordinated to match solid surface material color and shall form inconspicuous seams.
- E. Provide cutouts for plumbing fittings and bath accessories as indicated on the drawings and as recommended by the equipment and solid surface manufacturer.
- F. Cut and finish component edges with clean, sharp returns. Route radii and contours to exact template sizes. Repair or reject defective or inaccurate work.

3.3 INSTALLATION OF SOLID SURFACE MATERIAL

- A. Prepare substrate, plane, plumb and level, secure in place with all fasteners set flush. Shim supporting structure as required to provide an acceptable surface for attaching finish materials.
- B. Install components, plane, plumb and level, in accordance with approved shop drawings and product data.
- C. Pre-fit finish material in place. Scribe material as required to provide proper fit with adjacent materials.
- D. Provide additional support for material seams in both horizontal and vertical locations. Separation/release paper shall be provided between all supports and seams to prevent direct adhering of finish material to substrate.
- E. Form field joints using manufacturer's recommended adhesive, with inconspicuous joints in finished work.
- F. Prior to installing solid surface fabrication, make sure that substrate is clean and dry. Place silicone "dabs" on substrate in accordance with manufacturer's recommendations.
- G. Sink and bowl installation:
 - 1. Adhere [under mount] [seam mount] [flush mount] sinks/bowls to countertops using manufacturer's recommended adhesive and mounting hardware.
 - 2. Adhere top mount sinks/bowls to countertops using manufacturer's recommended [color matched] [clear] flexible adhesive.
- H. Provide backsplashes and sidesplashes as indicated on the drawings. Adhere backsplashes and sidesplashes to countertops using manufacturer's recommended [color matched] [clear] flexible adhesive.
- I. Keep components and hands clean during installation. Remove adhesives, sealants and other stains from the work as they occur.
- J. During installation, protect surfaces of solid surface fabrications from damage until all components have been installed.
- K. Make plumbing connections to sinks in accordance with Division 15, Mechanical. Do not over tighten connections which are in direct contact with or attached to solid surface fabrications.

3.4 PROTECTION OF SOLID SURFACE FABRICATION

- A. After fabrication and installation, protect surfaces of solid surface fabrications from damage until accepted by the Owner. Replace any damaged material prior to acceptance.

3.5 CLEANING OF SOLID SURFACE FABRICATION

- A. After installation, all surfaces shall be cleaned to remove contaminants. After cleaning, all work shall be protected against damage until it is accepted by the Owner. Thereafter, it shall be the responsibility of the Owner to maintain protection and provide final cleaning.