

## SECTION 06 6116

### SOLID SURFACING FABRICATIONS

#### PART 1 - GENERAL

##### 1.1 SUMMARY

- A. Section Includes: Fabrication and installation of solid surfacing components including accessories indicated, specified, and required for installation.

##### 1.2 SUBMITTALS

- A. Product Data: Manufacturer's technical literature for each product indicated, specified, or required. Include manufacturer's written fabrication and installation instructions.
- B. Shop Drawings: Dimensioned and detailed plans, elevations, and large-scale details.
  - 1. Show locations of each component.
  - 2. Show materials, finishes, edge and splash profiles, and methods of joining.
  - 3. Show locations and sizes of cutouts and holes for plumbing fixtures, accessories and other items installed in countertops.
  - 4. Show attachment devices and other components to be incorporated into work.
- C. Samples for Verification: 4 inch square sample of selected material, in specified gloss, cut into 2 pieces and then joined together to represent an inconspicuous seam; indicate full range of color and pattern.
- D. Maintenance Data:
  - 1. For inclusion in maintenance manual required by Division 01.
  - 2. Include manufacturer's instructions for maintenance of installed work, including methods and frequency recommended for maintaining optimum condition under anticipated use.
  - 3. Include precautions against cleaning products and methods which may be detrimental to finishes and performance.
- E. LEED Submittals:
  - 1. To qualify for LEED Credit EQ 4.1, submit documentation substantiating each adhesive and sealant product complies with specified limits for VOC content.
  - 2. To qualify for LEED Credit EQ 4.4, submit documentation substantiating each adhesive product contains no added urea-formaldehyde.
  - 3. To qualify for LEED Credit MR 5.1, submit documentation substantiating products are regionally manufactured within 500 miles of Project.

##### 1.3 QUALITY ASSURANCE

- A. Fabricator Qualifications:
  - 1. Experienced with successful fabrication of specified work similar to scope of this Project.
  - 2. Record of successful in-service performance.
  - 3. Sufficient production capability, facilities, and personnel to produce required work.
- B. Installer Qualifications:

1. Experienced in installation of specified work similar to scope of this Project.
2. Record of successful in-service performance.
3. Sufficient installation capability, facilities, and personnel to produce required work.

C. Mock-Up: Before beginning work of this Section, build mock-up to verify selections made under submittals and to demonstrate aesthetic effects and work execution. Approval does not constitute approval of deviations from Contract Documents, unless such deviations are specifically approved by Architect in writing.

1. Build mock-up approximately [ ] inches long by [ ] inches deep.
2. Use same Subcontractors, including supervisors, which will perform work on Project.
3. Install products and materials according to specified requirements.
4. Work on mock-up shall be representative of those to be expected for work.
5. Finish various components to show maximum variation that will exist in work.
6. Obtain Architect's approval before starting work of this Section.
7. Maintain mock-up during construction in an undisturbed condition as a standard for judging completed work.
8. Do not demolish, alter, or remove mock-up until acceptable to Owner and Architect.
9. When directed, demolish and remove mock-up from Project.

#### 1.4 FIELD CONDITIONS

A. Field Measurements:

1. Where components are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings.
2. Locate concealed framing, blocking, and reinforcements that support components by field measurements before being enclosed, and indicate measurements on Shop Drawings.
3. Where field measurements cannot be made without delaying the work, establish dimensions and proceed with fabrication without field measurements. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

#### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Do not deliver components until painting and similar activities have been completed in installation areas.
- B. Storage: Prior to installation, store in areas in which material will be installed.
- C. Handling: Handle components to prevent damage to finished surfaces.

#### 1.6 WARRANTY

- A. Manufacturer's Warranty: Provide manufacturer's warranty against defects in materials. Warranty shall provide material and labor to repair or replace defective materials. Damage caused by physical or chemical abuse or damage from excessive heat will not be warranted. Failures caused improper fabrication or installation will not be warranted.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements of Contract Documents, manufacturers offering products that may be incorporated into work include, but are not limited to, those named alphabetically below.
1. Avonite, Inc.; Avonite Surfaces.
  2. E. I. du Pont de Nemours and Co.; Corian.
  3. Formica Corp.; Formica Solid Surfacing.
  4. LG Chemical, Ltd.; Hi-Macs.
  5. Samsung; Staron.
  6. US Surface Warehouse; Livingstone.
  7. Wilsonart International; Gibraltar.

### 2.2 SOLID SURFACING MATERIAL

- A. Sheet Material:
1. Description: Continuously cast, non-porous, homogeneous solid sheets composed of acrylic polymer, aluminum trihydrate filler, and pigments that yield through-body color; not coated, laminated or of composite construction.
  2. Basis of Design Selection:
    - a. Manufacturer: US Surface Warehouse.
    - b. Color Name:
    - c. Finish: Matte.
    - d. Finish: Satin or semi-gloss.
    - e. Finish: Polished.
- B. Integral Sink/Bowls:
1. Description: Cast, non-porous, homogeneous solid sheets of filled plastic resin with through-body colors; not coated, laminated or of composite construction.
  2. Basis of Design Selection:
    - a. Manufacturer: US Surface Warehouse.
    - b. Color Name and SKU Number:

### 2.3 ACCESSORIES

- A. Joint Adhesives:
1. Description: No-added urea formaldehyde, 1 or 2 part adhesive capable of creating inconspicuous, non-porous seams; acceptable to material manufacturer.
  2. LEED Objectives:
    - a. To qualify for LEED Credit EQ 4.1, adhesives applied inside weatherproofing system shall have VOC content not more than listed below, less water, when calculated according to 40 CFR 59, Part 59, Subpart D (EPA Method 24).
      - 1) Adhesives for Porous Materials (Except Wood): 50 grams per liter.
      - 2) Multipurpose Construction Adhesives: 70 grams per liter.
      - 3) Contact Adhesive: 80 grams per liter.
      - 4) Special Purpose Contact Adhesive (contact adhesive that is used to bond melamine covered board, metal, unsupported vinyl, Teflon, ultra-high

molecular weight polyethylene, rubber or wood veneer 1/16 inch or less in thickness to any surface): 250 grams per liter.

5) Adhesive Primer for Plastic: 550 grams per liter.

b. To qualify for LEED Credit EQ 4.4, building materials and products shall contain no added urea-formaldehyde.

B. Fasteners and Mounting Hardware: Device type and size required sufficient to correctly attach or anchor specified item to substrate indicated without failure.

C. Protective Tape: Heat-reflective aluminum foil or insulating felt tape of thickness necessary to protect edges from heat sources.

## 2.4 FABRICATION

A. Fabrication Quality Standards: In addition to standards listed elsewhere, comply with following, unless otherwise specified:

1. Material quality standard indicated.
2. Approved submittals.
3. Contract Documents.

B. Shop Assembly:

1. Fabricate shapes in sizes and profiles indicated according to approved shop drawings and manufacturer's instructions.
2. Where necessary for fitting at Project, provide ample allowance for scribing, trimming, and fitting.

C. Seams:

1. Form inconspicuous joints between components.
2. Reinforce on concealed side with strip of solid surfacing material not less than 1 inch on either side of joint by same thickness as components being joined.
3. Locate more than 3 inches from cutouts.

D. Cutouts:

1. Use router to make openings according to templates and finish with clean and smooth edges.
2. Provide not less than 1/8 inch clearance between cutout edges and appliance or plumbing fixture.
3. Remove nicks and scratches.

E. Overhangs: Support overhangs that are more than 6 inches.

F. Thermoforming:

1. Heat component and maintain between 275 and 325 degrees Fahrenheit during forming.
2. Form pieces to shape prior to seaming and joining.
3. Cut pieces to finished dimensions.
4. Sand edges and remove nicks and scratches.

G. Inlays:

1. Rout groove approximately 1/8 inch deep according to design.

2. Fill groove using methods approved by manufacturer, avoiding air bubbles or voids.
  3. Overfill inlay area.
  4. Allow inlay to cure.
  5. Do not allow inlay to overheat during sanding.
  6. Finish and touch-up to uniform appearance.
- H. Integral Sink/Bowls: Secure sinks/bowls to countertops using manufacturer's recommended sealant, adhesive, or mounting hardware.
- I. Countertop Configuration:
1. General Provisions:
    - a. Fabricate with loose backsplashes for field assembly.
    - b. Accurately cut holes and drill countertop panels to receive plumbing, fixtures, soap dispensers and other accessories.
    - c. Install integral sink bowls in countertops in shop.
  2. Countertop and Splashes Thickness: Not less than 1/2 inch.
  3. Front Edge: Straight, slightly eased at top.
  4. Front Edge: Beveled.
  5. Front Edge: 3/4 inch bullnose.
  6. Front Edge: Radius edge with apron, 2 inch high with 3/8 inch radius.
  7. Front Edge: 1-1/2 inch laminated bullnose.
  8. Front Edge: 1 inch laminated bullnose.
  9. Front Edge: Wood-trimmed edge as indicated.
  10. Splashes: Straight, slightly eased at corner.
  11. Splashes: Beveled.
  12. Splashes: Radius edge with 3/8 inch radius.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Acceptance of Surfaces and Conditions:
1. Examine substrates to which solid surfacing components will be applied for compliance with requirements and other conditions affecting performance.
  2. Proceed only when unsatisfactory conditions have been corrected in a manner complying with Contract Documents.
  3. Starting work within a particular area will be construed as acceptance of surface conditions.

### 3.2 INSTALLATION

- A. General:
1. Install components plumb, level, and scribed to adjacent substrates.
  2. Leave space, not less than 1/8 inch for every 10 foot of length, between components and adjacent substrates.
- B. Anchorage:
1. Fasten countertops by screwing through corner blocks of base units into underside of countertop. Pre-drill holes for screws as recommended by manufacturer.

2. Secure backsplashes to tops and walls with adhesive.

C. Seams:

1. Clean surfaces to be seamed to remove oil, dirt, and dust.
2. Align adjacent surfaces and, using adhesive in color to match countertop, form seams to comply with manufacturer's instructions.
3. Clamp until fully cured.
4. Carefully dress joints smooth, remove surface scratches, and clean entire surface.
5. Buff and sand to produce a smooth uniform seamless surface.

D. Tolerance: Install countertops level, accurately aligned, without sag, bow, or variation from a straight line to a tolerance of 1/8 inches in 8 feet.

3.3 CLEANING

A. Surface Finish:

1. Remove stains according to manufacturers instructions.
2. Sand and polish to remove nicks, scratches, and other imperfections.

3.4 PROTECTION

A. Coverings: Cover installed components to prevent physical damage or staining until substantial completion.

END OF SECTION