

The addendum is hereby made part of the Contract Documents to the same extent as though it were originally included therein. Refer to "Bid Form" for acknowledgment of addenda.

All Contractors, Subcontractors and suppliers are reminded that they shall be familiar with all addenda items (as well as all parts of the construction documents) so as to understand the extent of their work and its interrelation with other trades.

To all bidders for furnishing all labor and materials necessary for the following contract:

## **ADDENDUM 2**

### **NEW BERNALILLO SENIOR CENTER SANDOVAL COUNTY BERNALILLO, NEW MEXICO**

#### **ARCHITECTURAL ITEMS**

#### **PROJECT MANUAL**

#### **SPECIFICATIONS**

##### **ITEM AD2-A1**

Section 07 5423 – Thermoplastic Polyolefin (TPO)

Delete this section and its duplicate

##### **ITEM AD2-A2**

Section 08 8000 Glazing

Replace entire section with new attached Section 08 8000 Glazing (Dated 4-14-2016)

##### **ITEM AD2-A3**

Section 08 1113 Hollow Metal Doors and Frames

Page 08 1113-4, Section 2.03 A 2. Replace 16 gage with 18 gage

Page 08 1113-4, Section 2.03 B 2. Replace 16 gage with 18 gage

Page 08 1113-4, Section 2.03 Delete C and D

Page 08 1113-4, Section 2.04 B Delete 4.

Page 08 1113-4, Section 2.04 Delete D, E and F

Page 08 1113-4, Delete Section 2.07

##### **ITEM AD2-A4**

Section 09 7733 Glass Fiber Reinforced Plastic Panels

Replace entire section with new attached 09 7733 Glass Fiber Reinforced Plastic Panels (Dated 4-14-2016)

##### **ITEM AD2-A5**

Section 09 3000 Tiling

Replace entire section with new attached 09 3000 Tiling (Dated 4-14-2016)

**MECHANICAL ITEMS**

**PROJECT MANUAL**

The following manufacturers have properly submitted their request to be allowed to bid substitute equipment and services for the referenced project. Based on information submitted, and our knowledge of and previous experience with the companies and products represented, we feel that the following are capable of providing products and services equivalent to those specified.

**EQUIPMENT**

Exhaust Fans PRE-1 & PRE-2  
Exhaust Fan PRE-3

**SUBSTITUTE**

Penn Barry DX  
Captive Aire

**END OF ADDENDUM NO. 2**

**Attachments:**

Section 08 8000 Glazing (Dated 4-14-2016)  
Section 09 3000 Tiling (Dated 4-14-2016)  
Section 09 7733 Glass Fiber Reinforced Plastic Panels (Dated 4-14-2016)

**SECTION 08 8000****GLAZING****PART 1 GENERAL****1.1 SECTION INCLUDES**

- A. Glass.
- B. Glazing compounds and accessories.

**1.2 RELATED REQUIREMENTS**

- A. Section 06 4100 - Architectural Wood Casework: Cabinets with requirements for glass shelves and glass in doors.
- B. Section 08 1113 - Hollow Metal Doors and Frames: Glazed doors and borrowed lites.
- C. Section 08 1416 - Flush Wood Doors: Glazed doors.
- D. Section 08 4313 - Aluminum-Framed Storefronts.

**1.3 REFERENCE STANDARDS**

- A. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials; current edition.
- B. ANSI Z97.1 - American National Standard for Safety Glazing Materials Used in Buildings, Safety Performance Specifications and Methods of Test; 2010.
- C. ASTM C864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers; 2005.
- D. ASTM C920 - Standard Specification for Elastomeric Joint Sealants; 2011.
- E. ASTM C1036 - Standard Specification for Flat Glass; 2006.
- F. ASTM C1048 - Standard Specification for Heat-Treated Flat Glass--Kind HS, Kind FT Coated and Uncoated Glass; 2004.
- G. ASTM C1172 - Standard Specification for Laminated Architectural Flat Glass; 2009e1.
- H. ASTM E 773 - Standard Test Method for Accelerated Weathering of Sealed Insulating Glass Units; 2001.
- I. ASTM E 774 - Standard Specification for the Classification of the Durability of Sealed Insulating Glass Units; 1997.
- J. ASTM E1300 - Standard Practice for Determining Load Resistance of Glass in Buildings; 2009a.
- K. ASTM E2190 - Standard Specification for Insulating Glass Unit Performance and Evaluation; 2010.
- L. GANA (GM) - GANA Glazing Manual; Glass Association of North America; 2009.
- M. GANA (SM) - FGMA Sealant Manual; Glass Association of North America; 2008.
- N. GANA (LGDG) - Laminated Glazing Reference Manual; Glass Association of North America; 2009.
- O. SIGMA TM-3000 - Glazing Guidelines for Sealed Insulating Glass Units; Sealed Insulating Glass Manufacturers Association; 2004.

**1.4 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Convene a preinstallation meeting one week before starting work of this section; require attendance by all affected installers.

**1.5 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Product Data on Glass Types: Provide structural, physical and environmental characteristics, size limitations, special handling or installation requirements.
- C. Product Data on Glazing Compounds: Provide chemical, functional, and environmental characteristics, limitations, special application requirements. Identify available colors.

- D. Samples: Submit two samples 4 x 4 inch (101.6 x 101.6 mm) in size of glass units, showing coloration and design.
- E. Manufacturer's Certificate: Certify that glass meets or exceeds specified requirements.
- F. Product Test Reports: Based on evaluation of comprehensive tests performed by a qualified testing agency, for tinted glass, coated glass, insulating glass, glazing sealants and glazing gaskets.

### 1.6 QUALITY ASSURANCE

- A. Perform Work in accordance with GANA Glazing Manual, FGMA Sealant Manual, and GANA Laminated Glazing Reference Manual for glazing installation methods.
- B. Installer Qualifications: Company specializing in performing the work of this section with minimum three years documented experience.
- C. Safety Glazing Labeling: Where safety glazing labeling is indicated, permanently mark glazing with certification label of the SGCC or another certification agency acceptable to authorities having jurisdiction. Label shall indicate manufacturer's name, type of glass, thickness, and safety glazing standard with which glass complies.
- D. Fire-Protection-Rated Glazing Labeling: Permanently mark fire-protection-rated glazing with certification label of a testing agency acceptable to authorities having jurisdiction. Label shall indicate manufacturer's name, test standard, whether glazing is for use in fire doors or other openings, whether or not glazing passes hose-stream test, whether or not glazing has a temperature rise rating of 450 deg F (250 deg C), and the fire-resistance rating in minutes.

### 1.7 FIELD CONDITIONS

- A. Do not install glazing when ambient temperature is less than 50 degrees F (10 degrees C).
- B. Maintain minimum ambient temperature before, during and 24 hours after installation of glazing compounds.

### 1.8 WARRANTY

- A. See Section 01 7800 - Closeout Submittals, for additional warranty requirements.
- B. Sealed Insulating Glass Units: Provide a five (5) year warranty to include coverage for seal failure, interpane dusting or misting, including replacement of failed units.
- C. Laminated Glass: Provide a five (5) year warranty to include coverage for delamination, including replacement of failed units.
- D. Glass-Ceramic Safety Glazing:: Provide a five (5) year warranty to include replacement of failed units.

## PART 2 PRODUCTS

### 2.1 GLAZING TYPES

- A. NORTH FACING GLAZING: Sealed Insulating Glass Units: Vision glazing, low-E.
  1. Application(s): All exterior glazing unless otherwise indicated.
  2. Substitutions: Refer to Section 01 6000 - Product Requirements.
    - a. Other products of other manufacturers will be considered provided the overall performance is within the specified range(s) and the overall appearance is not significantly different from that of the specified product.
    - b. Architect's decision on substitutions is final.
  3. Between-lite space filled with air.
  4. Thermal Resistance (U-Value): 0.29, minimum.
  5. Total Solar Heat Gain Coefficient: 0.38 , nominal.
  6. Total Visible Light Transmittance: 70 percent, nominal.
  7. Manufacturers:
    - a. PPG Industries (specified) [www.ppgideascales.com](http://www.ppgideascales.com)
    - b. Guardian Industries Corporation [www.sunguardglass.com](http://www.sunguardglass.com).
    - c. AGC/AGFD American Glass Company [www.afgglass.com/](http://www.afgglass.com/)
    - d. Pilkington North America [www.pilkington.com/na](http://www.pilkington.com/na)
  8. Basis of Design: PPG Industries, Inc: [www.ppgideascales.com](http://www.ppgideascales.com).

9. Outboard Lite: Annealed float glass, 1/4 inch (6 mm) thick.
    - a. Coating: PPG Solarban 60 on # 2 surface, no coating on #3 surface.
    - b. Coating: No coating on #2 surface.
    - c. Tint: None (clear).
  10. Inboard Lite: Annealed float glass, 1/4 inch (6 mm) thick.
    - a. Tint: None (clear).
    - b. Coating: No coating on #2 surface, PPG Solarban 60 on #3 surface.
  11. Total Thickness: 1 inch (25 mm).
- B. SOUTH, EAST AND WEST FACING GLAZING: Sealed Insulating Glass Units: Vision glazing, low-E.
1. Application(s): All exterior glazing unless otherwise indicated.
  2. Substitutions: Refer to Section 01 6000 - Product Requirements.
    - a. Other products of other manufacturers will be considered provided the overall performance is within the specified range(s) and the overall appearance is not significantly different from that of the specified product.
    - b. Architect's decision on substitutions is final.
  3. Between-lite space filled with air.
  4. Thermal Resistance (U-Value): 0.29, minimum.
  5. Total Solar Heat Gain Coefficient: 0.31 , nominal.
  6. Total Visible Light Transmittance: 42 percent, nominal.
  7. Manufacturers:
    - a. PPG Industries (specified) [www.ppgideasces.com](http://www.ppgideasces.com)
    - b. Guardian Industries Corporation [www.sunguardglass.com](http://www.sunguardglass.com).
    - c. AGC/AGFD American Glass Company [www.afgglass.com/](http://www.afgglass.com/)
    - d. Pilkington North America [www.pilkington.com/na](http://www.pilkington.com/na)
  8. Basis of Design: PPG Industries, Inc: [www.ppgideasces.com](http://www.ppgideasces.com).
  9. Outboard Lite: Annealed float glass, 1/4 inch (6 mm) thick.
    - a. Coating: PPG Solarban 60 on # 2 surface, no coating on #3 surface.
    - b. Tint: Solarbronze.
  10. Inboard Lite: Annealed float glass, 1/4 inch (6 mm) thick.
    - a. Tint: None (clear).
    - b. Coating: No coating on #2 surface, PPG Solarban 60 on #3 surface.
  11. Total Thickness: 1 inch (25 mm).
- C. Sealed Insulating Glass Units: Safety glazing:
1. Applications: Provide this type of glazing in the following locations:
    - a. Glazed sidelights and panels next to doors.
    - b. Other locations required by applicable federal, state, and local codes and regulations.
    - c. Other locations indicated on the drawings.
  2. Type: Same as other vision glazing except use fully tempered float glass for both outboard and inboard lites.
- D. Single Safety Glazing: Non-fire-rated.
1. Applications: Provide this type of glazing in the following locations:
    - a. Glazed lites in doors, except fire doors.
    - b. Glazed sidelights to doors, except in fire-rated walls and partitions.
    - c. Other locations required by applicable federal, state, and local codes and regulations.

- d. Other locations indicated on the drawings.
- 2. Type: Fully tempered float or laminated glass as specified.
- 3. Tint: Clear.
- 4. Thickness: 1/4 inch (6 mm).
- E. Obscure Glazing: Cast or modeled glass; translucent showing shadows but not form.
  - 1. Applications: Locations as indicated on drawings.
  - 2. Finish: F1 – Patterned on side; ASTM C1036. Sandblast selected by Architect.
  - 3. Tint: Clear.
  - 4. Glass Type: Insulating glass unit.
  - 5. Thickness: 1/4 inch, Nominal.

## 2.2 GLASS MATERIALS

- A. Float Glass Manufacturers:
  - 1. AGC Flat Glass North America, Inc: [www.afgglass.com](http://www.afgglass.com).
  - 2. Guardian Industries Corp: [www.sunguardglass.com](http://www.sunguardglass.com).
  - 3. Pilkington North America Inc: [www.pilkington.com/na](http://www.pilkington.com/na).
  - 4. PPG Industries, Inc: [www.ppgideascape.com](http://www.ppgideascape.com).
  - 5. Substitutions: Refer to Section 01 6000 - Product Requirements.
- B. Float Glass: All glazing is to be float glass unless otherwise indicated.
  - 1. Annealed Type: ASTM C1036, Type I, transparent flat, Class 1 clear, Quality Q3 (glazing select).
  - 2. Heat-Strengthened and Fully Tempered Types: ASTM C1048.
  - 3. Tinted Types: Color and performance characteristics as indicated.
  - 4. Thicknesses: As indicated; for exterior glazing comply with specified requirements for windload design regardless of specified thickness.
- C. Laminated Glass: Float glass laminated in accordance with ASTM C1172.
  - 1. Laminated Safety Glass: Comply with 16 CFR 1201 test requirements for Category II.
  - 2. Plastic Interlayer: 0.060 inch (1.52 mm) thick, minimum.
  - 3. Where fully tempered is specified or required, provide glass that has been tempered by the tong-less horizontal method.
  - 4. Manufacturers:
    - a. AGC Flat Glass North America, Inc: [www.afgglass.com](http://www.afgglass.com).
    - b. Cardinal Glass Industries: [www.cardinalcorp.com](http://www.cardinalcorp.com).
    - c. Viracon, Apogee Enterprises, Inc: [www.viracon.com](http://www.viracon.com).

## 2.3 GLAZING COMPOUNDS

- A. Provide glazing sealants that are compatible with one another and with other materials they will contact, including glass products, seals of insulating-glass units, and glazing channel substrates, under conditions of service and application, as demonstrated by sealant manufacturer based on testing and field experience.
- B. Comply with sealant and glass manufacturers' written instructions for selecting glazing sealants suitable for applications indicated and for conditions existing at time of installation.
- C. Colors of Exposed Glazing Sealants: As selected by Architect from manufacturer's full range.

## 2.4 GLAZING ACCESSORIES

- A. Setting Blocks: Neoprene, EPDM or silicone, 80 to 90 Shore A durometer hardness, ASTM C864 Option I. Length of 0.1 inch for each square foot (25 mm for each square meter) of glazing or minimum 4 inch (100 mm) x width of glazing rabbet space minus 1/16 inch (1.5 mm) x height to suit glazing method and pane weight and area.
- B. Spacer Shims: Neoprene, 50 to 60 Shore A durometer hardness, ASTM C 864 Option I. Minimum 3 inch (75 mm) long x one half the height of the glazing stop x thickness to suit application.
- C. Glazing Tape: Preformed butyl compound; 10 to 15 Shore A durometer hardness; coiled on release paper; size as required; black color, suitable for indicated applications.
- D. Glazing Gaskets: Resilient polyvinyl chloride or silicone extruded shape to suit glazing channel retaining slot; ASTM C 864 Option I; black color.

**PART 3 EXECUTION****3.1 EXAMINATION**

- A. Verify that openings for glazing are correctly sized and within tolerance.
- B. Take glass sizes from frames at job site.
- C. Verify that surfaces of glazing channels or recesses are clean, free of obstructions that may impede moisture movement, weeps are clear, and ready to receive glazing.

**3.2 PREPARATION**

- A. Clean contact surfaces with solvent and wipe dry.
- B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- C. Prime surfaces scheduled to receive sealant.
- D. Install sealant in accordance with manufacturer's instructions.

**3.3 GENERAL**

- A. Comply with combined written instructions of manufacturers of glass, sealants, gaskets, and other glazing materials, unless more stringent requirements are indicated, including those in referenced glazing publications.
- B. Protect glass edges from damage during handling and installation. Remove damaged glass from Project site and legally dispose of off Project site. Damaged glass is glass with edge damage or other imperfections that, when installed, could weaken glass and impair performance and appearance.
- C. Install setting blocks in sill rabbets, sized and located to comply with referenced glazing publications, unless otherwise required by glass manufacturer. Set blocks in thin course of compatible sealant suitable for heel bead.
- D. Do not exceed edge pressures stipulated by glass manufacturers for installing glass lites.
- E. Provide edge blocking where indicated or needed to prevent glass lites from moving sideways in glazing channel, as recommended in writing by glass manufacturer and according to requirements in referenced glazing publications.

**3.4 INSTALLATION - EXTERIOR/INTERIOR DRY METHOD (GASKET GLAZING)**

- A. Place setting blocks at 1/4 points with edge block no more than 6 inches (150 mm) from corners.
- B. Rest glazing on setting blocks and push against fixed stop with sufficient pressure on gasket to attain full contact.
- C. Install removable stops without displacing glazing gasket; exert pressure for full continuous contact.

**3.5 CLEANING**

- A. Remove glazing materials from finish surfaces.
- B. Remove labels after Work is complete.
- C. Clean glass and adjacent surfaces.

**3.6 PROTECTION**

- A. Protect glass from contact with contaminating substances resulting from construction operations.
- B. Remove and replace glass that is broken, chipped, cracked, or abraded or that is damaged from natural causes, accidents, and vandalism, during construction period.
- C. Wash glass on both exposed surfaces in each area of Project not more than four days before date scheduled for inspections that establish date of Substantial Completion.

**END OF SECTION**

**SECTION 09 300****PART 1 GENERAL****1.1 DESCRIPTION:**

Tile work includes furnishing and installing all ceramic/porcelain floors and walls and related items of tile work.

**1.2 STANDARDS:**

- A. The applicable portions of the listed documents establish minimum requirements and shall be followed except where modified or exceeded by these drawings or specifications:
- B. Tile Council of America:
  - 1. TCA Handbook for Ceramic Tile Installation, latest edition.
  - 2. American National Standards Institute:
  - 3. ANSI Specifications referenced.

**1.3 SUBMITTALS:**

- A. Submit in accordance with General Conditions and 01 30 00 Submittal Procedure.
  - 1. Samples:
  - 2. Tile and grout, submit for color selection.
- B. 2. Prepare (3) -12" square panels of each type tile and grout colors selected for
- C. Architect's approval. After approval, Architect will keep one, installer shall
- D. receive one, and Contractor shall keep one at project.

**1.4 JOB CONDITIONS:**

- A. Prohibit all traffic in areas where tile has been set.
- B. Use kneeling boards for work and walking on newly tiled floors.
- C. Preheat, maintain heat and ventilation before, during, and after installation as recommended by TCA and manufacturer.

**PART 2 PRODUCTS****2.1 PORCELAIN TILE:**

- A. Standard grade conforming to TCA 137.1.
  - 1. Manufacturers:
  - 2. Arizona Tile.
- B. Requests to use equivalent products of other manufacturers shall be submitted in accordance with Section 01 63 00 - Product Substitution Requirements. Architect reserves right to reject proposed substitutions on basis of color and pattern compatibility even though fabrication and materials are equivalent.
- C. Wall Tile:
  - 1. 1. Type – Basaltina Series , 11.5" X 23-5/8" Stack tile at toilet room walls and Drinking Fountain Alcove.

**2.2 TRIM AND ACCESSORIES**

- A. Non-Ceramic Trim (all tile applications): Brushed stainless steel, for setting using tile mortar or adhesive.
  - 1. Applications:
    - a. Open edges of wall tile.
    - b. Wall corners, outside and inside.
  - 2. Manufacturers:
    - a. Schluter-Systems: [www.schluter.com](http://www.schluter.com).
    - b. Genesis APS International: [www.genesis-aps.com](http://www.genesis-aps.com).
    - c. Substitutions: See Section 01 60 00 - Product Requirements.

**2.3 SETTING BED MATERIALS:**

- A. Thin Set:
  1. Products of domestic manufacturer. Latex Portland Cement mortar Conforming to or exceeding ANSI 118.4. Add latex to grout in the amount recommended by latex manufacturer to achieve maximum bond or use factory mixed product.

**2.4 TILE GROUT:**

- A. Products of domestic manufacturer. Grout conforming to or exceeding ANSI 118.
  1. Wall Grout:
    - a. 1. Non-shrinking - non-expanding, non-toxic, dense, bacterial growth inhibitive, factory prepared, stain resistant, non-efflorescing, ready for mixing with water.
    - b. 2. At exterior wall tile, use modified epoxy thin-set grout.

**2.5 CLEANER - SEALER:**

- A. Cleaner:
  1. Sulfamic acid by Hayward Thompson Chemical Co. Sure Clean #600.
- B. Sealer:
  1. Silicone sealer for sealing grout joints. Seal all finished tile work; H.B. Fuller
  2. sealer or equal.

**PART 3 EXECUTION****3.1 GENERAL:**

- A. Preinstallation Meeting: Convene one week prior to commencing work related to products of this section; require attendance of all affected installers.
- B. Install in accordance with TCA's Handbook for Ceramic Tile Installation for conditions and substrate involved.
- C. Minimum 50°F temperature, ambient, surface and material, during and 3 days after installation.
- D. Clean surfaces to receive tile.
- E. Level and grade mortar setting bed.
- F. Verify substrate floor is properly leveled or graded to drains where thin-set bed employed.
- G. Set tile to provide uniform smooth surface.
- H. 1/8" joints for ceramic tile.
- I. Cuts made with saw or drill.
- J. Borders uniform and not less than ½ tile.
- K. Trim joints same spacing as wall tile.
- L. Joints straight, even, in line.
- M. Align wall joints with floor joints of same type tile units.
- N. Install special shapes as required, including cove at floor edges, curbs, etc.
- O. Use surface bullnose at outside corners and at discontinuous edges of wall tile.
- P. Replace marred broken or chipped units.
- Q. Use color match caulk at corners.

**3.2 METHODS: (TCA DESIGNATIONS)**

- A. Walls scheduled "PTILE" - W223-96 with Latex-Portland Cement Mortar.

**3.3 CONTROL EXPANSION JOINTS:**

- A. Minimum joint width 3/16" with ceramic tile. Increase joint width 1/16" for each 4 ft. spacing greater than 12 ft. between joints. Never more than 24 ft. o.c. Areas 12 ft. or less require no joint at edges and obstructions.

- B. Provide joint at perimeter of tile areas, in recessed beds, and at other restraints.
- C. Joint layout in tile field above joints in substrate and subject to Architect approval.
- D. Construction joints full depth of tile and setting bed.
- E. Fill joint with compressible filler and back-up for sealant. Asphalt products not permitted. Sealant depth  $\frac{1}{2}$  joint width.
- F. Seal joints with sealant specified Section 07 92 00, Caulking and Sealants after grout is cured, control joints thoroughly cleaned and BEFORE tile sealer is applied. Color matching grout joint color or as selected by Architect.

**3.4 GROUTING:**

- A. Do not mix grout material with any other material except drinkable water. Mix
  - 1. thoroughly.
- B. When tile is locked in place work mixed joint grout (filler) into joints until joints are full. Rub in and apply second coating as recommended by manufacturer.
- C. Clean surplus from surfaces. If manufacturer permits use, dilute commercial
  - 1. foaming cleaner if absolutely necessary. If used apply cleaner only on wetted
  - 2. surfaces and thoroughly rinse off all cleaner when tile work is clean.

**3.5 PROTECTION AND CURING:**

- A. After installation keep all traffic off horizontal installations at least 72 hours, and all heavy traffic off at least one week.
- B. After grouting, clean thoroughly and cover the entire surface(s) with a kraft-type paper with edges lapped and sealed. Leave paper in place for a minimum of three days. Other coverings if recommended by manufacturer, may be employed for curing membrane.

**3.6 SEALING:**

- A. After curing uncover and allow tile to dry. Install sealant in control/expansion joints and allow to cure. Immediately before sealing clean surfaces, if needed. Apply sealer to all tiled surfaces in accordance with manufacturer's recommendations.

**END OF SECTION**

**SECTION 09 77 33**  
**GLASS FIBER REINFORCED PLASTIC PANELS**

**PART 1 GENERAL****1.1 SECTION INCLUDES**

- A. Glass fiber reinforced plastic panels.
- B. Trim.

**1.2 RELATED SECTIONS**

- A. Section 09 21 16 - Gypsum Board Assemblies.
- B. Section 09 65 00 - Resilient Floors.

**1.3 REFERENCE STANDARDS**

- A. ASTM D256 - Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics; 2010.
- B. ASTM D2583 - Standard Test Method for Indentation Hardness of Rigid Plastics by Means of Barcol Impressor; 2013a.
- C. ASTM D3273 - Standard Test Method for Resistance to Growth of Mold on the Surface of Interior Coatings in an Environmental Chamber; 2012.
- D. ASTM D5319 - Standard Specification for Glass-Fiber Reinforced Polyester Wall and Ceiling Panels; 2012.
- E. FDA Food Code - Chapter 6, Physical Facilities; current edition with Supplements, if any.
- F. ISO 2812-1 - Paints and Varnishes - Determination of resistance to liquids - Part 1: Immersion in liquids; 2007.

**1.4 SUBMITTALS**

- A. See Section 01 31 00 - Project Management and Coordination, for submittal procedures.
- B. Product Data: Provide data on specified products, describing physical and performance characteristics; including sizes, patterns and colors available; and installation instructions.
- C. Selection Samples: Submit manufacturer's standard color pattern selection samples representing manufacturer's full range of available colors and patterns.

**1.5 QUALITY ASSURANCE**

- A. Sanitary Standards: System components and finishes shall comply with:
  - 1. United States Department of Agriculture (USDA) requirements for food preparation facilities, incidental contact.
  - 2. Food and Drug Administration (FDA) 1999 Food Code 6-101.11.
- B.

**1.6 DELIVERY, STORAGE, AND HANDLING**

- A. Store panels flat, indoors, on a clean, dry surface. Remove packaging and allow panels to acclimate to room temperature for 48 hours prior to installation.

**PART 2 PRODUCTS****2.1 MANUFACTURERS**

- A. Glass Fiber Reinforced Plastic Panels:
  - 1. Crane Composites, Inc: [www.cranecomposites.com](http://www.cranecomposites.com).
  - 2. Marlite: [www.marlite.com](http://www.marlite.com).
  - 3. Nudo: [www.nudo.com](http://www.nudo.com).
  - 4. Substitutions: See Section 01 60 00 - Product Requirements.

**2.2 PANEL SYSTEMS**

- A. Wall Panels:

1. FiberLite FRP as manufactured by Nudo.
    - a. Or approved equal.
  2. Surface burning Characteristics: Flame spread index of 25, maximum; Smoke Developed Index of 450, maximum, when whole system is tested in accordance with ASTM E84.
  3. Panel Size: 4 by 8 feet.
  4. Panel Thickness: 0.10 inch.
  5. Surface Design: Embossed.
  6. Color: White.
  7. Attachment Method: Adhesive only, with trim and sealant in joints.
- B. Wall Panels - Decorative FRP
1. FiberLite FRP as manufactured by Nudo.
    - a. Or prior approved equal.
  2. Surface burning Characteristics: Flame spread index of 76 - 200; Smoke Developed Index of 450, maximum, when whole system is tested in accordance with ASTM E84.
  3. Panel Size: 4 foot wide by length to provide full height wall panels.
  4. Panel Thickness: 0.090 inch (2.3 mm).
  5. Surface Design: Embossed.
  6. Color: As selected by Architect from Manufacturer's full line.
  7. Attachment Method: Adhesive only, with trim and sealants in joints.

### 2.3 MATERIALS

- A. Panels: Glass fiber reinforced plastic (FRP), complying with ASTM D5319.
1. Mold Resistance: Score of 10, when tested in accordance with ASTM D3273.
  2. Scratch Resistance: Barcol hardness score greater than 35, when tested in accordance with ASTM D2583.
  3. Impact Strength: Greater than 6 ft lb force per inch, when tested in accordance with ASTM D256.
  4. Surface Characteristics and Cleanability: Provide products that are smooth, durable, and easily cleanable, in compliance with FDA Food Code, Chapter 6 - Physical Facilities.
  5. Chemical Cleanability: Excellent chemical resistance to common cleaners and detergents when tested in accordance with ISO 2812-1.
- B. Trim: Vinyl; color coordinating with panel.
- C. Sealant: Type recommended by panel manufacturer; white.

### PART 3 EXECUTION

#### 3.1 EXAMINATION

- A. Verify existing conditions and substrate flatness before starting work.
- B. Verify that substrate conditions are ready to receive the work of this section.

#### 3.2 INSTALLATION - WALLS

- A. Install panels in accordance with manufacturer's instructions.
- B. Cut and drill panels with carbide tipped saw blades, drill bits, or snips.
- C. Apply adhesive to the back side of the panel using trowel as recommended by adhesive manufacturer.
- D. Apply panels to wall with seams plumb and pattern aligned with adjoining panels.
- E. Install panels with manufacturer's recommended gap for panel field and corner joints.
- F. Place trim on panel before fastening edges, as required.
- G. Fill channels in trim with sealant before attaching to panel.
- H. Install trim with adhesive and screws or nails, as required.
- I. Seal gaps at floor, ceiling, and between panels with applicable sealant to prevent moisture intrusion.

- J. Remove excess sealant after paneling is installed and prior to curing.

**END OF SECTION**