

THE SCHOOL DISTRICT OF PHILADELPHIA
Office of Capital Programs
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Addendum No. 02

Subject: Classroom Modernizations:
BROWN, Joseph H. SDP Contract Nos. B-037C, B-039C of 2017/18
CHILDS, George W. SDP Contract Nos. B-071C, B-074C of 2017/18
DAY, Anna B. SDP Contract Nos. B-059C, B-062C of 2017/18
FARRELL, Louis SDP Contract Nos. B-029C, B-031C of 2017/18
HUNTER, William H. SDP Contract Nos. B-055C, B-058C of 2017/18
MCMICHAEL, Morton SDP Contract Nos. B-041C, B-043C of 2017/18
RHOADS, James SDP Contract Nos. B-033C, B-035C of 2017/18
ROWEN, William SDP Contract Nos. B-063C, B-066C of 2017/18
STEEL, Edward SDP Contract Nos. B-067C, B-070C of 2017/18
TAGGART, John H. SDP Contract Nos. B-047C, B-050C of 2017/18
WEBSTER, John H. SDP Contract Nos. B-051C, B-054C of 2017/18

Location: As noted on previously issued contract documents for each project.

This Addendum, dated May 9, 2018, shall modify and become part of the Contract Documents for the work of this project. Any items not mentioned herein, or affected by, shall be performed strictly in accordance with the original documents.

The following items, clarifications and/or revisions are to be included in the Contract Documents:

GENERAL

1. All permits shall be submitted for expedited processing.

SPECIFICATIONS

00 0005 SPECIFICATIONS TABLE OF CONTENTS

ADD the following sections:

06 4023	INTERIOR ARCHITECTURAL WOODWORK
10 5115	ELECTROSTATIC PAINTING
12 3623	PLASTIC LAMINATE CLAD COUNTERTOPS

08 7100 DOOR HARDWARE

ADD to 1.04.B.4 the following:

4. *Key Schedule:* Arrange meeting with owner, architect and finish hardware supplier to determine keying requirements immediately upon receipt of finish hardware schedule.

REVISE 2.07.B.2 as follows:

- ~~a. Provide temporary construction cores replaceable by permanent cores, furnished in accordance with the following requirements:

 - 1) ~~3 construction control keys~~
 - 2) ~~12 construction change (day) keys~~~~
- ~~b. Owner or owner's representative will replace temporary construction cores with permanent cores.~~
- a. No construction cores are to be provided.

REVISE 2.08.C.1 as follows:

- 1. *Provide permanent cylinders/cores keyed by the manufacturer according to the following key system.* Install permanent cores in new hardware as each opening is completed and immediately turn keys over to SDP building engineer.

ADD to 2.09.B the following:

- 9. All closers to have full metal closers.

DELETE hardware sets and **REPLACE** with the following:

Hardware Set No. 01 (Typical Classrooms Entry)

Provide each SGL door(s) with the following:

Qty		Description	Catalog Number	Finish	Mfr
1	EA	CONT. HINGE	112HD	628	IVE
1	EA	INTRUDER LOCK	ND75BD RHO XN12-035	626	SCH
2		KEYED LOCK CORE	TO EXISTING SYSTEM	626	
1		CUSTOM LOCK STRIKE	TO FIT EXISTING FRAME	626	
1	EA	SURFACE CLOSER	4050 EDA	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

NOTE:

- 1. Existing frame to remain.
- 2. Field verify existing frame preps for hinge and lock strike compatibility of specified hardware. Provide proper size as required.

Hardware Set No. 02 (Typical Kindergarten Toilet)

Provide each SGL door(s) with the following:

<u>Qty</u>		Description	Catalog Number	Finish	<u>Mfr</u>
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	INTRUDER LOCK	ND75BD RHO XN12-035	626	SCH
2		KEYED LOCK CORE	TO EXISTING SYSTEM	626	
1		CUSTOM LOCK STRIKE	TO FIT EXISTING FRAME	626	
1	EA	SURFACE CLOSER	4050 CUSH	689	LCN
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
3	EA	SILENCER	SR64	GRY	IVE

NOTE:

1. Existing frame to remain.
2. Field verify existing frame preps for hinge and lock strike compatibility of specified hardware. Provide proper size as required.

Hardware Set No. 03 (Typical Closet)

Provide each SGL door(s) with the following:

<u>Qty</u>		Description	Catalog Number	Finish	<u>Mfr</u>
3	EA	HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
1	EA	CLASSROOM LOCK	ND70BD RHO	626	SCH
1		KEYED LOCK CORE	TO EXISTING SYSTEM	626	
1		CUSTOM LOCK STRIKE	TO FIT EXISTING FRAME	626	
1	EA	WALL STOP	WS406/407CCV	630	IVE

NOTE:

1. Existing frame to remain.
2. Field verify existing frame preps for hinge and lock strike compatibility of specified hardware. Provide proper size as required.

Hardware Set No. 04 (Typical Classrooms Entry)

Provide each SGL door(s) with the following:

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HINGE	5BB1 4.5 X 4.5 NRP	652	IVE
1	EA	CLASSROOM SECURITY	ND75BD RHO XN12-035	626	SCH
2		KEYED LOCK CORE	TO EXISTING SYSTEM	626	
1		CUSTOM LOCK STRIKE	TO FIT EXISTING FRAME	626	
1	EA	LOCK ADAPTER PLATE	5202-9	630	TRM
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
1	EA	WALL STOP	WS406/407CCV	630	IVE

NOTE:

1. Existing frame to remain.
2. Field verify existing frame preps for hinge and lock strike compatibility of specified hardware. Provide proper size as required.
3. Furnish 5202-9 adapter plate specified above on doors where existing mortise locks are installed.

Hardware Set No. 05 (Typical Kindergarten Toilet)

Provide each SGL door(s) with the following:

Qty		Description	Catalog Number	Finish	Mfr
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	PASSAGE SET	ND10S RHO	626	SCH
1		CUSTOM LOCK STRIKE	TO FIT EXISTING FRAME	626	
1	EA	LOCK ADAPTER PLATE	5202-9	630	TRM
1	EA	WALL STOP	WS406/407CCV	630	IVE

NOTE:

1. Existing frame to remain.
2. Field verify existing frame preps for hinge and lock strike compatibility of specified hardware. Provide proper size as required.
3. Furnish 5202-9 adapter plate specified above on doors where existing mortise locks are installed.

Hardware Set No. 06 (Typical Closet)

Provide each SGL door(s) with the following:

<u>Qty</u>		Description	Catalog Number	Finish	<u>Mfr</u>
3	EA	HINGE	5BB1 4.5 X 4.5	652	IVE
1	EA	CLASSROOM LOCK	ND70BD RHO	626	SCH
1		KEYED LOCK CORE	TO EXISTING SYSTEM	626	
1		CUSTOM LOCK STRIKE	TO FIT EXISTING FRAME	626	
1	EA	LOCK ADAPTER PLATE	5202-9	630	TRM
1	EA	WALL STOP	WS406/407CCV	630	IVE

NOTE:

1. Existing frame to remain.
2. Field verify existing frame preps for hinge and lock strike compatibility of specified hardware. Provide proper size as required.
3. Furnish 5202-9 adapter plate specified above on doors where existing mortise locks are installed.

Hardware Set No. 07

For use on door #(s):

HUNTER
DOORS

Provide each SGL door(s) with the following:

<u>Qty</u>		Description	Catalog Number	Finish	<u>Mfr</u>
1	EA	KICK PLATE	8400 10" X 1" LDW B-CS	630	IVE
			(Furnish above plate for Pairs of door)		
1	EA	KICK PLATE	8400 10" X 2" LDW B-CS	630	IVE
			(Furnish above plate for Single doors)		

NOTES:

1. Add new kickplate to push side of all existing doors.

09 5113 ACOUSTICAL PANEL CEILINGS

ADD to 1.7.A the following:

2. Suspension Systems: Furnish quantity equal to two percent for each component.

ADD to 2.2 the following:

- E. Recycled Content: Acoustical panel ceilings shall have total recycled content of minimum 70%.

09 9123 PAINTING

ADD to 3.7 the following:

O. Wood (painted): Provide the following finish systems.

1. Semi-Gloss Finish: Two finish coats
 - a. Primer: Not required.
 - b. Primer: SW, Solo 100% Acrylic, semi-gloss.

*Zero VOC, Anti-Microbial, *Product remains Zero VOC when tinted.

- P. Wood (clear coat): Provide the following finish systems.
1. Satin Finish: Two finish coats
 - a. Finish Coats: SW, Wood Classics WB Polyurethane A68
- Q. Wood Flooring: Provide the following finish systems.
1. Satin Finish: Two finish coats
 - a. Finish Coats: Minwax, Polyurethane for floors

10 1100 VISUAL DISPLAY UNITS

DELETE from 2.3.C the following:

- C. Fabric Wrapped Frameless Tackboards (~~Taggart Elementary ONLY~~):

ADD to 2.3.C the following:

5. No frame required where existing wood frames are to remain, tackboard panel is only required for infill locations.

REVISE 2.2.D as follows:

~~D. Writing Surface Overlay Skins (Taggart Elementary ONLY)~~

- ~~1. Materials: Equal to standards indicated above.~~
~~2. Size: refer to drawings. Verify in field.~~
~~3. Installation: Over existing boards.~~
~~4. Adhesive: Per manufacturer's written recommendations.~~

D. Markerboard Skins

1. Materials: MooreCo (Basis of Design). Magnetic porcelain self-adhered skins. 24-gauge steel.
2. Accessories:
 - a. Cover bar at seams
 - b. Panel roller
3. Size: Refer to drawings. Verify in field.
4. Installation: Over existing boards.

ADD the following sections in their entirety:

06 4023 INTERIOR ARCHITECTURAL WOODWORK
10 5115 ELECTROSTATIC PAINTING
12 3623 PLASTIC LAMINATE CLAD COUNTERTOPS

ATTACHMENTS

06 4023 INTERIOR ARCHITECTURAL WOODWORK
10 5115 ELECTROSTATIC PAINTING
12 3623 PLASTIC LAMINATE CLAD COUNTERTOPS

End of Addendum No. 02

SECTION 064023 - INTERIOR ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Custom laminate cabinets and millwork
 - 2. Hardware and accessories for custom cabinets.

1.3 DEFINITIONS

- A. Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips for installing woodwork items unless concealed within other construction before woodwork installation.

1.4 ACTION SUBMITTALS

- A. Product Data: For each product indicated, including high-pressure decorative laminate and accessories, cabinet and millwork hardware and accessories, and finishing materials and processes.
- B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
 - 1. Show details full size.
 - 2. Show locations and sizes of furring, blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.
 - 3. Show locations and sizes of cutouts and holes for grommets and other wire management components installed in architectural woodwork.
 - 4. Show veneer leaves with dimensions, grain direction, exposed face, and identification numbers indicating the flitch and sequence within the flitch for each leaf.
- C. Samples for Initial Selection:
 - 1. Shop-applied transparent finishes.
 - 2. Plastic laminates.
 - 3. Edging/banding materials.
- D. Samples for Verification:

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STANDARD SPECIFICATIONS

1. Plastic laminates, 8 by 10 inches, for each type, color, pattern, and surface finish, with 1 sample applied to core material and specified edge material applied to 1 edge.
2. Exposed cabinet hardware and accessories; one unit for each type and finish.

1.5 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For fabricator.
- B. Product Certificates: For each type of product, signed by product manufacturer.

1.6 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.
- B. Installer Qualifications: Installer who is either employed or approved by the Fabricator.
- C. Quality Standard: AWI labeling and certification for fabrication is not required; however, as a standard of quality the Fabricator and Installer shall comply with AWI's "Architectural Woodwork Quality Standards" for grades of interior architectural woodwork indicated for construction, finishes, installation, and other requirements.
- D. Fire-Test-Response Characteristics: Where fire-retardant materials or products are indicated, provide materials and products with specified fire-test-response characteristics as determined by testing identical products per test method indicated by UL, ITS, or another testing and inspecting agency acceptable to authorities having jurisdiction. Identify with appropriate markings of applicable testing and inspecting agency in the form of separable paper label or, where required by authorities having jurisdiction, imprint on surfaces of materials that will be concealed from view after installation.
- E. Mockups: Build mockups to verify selections made under sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.
 1. Approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.
- F. Preinstallation Conference: Conduct conference at Project site to comply with requirements in Division 1 Section "Project Management and Coordination."

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver woodwork until painting and similar operations that could damage woodwork have been completed in installation areas. If woodwork must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Project Conditions" Article.

1.8 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
 - 1. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being enclosed, and indicate measurements on Shop Drawings.
 - 2. Established Dimensions: Where field measurements cannot be made without delaying the Work, establish dimensions and proceed with fabricating woodwork without field measurements. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

1.9 COORDINATION

- A. Coordinate sizes and locations of framing, blocking, furring, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. Wood Products: Comply with the following:
 - 1. Recycled Content of Medium-Density Fiberboard and Particleboard: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 20 percent.
 - 2. Low-Emitting Materials: Composite wood products shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
 - 3. Medium-Density Fiberboard: ANSI A208.2, Grade MD, made with binder containing no urea formaldehyde.
 - 4. Particleboard: ANSI A208.1, Grade M-2, made with binder containing no urea formaldehyde.
 - 5. Softwood Plywood: DOC PS 1, Medium Density Overlay.
 - 6. Veneer-Faced Panel Products (Hardwood Plywood): HPVA HP-1, made with adhesive containing no urea formaldehyde.
- B. HARDWOOD LUMBER TRIM FOR TRANSPARENT FINISH (STAIN OR CLEAR FINISH)
 - 1. Species and Grade: As selected by Architect from manufacturer's full range.
 - 2. Maximum Moisture Content: 10 percent.
 - 3. Finger Jointing: Not allowed.
 - 4. Gluing for Width: Not allowed.
 - 5. Veneered Material: Not allowed.
 - 6. Face Surface: Surfaced (smooth)
 - 7. Matching: Selected for compatible grain and color.

- C. High-Pressure Decorative Laminate: NEMA LD 3, grades as indicated or, if not indicated, as required by woodwork quality standard.
 - 1. Available Manufacturers: Subject to compliance with requirements, manufacturers offering high-pressure decorative laminates that may be incorporated into the Work include the following:
 - a. Wilsonart International; Div. of Premark International, Inc.

2.2 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this Article, that are acceptable to authorities having jurisdiction, and with fire-test-response characteristics specified. Refer to Division 6 Section "Rough Carpentry" for interior architectural woodwork to be installed in conjunction with fire-retardant-treated rough carpentry items.
 - 1. Do not use treated materials that do not comply with requirements of referenced woodworking standard or that are warped, discolored, or otherwise defective.
 - 2. Use fire-retardant-treatment formulations that do not bleed through or otherwise adversely affect finishes. Do not use colorants to distinguish treated materials from untreated materials.
 - 3. Identify fire-retardant-treated materials with appropriate classification marking of UL or another testing and inspecting agency acceptable to authorities having jurisdiction.
- B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: Comply with performance requirements of AWPA C20 (lumber) and AWPA C27 (plywood). Use the following treatment type:
 - 1. Interior Type A: Low-hygroscopic formulation.
 - 2. Mill lumber before treatment and implement special procedures during treatment and drying processes that prevent lumber from warping and developing discolorations from drying sticks or other causes, marring, and other defects affecting appearance of treated woodwork.
 - 3. Kiln-dry materials before and after treatment to levels required for untreated materials.
- C. Fire-Retardant Particleboard: Panels complying with the following requirements, made from softwood particles and fire-retardant chemicals mixed together at time of panel manufacture to achieve flame-spread index of 25 or less and smoke-developed index of 25 or less per ASTM E 84.
 - 1. For panels 3/4 inch thick and less, comply with ANSI A208.1 for Grade M-2 except for the following minimum properties: modulus of rupture, 1600 psi; modulus of elasticity, 300,000 psi; internal bond, 80 psi; and screw-holding capacity on face and edge, 250 and 225 lbf, respectively.
 - 2. For panels 13/16 to 1-1/4 inches thick, comply with ANSI A208.1 for Grade M-1 except for the following minimum properties: modulus of rupture, 1300 psi; modulus of elasticity, 250,000 psi; linear expansion, 0.50 percent; and screw-holding capacity on face and edge, 250 and 175 lbf, respectively.
 - 3. Product: Subject to compliance with requirements, provide products equal to "Duraflake FR" by Weyerhaeuser.

2.3 PLASTIC LAMINATE CABINETS & MILLWORK

- A. Laminate Cladding for Exposed Surfaces: High-pressure decorative laminate complying with the following requirements:
 - 1. Horizontal Surfaces Other Than Tops: Grade HGS.
 - 2. Vertical Surfaces: Grade VGS.
 - 3. Edges: PVC edge banding, 0.12 inch thick, matching laminate in color, pattern, and finish.
- B. Materials for Semiexposed Surfaces:
 - 1. Surfaces Other Than Drawer Bodies: High-pressure decorative laminate, Grade VGS.
 - a. Edges of Plastic-Laminate Shelves: PVC edge banding, 0.12 inch thick, matching laminate in color, pattern, and finish.
 - b. For semiexposed backs of panels with exposed plastic-laminate surfaces, provide surface of high-pressure decorative laminate, Grade VGS.
 - 2. Drawer Sides and Backs: Hardwood plywood.
 - 3. Drawer Bottoms: Hardwood plywood.
- C. Concealed Backs of Panels with Exposed Plastic Laminate Surfaces: High-pressure decorative laminate, Grade BKL.
- D. Door and Drawer Edging: Provide 3mm PVC edging for all doors and drawers on laminate custom cabinets/millwork. Color shall be equal to "Wood Tape" brand, as selected from manufacturer's full range of colors.
- E. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
 - 1. As selected by Architect from laminate manufacturer's full range in solid colors, wood grains and special patterns, all of which shall consist of a matte finish, unless otherwise noted.

2.4 CABINET HARDWARE AND ACCESSORIES

- A. General: Provide cabinet hardware and accessory materials associated with architectural cabinets.
- B. Frameless Concealed Hinges (European Type): BHMA A156.9, B01602, 135 degrees of opening, self-closing.
- C. Wire Pulls: Back mounted, solid metal, 4 inches long, 5/16 inch in diameter.
- D. Catches: Magnetic catches, BHMA A156.9, B03141.
- E. Adjustable Shelf Standards and Supports: BHMA A156.9, B04071; with shelf rests, B04081.
- F. Shelf Rests: BHMA A156.9, B04013; metal.
- G. Drawer Slides: BHMA A156.9, B05091.

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1. Heavy Duty (Grade 1HD-100 and Grade 1HD-200): Side mounted; full-extension type; zinc-plated steel ball-bearing slides.
 2. Box Drawer Slides: Grade 1HD-100; for drawers not more than 6 inches high and 24 inches wide.
 3. File Drawer Slides: Grade 1HD-100 and Grade 1HD-200; for drawers more than 6 inches high or 24 inches wide.
- H. Door Locks: BHMA A156.11, E07121.
- I. Drawer Locks: BHMA A156.11, E07041.
- J. Accessories: Equal to products manufactured by Doug Mockett & Company, Inc. Refer to Drawings for locations and types.
1. Grommets: For cable passage through countertops; 1-1/4-inch outside diameter, black, molded-plastic grommets and matching plastic caps with slot for wire passage. Equal to "OG Series."
 2. Wire Management Hangers: Equal to "Model No. WM9;" color to be determined.
- K. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.
1. Satin Stainless Steel: BHMA 630.
- L. For concealed hardware, provide manufacturer's standard finish that complies with product class requirements in BHMA A156.9.

2.5 MISCELLANEOUS MATERIALS

- A. Furring, Blocking, Shims, and Hanging Strips: Softwood or hardwood lumber, kiln dried to less than 15 percent moisture content.
- B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.
- C. Adhesives, General: Adhesives shall not contain urea formaldehyde.
- D. Low-Emitting Materials: Adhesives shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- E. VOC Limits for Installation Adhesives: Installation adhesives shall comply with the following limits for VOC content when calculated according to 40 CFR 59, Subpart D (EPA Method 24):
1. Wood Glues: 30 g/L.
 2. Multipurpose Construction Adhesives: 70 g/L.
 3. Contact Adhesive: 250 g/L.
- F. Adhesive for Bonding Plastic Laminate: Unpigmented contact cement.
1. Adhesive for Bonding Edges: Hot-melt adhesive or adhesive specified above for faces.

2.6 FABRICATION, GENERAL

- A. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.
- B. Sand fire-retardant-treated wood lightly to remove raised grain on exposed surfaces before fabrication.
- C. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:
 - 1. Corners of Cabinets and Edges of Solid-Wood (Lumber) Members 3/4 Inch Thick or Less: 1/16 inch.
 - 2. Edges of Rails and Similar Members More Than 3/4 Inch Thick: 1/8 inch.
 - 3. Corners of Cabinets and Edges of Solid-Wood (Lumber) Members and Rails: 1/16 inch.
- D. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
 - 1. Notify Architect seven days in advance of the dates and times woodwork fabrication will be complete.
 - 2. Trial fit assemblies at fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements indicated on Shop Drawings before disassembling for shipment.
- E. Shop-cut openings to maximum extent possible to receive hardware, grommets, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.
 - 1. Seal edges of openings in countertops with a coat of varnish.
- F. Where indicated, and whenever possible, install glass, plastic or metal panels, stand-

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas.
- B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

3.2 INSTALLATION

- A. Grade: Install woodwork to comply with requirements for the same grade specified in Part 2 for fabrication of type of woodwork involved.
- B. Assemble woodwork and complete fabrication at Project site to comply with requirements for fabrication in Part 2, to extent that it was not completed in the shop.
- C. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches.
- D. Scribe and cut woodwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- E. Fire-Retardant-Treated Wood: Handle, store, and install fire-retardant-treated wood to comply with chemical treatment manufacturer's written instructions, including those for adhesives used to install woodwork.
- F. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated.
- G. Cabinets: Install without distortion so doors and drawers fit openings properly and are accurately aligned. Adjust hardware to center doors and drawers in openings and to provide unencumbered operation. Complete installation of hardware and accessory items as indicated.
 - 1. Install cabinets with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.
- H. Benches: Anchor securely to supporting substrates, as detailed.
- I. Touch up finishing work specified in this Section after installation of woodwork. Fill nail holes with matching filler where exposed.

3.3 ADJUSTING AND CLEANING

- A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
- B. Clean, lubricate, and adjust hardware.
- C. Clean woodwork on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 064023

SECTION 105115 – ELECTROSTATIC PAINTING

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings, Division 0 - Bidding and Contract Requirements and Division 1 General Requirements apply to this Section.

1.2 SUMMARY

- A. This Section includes the following:
 - 1. Electrostatic painting systems

1.3 SUBMITTALS

- A. Product Data: provide manufacturers product data for electrostatic paint system.
- B. Samples for Initial Selection: Manufacturer's color charts showing the full range of colors available.

1.4 QUALITY ASSURANCE

- A. Source Limitations: Obtain electrostatic paint through one source from a single manufacturer.

PART 2 - PRODUCTS

2.1 FINISHES, GENERAL

- A. Finish surfaces as indicated in the drawings to receive electrostatic paint system.
- B. Appearance of Finished Work: Variations in appearance of abutting or adjacent pieces are acceptable if they are within one-half of the range of approved Samples. Noticeable variations in the same piece are not acceptable. Variations in appearance of other components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast. Provide mock up for owner and architect approval prior to painting of all surfaces. Mockup will serve as a benchmark.

2.5 ELECTROSTATIC REFINISHING (for surfaces indicated per the drawings)

- A. Preparation:

1. Schedule all work in accordance with the overall project schedule and to assure no interruption of class sessions.
2. Verify that all refurbishment work except installation of new number plates and final adjustment and lubrication has been completed prior to beginning finishing operations.
3. Remove all number plates and completely mask or remove all locks and operating hardware.
4. Thoroughly mask all adjacent surfaces including floors, walls and ceilings.
5. Sand all exposed surfaces which will be refinished, including door faces, backs and edges, face frames and returns and exposed locker ends and tops. Wash with a suitable agent to remove all foreign substances which would inhibit bond of the new finish, including dirt, grease, oil and wax.
6. Prime all rusted or bare areas with PPG Multi-Prime or approved equal. Provide a light coat of primer to assure proper adherence of finish to the balance of surfaces to be refinished.

B. Refinishing:

1. Apply PPG Pitthane vandal-resistant two part polyurethane finish, or an approved equal, using an electrostatic airless method. Advise the Architect in writing if it is determined that there are surfaces which have been previously recoated which may not be suitable to receive the specified finish.
2. Remove masking materials, reinstall removed items and prepare lockers for installation of new number plates and final adjusting.
3. Color: Provide custom color to match Architect's sample.

C. Restoration

1. Provide all new nameplates for any lockers being painted as a part of the project. Coordinate with owner for numbering sequence.
2. Replace any damaged or missing parts including hardware, operator latches, and dented doors and panels.

PART 3 - EXECUTION

3.1 ADJUSTING, CLEANING, AND PROTECTION

- A. Adjust doors and latches to operate easily without binding. Verify that integral locking devices operate properly.
- B. Protect newly electrostatically painted surfaces from damage, abuse, dust, dirt, stain, or paint.
- C. Touch up marred finishes on surfaces.

END OF SECTION 105115

SECTION 12 3623 - PLASTIC-LAMINATE-CLAD COUNTERTOPS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes plastic-laminate countertops and backsplash (match existing).

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product, including high-pressure decorative laminate, adhesive for bonding plastic laminate and fire-retardant-treated materials.
 - 1. Include data for fire-retardant treatment from chemical-treatment manufacturer and certification by treating plant that treated materials comply with requirements.
- B. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
 - 1. Show locations and sizes of cutouts and holes for plumbing fixtures faucets and other items installed in plastic-laminate countertops.
 - 2. Apply AWI Quality Certification Program label to Shop Drawings.
- C. Samples for Initial Selection:
 - 1. Plastic laminates.
- D. Samples for Verification:
 - 1. Plastic laminates, 8 by 10 inches, for each type, color, pattern, and surface finish, with one sample applied to core material and specified edge material applied to one edge.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For Installer.
- B. Product Certificates: For the following:
 - 1. High-pressure decorative laminate.

2. Adhesives.

- C. Evaluation Reports: For fire-retardant-treated materials, from ICC-ES.

1.5 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.
- B. Installer Qualifications: Fabricator of products.
- C. Testing Agency Qualifications: For testing agency providing classification marking for fire-retardant-treated material, an inspection agency acceptable to authorities having jurisdiction that periodically performs inspections to verify that the material bearing the classification marking is representative of the material tested.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver countertops until painting and similar operations that could damage countertops have been completed in installation areas. If countertops must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Field Conditions" Article.

1.7 FIELD CONDITIONS

- A. Environmental Limitations: Do not deliver or install countertops until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature between 60 and 90 degrees F and relative humidity between 25 and 55 percent during the remainder of the construction period.
- B. Field Measurements: Where countertops are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
- C. Established Dimensions: Where countertops are indicated to fit to other construction, establish dimensions for areas where countertops are to fit. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

PART 2 - PRODUCTS

2.1 PLASTIC-LAMINATE COUNTERTOPS

- A. Quality Standard: Unless otherwise indicated, comply with the "Architectural Woodwork Standards" for grades indicated for construction, installation, and other requirements.
 - 1. Provide labels from AWI certification program indicating that countertops, including installation, comply with requirements of grades specified.
 - 2. The Contract Documents contain selections chosen from options in the quality standard and additional requirements beyond those of the quality standard. Comply with those selections and requirements in addition to the quality standard.
- B. Grade: Custom.
- C. High-Pressure Decorative Laminate: NEMA LD 3, Grade HGS.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Formica Corporation.
 - b. Lamin-Art, Inc.
 - c. Panolam Industries International, Inc.
 - d. Wilsonart International; Div. of Premark International, Inc.
- D. Colors, Patterns, and Finishes: Provide materials and products that result in colors and textures of exposed laminate surfaces complying with the following requirements:
 - 1. Match existing.
- E. Edge Treatment: Same as laminate cladding on horizontal surfaces.
- F. Core Material: Exterior-grade plywood.
- G. Core Material at Sinks: Exterior-grade plywood.
- H. Core Thickness: 1-1/2 inch.
 - 1. Provide plastic-laminate sheet, shop bonded with waterproof glue to both sides of 1-1/2 inch plywood or particleboard. Sand surfaces to which plastic laminate is to be bonded.
- I. Backer Sheet: Provide plastic-laminate backer sheet, NEMA LD 3, Grade BKL, on underside of countertop substrate.
- J. Paper Backing: Provide paper backing on underside of countertop substrate.

2.2 WOOD MATERIALS

- A. Wood Products: Provide materials that comply with requirements of referenced quality standard unless otherwise indicated.
 - 1. Wood Moisture Content: 5 to 10 percent.

2.3 FIRE-RETARDANT-TREATED MATERIALS

- A. Fire-Retardant-Treated Materials, General: Where fire-retardant-treated materials are indicated, use materials complying with requirements in this article that are acceptable to authorities having jurisdiction and with fire-test-response characteristics specified as determined by testing identical products per test method indicated by a qualified testing agency.
1. Use treated materials that comply with requirements of referenced woodworking standard. Do not use materials that are warped, discolored, or otherwise defective.
 2. Use fire-retardant-treatment formulations that do not bleed through or otherwise adversely affect finishes. Do not use colorants to distinguish treated materials from untreated materials.
 3. Identify fire-retardant-treated materials with appropriate classification marking of qualified testing agency in the form of removable paper label or imprint on surfaces that will be concealed from view after installation.
- B. Fire-Retardant-Treated Lumber and Plywood: Products with a flame-spread index of 25 or less when tested according to ASTM E 84, with no evidence of significant progressive combustion when the test is extended an additional 20 minutes, and with the flame front not extending more than 10.5 feet beyond the centerline of the burners at any time during the test.
1. Kiln dry lumber and plywood after treatment to a maximum moisture content of 19 and 15 percent, respectively.
 2. For items indicated to receive a stained or natural finish, use organic resin chemical formulation.
 3. Mill lumber after treatment within limits set for wood removal that do not affect listed fire-test-response characteristics, using a woodworking shop certified by testing and inspecting agency.
 4. Mill lumber before treatment and implement special procedures during treatment and drying processes that prevent lumber from warping and developing discolorations from drying sticks or other causes, marring, and other defects affecting appearance of treated woodwork.

2.4 ACCESSORIES

- A. Grommets for Cable Passage through Countertops: 2-inch OD, black, molded-plastic grommets and matching plastic caps with slot for wire passage.

2.5 MISCELLANEOUS MATERIALS

- A. Adhesives: Do not use adhesives that contain urea formaldehyde.
- B. Adhesive for Bonding Plastic Laminate: Unpigmented contact cement.
1. Adhesive for Bonding Edges: Hot-melt adhesive or adhesive specified above for faces.

2.6 FABRICATION

- A. Sand fire-retardant-treated wood lightly to remove raised grain on exposed surfaces before fabrication.
- B. Fabricate countertops to dimensions, profiles, and details indicated. Provide front and end overhang of 1 inch over base cabinets. Ease edges to radius indicated for the following:
 - 1. Solid-Wood (Lumber) Members: 1/16 inch unless otherwise indicated.
- C. Complete fabrication, including assembly, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
 - 1. Notify Architect seven days in advance of the dates and times woodwork fabrication will be complete.
 - 2. Trial fit assemblies at fabrication shop that cannot be shipped completely assembled. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting. Verify that various parts fit as intended and check measurements of assemblies against field measurements before disassembling for shipment.
- D. Shop cut openings to maximum extent possible to receive appliances, plumbing fixtures, electrical work, and similar items. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.
 - 1. Seal edges of openings in countertops with a coat of varnish.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before installation, condition countertops to average prevailing humidity conditions in installation areas.
- B. Before installing countertops, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

3.2 INSTALLATION

- A. Grade: Install countertops to comply with same grade as item to be installed.
- B. Assemble countertops and complete fabrication at Project site to the extent that it was not completed in the shop.

1. Provide cutouts for appliances, plumbing fixtures, electrical work, and similar items.
 2. Seal edges of cutouts by saturating with varnish.
- C. Field Jointing: Where possible, make in the same manner as shop jointing, using dowels, splines, adhesives, and fasteners recommended by manufacturer. Prepare edges to be joined in shop so Project-site processing of top and edge surfaces is not required. Locate field joints where shown on Shop Drawings.
1. Secure field joints in plastic-laminate countertops with concealed clamping devices located within 6 inches of front and back edges and at intervals not exceeding 24 inches. Tighten according to manufacturer's written instructions to exert a constant, heavy-clamping pressure at joints.
- D. Install countertops level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb to a tolerance of 1/8 inch in 96 inches.
- E. Scribe and cut countertops to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- F. Fire-Retardant-Treated Wood: Handle, store, and install fire-retardant-treated wood to comply with chemical treatment manufacturer's written instructions, including those for adhesives used to install woodwork.
- G. Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop.
1. Install countertops with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.
 2. If not integral part of top; secure backsplashes to tops with concealed metal brackets at 16 inches o.c. and to walls with adhesive.
 3. Seal junctures of tops, splashes, and walls with mildew-resistant silicone sealant or another permanently elastic sealing compound recommended by countertop material manufacturer.
- 3.3 ADJUSTING AND CLEANING
- A. Repair damaged and defective countertops, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
 - B. Clean countertops on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 12 3623