Preparing Activity: USACE Superseding
UFGS-06 61 16 (August 2010)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated July 2023
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USACE / NAVFAC / AFCEC / NASA **UFGS-06 61 16 (August 2020)**

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UNIFIED FACILITIES GUIDE SPECIFICATIONS

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SECTION 06 61 16

SOLID SURFACING FABRICATIONS
08/20

****
NOTE: This guide specification covers the requirements for solid polymer and quartz agglomerate (or "engineered quartz") fabrications.

Adhere to UFC 1-300-02 Unified Facilities Guide Specifications (UFGS) Format Standard when editing this guide specification or preparing new project specification sections. Edit this guide specification for project specific requirements by adding, deleting, or revising text. For bracketed items, choose applicable item(s) or insert appropriate information.

Remove information and requirements not required in respective project, whether or not brackets are present.

Comments, suggestions and recommended changes for this guide specification are welcome and should be submitted as a Criteria Change Request (CCR).
****

PART 1 GENERAL

1.1 REFERENCES

****
NOTE: This paragraph is used to list the publications cited in the text of the guide specification. The publications are referred to in the text by basic designation only and listed in this paragraph by organization, designation, date, and title.

Use the Reference Wizard's Check Reference feature when you add a Reference Identifier (RID) outside of the Section's Reference Article to automatically place the reference in the Reference Article. Also use the Reference Wizard's Check Reference feature

to update the issue dates.

References not used in the text will automatically be deleted from this section of the project specification when you choose to reconcile references in the publish print process.

****

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

ASTM INTERNATIONAL (ASTM)

ASTM C920	(2018) Standard Specification for Elastomeric Joint Sealants
ASTM D570	(1998; E 2010; R 2010) Standard Test Method for Water Absorption of Plastics
ASTM D638	(2014) Standard Test Method for Tensile Properties of Plastics
ASTM D696	(2016) Standard Test Method for Coefficient of Linear Thermal Expansion of Plastics Between -30 degrees C and 30 degrees C With a Vitreous Silica Dilatometer
ASTM D790	(2017) Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
ASTM D2583	(2013a) Indentation Hardness of Rigid Plastics by Means of a Barcol Impressor
ASTM E84	(2023) Standard Test Method for Surface Burning Characteristics of Building Materials
ASTM G21	(2015; R 2021; E 2021) Standard Practice for Determining Resistance of Synthetic Polymeric Materials to Fungi

CALIFORNIA DEPARTMENT OF PUBLIC HEALTH (CDPH)

CDPH SECTION 01350	(2017; Version 1.2) Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources using Environmental Chambers

CSA GROUP (CSA)

CSA B45.5-17/IAPMO Z124	(2017; Errata 2017; Errata 2018) Plastic Plumbing Fixtures

INTERNATIONAL CAST POLYMER ASSOCIATION (ICPA)

ICPA SS-1	(2001) Performance Standard for Solid Surface Materials

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

ANSI/NEMA LD 3	(2005) Standard for High-Pressure Decorative Laminates

NSF INTERNATIONAL (NSF)

NSF/ANSI 51	(2023) Food Equipment Materials

1.2 SYSTEM DESCRIPTION

****

NOTE: The term "solid surfacing material" encompasses many formulations, including 100 percent acrylic, and blends of acrylic/polyester called acrylic-modified, and other formulations which include such materials as fiberglass for strengthening and quartz agglomerates. Performance characteristics and cost will vary depending on the formulation. For the purposes of this specification, only solid polymer materials in 100 percent acrylic, acrylic-modified polyester formulations and quartz agglomerates will be considered. These three materials provide the best value in terms of performance and life-cycle cost. When specifying solid surfacing products other than solid polymer and quartz agglomerate, care should be taken to fully understand the limitations of these products compared to solid polymer and quartz agglomerates with regard to performance characteristics, fabrication, and installation.

Veneered products consisting of a thin top layer of solid surfacing material with a structural substrate of plywood or particleboard are not considered to be solid polymer with respect to this specification. When specifying a veneered product, care should be taken to fully understand the limitations of this product compared to solid polymer fabrications with regard to performance characteristics and installation.

This specification can be used for counter tops, counter tops with sinks, sinks or bowls, window stools, tub and shower walls, toilet and shower partitions, wainscoting, shelving, table tops, hot and cold cafeteria surfaces, flooring thresholds, wall panel wainscoting, and other applications where a hard, durable, stain resistant surface is desired. Facility types include, but are not limited to: healthcare, institutional, administrative, hospitality, retail, and laboratories. The use of solid surfacing material fabrications meets many health, hygiene, and

durability requirements due to its non-porous and abrasion resistant properties. Provide specific project uses in the brackets below.

****

a. Work under this section includes [_____] and other items utilizing solid surfacing material fabrications as indicated on the drawings and as described in this specification. Do not change source of supply for materials after work has started, if the appearance of finished work would be affected.

b. In most instances, installation of solid surfacing material fabricated components and assemblies requires strong correctly located structural support provided by other trades. To provide a stable, sound, secure installation, close coordination is required between the solid surfacing material fabricator/installer and other trades to ensure that necessary structural wall support, cabinet counter top structural support, proper clearances, and other supporting components are provided for the installation of wall panels, counter tops, shelving, and all other solid surfacing material fabrications to the degree and extent recommended by the solid surfacing material manufacturer.

c. Provide appropriate staging areas for solid surfacing material fabrications. Allow variation in component size and location of openings of plus or minus 3 mm 1/8 inch.

1.3 SUBMITTALS

****

NOTE: Review submittal description (SD) definitions in Section 01 33 00 SUBMITTAL PROCEDURES and edit the following list, and corresponding submittal items in the text, to reflect only the submittals required for the project. The Guide Specification technical editors have classified those items that require Government approval, due to their complexity or criticality, with a "G." Generally, other submittal items can be reviewed by the Contractor's Quality Control System. Only add a “G” to an item, if the submittal is sufficiently important or complex in context of the project.

For Army projects, fill in the empty brackets following the "G" classification, with a code of up to three characters to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy, Air Force, and NASA projects.

The "S" classification indicates submittals required as proof of compliance for sustainability Guiding Principles Validation or Third Party Certification and as described in Section 01 33 00 SUBMITTAL PROCEDURES.

Choose the first bracketed item for Navy, Air Force and NASA projects, or choose the second bracketed item for Army projects.

****

Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are [for Contractor Quality Control approval.][for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government.] Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Detail Fabrication Drawings; G[, [_____]]

Installation; G[, [_____]]

SD-03 Product Data

Solid Polymer; G[, [_____]]

Indoor air quality for solid surface seam and sealant products; S[, [_____]]

[Quartz Agglomerate Material; G[, [_____]]

] SD-04 Samples

Material; G[, [_____]]

Counter Tops; G[, [_____]]

SD-06 Test Reports

Test Report Results

SD-07 Certificates

Qualifications

Indoor Air Quality for solid surface fabrication products; S[, [_____]]

SD-10 Operation and Maintenance Data

Solid Polymer, Data Package 1; G[, [_____]]

[Quartz Agglomerate Material, Data Package 1; G[, [_____]]

]1.4 QUALITY ASSURANCE

****

NOTE: Although solid surfacing materials are fabricated by methods and with tools similar to wood fabrications, familiarity with and expertise in fabricating solid surfacing material items is essential to achieving high quality results.

Cabinet or millwork shops, often associated with cabinet counter tops and other millwork fabrications do not necessarily possess this expertise. Proof of qualification is therefore very important.
****

1.4.1 Qualifications

To ensure warranty coverage, provide manufacturer certified solid surfacing fabricators to fabricate the solid surfacing material being utilized. Mark all fabrications with the fabricator's certification label affixed in an inconspicuous location. Minimum of 5 years of experience working with solid surfacing materials is required of fabricators. Submit solid surfacing material manufacturer's certification attesting to fabricator qualification approval.

1.4.2 Mock-ups

****
NOTE: The counter top submittal sample, as described here, is intended for submittal review at the COE or AE reviewer's office. Where only field or onsite submittal reviews are provided and multiple units are to be installed, the Contractor can be given the requirement to provide a full size mock-up for inspection. A full size mock-up precludes the need for the counter top sample.
****

Submit Detail Fabrication Drawings indicating locations, dimensions, component sizes, fabrication and joint details, attachment provisions, installation details, and coordination requirements with adjacent work. Prior to final approval of shop drawings, provide a full-size mock-up of a typical [counter top] [shelving] [_____] where multiple units are required. Include all solid surfacing material components required to provide a completed unit. Utilize finishes in patterns and colors[as specified in Section 09 06 00 SCHEDULES FOR FINISHES.][as indicated; colors listed are not intended to limit the selection of equal colors from other manufacturers.] in the mock-up. Should the mock-up not be approved, re-work or remake it until approval is secured. Remove rejected units from the jobsite. Approved mock-up may remain as part of the finished work.

1.5 DELIVERY, STORAGE, AND HANDLING

Do not deliver materials to project site until areas are ready for installation. Deliver components and materials to the site undamaged, in containers clearly marked and labeled with manufacturer's name. Store materials indoors and take adequate precautions to prevent damage to finished surfaces. Provide protective coverings to prevent physical damage or staining following installation, for duration of project.

1.6 WARRANTY

Provide manufacturer's warranty to repair or replace defective materials[, excluding damages caused by physical or chemical abuse or excessive heat,] and workmanship for a period of [10][_____] years from date of final acceptance of the work.

PART 2 PRODUCTS

2.1 MATERIAL

****
NOTE: Standard thicknesses for solid surfacing material are 6 mm 1/4 inch, 13 mm 1/2 inch, or 19 mm 3/4 inch. Material 13 mm 1/2 inch thick is considered standard for most applications and is an adequate thickness for most counter top and horizontal surface use; this material does not ordinarily require any sheet underlayment, such as plywood or particle board, when properly spaced structural support is provided. The 6 mm 1/4 inch thick material is generally used only for vertical applications. Quartz agglomerate material minimum thickness 19 mm 3/4 inch.

The 19 mm 3/4 inch thick material is heavier than 13 mm 1/2 inch thick material and generally has a longer lead time and limited color selection. Quartz agglomerate material minimum thickness 19 mm 3/4 inch.
****

Submit detail fabrication drawings and installation drawings of each solid surfacing fabrication indicated. Include elevations, dimensions, clearances, details of construction and anchorage, and details of joints and connections.

Submit manufacturers' descriptive product data for [each type of] solid polymer fabrication [and quartz agglomerate fabrication] indicated. Include manufacturers' literature, finishes, profiles and thicknesses of materials.

Submit manufacturers' operations and maintenance data for [each type of] solid polymer fabrication [and quartz agglomerate material fabrication] in accordance with Section 01 78 23 OPERATIONS AND MAINTENANCE DATA.

2.1.1 Solid Surfacing Material

Provide solid polymer[and][quartz agglomerate material] that is a homogeneous filled solid polymer; not coated, laminated or of a composite construction, complying with ICPA SS-1[and ICPA SS-1 for quartz agglomerate, except for composition]. Provide material that meets or exceeds the minimum physical and performance properties specified. Superficial damage to a depth of 0.25 mm 0.01 inch must be repairable by sanding or polishing. Material thickness is as[indicated below][indicated on the drawings]; required minimum thickness is 6 mm 1/4 inch. Submit a minimum 102 by 102 mm 4 inch by [4][_____] inch sample of each color and pattern for approval; include full range of color and pattern variation. Retain approved samples as a standard for this work. Submit test report results from an independent testing laboratory attesting that the submitted solid surfacing materials meet or exceed each of the specified performance requirements.

a. Horizontal Surfaces:[13 mm 1/2 inch thick material][19 mm 3/4 inch thick material][_____]

b. Vertical Surfaces:[6 mm 1/4 inch thick material][13 mm 1/2 inch thick material][_____]

c. Provide materials that meet the emissions requirements of CDPH SECTION 01350 (limit requirements for either office or classroom spaces regardless of space type). Provide certification or validation of indoor air quality for solid surface fabrication products.

2.1.2 Cast, 100 Percent Acrylic Polymer Solid Surfacing Material

****

NOTE: Although acrylic-modified polyester polymer is included as an option below, cast, solid 100 percent acrylic polymer material has superior performance characteristics and is therefore considered a superior choice of materials. Cast, solid 100 percent acrylic polymer should always be selected unless cost or a particular pattern/color are considered a higher priority.

****

Cast, 100 percent acrylic solid polymer material composed of acrylic polymer, mineral fillers, and pigments. Provide acrylic polymer that meets or exceeds the following minimum performance requirements:

PROPERTY	REQUIREMENT (min. or max.)	TEST PROCEDURE
Tensile Strength	291 kg/cm^2 4000 psi (max.)	ASTM D638
Hardness	55-Barcol Impressor (min.)	ASTM D2583
Thermal Expansion	.0000386cm/cm/deg C .000023 in/in/F (max.)	ASTM D696
Boiling Water Surface Resistance	No Change	ANSI/NEMA LD 3-3.05
High Temperature Resistance	No Change	ANSI/NEMA LD 3-3.06
Impact Resistance (Ball drop)		ANSI/NEMA LD 3-303
6 mm 1/4 inch sheet	914 mm, 227 g 36-inches, 1/2 lb ball, no failure	
13 mm 1/2 inch sheet	3556 mm, 227 g 140-inches, 1/2 lb ball, no failure	
19 mm 3/4 inch sheet	5080 mm, 227 g 200-inches, 1/2 lb ball, no failure	
Mold & Mildew Growth	No growth	ASTM G21
Bacteria Growth	No growth	ASTM G21

PROPERTY	REQUIREMENT (min. or max.)	TEST PROCEDURE
Liquid Absorption (Weight in 24 hrs.)	0.1 percent max.	ASTM D570
Flammability		ASTM E84
Flame Spread	25 max.	
Smoke Developed	30 max.	
Sanitation	"Food Contact" approval	NSF/ANSI 51
Flexural Strength	[6,800][10,400] psi (min.)	ASTM D790

2.1.3 Acrylic-modified Polymer Solid Surfacing Material

Cast, solid polymer material composed of a formulation containing acrylic and polyester polymers, mineral fillers, and pigments. Provide acrylic polymer content not less than 5 percent and not more than 10 percent in order to meet the following minimum performance requirements:

PROPERTY	REQUIREMENT (min. or max.)	TEST PROCEDURE
Tensile Strength	288 kg/cm^2 4100 psi (max.)	ASTM D638
Hardness	50-Barcol Impressor (min.)	ASTM D2583
Thermal Expansion	.0000386cm/cm/deg C .000023 in/in/F (max.)	ASTM D696
Boiling Water Surface Resistance	No Change	ANSI/NEMA LD 3-3.05
High Temperature Resistance	No Change	ANSI/NEMA LD 3-3.06
Impact Resistance (Ball drop)		ANSI/NEMA LD 3-303
6 mm 1/4 inch sheet	914 mm, 227 g 36 inches, 1/2 lb ball, no failure	
13 mm 1/2 inch sheet	3556 mm, 227 g 140 inches, 1/2 lb ball, no failure	
19 mm 3/4 inch sheet	5080 mm, 227 g 200 inches, 1/2 lb ball, no failure	
Mold & Mildew Growth	No growth	ASTM G21
Bacteria Growth	No growth	ASTM G21

PROPERTY	REQUIREMENT (min. or max.)	TEST PROCEDURE
Liquid Absorption (Weight in 24 hrs.)	0.6 percent max.	ASTM D570
Flammability		ASTM E84
Flame Spread	25 max.	
Smoke Developed	100 max.	
Sanitation	"Food Contact" approval	NSF/ANSI 51
Flexural Strength	[6,800][10,400] psi (min.)	ASTM D790

[2.1.4 Quartz Agglomerate (or "Engineered Quartz") Solid Surfacing Material

Solid sheets consisting of quartz aggregates in an acrylic or polyester, or a combination of the two, resin binder (or matrix) that is solid and nonporous with integral color.

]2.1.5 Material Patterns and Colors

****

Editing of color reference sentence(s) must be coordinated with the Government. Generally Section 09 06 00 SCHEDULES FOR FINISHES or drawing is used when the project is designed by an architect or interior designer. Color must be selected from manufacturers standard colors or identified as a manufacturers color in this specification only when the project is very simple and has minimal finishes.

When the Government directs that color be located in the drawings a note must be added that states: "Where color is shown as being specific to one manufacturer, an equivalent color by another manufacturer may be submitted for approval. Manufacturers and materials specified are not intended to limit the selection of equal colors from other manufacturers. The word "color" as used herein includes surface color and pattern."

Prior to specifying a custom color finish, research to determine if additional cost and lead time is feasible. Note there is often a minimum order requirement; this requirement will also affect future orders.

When a manufacturer's name, stock number, pattern, and color is used, be certain that the product conforms to this specification, as edited.

Availability of material patterns and colors within any particular manufacturer may vary depending on the material thickness. Scratches in some dark colored solids and patterns, while repairable, are highly visible until repair takes place. Color selection should be based on material availability and severity of end use condition.

The solid surfacing material manufacturing process for products with veining ("motion") often produces particulate distortion through the sheet thickness. The color/vein can drift through the full sheet thickness resulting in unexpected appearance when a stacked-edge buildup is used instead of a mitered edge.

****

Provide pattern and color for all solid surfacing material components and fabrications [as specified in Section 09 06 00 SCHEDULES FOR FINISHES.][as indicated; colors listed are not intended to limit the selection of equal colors from other manufacturers.] Provide products with consistent patterned color throughout thickness of the product.

2.1.6 Surface Finish

****

NOTE: Matte finish is recommended for most horizontal surfaces such as counter tops. A matte finish is the best for masking surface scratches and is the best finish for facilitating repair of minor scratches, cuts, and abrasions. Semigloss and polished surface finishes are recommended only for very light-duty end use surfaces. Gloss ratings are based on standard glossometer readings made at a 60 degree angle of incidence.

Where semigloss or gloss finishes are specified, recommend these finishes be factory supplied in order to ensure a consistent gloss level of reflectance throughout the entire surface area.

****

Provide a uniform appearance on exposed finished surfaces and edges. Exposed surface finish is [matte; gloss rating of 5-20] [semigloss; gloss rating of 25-50] [polished; gloss rating of 55-80] [as indicated].

2.2 ACCESSORY PRODUCTS

Provide accessory products, as specified below, as manufactured by the solid surfacing material manufacturer or as approved by the solid surfacing material manufacturer for use with the solid surfacing materials being specified.

2.2.1 Adhesives

Provide a two-part seam adhesive kit to create permanent, inconspicuous, non-porous, hard seams and joints by chemical bond between solid surfacing materials and components to create a monolithic appearance of the fabrication. Provide adhesive approved by the solid surfacing material

manufacturer. Color-match adhesive to the surfaces being bonded where solid-colored, solid surfacing materials are being bonded together. Provide clear or color matched seam adhesive where particulate patterned, solid surfacing materials are being bonded together.

2.2.2 Seam and Sealant Emissions

Provide seam and other accessory materials that meet the emissions requirements of CDPH SECTION 01350 (limit requirements for either office or classroom spaces regardless of space type). Provide validation of indoor air quality for solid surface seam and sealant products.

2.2.3 Silicone Sealant

Provide silicone sealant, mildew-resistant, single-component, nonsag, plus 25 percent and minus 25 percent movement capability, acid-curing; ASTM C920, Type S, Grade NS, Class 25, Use NT; clear formulation; approved for use by the solid surfacing material manufacturer.

2.2.4 Conductive Tape

Provide manufacturer's standard conductive foil tape, 0.1 mm 4 mils thick, applied around the edges of cut outs containing hot or cold appliances.

2.2.5 Insulating Tape

****

NOTE: This tape is not required for cooktops or ranges in family housing or other residential applications. Only commercial food wells create enough heat or cold to require extra insulation. Conductive tape is adequate for residential kitchen cooktop cutouts.

****

Provide manufacturer's standard insulating tape for use with drop-in food wells used in commercial food service applications to insulate solid surfacing material from hot or cold appliances.

2.2.6 Heat Reflective Tape

Provide heat reflective tape as recommended by the solid surfacing material manufacturer for use with cutouts for heat sources.

2.2.7 Mounting Hardware

Provide mounting hardware, including sink/bowl clips, inserts and fasteners for attachment of undermount sinks and lavatories.

2.3 FABRICATIONS

Provide factory or shop fabricate components to sizes and shapes indicated, to the greatest extent practical, in accordance with approved Shop Drawings and manufacturer's requirements. Provide factory cutouts for sinks, lavatories, and plumbing fixtures where indicated on the drawings. Contours and radii must be routed to template, with edges smooth. Defective and inaccurate work will be rejected. Submit product data indicating product description, fabrication information, and compliance with specified performance requirements for solid surfacing

material, joint adhesive, sealants, and heat reflective tape.[Both the manufacturer of materials and the fabricator are required to submit a detailed description of operations and processes in place that support efficient use of natural resources, energy efficiency, emissions of ozone depleting chemicals, management of water and operational waste, indoor environmental quality, and other production techniques supporting sustainable design and products.]

2.3.1 Joints and Seams

Form joints and seams between solid surfacing material components using manufacturer's approved seam adhesive. Provide inconspicuous joints in appearance without voids to create a monolithic appearance.

2.3.2 Edge Finishing

Rout and finish component edges to a smooth, uniform appearance and finish. Provide edge shapes and treatments, including any inserts, as detailed on the drawings. Rout all cutouts, then sand all edges smooth. Repair or reject defective or inaccurate work.

2.3.3 Counter Top Splashes

Fabricate backsplashes and end splashes from [13 mm 1/2 inch] [_____] thick solid surfacing material to be [[102 mm 4 inches] [_____] high] [in conformance with dimensions and shapes as indicated]. Provide backsplashes and end splashes [for all counter tops] [at locations indicated]. Shop fabricate backsplashes and provide [permanently attached] [loose, to be field attached].

2.3.3.1 Permanently Attached Backsplash

****

NOTE: Permanently attached backsplashes eliminate the maintenance associated with silicone caulk attachment. Straight attachment with joint adhesive results in a 90 degree square appearance in the counter top/backsplash transition. It is lower in cost than the coved transition method which involves shaping and adhering a strip of matching solid surfacing material into the transition.

****

Provide permanently attached backsplashes [straight with seam adhesive to form a 90 degree transition] [with seam adhesive and to form a radiused coved transition from counter top to backsplash].

2.3.3.2 End Splashes

Provide end splashes loose for installation at the jobsite after horizontal surfaces to which they are to be attached have been installed.

2.3.4 Shelving

Fabricate shelving [and wall support brackets] from [13 mm 1/2 inch] [_____] thick solid surfacing material; dimensions, edge shape, and other details as indicated.

2.3.5 Window Stools

****
NOTE: Many manufacturers of solid surfacing material offer a program of pre-fabricated window stools in selected patterns and colors, dimensions, thicknesses, and edge details. Use of these programs can result in considerable cost-savings over custom fabricated window stools. These programs should be utilized to the greatest extent possible.
****

Fabricate window stools from [13 mm 1/2 inch] [_____] thick solid surfacing material; dimensions, edge shape, and other details [as indicated] [as selected from manufacturer's available pre-fabricated standards] [equal to the width of the window opening by a 13 mm 1/2 inch overhang of the window sill depth] [_____]. Provide [square][bullnose][_____] edge profile.

2.3.6 Counter Tops

Fabricate all solid surfacing material, counter top components from[13 mm 1/2 inch][19 mm 3/4 inch [_____] thick material. Indicate details, dimensions, locations, and quantities on the drawings. Provide counter tops with[102 mm 4 inch] [_____] high [loose] [permanently attached, 90 degrees transition] [permanently attached with coved transition backsplash and loose endsplashes] [at all locations] as indicated]. Attach 51 mm 2 inch wide reinforcing strip of solid surfacing material under each horizontal counter top seam. Submit a minimum 305 mm 1 foot wide by 152 mm 6 inch deep, full size sample for each type of counter top shown on the project drawings; include the edge profile and backsplash as detailed on the drawings and at least one seam. Retain approved sample as standard for this work. Provide [square][bullnose][_____] edge profile.

2.3.6.1 Counter Tops with Sinks

****
NOTE: Rimless sink type is recommended with solid surfacing counter tops. Rimless installation provides superior counter top cleaning capability.
****

[a. Provide stainless steel or vitreous china sink; include cutouts to template for counter tops with sinks as furnished by the sink manufacturer. Provide manufacturer's standard sink mounting hardware for [stainless steel] [vitreous china] [rimless] [_____] installation. Seal between sink and counter top with specified silicone sealant. Provide sink, faucet, and plumbing requirements in accordance with Section 22 00 00 PLUMBING,GENERAL PURPOSE. [_____]

][b. Provide manufacturer's standard solid polymer sinks, pre-molded product specifically designed for attachment to solid surfacing material counter tops. See paragraph SOLID POLYMER SINKS for additional requirements.

]2.3.6.2 Counter Tops with Bowls

****

NOTE: Rimless sink type is recommended with solid surfacing material counter tops. Rimless installation provides superior counter top cleaning capability.

****

[a. Include cutouts to template for counter tops with vitreous china bowls as furnished by the sink manufacturer. Provide manufacturer's standard sink mounting hardware for vitreous china [rimless] [_____] installation. Seal between sink and counter top with specified silicone sealant. Provide sink, faucet, and plumbing requirements in accordance with Section 22 00 00 PLUMBING,GENERAL PURPOSE. [_____].

][b. Provide manufacturer's standard solid polymer bowls, pre-molded product specifically designed for attachment to solid surfacing material counter tops. See paragraph SOLID POLYMER BOWLS for additional requirements

]

****

NOTE: Many manufacturers of solid polymer offer one-piece, prefabricated counter tops and bowls in various configurations and sizes. These pre-fabricated units can provide considerable cost savings over field fabricated units. Care should be taken when specifying one-piece units to coordinate the unit size designed with the available manufacturer's standard dimensions.

****

[c. Provide manufacturer's standard pre-fabricated one-piece counter top and bowl fabrications. Each unit includes a counter top with integral backsplash and sink bowl. See paragraph SOLID POLYMER BOWLS for additional requirements.

]2.3.6.3 Cafeteria Counter Tops

Include cutouts for cold or hot appliances to templates furnished by the equipment manufacturers. Reinforce joints and cutouts as recommended by the solid surfacing material manufacturer. Provide insulation between the solid surface material and all appliances, hot or cold. Thermally isolate hot applications from cold applications in accordance with the solid surfacing material manufacturer's recommendations. Provide expansion joints as necessary to accommodate hot appliances. Provide adequate ventilation for cabinets beneath counter tops to prevent heat build-up.

[2.3.7 Solid Polymer Sinks

Provide solid polymer sinks that are a standard product of the solid polymer manufacturer, in compliance with CSA B45.5-17/IAPMO Z124 requirements, designed specifically to be installed in solid surfacing material counter tops. Provide sinks of the same polymer composition as the adjoining counter top. Sink design must support a [seam adhesive undermount] [seam adhesive flush] installation method. Sinks must be [single bowl] [double bowl] [double bowl with molded drainboard] configuration. Bowl dimensions must be [as indicated][_____].

][2.3.8 Solid Polymer Bowls

Provide solid polymer bowls that are a standard product of the solid polymer manufacturer, in compliance with CSA B45.5-17/IAPMO Z124 requirements, designed specifically to be installed in solid surfacing material counter tops. Provide bowls of the same polymer composition as the adjoining counter top. Bowl design must support a [seam adhesive undermount] [seam adhesive flush] installation method. Bowl dimensions must be [as indicated][_____].

]2.3.9 Tub/Shower Wall Panel System

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NOTE: Some solid surfacing material manufacturers offer standardized tub and shower surround kits that can be field cut to fit with minimum material waste. These standardized packages can provide significant cost savings over custom designed tub and shower panel applications.

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Provide tub/shower wall enclosures with a system of solid surfacing material components to include: [panels] [corner trim] [soap dish] [shampoo shelf] [panel edge trim] [_____]; dimensions of all components are [as indicated] [standard manufacturer's dimensions to be field cut to fit]. Form panels from manufacturer's standard[6 mm 1/4 inch][13 mm 1/2 inch] [_____] thick sheet product. Provide panels full width and height with seams occurring only at the inside corners of the enclosure.[Provide soap dish and shampoo shelf of configuration, shape, and location [as indicated] [as standard with the manufacturer's system].]

2.3.10 Wall Cladding/Wainscoting

Provide solid surfacing material wall cladding or wainscoting to dimensions and in locations as indicated on the drawings. Fabricate panels from manufacturer's standard[6 mm 1/4 inch][13 mm 1/2 inch] [_____] thick sheet product. Provide panels to heights indicated on the drawings with no horizontal seaming; utilize the maximum panel dimension available to minimize vertical seams.

2.3.11 Toilet Partition System

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NOTE: Some solid surfacing material manufacturers offer standardized partition kits that include all solid surfacing material components and installation hardware. These standardized packages can provide significant cost savings over custom designed partition systems and should be utilized wherever possible.

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Refer to Section 10 21 13 TOILET COMPARTMENTS.

PART 3 EXECUTION

3.1 INSTALLATION

3.1.1 Components

Install all components and fabricated units plumb, level, and rigid. Make field joints between solid surfacing material components using solid surfacing material manufacturer's approved seam adhesives, to provide a monolithic appearance with joints inconspicuous in the finished work. Attach metal or vitreous china sinks and lavatory bowls to counter tops using solid surfacing material manufacturer's recommended clear silicone sealant and mounting hardware. Install solid polymer sinks and bowls using a color-matched seam adhesive.

3.1.1.1 Loose Counter Top Splashes

Mount loose splashes in the locations noted on the drawings. Adhere loose splashes to the counter top with a color matched silicone sealant when the solid surfacing material components are solid colors. Use a clear silicone sealant to provide adhesion of particulate patterned solid surfacing material splashes to counter tops.

3.1.1.2 Wall Panels & Panel Systems

Installation of wall panels and system components to substrates must include the use of a specified panel adhesive. Use specified seam adhesive to adhere all solid surfacing material components to each other with the exception of expansion joints and inside corners. All inside corners and expansion joints between solid surfacing material components must be joined with specified silicone sealant. All joints between solid surfacing material components and non-solid polymer surfaces must be sealed with specified silicone sealant.

3.1.2 Silicone Sealant

Use specified silicone sealant to seal all expansion joints between solid surfacing material components and all joints between solid surfacing material components and other adjacent surfaces such as walls, floors, ceiling, and plumbing fixtures. Provide sealant bead smooth and uniform in appearance and minimum size necessary to bridge any gaps between the solid surfacing material and the adjacent surface. Provide continuous bead and run the entire length of the joint being sealed.

3.1.3 Plumbing

Make plumbing connections to sinks and lavatories in accordance with Section [22 00 00 PLUMBING, GENERAL PURPOSE] [_____].

3.2 CLEAN-UP

Components must be cleaned after installation and covered to protect against damage during completion of the remaining project items. Damaged components must be repaired or replaced at the Contractor's sole expense.

-- End of Section --