

PROJECT MANUAL

for

Albert Einstein Middle School Re-Roof and Beautification Project

at

9325 Mirandy Drive
Sacramento, California 95826

SACRAMENTO CITY UNIFIED SCHOOL DISTRICT
Sacramento, California

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NLA Project No. Y2243.00

Bid Package “B”

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PROJECT MANUAL AND SPECIFICATIONS
FOR
**SACRAMENTO CITY UNIFIED SCHOOL DISTRICT
ALBERT EINSTEIN MIDDLE SCHOOL
RE-ROOF AND BEAUTIFICATION PROJECT**

DSA Application No. N/A

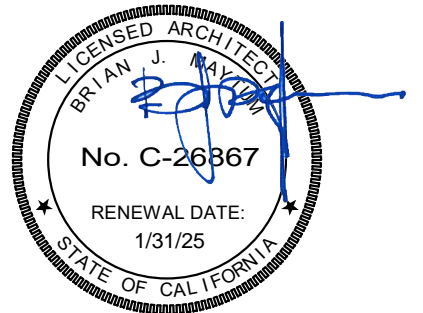
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PROJECT MANUAL AND SPECIFICATIONS
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ALBERT EINSTEIN MIDDLE SCHOOL
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BID PACKAGE "B"**

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**SECTION 08 80 00
GLAZING**

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Glass and glazing for storefronts, curtain walls, windows, and doors.
- B. Applied custom graphic window film.

1.02 RELATED SECTIONS

- A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.
- B. Section 07 90 00: Joint Sealers: Sealant and back-up material.
- C. Section 08 11 00: Metal Doors and Frames.
- D. Section 08 11 16: Aluminum Entrance Doors.
- E. Section 08 16 13: FRP Doors.
- F. Section 08 16 14: Specialty Doors.
- G. Section 08 43 13.10: Aluminum Framed Storefronts - Exterior.
- H. Section 08 43 13.20: Aluminum Framed Interior Storefronts - Interior.
- I. Section 08 84 00: Decorative Plastic Glazing.

1.03 REFERENCES

- A. ANSI Z97.1 - Safety Performance Specifications and Methods of Test for Safety Glazing Used in Buildings.
- B. ASTM C864 - Dense Elastomeric Compression Seal Gaskets, Setting Blocks and Spacers.
- C. ASTM C920 - Elastomeric Joint Sealants.
- D. ASTM C1036 - Flat Glass.
- E. ASTM C1048 - Heat Treated Flat Glass - Kind HS, Kind FT Coated and Uncoated Glass.
- F. ASTM D1056 - Flexible Cellular Materials - Sponge or Expanded Rubber.
- G. ASTM D2240 - Test Method for Rubber Property - Durometer Hardness.
- H. CPSC 16 CFR 1201 - Safety Standard for Architectural Glazing Materials.
- I. ASTM C 1048 – Standard Specification for Heat-Treated Flat Glass—Kind HS, Kind FT Coated and Uncoated Glass.
- J. ASTM E2010-01: Standard Test Method for Positive Pressure Fire Tests of Window Assemblies.

1.04 SUBMITTALS

- A. Submit under provisions of Section 00 72 00.
- B. Product Data on Glass Types Specified: 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 handling or installation requirements. Identify available colors.
- D. Samples: Submit two samples, 12x12 inch in size, illustrating glass.
- E. Samples: Submit 3 inch long bead of glazing sealant, color as selected.

1.05 QUALITY ASSURANCE

- A. Perform Work in accordance with FGMA Glazing Manual, FGMA Sealant Manual for glazing installation methods.
- B. Installer's Qualifications: The installation shall be performed only by an installation firm normally engaged in this business. All work shall be performed by qualified mechanics who specialize in glazing and glass installation.
- C. Safety glazing shall be identified in accordance with Section 2406.2, 2016 C.B.C., Title 24, Part 2 with identification etched in glass.

1.06 ENVIRONMENTAL REQUIREMENTS

- A. Do not install glazing when ambient temperature is less than 40 degrees F.
- B. Maintain minimum ambient temperature before, during and 48 hours after installation of glazing compounds.

1.07 FIELD MEASUREMENTS

- A. Verify that field measurements are as indicated on shop Drawings.

1.08 COORDINATION

- A. Coordinate Work with glazing frames, wall openings, and adjacent Work.

PART 2 – PRODUCTS

2.01 GENERAL

- A. All Glass shall be graded and meet requirements of ASTM C1036. Each light of glass delivered and installed shall have affixed thereto the manufacturer's grade label.

2.02 GLASS TYPES

- A. **Type 1GI:** Gray-Tint Insulating Glass; Low Emissivity, 1" hermetically sealed assembly consisting of 1/4" (Solargray) tempered glass on the outboard surface with Solarban 70 on #2 surface, 1/2" air space and 1/4" clear tempered glass on the inboard surface. Temper all glass components.
- B. **Type 1CI:** Clear Insulating Glass; Low Emissivity, 1" hermetically sealed assembly consisting of 1/4" clear tempered glass on the outboard surface with Solarban 70 on #2 surface, 1/2" air space and 1/4" clear tempered glass on the inboard surface. Temper all glass components.
- C. **Type 1GL:** Grey-Tint Insulating Glass; Low Emissivity, 1" hermetically sealed assembly consisting of 7/32" grey-tint laminate glass on the outboard surface with Solarban 70 on #2 surface, 1/2" air space and 1/4" clear tempered glass on the inboard surface.
- D. **Type 1LI:** Clear Insulating Glass; Low Emissivity, 1" hermetically sealed assembly consisting of 7/32" clear laminate glass on the outboard surface with Solarban 70 on #2 surface, 1/2" air space and 1/4" clear tempered glass on the inboard surface.
- E. **Type 1"SPAN:** (Exterior storefront insulated spandrel panels) MAPES-R, 1-inch insulated panel. Anodized aluminum exterior and interior skin with hardboard substrate and 2-pound density polystyrene core. As manufactured by MAPES Architectural Panels, www.mapespanels.com. Pre-finished anodized aluminum skins to best match window framing per Section 08 43 13, Aluminum Framed Storefronts.
 - 1. Color: Dark Bronze
- F. **Type 1/4CT:** Clear Tempered Glass; ASTM C1048-85, Type 1, Class 1, Quality q3. Heat strengthened by manufacturer's standard process (after cutting to final size) to achieve a flexural strength 4 times normal glass strength; 1/4" thickness. All tempered glass shall have a permanent logo signifying compliance with the Consumer Product Safety Commission 16 CFR 1201 C1 and C11.
- G. **Type 1/4CL:** Laminated 7/32" glass with .030 inch interlayer. Clear.
- H. **Type 1/4FL:** Laminated 7/32" glass with .030 inch interlayer. Frosted.

2.03 GLAZING COMPOUNDS

- A. Glazing Sealants (non-sag type): Dow Corning 795, Tremco "Proglaze" or GE Silicone Sealants; Tremco "Mono" acrylic sealant.
- B. Glazing Compound: Shall meet requirements of ASTM C669-00.

2.04 GLAZING ACCESSORIES

- A. Setting Blocks: Neoprene EPDM blocks with a Shore A durometer hardness of 85, plus or minus 5 percent, chemically compatible with sealant used.
- B. Spacer Shims: Neoprene, 50-60 Shore A durometer hardness, minimum 3 inch long x one half the height of the glazing stop x thickness to suit application.
- C. Glazing Tape: Preformed butyl compound with integral resilient tube spacing device; 10 - 15 Shore A durometer hardness; coiled on release paper; black color; Tremco No. 440 tape.
- D. Glazing Splines: Resilient polyvinyl chloride extruded shape to suit glazing channel retaining slot; black color.
- E. Miscellaneous: Furnish all primers-sealers, setting blocks, shims, spacers, compression seals, etc., as required for a first class workmanlike job.

2.05 APPLIED CUSTOM GRAPHIC WINDOW FILM

- A. Where indicated on the drawings, provide custom graphic window film as provided by:
 - Signature Graphics
 - 620 Sunbeam Ave.
 - Sacramento, CA 95811
 - Contact: Shane Duncan (916) 454-0800
- B. Films shall be installed on building interior side, or on interior room side and be read from the outside/hallway side and shall generally consist of light white frosted to opaque graphics on clear film.
- C. Architect to provide graphic files at time of submittal.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Verify prepared openings for adequacy to receive glass.
- B. Verify that openings for glazing are correctly sized and within tolerance.
- C. Verify that surfaces of glazing channels or recesses are clean, free of obstructions, and ready to receive glazing.
- D. Report in writing to, any conditions that may be detrimental to the Work.
- E. Only laminated glass lites are to be installed in metal doors.

3.02 PREPARATION

- A. Clean contact surfaces with solvent and wipe dry.
- B. Seal porous glazing channels or recesses with substrate compatible primer or sealer.
- C. Check that glass is free of edge damage or face imperfections.

3.03 INSTALLATION

- A. General: Install glass types at locations indicated, according to glass manufacturer's recommendations and as specified herein.
- B. Glass Glazing:
 - 1. Positioning Glass: Orient pattern and draw of glass pieces in same direction. Set all sheet glass so that any waves, etc. are horizontal.
 - 2. Do not cut, nip or abrade tempered glass.
 - 3. Watershed: Gunnable sealants, when applied as a cap head, shall form a bevel or watershed away from the glass. When tape is used to the sightline, it shall form a watershed when compressed. Do not undercut a sealant, compound, or tape below the sightline. Tool and finish sealant as required. Use tooling solution recommended by the sealant manufacturer.
 - 4. Positive Contact:
 - a. When applying a heel bead, lap onto the glass a minimum of 3/16".
 - b. When applying a toe bead, whether continuous or a corner seal, make certain it is large enough to contact both the glass and sash. Install the sealant prior to glass placement.
 - 5. Setting blocks shall be 1/16" less than the full rabbet width, minimum length of 4" and high enough to provide the recommended minimum bite and edge clearance for the glass. Center blocks at 1/4 points unless otherwise recommended by the glass manufacturer.
 - 6. Provide spacer-shims at a maximum of 24" o.c.
 - 7. Clearances: Observe minimum face clearances, edge clearance and glass bite as recommended by the glass and sealant manufacturer.
 - 8. Tape Installation: Do not install glazing tapes more than one day ahead of glass placement. Remove the paper backing from the tape only when the lite is ready to be installed. Do not stretch the tape to make it fit. Do not overlap the ends of the tape. Instead, butt ends together, and when corners are butted together, daub with sealant to assure a positive seal.
 - 9. Glazing tapes must be kept under proper compression.
 - 10. Glazing stops shall be installed so that stop or frame does not bear directly against glass.

3.04 CLEANING

- A. Clean work under provisions of 00 72 00.
- B. Remove glazing materials from finish surfaces.
- C. Remove labels after work is complete.
- D. Clean glass.

3.05 PROTECTION OF FINISHED WORK

- A. Protect finished Work under provisions of Section 00 72 00.
- B. Replacement: At completion of building construction and prior to its acceptance, all broken, cracked, excessively scratched, or otherwise imperfect glazing materials included under this Section shall be replaced with new glazing materials of the type specified, as directed by the Architect, and at no additional cost to the Owner.

END OF SECTION 08 80 00

**SECTION 09 51 00
ACOUSTICAL CEILINGS**

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Lay-in acoustical ceiling systems and metal suspension system.
2. Suspended acoustical ceiling baffles.
3. Direct attached acoustical ceiling panels to t-bar grid.

B. Related Requirements:

1. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.
2. Section 05 40 00: Cold Formed Metal Framing.
3. Section 08 62 23: Tubular Skylights
4. Section 09 29 00: Gypsum Board.
5. Division 23: HVAC.
6. Division 26: Electrical.

1.02 REFERENCES

- A. Conform to California Building Code (CBC) 2022 requirements and UL - Tunnel Test for Fire Hazard Classification of Building Materials.
- B. CISCA: Acoustical Ceilings Use and Practice.
- C. Division of the State Architect: Comply with requirements of IR 25-2.10.
- D. ASTM A641 - Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire.
- E. ASTM A653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
- F. ASTM C423 - Standard Test Method for Sound Absorption and Sound Absorption Coefficients by the Reverberation Room Method.
- G. ASTM C635 - Standard Specification for the Manufacture, Performance, and Testing of Metal Suspension Systems for Acoustical Tile and Lay-in Panel Ceilings.
- H. ASTM C636 - Standard Practice for Installation of Metal Ceiling Suspension Systems for Acoustical Tile and Lay-In Panels.

- I. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- J. ASTM E580 – Standard Practice for Installation of Ceiling Suspension Systems for Acoustical Tile and Lay-in Panels in Areas Subject to Earthquake Ground Motions.
- K. ASTM E1264 - Standard Classification for Acoustical Ceiling Products.
- L. ASTM E1414 - Standard Test Method for Airborne Sound Attenuation Between Rooms Sharing a Common Ceiling Plenum.
- M. ASTM E1477 - Standard Test Method for Luminous Reflectance Factor of Acoustical Materials by Use of Integrating-Sphere Reflectometers.
- N. ASCE 7 - Minimum Design Loads for Buildings and Other Structures, as amended by CBC 1615A.1.16.
- O. CHPS Low-Emitting Materials Table: Materials submitted must be listed as low emitting on the CHPS website, www.CHPS.net.

1.03 SUBMITTALS

A. Samples:

1. Lay in panels of each specified type, 6-inch by 6-inch minimum size.
2. Suspension System: 12-inch-long samples of suspension system members, connections, moldings and wall angles, for each color specified.

B. Shop Drawings:

1. Indicate complete plan layouts and installation details.
2. Indicate related Work of other sections which is installed in, attached to, or penetrates ceiling areas, such as air distribution and electrical devices.

C. Product Data:

1. Suspension System for Lay-in Ceiling: Printed data for suspension system components, including load tests, indicating conformance to specified tests and standards.
2. Acoustical units: Printed data indicating conformance to specified tests and standards.

- D. Maintenance Materials: Provide extra panels equal to 1 percent of the area of each typical module size of acoustical panel, but not less than eight (8) of each specified size, style and color.

1.04 QUALITY ASSURANCE

- A. Ceiling systems shall consist of lay-in acoustical ceiling panels by a single manufacturer and suspension systems by a single manufacturer for the entire project.

B. Qualifications of Installer: Minimum five (5) years' experience in installing acoustical ceiling systems of the types specified.

C. Design Criteria:

1. Deflection of finished surface to 1/360 of span or less.
2. 1/8-inch maximum permissible variation from true plane measured from 10-foot straightedge placed on surface of finished acoustical fiber units.

1.05 DELIVERY, STORAGE AND HANDLING

A. Deliver materials to the Project site in original sealed packages.

B. Storage: Store materials in building area where they will be installed, in original package. Keep clean and free from damage due to water or deteriorating elements.

C. Handle in a manner to prevent damage during storage and installation.

1.06 PROJECT CONDITIONS

A. Installation of acoustical ceiling system shall not begin until the building is enclosed, permanent heating and cooling is in operation, and residual moisture from plaster and concrete work has dissipated. Building areas to receive ceilings shall be free of construction dust and debris.

B. Environmental Requirements: Maintain temperature in space at 55 degrees F or above for 24 hours before, during, and after installation of materials.

C. Scheduling:

1. Before concealing Work of other sections, verify required tests and inspections have been completed.
2. Coordinate with related Work of other sections. Coordinate location and symmetrical placement of air distribution devices, electrical devices, and penetrations with related Work section.

1.07 WARRANTY

A. Manufacturer shall provide a 10-year material warranty.

B. Installer shall provide a two (2) year fabrication and installation warranty.

PART 2 - PRODUCTS

2.01 ACCEPTABLE MANUFACTURERS

A. USG Corporation.

B. Armstrong World Industries.

C. TURF Design.

D. Or Approved Equal.

2.02 SUSPENSION SYSTEM

A. Metal suspension system for acoustical lay-in tile shall be hot-dipped galvanized steel conforming to ASTM A653. Main beams and cross tees shall be double-web steel construction with exposed flange design, with factory punched cross tee slots, hanger holes and integral couplings.

B. Metal suspension system for acoustical lay-in tile shall conform with ASTM C635, C636 and E580 and section 13.5.6 of ASCE 7, as amended by CBC Section 1615A.1.16, for installation in high seismic areas.

C. Structural classification of suspension systems shall be heavy-duty in conformance to ASTM C635.

D. Vertical Strut: USG Donn Compression Post, or equal, or as indicated; types and designs complying with requirements of authorities having jurisdiction and seismic Zones D, E and F requirements. Provide base attachment clip for connection of vertical strut to main beams.

E. Wall Molding: Fabricated from galvanized steel with 2-inch horizontal leg and hemmed edges, same finish as main and cross tees.

F. Spacer/Stabilizer Bars: Provide for tying together the ends of main runners and cross tees that are not attached to wall molding.

G. Hanger Wire: 0.106-inch diameter (0.144-inch diameter for pendant fixtures), galvanized soft annealed mild steel wire as defined in ASTM A641, Class 1 coating.

H. Provide attachment devices and any other required accessories for a complete suspended ceiling system installation.

2.03 ACOUSTICAL CEILING PANELS

A. Acoustical ceiling panels shall be class A in accordance to ASTM E1264.

B. Acoustical panels shall meet the following surface-burning characteristics when tested in accordance to ASTM E84 for Class A materials:

1. Maximum Flame Spread: 25.
2. Maximum Smoke Developed: 50.

C. Mold and Mildew Resistance: Panels and faces shall be treated with a biocide paint additive or an antimicrobial solution to inhibit mold and mildew.

2.04 CEILING TYPES

A. **ACT 1** – All Classrooms main space, Library, Kindergartens, Building C Workrooms:

1. Acoustical Ceiling Panels:

- a. Panel Name: **Armstrong #1717 Fine Fissured High NRC**, or equal.
- b. Panel Size: 2-foot by 4-foot.
- c. Panel Thickness: 3/4 inch.
- d. Edge Detail: Tegular.
- e. Light Reflectance: 0.82 minimum, complying with ASTM E1477.
- f. CAC: Minimum 40, UL Classified, complying with ASTM E1414.
- g. NRC: Minimum 0.70, UL Classified, complying with ASTM C423.
- h. Color: White.
- i. Recycled Content: Per Manufacturer.

2. Suspension System:

- a. Suspension System Name: **Prelude XL by Armstrong, Donn DX by USG, 1200 Seismic Series** by Chicago Metallic Corporation, or equal.
- b. Color: White.

B. **ACT 2** – Classrooms over teaching wall, Administration Reception:

1. Acoustical Ceiling Panels:

- a. Panel Name: **Armstrong #8352PB Lyra PB**, or equal.
- b. Panel Size: 2-foot by 2-foot.
- c. Panel Thickness: 1 inch.
- d. Edge Detail: Tegular.
- e. Light Reflectance: 0.88 minimum, in accordance with ASTM E1477.
- f. CAC: n/a.
- g. NRC: Minimum 0.95, UL Classified, complying with ASTM C423.
- h. Color: Chosen from full range of colors.
- i. Recycled Content: Per Manufacturer.

2. Suspension System:

- a. Suspension System Name: **Silhouette XL by Armstrong, Fineline by USG, 4500 Ultraline** Series by Chicago Metallic Corporation, or equal.
- b. Color: White.

C. **ACT 3** – Administration Areas except Reception:

1. Acoustical Ceiling Panel:

- a. Panel Name: **Armstrong MESA Second Look #688**, or equal.
- b. Panel Size: 2-foot by 2-foot.

- c. Panel Thickness: 3/4 inch.
- d. Edge Detail: Angled Tegular.
- e. Light Reflectance: 0.85 minimum, complying with ASTM E1477.
- f. CAC: Minimum 35, UL Classified, complying with ASTM E1414.
- g. NRC: Minimum 0.60, UL Classified, complying with ASTM C423.
- h. Color: White.
- i. Recycled Content: Per Manufacturer.

2. Suspension System:

- a. Suspension System Name: **Prelude XL by Armstrong, Donn DX by USG, 1200 Seismic Series** by Chicago Metallic Corporation, or equal.
- b. Color: From full range of standard colors.

D. **ACT 4** – Kitchen and Serving Areas:

1. Acoustical Ceiling Panel:

- a. Panel Name: **Armstrong Kitchen Zone #672**, or equal.
- b. Panel Size: 2-foot by 4-foot.
- c. Panel Thickness: 5/8 inch.
- d. Edge Detail: Lay-in.
- e. Light Reflectance: 0.89 minimum, complying with ASTM E1477.
- f. CAC: Minimum 35, UL Classified, complying with ASTM E1414.
- g. NRC: Per Manufacturer.
- h. Color: White.
- i. Recycled Content: Per Manufacturer.

2. Suspension System:

- a. Suspension System Name: **Prelude XL by Armstrong, Donn DX by USG, 1200 Seismic Series** by Chicago Metallic Corporation, or equal.
- b. Color: Manufacturer's standard "White".

E. **ACT 5** – Administration Entry Lobby:

1. Suspended Acoustical Baffles:

- a. Panel Name: **Turf Design, LLC, TURF Slab**, or equal.
- b. Panel Size: 2.25 inches thick x 8.68 inches tall x 119 (maximum) inches long. Length as shown on drawings.
- c. Panel Thickness: 2.25 inches.
- d. Edge Detail: square.
- e. Spacing: 12 inches o.c.
- f. Attachment Method: Gridlock system. Attaches to standard t-bar grid. Connection spacing per Manufacturer.
- g. Color: To be selected by Architect at time of submittal from manufacturer's full range of 9 mm felt and woods.

h. Recycled Content: Per Manufacturer.

2. Suspension System:

- a. Suspension System Name: **Prelude XL by Armstrong, Donn DX by USG, 1200 Seismic Series** by Chicago Metallic Corporation, or equal.
- b. Color: Manufacturer's standard "White".

F. **ACT 6** – Library:

1. Suspended Acoustical Baffles:

- a. Panel Name: **Turf Design, LLC, TURF Ridge Baffles**, or equal.
- b. Panel Size: 2.25 inches thick x 8.68 inches tall x 119 (maximum) inches long. Provide standard Ridge Pattern consisting of six(6) differently shaped panels in a repeating pattern. Quantity as shown on drawings.
- c. Panel Thickness: 27mm.
- d. Edge Detail: Exposed Felt.
- e. Spacing: 12 inches o.c.
- f. Attachment Method: Felt Lock attachment to Unistrut grid. Unistrut then attaches to standard t-bar grid. Connection spacing per Manufacturer.
- g. Color: To be selected by Architect at time of submittal from manufacturer's full range of 9 mm felt and woods.
- h. Recycled Content: Per Manufacturer.

2. Suspension System:

- a. Suspension System Name: **Prelude XL by Armstrong, Donn DX by USG, 1200 Seismic Series** by Chicago Metallic Corporation, or equal.
- b. Color: Manufacturer's standard "White".

G. **ACT 7** – Multi-Purpose:

1. Tectum Acoustic Panels:

- a. Panel Name: **Tectum Direct Attach #8180T10TWH**, or equal.
- b. Panel Size: 4-foot by 8-foot
- c. Panel Thickness: 1 inch.
- d. Edge Detail: Long edge beveled, short edge square.
- e. Light Reflectance: 0.75 minimum, complying with ASTM E1477.
- f. CAC: Minimum 35, UL Classified, complying with ASTM E1414.
- g. NRC: Minimum 0.85, UL Classified, complying with ASTM C423.
- f. Attachment Method: Direct attachment to standard t-bar grid. Connection spacing per Manufacturer.
- h. Color: White.
- i. Recycled Content: Per Manufacturer.

2. Suspension System:

- a. Suspension System Name: **Prelude XL by Armstrong, Donn DX by USG, 1200 Seismic Series** by Chicago Metallic Corporation, or equal.
- b. Color: Manufacturer's standard "White".

2.05 CEILING ACCESS PANEL

- A. Non-rated, 24"x48", flush mounted, .063 inch thick aluminum access panel with continuous piano hinge and cam locks. Access panel shall be single unit sized to fit in t-bar grid system. Finish shall be electrostatically applied baked white enamel over rust inhibiting phosphate treated steel. Product shall be equal to Williams Brothers Corporation of America, WB-TB Drop-in Ceiling Access Door. Locate in ceiling system to provide access to above ceiling mechanical equipment.

PART 3 - EXECUTION

3.01 PREPARATION

- A. Furnish layouts for inserts, clips or other supports and struts required to be installed by the Work of other trades that depend on the suspended ceiling system for support.
- B. Coordinate related Work to ensure completion prior to installation of clips or fasteners.
- C. Compare layouts with construction conditions. Tile shall be spaced symmetrically about the centerlines of the room or space, and shall start with a tile or joint line as required to avoid narrow tiles at the finish edges unless indicated otherwise. Joints shall be tight with joint lines straight and aligned with the walls. Ceiling moldings shall be provided where tile abuts wall with matching caulking to eliminate any space.

3.02 INSTALLATION

A. Suspension Systems

1. Install suspension system in accordance with ASTM C636 and ASTM E580.
2. System shall be complete; with joints neatly and tightly joined and securely fastened; suspension members shall be installed in a true, flat, level plane.
3. Hanger Wires: 0.106-inch diameter minimum; larger sizes as indicated or required.
 - a. Fasten wires to panel points and structure above per most stringent requirements of fabricator and CBC and as indicated on Drawings.
 - b. Wires exceeding 1:6 out-of-plumb shall be braced with counter-sloping wires.
 - c. Maintain wires at least 6 inches from non-braced ducts, pipes, conduits, and other items.
 - d. Install wire along main runners at 4 feet on center. Terminal ends of each main runner and cross tee must be supported within 8 inches of each wall with a perimeter wire or within 1/4 of the length of the end tee, whichever is least, for the perimeter of the ceiling area.
 - e. Where obstructions prevent direct suspension, provide trapezes or equivalent devices; 1 1/2-inch minimum cold rolled channels back-to-back may be installed for spans to 6 feet maximum.

- f. Wire shall be straight, without extraneous kinks or bend. Hanger wire connections must be capable of carrying a 200 - pound pull without stretching or shifting the suspension clip.
4. Bracing Wires to Resist Seismic Forces: 0.106-inch diameter minimum, larger sizes as indicated or required.
 - a. System for Bracing Ceilings: Lay-in Ceiling Systems: Install one (1) 4 wire set of sway bracing wires and a vertical strut for each 144 square feet maximum of ceiling area. Locate wire sets and struts at 12 feet maximum on center. At ceiling perimeters, wire-sets shall be installed within 6 feet of walls.
 - b. Install 4-wire sets and struts within 2 inches of cross-runner intersection with main runner; space wires 90 degrees from each other.
 - c. Do not install sway bracing wires at an angle greater than 45 degrees with the ceiling plane.
 - d. Wires shall be tight, without causing ceiling to lift.
 - e. Fasten struts in accordance with CBC requirements.
 - f. Maintain wires at least 6 inches from non-braced ducts, pipes, conduit, and other items.
 5. Provide additional wires, 0.106-inch diameter minimum, necessary to properly support suspension at electrical devices, air distribution devices, vertical soffits, and other concentrated loads.
 6. Suspension:
 - a. Suspension members shall be fastened to two (2) adjacent walls per ASTM 580; but shall be at least 3/4 inches minimum clear of other walls.
 - b. Any suspension members not fastened to walls shall be interconnected to prevent spreading, near their free end, with a horizontal metal strut or stabilizer bar or 0.064-inch diameter taut tie wire.
 - c. Provide additional tees or sub tees to frame openings for lights, air distribution devices, electrical devices, and other items penetrating through ceiling, which do not have an integral flange to support and conceal cut edges of acoustic panels. Provide cross bracing necessary to securely support any surface mounted fixtures or other items.
 7. Attachment of Wires:
 - a. To Metal Deck or Steel Framing Members: Install as required by current code.
 - b. To Suspension Members: Insert through holes in members or supporting clips.
 - c. Wires shall be fastened with three (3) tight turns minimum for hanger wires and four (4) tight turns minimum bracing wires. Turns shall be made in a 1 ½-inch maximum distance.
- B. Suspension System for 2-foot by 4-foot Lay-in Acoustical Ceilings:
1. Main Runners: Install main runners 48 inches apart; 0.106-inch diameter hanger wires space 48 inches on center maximum along runners, and within 8 inches of ends.
 2. Install wall moldings with fasteners to studs. Install corner caps at molding intersections.
 3. Cross Tees: Install between main runners in a repetitive pattern of 2-foot spacings.
 4. Sub-Tees: Install at edges of penetrations.

C. Acoustical Panels

1. Install panels into suspension system. Partial panels shall be neatly cut and fitted to suspension and around penetrations and/or obstructions. Duplicate tegular edges at partial panels; cuts to be straight. Repaint cut tiles to match color or as directed by manufacturer for mylar facing at visually exposed conditions or as required by the Architect.
2. Penetrations through the ceilings for sprinkler heads and other similar devices that are not integrally tied to the ceiling system in the lateral direction shall have a 2-inch oversized ring, sleeve or adapter through the ceiling tile to allow free movement of 1 inch in horizontal directions. Alternatively, per ASTM E580, a flexible sprinkler hose fitting that can accommodate 1 inch of ceiling movement shall be permitted to be used in lieu of the oversized ring, sleeve or adapter.

D. Air Distribution Devices

1. Refer to and coordinate with Division 23 - HVAC.
2. Install air distribution grilles and other devices into suspension system. Install 4 taut wires, each 0.106-inch diameter minimum, to each device within 3 inches of device corners, to support their weight independent of the suspension system.

E. Light Fixtures

1. Refer to and coordinate with Division 26 - Electrical.
2. Fixtures weighing less than 56 pounds: Install fixtures into suspension systems and fasten earthquake clips to suspension members. Install minimum 2 slack safety wires, each 0.106 inch diameter minimum, to each fixture at diagonally opposite corners, to support their weight independent of the system.
3. Fixtures weighing 56 pounds or more: Install fixtures into suspension system and fasten earthquake clips to suspension system members as required by the Drawings and/or code. Install not less than 4 taut 0.106-inch diameter wires capable of supporting four (4) times the fixture load.
4. Support pendant-mounted light fixtures directly from the structure above with hanger wires or cables passing through each pendant hanger and capable of supporting two (2) times the weight of the fixture. Brace the pendant-mounted light fixtures by either a bracing assembly at the ceiling penetration or below the ceiling to the walls, as indicated in the drawings.

3.03 CLEANING

- A. General: After installation of acoustical material has been completed, clean surfaces of the material, removing any dirt or discolorations. Replace panels as required.
- B. Acoustical Panels: Minor abraded spots and cut edges shall be touched up with the same paint as was used for factory applied finish of the lay-in panels.
- C. Remove and replace work that cannot be successfully cleaned and repaired to eliminate evidence of damage.

D. Remove rubbish, debris, and waste materials and legally dispose of off of the Project site.

3.04 PROTECTION

A. Protect the Work of this section until Substantial Completion.

END OF SECTION 09 51 00

SECTION 09 64 00

REFINISHING HARDWOOD FLOORS

REVISION SUMMARY

All Users and Designers! This page is for your information only to provide information on the latest update to this specification so that you don't have to traipse line by line looking for the last edit. Please delete this page prior to issuance.

- xx/xx/xx - Revised for formatting and checked all CBC code references.
- 01/15/2020 - Revised to reflect and include 2019 CBC reference changes. Revisions to used products.
- 02/01/2023 - Revised to reflect and include 2022 CBC reference changes. Added additional finish system.
- 08/01/2023 - Revised procedures for sanding, sealer and finish coats, and painted lines.

SECTION 09 64 00

REFINISHING HARDWOOD FLOORS

PART 1 – GENERAL

1.01 SECTION INCLUDES

- A. Repair, stripping, sanding, and refinishing of existing hardwood floors.

1.02 RELATED SECTIONS

- A. Section 00 72 00: General Conditions.
- B. Section 00 72 00: Exhibit C: Abatement of Hazardous Materials.

1.03 REFERENCES

- A. National Wood Flooring Association (NWFA)

1.04 QUALITY ASSURANCE

- A. Flooring Contractor Installer Qualifications:
 - 1. Flooring refinishing contractor to be an established firm experienced in the installation and refinishing of hardwood floors and shall have access to all manufacturers required technical, maintenance, specifications and related documents.
 - 2. Floor finisher must be factory trained and certified for the installation of the specific products being installed.
 - 3. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - a. Finish areas designated by Architect.
 - b. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
 - c. Refinish mock-up area as required to produce acceptable work.

1.05 SUBMITTALS

- A. Provide a complete submittal package with all components required within this section. Submit per Section 00 72 00.
 - 1. Product Data: Provide product data describing physical and performance characteristics, material safety data sheets and manufacturer's instructions for all proposed products.
- B. Selection Samples: For each finish product specified, two complete sets of color chips representing

manufacturer's full range of available colors and patterns.

- C. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square representing actual product, color, and patterns.

1.06 OPERATION AND MAINTENANCE DATA

- A. Submit cleaning and maintenance data under provisions of Section 00 72 00.
- B. Include maintenance procedures, recommended maintenance materials, and suggested schedule and products for cleaning, stripping, and re-waxing.

1.07 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- B. Storage and Protection: Store materials protected for exposure to harmful weather conditions and at a temperature and humidity conditions recommended by manufacturer. Materials should be stored in areas that are fully enclosed, weather tight with a permanent HVAC system set at a uniform temperature of at least 68 degrees F (20 degrees C) for 72 hours prior to, during and after installation.

1.08 ENVIRONMENTAL REQUIREMENTS

- A. Maintain a minimum temperature in the spaces to receive floor refinishing of 65°F (18°C) and a maximum temperature of 100°F (38°C) [85°F (29°C)] for at least 48 hours before, during, and for not less than 48 hours after installation. Thereafter, maintain a minimum temperature of 55°F (13°C) in areas where work is completed. Protect all materials from the direct flow of heat from hot-air registers, radiators, or other heating fixtures and appliances.
- B. Maintain lighting at a minimum uniform level of 50 or more-foot candles in areas where the floor system is being installed.

1.10 EXTRA MATERIALS

- A. Provide a minimum of (2) gallons of floor finish material.

1.11 WARRANTY

- A. Floor Finish Manufacturer's Warranty: Two (2) year manufacturer warranty commencing on recordation date of the Notice of Completion.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Floor Sealer and Finish: Clear VOC compliant, water-based polyurethane gloss finish.
1. Bona Super Sport Seal.
 - a. Ingredients: Water, acrylic resin, Dipropylene Glycol Monomethyl Ether, defoamers.
 - b. Color: Milky, off white (wet).
 - c. Clarity: Clear when dry.
 - d. pH: 7.8.
 - e. Solids: 35 percent.
 - f. Density: 8.66 lbs./gallon (1.04 S.G.).
 - g. US Regulatory VOC: 100 g/L.
 - h. Gloss Level: N/A.
 - i. Odor: Non-offending.
 2. Bona Super Sport Finish.
 - a. Ingredients: Water, polyurethane resin, N-Methyl-2-Pyrrolidone, Dipropylene Glycol Monomethyl Ether and Dipropylene Glycol n-Butyl Ether.
 - b. Color: Milky, off white (wet).
 - c. pH: 8.3.
 - d. Solids: 28 percent.
 - e. Viscosity: (#4 Ford cup at 25 degree C) approx. 16 seconds.
 - f. Density: 8.52 lbs./gallon (1.02 S.G.).
 - g. US Regulatory VOC: 350 g/L.
 - h. Gloss Level: (60 degrees) 88+.
 - i. Odor: Non-offending.
 - j. Stability: 1-year shelf life in unopened container.
 - k. Percent Cured After 24 Hours: 70 percent; after 72 hours - 90 percent.
 - l. Maximum Cure: 100 percent in one week.
 3. Approved equal.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Refinisher must examine areas and conditions under which work is to be performed and must notify General Contractor in writing of conditions detrimental to proper and timely completion of work. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Owner and Architect.
- B. Coordinate with General Contractor and Owner for the removal of all loose furniture and equipment which would be in the way of refinishing work.
- C. For new installation of floors, use only in structures with humidity and temperature controls. Do not use over channel and clip floor systems in environments not controlled for temperature and humidity.

3.02 EXECUTION

- A. Where identified on the drawings, remove conduits, pipes, and other abandoned utilities to below floor surface.
- B. Drill or cut clean holes at locations of removed utilities and provide new hardwood plugs in a material equal to existing flooring and securely anchored.
- C. Remove all abandoned fasteners and other foreign objects and securely anchor any loose boards.
- D. Machine sand existing finish down to bare natural wood and remove all offsets, ridges, and cups. Reach all corners, hand sand as required. Sand and prepare floor using Maple Flooring Manufacturers Association (MFMA) accepted methods.
- E. Make final cut with 100 - 120 grit sandpaper and screen to 120 - 150 grit. Machine sand with finish grade grit as required to remove sanding marks and to provide a smooth surface to receive new finish. Reach all corners, hand sand as required.
- F. Vacuum thoroughly. Clean bare wood thoroughly with naphtha solvent and clean cloths prior to application of finish.
- G. Apply (2) coats minimum of wood sealer. Apply additional coats as required by Manufacturer.
- H. After seal coats are completed, and before applying final finish coats, paint game lines and graphics as indicated on Drawings and upon favorably reviewed Game Court Marking Plan submittal. Mark game lines, court lines and other markings in approved colors using approved Game Court Marking Plan. Apply (2) coats if required to develop true color. Let dry minimum of 12 hours. When completely dry, re-clean floor thoroughly and apply third coat of sealer.
- I. Prepare painted floor for final finish.
- J. Apply (3) coats of clear finish at a maximum rate of 350 square feet per gallon, allowing full drying time between coats as recommend in manufacturer's written instructions.

3.05 PROTECTION

- A. Prohibit traffic on new floor finish for 5-days after installation and prior to cleaning.
- B. Protect flooring from damages by other trades prior to owner occupancy.

[END OF SECTION 09 64 00]

SECTION 09 65 16

RESILIENT FLOORING AND BASE

PART 1 – GENERAL

1.01 RELATED DOCUMENTS

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

1.02 SECTION INCLUDES

- A. Resilient Luxury Vinyl Tile Flooring.
- B. Rubber Stair Risers and Treads.
- C. Topset Resilient Base.
- D. Accessories.

1.03 SUBMITTALS

- A. Submit per the requirements the General Conditions for each product specified.
 - 1. Product Data: Provide product data describing physical and performance characteristics, sizes, patterns, colors, material safety data sheets and manufacture's installation instructions for all proposed products.
 - 2. Submit samples for color selection illustrating color and pattern for floor material.

1.04 QUALITY ASSURANCE

- A. Flooring Contractor Installer Qualifications:
 - 1. Flooring Contractor to be an established firm experienced in the installation of the specified product and shall have access to all manufacturers' required technical, maintenance, specifications and related documents.
 - 2. Floor covering installer must be factory trained and certified for the installation of the specific products being installed.
 - 3. Installer to provide project inspector proof of certification prior to starting work.
 - 4. Certified installer must be present on job site while work is in progress.

1.05 PROJECT CONDITIONS

- A. Install resilient products after other finishing operations, including painting, have been completed.
- B. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.

- B. Storage and Protection: Store materials protected for exposure to harmful weather conditions and at a temperature and humidity conditions recommended by manufacturer. Materials should be stored in areas that are fully enclosed, weather tight with the permanent HVAC system set at a uniform temperature of at least 65 degrees F 48 hours prior to, during and after installation. Maintain ambient relative humidity between 40% and 60% during installation.

1.06 WARRANTY

- A. Installation Warranty: Two (2) year installation warranty commencing on recordation date of the Notice of Completion.
- B. Manufacturer's Warranty: Five (5) year manufacturer warranty commencing on recordation date of the Notice of Completion.

PART 2 – PRODUCTS

2.01 RESILIENT VINYL PLANK FLOORING (LVT)

- A. Manufacturer
 - 1. Interface
www.interface.com
 - 2. Approved equal meeting all specified requirements herein, including matching colors, textures and patterns.
- B. Performance Requirements
 - 1. Fire-Test-Response Characteristics: For resilient tile flooring, as determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.
 - 2. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.
 - 3. Flooring products shall comply with the requirements of the California Department of Public Health's "Standard Method for the Testing and Evaluation of Volatile Organic Chemical Emissions from Indoor Sources Using Environmental Chambers."
- C. Product Type, **LVT-1, Interface, "Studio Set" line.**
 - 1. Construction: High Performance Luxury Vinyl Tile
 - 2. Class / ASTM F1700: Class III Printed Vinyl Plank
 - 3. Wear Layer Thickness: 22 mil.
 - 4. Total Thickness: 4.5 mm
 - 5. Backing Class: Commercial Grade
 - 6. Finish: Ceramor
 - 7. Nominal Dims. 25 cm x 1 m (9.85" x 39.4")
 - 8. Slip Resistance (ASTM D2047) >0.55 wet/dry, ADA Compliant
 - 9. Static Load Limit (ASTM F970) 1,500 psi
 - 10. Flexibility (ASTM F137) Passes
 - 11. Radiant Flux (ASTM E648) Class I
 - 12. Residual Indentation (ASTM F1914) Passes
 - 13. Chemical Resistance (ASTM F925) Passes

- 14. Color/Texture As selected by Architect at time of submittal
- 15. Color Allowance See drawings for quantities and distribution
- 16. Install Pattern Ashlar
- 17. Installation Materials
 - a. Trowelable Leveling and Patching Compounds: Latex-modified, Portland cement based or blended hydraulic-cement-based formulation.
 - b. Adhesives: XL Brands Adhesive 2000 Plus, XL Brands HM99 High Moisture Adhesive as recommended by Interface to meet site conditions.

2.02 RUBBER STAIR RISERS AND TREADS – Use at MP platform stairs and platform edge nosing.

- A. Manufacturer
 - 1. Roppe Rubber Corp. (Specified)
 - 2. Armstrong.
 - 3. Burke Industries.
 - 4.. Approved equal.
- B. Product Type, **Roppe Rubber Tread**
 - 1. Construction: Multi-part rubber riser & treads
 - 2. Resilience ASTM F2169 Type TS, Class 1 & 2
 - 3. Critical Flux ASTM E648 Class 1
 - 4. Smoke Density ASTM E662 Passes, <450
 - 5. Coeff. of Friction ASTM D2047 >50
 - 6. Nosing Configuration Ribbed insert/contrasting color
 - 7. Tread Finish #95 hammered design
 - 8. Rider Finish Smooth
 - 9. Color: As selected by Architect at time of submittal from Manufacturer’s full range of colors and patterns including Roppe ReNew line.
 - 10. Installation Materials Excelsior direct glue-down fillers and adhesives per manufacturer’s instructions.
- C. Provide a minimum of (2) unopened cartons of each type of LVT flooring used.

2.03 RUBBER BASE

- A. Manufacturer
 - 1. Roppe Rubber Corp. (Specified)
 - 2. Armstrong.
 - 3. Burke Industries.
 - 4.. Approved equal.
- B. Performance Requirements, **RB-1**
 - 1. Conforming to ASTM F 1861 or FS-SS-W-40, Type 1 with matching end stops and manufactured performed outside corners. 4” high and 1/8 inch gauge.
 - 2. Colors as selected by Architect from Manufacturer’s full range of standard colors at time of submittal.
- C. Accessories

1. Resilient Edge Strips/Reducer Strips: Tapered or bullnose, minimum of 1 inch wide, as recommended by flooring manufacturer for specific application. Use at transition from wainscot wall finish to painted gypsum board and as otherwise required at flooring transitions.
 2. Adhesive: Zero VOC, waterproof, high moisture rated, as recommended by flooring manufacturer for specific application.
 3. Primer: Non-staining type as recommended by flooring manufacturer.
 4. Leveling and Patching Compounds: Provide as recommended by flooring manufacturer for specific application.
- D. Provide a minimum of 10 lineal feet of base and transition pieces of each material and color specified.

2.04 ACCESSORIES

- A. Manufacturer's standard accessories not specified but required for a complete installation.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. Examine substrates, with Installer present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the work.
- B. Verify that finishes of substrates comply with tolerances and other requirements specified in other Sections and that substrates are free of cracks, ridges, depressions, scale, and foreign deposits that might interfere with adhesion of resilient products.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

3.02 PREPARATION

- A. Prepare substrates according to Tarkett written instructions to ensure proper adhesion of Resilient Flooring.
- B. Prepare concrete substrates in accordance with ASTM F 710.
1. Concrete floors must be free of dust, solvent, paint, wax, oil, grease, residual adhesive, adhesive removers, film-forming curing compounds, silicate penetrating curing compounds, sealing, hardening or parting compounds, alkaline salts, excessive carbonation or laitence, mold, mildew, and other foreign materials that may affect dissipation rate of moisture from the concrete, discoloration or adhesive bonding.
 2. Mechanically remove contamination on the substrate that may cause damage to the resilient flooring material. Permanent and non-permanent markers, pens, crayons, paint, etc., must not be used to write on the back of the flooring material or used to mark the substrate as they could bleed through and stain the flooring material.
- C. Fill cracks, holes, depressions and irregularities in the substrate with good quality Portland cement based underlayment leveling and patching compound and remove bumps and ridges to produce a uniform and smooth substrate.

- D. Do not install resilient products until they are same temperature as the space where they are to be installed. Move resilient products and installation materials into spaces where they will be installed at least 48 hours in advance of installation.
- E. Sweep and vacuum clean substrates to be covered by resilient products immediately before installation.

3.03 RESILIENT PLANK FLOORING INSTALLATION

- A. Comply with manufacturer's written instructions for installing resilient tile flooring.
- B. Luxury Vinyl Tile Flooring:
 - 1. Install with Interface adhesive specified for the site conditions and follow adhesive label for proper use.
 - 2. Follow manufacturer's recommendation for tile orientation for Ashlar pattern.
 - 3. Open enough cartons of floor tiles to cover each area, and mix tile to ensure shade variations do not occur within any one area.
 - 4. Roll the flooring in both directions using a 100 pound three-section roller.

3.04 BASE MATERIAL INSTALLATION

- A. Install resilient wall base on entire wall perimeter including toe spaces and open ends of cabinets and within accessible knee space of sink bases. Set all bases in adhesive as recommended by the manufacturer. All joints in bases, including those at any preformed comers, shall be plumb, flush, tight and inconspicuous. Seat top edge and back of base firmly against the wall. Interior corners shall be mitered and tightly fitted.

3.05 CLEANING AND PROTECTION

- A. Comply with manufacturer's written instructions for cleaning and protection of resilient products.
- B. Perform the following operations immediately after completing resilient product installation:
 - 1. Remove adhesive and other blemishes from exposed surfaces.
 - 2. Sweep and vacuum surfaces thoroughly.
 - 3. Damp-mop surfaces to remove marks and soil.
- C. Protect resilient products from mars, marks, indentations, and other damage from construction operations and placement of equipment and fixtures during remainder of construction period.
 - 1. No traffic for 24 hours after installation.
 - 2. No heavy traffic, rolling loads, or furniture placement for 48 hours after installation.
- D. Wait 48 hours after installation before performing initial cleaning.

END OF SECTION 09 65 16

SECTION 09 68 00

CARPET

PART 1 – GENERAL

1.01 SUMMARY

A. Section Includes:

1. Broadloom and carpet tile.
2. Integrated walk-off mats
3. Accessories
4. Subfloor testing and preparation.
5. Installation of vapor retarder if required.

B. RELATED SECTIONS

1. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.
3. Section 03 31 00: Cast-in-Place Concrete.
4. Section 07 26 00: Vapor Retarders
5. Section 09 21 16: Gypsum Board Systems: Wall materials to receive base.
6. Section 09 65 00: Resilient Flooring.

1.02 REFERENCES

- A. ANSI/ASTM E648-15e1 - Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.
- B. ASTM F1869-16 – Standard Test Method for Measuring Moisture Vapor Emission Rate of Concrete Subfloor Using Anhydrous Calcium Chloride.

1.03 QUALITY ASSURANCE

A. Manufacturer, Contractor, and Installer Qualifications:

1. Manufacturer: Company specializing in contract flooring with ten-years minimum experience.
2. Flooring Contractor: Company with five years minimum documented experience, approved by manufacturer for the installation of the specified products and shall have access to all manufacturers required technical, maintenance, specifications and related documents.
3. Installer:
 - a. Floor covering installer must be factory trained and certified for the installation of the specific products being installed.
 - b. Installer to provide project inspector proof of certification prior to starting work.
 - c. Certified installer must be present on job site while work is in progress.

4. Testing Laboratory:

- a. Certified, bonded, qualified and experienced agency to perform pH and Relative Humidity (RH) emission tests.

B. Pre-Floor Covering Installation Meeting:

1. Contactor to notify Construction Manager with a minimum of 5-days' notice when anticipated to be ready for pre-floor covering installation meeting. (After subfloor preparation is complete and ready for floor covering installation.)
2. Contractor, installer, and manufacturer representative are required to attend pre-floor covering meeting. Contractor is responsible for coordinating and scheduling their attendance.
3. Construction Manager will schedule meeting with Contractor team, Project Inspector, and Architect.
4. Purpose of Meeting: To review subfloor preparation, verification of readiness for floor covering installation and use of correct products, verification of the acclimation of correct finish materials and review installation requirements.

C. Manufacturer's Field Services:

1. Manufacturer representative to attend the "Pre-Flooring" meeting.
2. Upon Owner or Architect's request, and with at least 72-hour notice, provide manufacturer's representative site visit(s) for inspection of product installation.
3. At the Owner's request, manufacturer representative to attend operation and maintenance training meeting for Owner's custodial staff prior to acceptance of floor covering installation.

1.04 SUBMITTALS

A. Provide a complete submittal package with all components required within this section. Submit per Section 01 33 00.

1. Product Data: Provide product data describing physical and performance characteristics, sizes, patterns, colors, material safety data sheets, and method of seaming and manufacture's installation instructions for all proposed products.
2. Shop Drawings:
 - a. Provide a floor plan indicating all proposed seam locations and integrated walk-off mats. Indicate method of joining seams, and direction of carpet.
3. Samples:
 - a. Submit samples for color selection illustrating color and pattern for floor material with samples of matching walk-off mats, rubber base and transition material proposed for installation.
 - b. Submit sample of solvent welded seam.
4. Maintenance Data: Submit manufacturers recommend cleaning and maintenance data. Include maintenance procedures, recommended maintenance materials, and suggested schedule for cleaning.

5. Recycled Content Percentage Submittals
6. Submit a statement signed by the manufacturer's Executive Officer or independent certification third-party that the provided carpet materials have the specified recycled material percentage.
7. Submit documentation of manufacturer's take-back program for carpet. Including:
 - a. Confirmation that the new carpet being installed will be accepted (at the point of future replacement) through a manufacturer's operated program for recycling or reuse;
 - b. Written description of such a process for the recycling and/or recovery of used/worn products;
 - c. Contact information for the take-back program.
8. Existing Carpet Recycling Plan and Recycling Certification. Submit documentation describing the reclamation plan for existing carpet. Include appropriate contact information, overview of procedures, and limitations and conditions applicable to the project Carpet recycling options consist of:
 1. Repurposing - reusing the product in another application such as facilitating the donation of used carpeting to charities and other nonprofit organizations.
 2. Closed Loop Recycling - turning waste materials into new materials of the same value, such as vinyl backing into vinyl backing and nylon yarn into nylon carpet yarn.
 3. Open Loop Recycling – creating other product types from reclaimed carpet. For example, turning nylon face fiber into automotive parts or carpet padding, including nylon face fiber in recycled backings
 4. Waste-to-Energy - using carpet for waste-to-energy. In the case of waste-to-energy, manufacturer shall justify why carpet cannot be recycled as this method should be a last resort.
 5. Landfill or incineration – are not approved disposal methods
 6. At the completion of the project, a certificate shall be furnished verifying the reclamation of the carpet and the pounds of material diverted from the landfill.

1.05 OPERATION AND MAINTENANCE DATA

- A. Submit cleaning and maintenance data under provisions of Section 01 33 00.
- B. Include maintenance procedures, recommended maintenance materials, and suggested schedule and products for cleaning.
- C. Provide in-service training with Owner's custodial staff prior to acceptance of flooring for proper care and maintenance of carpet. Also review and provide recommended type of furniture casters and glides.

1.06 DELIVERY, STORAGE AND HANDLING

- A. Delivery: Deliver materials in manufacturer's original, unopened, undamaged containers with identification labels intact.
- B. Storage and Protection: Store materials protected for exposure to harmful weather conditions and at a temperature and humidity conditions recommended by manufacturer. Materials should be stored in

areas that are fully enclosed, weather tight with the permanent HVAC system set at a uniform temperature of at least 68 degrees F (20 degrees C) for 72 hours prior to, during and after installation.

1.07 ENVIRONMENTAL REQUIREMENTS

- A. Store materials for three days prior to installation in area of installation to achieve temperature stability.
- B. Maintain minimum 70 F ambient temperature at floor level three days prior to, during, and 24 hours after installation of materials.
- C. Prior to testing for moisture vapor emission rate, space shall be enclosed, fully weather-tight, wet-work in space shall be completed and nominally dry, work above ceilings finished. The test site should be at the same temperature and humidity expected during normal use.
- D. Maintain lighting at a minimum uniform level of 50 or more-foot candles in areas where the floor system is being installed.
- E. Comply with CRI's "CRI Carpet Installation Standard" for temperature, humidity, and ventilation limitations.
- F. Environmental Limitations: Do not deliver or install carpet tiles until spaces are enclosed and weather tight, wet-work in spaces is complete and dry, and ambient temperature and humidity conditions are maintained at levels planned for building occupants.
- G. Floor temperature should be 60 °F minimum for proper adhesive curing and performance.
- H. If subfloor is contaminated with an oily residue either from removal of "cutback" during asbestos abatement or from a previous end use such as metal fabrication, this residue MUST be totally removed or covered prior to applying modular adhesive and carpet.

1.08 CONCRETE SUBFLOOR TESTING

- A. Testing for internal relative humidity of concrete slabs must be conducted in accordance with the current version of ASTM F2170, not to exceed manufacturer's requirements (ASTM F2170 – Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using In-Situ Probes).
- B. The Flooring Contractor shall verify in writing to the Owner, a minimum of thirty (30) days prior to scheduled carpet installation, the following substrate conditions:
 - 1. Moisture: Initial emission rate, as tested with in-situ probes, per ASTM F 2170.
 - 2. Alkalinity: pH level. Testing the pH at the surface of a concrete slab must be conducted in accordance with the current version of ASTM F710, not to exceed manufacturer's requirements (ASTM F710 – Standard Practice for Preparing Concrete Floors to Receive Resilient Flooring.)
- C. High Moisture and /or Alkalinity Readings:
 - 1. New Construction (New Concrete Slab)

- a. If the Contractor's test results indicate that the slab relative humidity (RH) readings are below those of flooring manufacturer's requirement, then the Owner's representative will initiate independent testing to confirm results and will initiate additional testing using petrographic analysis to determine if the Water Cement Ratio and sufficient hydration has taken place.
 - 1) If it is determined that the Specifications were followed in their entirety, water/cement ratio (as specified), and or the concrete surface has been adequately hydrated; then the Contractor shall initiate a credit to the Owner for the cost of installation of the Vapor Retarders as specified in section 07 26 00 that were not installed.
- D. Comply with manufacturer's written requisites for field conditions including but not limited to testing for moisture, confirmation of vapor retarder, floor prep, bond test, photo documentation, etc.

1.09 EXTRA MATERIALS

- A. Provide a minimum of 4 square yards of each color installed. In addition, provide all usable scraps one sq. yd. or larger in size. Remnants shall be packaged, identified and delivered to the Owners Representative, who will retain any he chooses for future repairs before they are removed from the job site.

1.10 WARRANTY

- A. Manufacturer's Warranty: Twenty (20) year minimum manufacturer warranty commencing on recordation date of the Notice of Completion.
 1. Should carpet, tend to creep, bulge, be defective in manufacturing, or show a substantial amount of wear - carpet shall be replaced with new carpeting at no cost to the Owner. Manufacturer to submit written warranty covering the following:
 - a. 20 Year minimum, non-prorated Guarantee shall also include:
 - 1) No resiliency loss of backing.
 - 2) No zippering.
 - 3) Static protection (will not lose static property—will not give static discharge above 3.5KV).
 - 4) No edge ravel or zippering.
 - 5) Delamination.
 - 6) Surface wear (maintains at least 90% surface pile weight).
 - 7) No staining.
 - 8) Dimensional Stability.
 - 9) Moisture Resistance.

PART 2 – PRODUCTS

2.01 MATERIALS

- A. Carpet (Vinyl Cushioned Tufted Textile) and integrated walk-off mats: Color as selected by Architect from Manufacturer's full range of colors and patterns from specified product line. No other substitutions will be allowed.

1. **CRPT1** - Tandus Flooring – Broadloom Roll.
 - a. “Aftermath II” Series with custom Antron fibers, 6’-0” roll, glue down. Powerbond cushion RS vinyl backing system and seam sealer.
 2. **CRPT2** - Tandus Flooring – Carpet Tiles
 - a. “Aftermath II” Series with custom Antron fibers, 6’-0” roll, glue down. Powerbond cushion RS vinyl backing system and seam sealer.
 3. Walk-Off System – **WOM1**
 - a. Tandus “Abrasive Action II” walk-off system at all exterior doors in carpeted rooms. Color to be coordinated with carpet color selection.
- B. Primer:
1. Tandus Centiva: C-36E primer.
 2. Milliken: No required.
- C. Adhesives: Low VOC, waterproof, and as recommended by product manufacturer.
1. Tandus Centiva: C-16E Adhesive
 2. Milliken: Mosaic Moisture XT Spray.

PART 3 – EXECUTION

3.01 EXAMINATION

- A. New Construction (New Concrete Slab)
1. Installer must examine areas and conditions under which resilient flooring and accessories are to be installed and must notify General Contractor in writing of conditions detrimental to proper and timely completion of work. Do not proceed with work until unsatisfactory conditions have been corrected in manner acceptable to Owner and Architect.
 2. Testing for internal relative humidity of concrete slabs must be conducted in accordance with the current version of ASTM F2170, not to exceed manufacturer’s requirements (ASTM F2170 – Standard Test Method for Determining Relative Humidity in Concrete Floor Slabs Using In-Situ Probes).
 3. Verify that new surfaces are smooth and flat with maximum variation as specified in 03 31 00- Structural Concrete and are ready to receive work.
 4. Beginning of installation on new substrates means acceptance of substrate. The existing substrates will require as much preparation as necessary to provide proper installation of new materials.

3.02 PREPARATION

- A. New Construction

1. Install underlayment where flooring is being installed on a wooden subfloor per the manufacturer's instructions.
2. Remove sub-floor ridges and bumps. Fill low spots, cracks, joints, holes, and other defects with manufacturer recommended subfloor filler.
3. Apply, trowel, and float filler to leave a smooth, flat, hard surface.
4. Prohibit traffic from area until filler is cured.
5. Prepare floor substrate to be smooth, rigid, flat, level, permanently dry, clean and free of foreign materials such as dirt, paint, grease, oils, solvent, curing and hardening compounds, sealers, asphalt and old adhesive residue. Vacuum clean substrate.
6. Apply primer to concrete surfaces.

3.03 CARPET INSTALLATION

- A. Install in accordance with manufacturers' instructions and recommendations with fully welded seams.
- B. Install flooring square with room axis and in accordance with approved shop drawing.
- C. Layout roll-goods in a manner to minimize seams and avoid seams in traffic areas. End butt joints shall be kept to a minimum, shall be staggered, and shall occur where approved on detail plan layout. Use the largest sections possible to minimize seams. Avoid cross seams, filler pieces and strips. Match edges for color shading and pattern at the seams in compliance with the manufacturer recommendations.
- D. Terminate flooring at centerline of door openings where adjacent floor finish is dissimilar.
- E. Scribe, cut, fit flooring to butt tightly to vertical surfaces, permanent fixtures, and built-in furniture, including pipes, outlets, edgings, thresholds, nosing and cabinets.
- F. Install edge strips at unprotected or exposed edges, and where flooring terminates.
- G. Install flooring on covers for telephone and electrical ducts, and similar items occurring within finish floor areas. Maintain overall continuity of color and pattern with pieces of flooring installed on these covers.
- H. Adhere carpet to prepared substrate without producing open cracks, voids, raising and puckering at joints, telegraphing to adhesive spreader marks, or other surface imperfections in completed installation.
- I. Fully solvent weld all seams. Seams shall be unnoticeable in finished installation.
- J. Verify carpet match before cutting to ensure minimal variation between dye lots.
- K. Double cut carpet, to allow intended seam and pattern match. Make cuts straight, true, and unfrayed.
- L. Lay carpet on floors with run of pile in same direction as anticipated traffic.

- M. Do not change run of pile in any room where carpet is continuous through a wall opening into another room. Locate change of color or pattern between rooms under door centerline.
- N. Complete installation shall conform to the Carpet Installation Standard of Carpet and Rug Institute (CRI).

3.03 INTEGRATED WALK-OFF MAT INSTALLATION

- A. Install in accordance with manufacturers' instructions and recommendations.
- B. Install modular tile like any "dry-back" modular with a full-spread wet adhesive.
- C. Installation instructions for Tandu's Floorcoverings' Powerbond Non-RS (dry-back) Modules can be used as "reference only."
- D. Adhesives below are offered to install modular tile product based upon application and intended use:
 - 1. #024 Solvent Free Outdoor Adhesive (Tandus SKU/Style # 919).
 - 2. #002 Premium Grade Multi-Purpose Adhesive (Tandus SKU/Style # 920).
 - 3. PS100 Pressure Sensitive Releasable Adhesive (Tandus SKU/Style # 923).
- E. Modular tile should be securely attached to the sub-floor in compliance with ADA Accessibility Guidelines, latest edition, for Building & Facilities, Section 4.5.3.
- F. Provide integrated walk-off mats at all exterior door location where carpet is indicated to be installed. The walk-off mats shall extend a minimum of the door width plus six inches (6") and six feet (6'-0") in the direction of travel or as indicated on the drawings.

3.04 INSTALLATION - BASE MATERIAL

- A. Install resilient wall base on entire wall perimeter including toe spaces and open ends of cabinets. Set all bases in adhesive as recommended by the manufacturer. All joints in bases shall be plumb, flush, tight and inconspicuous. Seat top edge and back of base firmly against the wall. Wrap base around all outside corners and no seams within 12" of corners. Interior corners shall be mitered and tightly fitted.

3.05 PROTECTION

- A. Prohibit traffic from carpet areas for 24 hours after installation.
- B. Protect flooring from damages by other trades prior to owner occupancy.

3.06 FINAL CLEANING

- A. Remove excess adhesive from floor, base, and wall surfaces without damage. Remove and dispose of all small scraps, cartons, and rubbish upon completion of the work. Remove all loose threads with sharp scissors.
- B. Clean carpet of all spots with proper spot remover, and vacuum carpet surfaces.

END OF SECTION 09 68 00

SECTION 09 91 00
PAINTING

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Surface preparation and field painting of exposed interior items and surfaces, including mechanical and electrical equipment that do not have a factory-applied finish.

1.2 RELATED SECTIONS

- A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.
- B. Section 05 50 00 - Metal Fabrications: Shop priming ferrous metal.
- C. Section 08 11 00 - Steel Doors and Frames: Factory priming steel doors and frames.
- D. Section 09 29 00.10 - Gypsum Board Assemblies: Surface preparation of gypsum board.
- E. Division 23: Mechanical.
- F. Division 26: Electrical.

1.3 REFERENCES

- A. ASTM International (ASTM): ASTM D 16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications.
- B. Steel Structures Painting Council (SSPC) SP6 - Commercial Blast Cleaning Procedures.
- C. Steel Structures Painting Council (SSPC) SP10 - Near White Blast Cleaning Procedure.

1.4 DEFINITIONS

- A. General: Standard coating terms defined within Masters Painters Institute (MPI) manual.
 - 1. Gloss level 1 - Flat with a gloss range below 5 when measured at a 60-degree meter and 10 when measured at an 85-degree meter.
 - 2. Gloss level 2 - Low Sheen with a gloss range of 5 to 10 when measured at a 60 degree meter and 10 to 35 when measured at an 85 degree meter.
 - 3. Gloss level 3 - Eggshell with a gloss range between 10 and 15 when measured at a 60-degree meter and 10 to 35 when measured at an 85-degree meter.
 - 4. Gloss level 4 - Satin with a gloss range between 25 to 35 when measured with a 60 degree meter.
 - 5. Gloss level 5 - Semi-Gloss with a gloss range between 50 and 55 when measured at a 60 degree meter.
 - 6. Gloss level 6 - Gloss with a gloss range more than 70 when measured at a 60 degree meter.

1.5 SUBMITTALS

- A. General: Submit in accordance with Conditions of the Contract and Division 1 Specification sections.

- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Material List: An inclusive list of required coating materials. Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by manufacturer's catalog number and general classification.
 - 2. Preparation instructions and recommendations.
 - 3. Manufacturer's Information: Manufacturer's technical information, including label analysis and instructions for handling, storing, and applying each coating material.
- C. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- D. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.

1.6 QUALITY ASSURANCE

- A. Installer Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance.
- B. Obtain block fillers and primers for each coating system from the same manufacturer as the finish coats.
- C. Paint Exposed Surfaces: If an item or a surface is not specifically mentioned, paint the item, or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, Architect will select from standard colors and finishes available.
- D. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
- E. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
 - 3. Refinish mock-up area as required to produce acceptable work.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label:
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 deg F (7 deg C). Maintain storage containers in a clean condition, free of foreign materials and residue.
- C. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.
- D. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 deg F (10 and 32 deg C), unless manufacturer's instructions specifically states.
- E. Apply solvent-thinned paints only when temperatures of surfaces to be painted and surrounding air are between 45 and 95 deg F (7 and 35 deg C).
- F. Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent;

or at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.

1.8 EXTRA MATERIALS

- A. Furnish extra paint materials from the same production run as the materials applied and, in the quantities, described below. Package with protective covering for storage and identify with labels describing contents. Deliver extra materials to Owner.
- B. Quantity: Furnish Owner with an additional three percent, but not less than 1 gal (3.8 l) or 1 case, as appropriate, of each material and color applied.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Kelly-Moore Paints.
- B. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 PAINT MATERIALS - GENERAL

- A. Material Compatibility: Provide block fillers, primers, and finish-coat materials that are compatible with one another and with the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
- B. VOC Classification: Provide materials, including primers, undercoats, and finish-coat materials, which meet local air quality management district regulations.
- C. Color: Refer to Finish Schedule and Paint Legend for paint colors.
- D. Application Rate: Coating thickness for primer, intermediate, barrier and finish coats shall be measured as Dry Film Thickness (DFT) and comply with manufacturer's published recommendations.

2.3 Interior Paint Systems

- A. Gypsum and Plaster Walls:
 - a. Prime Coat: KM 295 Kel-Bond Universal Primer
 - b. 2nd Coat: KM 1010 Premium Professional Eggshell Enamel
 - c. 3rd Coat: KM 1010 Premium Professional Eggshell Enamel
- B. Suspended and Surface applied Ceilings:
 - a. Prime Coat: KM 295 Kel-Bond Universal Primer
 - b. 2nd Coat: KM 1002 Ceiling Paint Flat Finish
 - c. 3rd Coat: KM 1002 Ceiling Paint Flat Finish
- C. Wood Doors & Frames (Painted Finish):
 - a. Prime Coat: KM 295 Kel-Bond Universal Primer
 - b. 2nd Coat: KM 1828 Envy Acrylic Urethane Semi-Gloss Enamel
 - c. 3rd Coat: KM 1828 Envy Acrylic Urethane Semi-Gloss Enamel

- D. Previously Painted Wood:
 - a. Prime Coat: KM 295 Kel-Bond Universal Primer
 - b. 2nd Coat: KM 1828 Envy Acrylic Urethane Semi-Gloss Enamel
 - c. 3rd Coat: KM 1828 Envy Acrylic Urethane Semi-Gloss Enamel
- E. Wood Previously Stained to be Painted:
 - a. Prime Coat: KM 265 Kel-Bond Hybrid Water-Borne Alkyd Primer
 - b. 2nd Coat: KM 1828 Envy Acrylic Urethane Semi-Gloss Enamel
 - c. 3rd Coat: KM 1828 Envy Acrylic Urethane Semi-Gloss Enamel
- F. Wood to be re-finished and sealed:
 - a. 2 Coats: Old Masters Master Armor Satin Finish
- G. Metal Doors and Frames:
 - a. Prime Coat: KM 6646 DTM Eggshell Primer Finish
 - b. 2nd Coat: KM 1828 Envy Acrylic Urethane Semi-Gloss Enamel
 - c. 3rd Coat: KM 1828 Envy Acrylic Urethane Semi-Gloss Enamel
- H. Vinyl Tackable wall Panels:
 - a. Prime Coat: KM Zinsser B-I-N Shellac Base Primer
 - b. 2nd Coat: KM 1010 Premium Professional Low VOC Eggshell Enamel
 - c. 3rd Coat: KM 1010 Premium Professional Low VOC Eggshell Enamel

2.4 Exterior Paint Systems

- A. Concrete Substrates, Masonry, Stucco, Non-Traffic Surfaces:
 - a. Prime Coat: KM 2287 Kel-Bond Adhesion Plus Primer
 - b. 2nd Coat: KM 1247 Acryshield 100% Acrylic Exterior Satin Enamel
 - c. 3rd Coat: KM 1247 Acryshield 100% Acrylic Exterior Satin Enamel
- B. Wood Siding:
 - a. Prime Coat: KM 2287 Kel-Bond Adhesion Plus Primer
 - b. 2nd Coat: KM 1247 Acryshield 100% Acrylic Exterior Satin Finish
 - c. 3rd Coat: KM 1247 Acryshield 100 Acrylic Exterior Satin Finish
- C. Wood Fascia:
 - a. Prime Coat: KM 2287 Kel-Bond Adhesion Plus Primer
 - b. KM 1250 Acryshield 100% Acrylic Exterior Semi-Gloss Enamel
 - c. KM 1250 Acryshield 100% Acrylic Exterior Semi-Gloss Enamel
- D. Wood Benches:
 - a. Prime Coat: KM 2287 Kel-Bond Adhesion Plus Primer
 - b. 2nd Coat: KM 1998 Epic Waterborne Urethane Alkyd Semi-Gloss Enamel
 - c. 3rd Coat: KM 1998 Epic Waterborne Urethane Alkyd Semi-Gloss Enamel
- E. Interior & Exterior Surfaces of Exterior Doors:
 - a. Prime Coat: KM 2287 Kel-Bond Adhesion Plus Primer
 - b. 2nd Coat: KM 1828 Envy Acrylic Urethane Semi-Gloss Enamel
 - c. 3rd Coat: KM 1828 Envy Acrylic Urethane Semi-Gloss Enamel
- H. Door Mullions at Pair Doors:
 - a. Prime Coat: KM 2287 Kel-Bond Adhesion Plus Primer
 - b. 2nd Coat: KM 1828 Envy Acrylic Urethane Semi-Gloss Enamel
 - c. 3rd Coat: KM 1828 Envy Acrylic Urethane Semi-Gloss Enamel

- I. Painted Infill Panels at window Locations:
 - a. Prime Coat: KM 2287 Kel-Bond Adhesion Plus Primer
 - b. 2nd Coat: KM 1828 Envy Acrylic Urethane Semi-Gloss Enamel
 - c. 3rd Coat: KM 1828 Envy Acrylic Urethane Semi-Gloss Enamel

- J. Ferrous Metal Substrates:
 - a. Prime Coat: KM 265 Kel-Bond HyBird Waterborne alkyd Primer
 - b. 2nd Coat: KM 1828 Envy Acrylic Urethane Semi-Gloss Enamel
 - c. 3rd Coat: KM 1828 Envy Acrylic Urethane Semi-Gloss Enamel

- K. Metal Handrails, Guardrails, Barricade Rails & Fencing:
 - a. Prime Coat: KM 6646 DTM Eggshell Primer/Finish.
 - b. 2nd Coat: KM 1828 Envy Acrylic Urethane Semi-Gloss Enamel
 - c. 3rd Coat: KM 1828 Envy Acrylic Urethane Semi-Gloss Enamel

- L. Metal Panels Fascia:
 - a. Prime Coat: KM 98 Multi Seal Exterior Clear Sealer
 - b. 2nd Coat: KM 1250 Acryshield 100% Acrylic Exterior Semi-Gloss Enamel
 - c. 3rd Coat: KM 1250 Acryshield 100% Acrylic Exterior Semi-Gloss Enamel

- M. Metal Gates:
 - a. Primer Coat: KM 6646 DTM Eggshell Primer/Finish
 - b. 2nd Coat: KM 1998 Epic Waterborne Urethane Alkyd Semi-Gloss Enamel
 - c. 3rd Coat: KM 1998 Epic Waterborne Urethane Alkyd Semi-Gloss Enamel

- N. Gutters, downspouts, Cap & Edge Flashings.
 - a. Prime Coat: KM 295 Kel-Bond Universal Primer
 - b. 2nd Coat: KM 1250 Acryshield 100% Acrylic Semi-Gloss Enamel
 - c. 3rd Coat: KM 1250 Acryshield 100% Acrylic Semi-Gloss Enamel

- O. Canopies Including Undersides:
 - a. Primer Coat: KM 6646 DTM Eggshell Primer/Finish
 - b. 2nd Coat: KM 6648 DTM Semi-Gloss Enamel
 - c. 3rd Coat: KM 6648 DTM Semi-Gloss Enamel

- P. Extended Roof Overhangs and Covered Walks Including Undersides:
 - a. Prime Coat: KM 295 Kel-Bond Universal Primer
 - b. 2nd Coat: KM 1247 Acryshield 100% Acrylic Satin Finish
 - c. 3rd Coat: KM 1247 Acryshield 100% Acrylic Satin Finish

- Q. Flag Poles:
 - a. Prime Coat: KM 6646 DTM Eggshell Primer/Finish
 - b. 2nd Coat: KM 6648 DTM Semi-Gloss Enamel
 - c. 3rd Coat: KM 6648 DTM Semi-Gloss Enamel

- R. Relocatable Classroom Buildings and Skirts:
 - a. Prime Coat: KM 295 Kel-Bond Universal Primer
 - b. 2nd Coat: KM 1247 Acryshield 100% Acrylic Satin Finish
 - c. 3rd Coat: KM 1247 Acryshield 100% Acrylic Satin Finish

- S. Relocatable Building Ramp Skirts & Handrails:
 - a. Prime Coat: KM 295 Kel-Bond Universal Primer
 - b. 2nd Coat: KM 1247 Acryshield 100% Acrylic Satin Finish
 - c. 3rd Coat: KM 1247 Acryshield 100% Acrylic Satin Finish
 - d. Handrail's: 2 Coats: KM 1828 Envy Acrylic Urethane Enamel

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.
- C. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
 - 1. Notify Architect about anticipated problems when using the materials specified over substrates primed by others.
 - 2. If a potential incompatibility of primers applied by others exists, obtain the following from the primer Applicator before proceeding:
 - a. Confirmation of primer's suitability for expected service conditions.
 - b. Confirmation of primer's ability to be top coated with materials specified.

3.2 PREPARATION

- A. General: Remove hardware and hardware accessories, plates, machined surfaces, lighting fixtures, and similar items already installed that are not to be painted. If removal is impractical or impossible because of size or weight of the item, provide surface-applied protection before surface preparation and painting.
 - 1. After completing painting operations in each space or area, reinstall items removed using workers skilled in the trades involved.
- B. Cleaning: Before applying paint or other surface treatments, clean substrates of substances that could impair bond of the various coatings. Remove oil and grease before cleaning.
 - 1. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
- C. Surface Preparation: Clean and prepare surfaces to be painted according to manufacturer's written instructions for each particular substrate condition and as specified.
 - 1. Provide barrier coats over incompatible primers or remove and reprime.
 - 2. Provide barrier coats over incompatible primers or remove primers and reprime substrate.
 - 3. Cementitious Substrates: Prepare concrete, brick, concrete masonry block, and cement plaster surfaces to be coated. Remove efflorescence, chalk, dust, dirt, grease, oils, and release agents. Roughen as required to dull surfaces. If hardeners or sealers have been used to improve curing, use mechanical methods to prepare surfaces.
 - a. Use abrasive blast-cleaning methods if recommended by coating manufacturer.
 - b. Determine alkalinity and moisture content of surfaces by performing appropriate tests. If surfaces are sufficiently alkaline to cause the finish paint to blister and burn, correct this condition before application. Do not coat surfaces if moisture content exceeds that permitted in manufacturer's written instructions.
 - 4. Wood Substrates: Clean surfaces of dirt, oil, and other foreign substances with scrapers, mineral spirits, and sandpaper, as required. Smoothly sand surfaces exposed to view and dust off.
 - a. Scrape and clean small, dry, seasoned knots, and apply a thin coat of white shellac or other recommended knot sealer, before applying primer.
 - b. Immediately on delivery, prime edges, ends, faces, undersides, and backsides of wood to be coated.
 - c. After priming, fill holes and imperfections in the finish surfaces with putty or

- plastic wood filler. Sand smooth when dried.
 - d. Determine moisture content of surfaces by performing a moisture test. Do not coat if moisture content exceeds 15 percent.
 - 5. Ferrous-Metal Substrates: Clean ungalvanized ferrous-metal surfaces that have not been shop coated; remove oil, grease, dirt, loose mill scale, and other foreign substances. Use solvent or mechanical cleaning methods that comply with SSPC recommendations.
 - a. Blast-clean steel surfaces as recommended by coating manufacturer and according to SSPC-SP 10.
 - b. Treat bare and sandblasted or pickled clean metal with a metal treatment wash coat before priming.
 - c. Touch up bare areas and shop-applied prime coats that have been damaged. Wire brush, solvent clean, and touch up with same primer as the shop coat.
 - 6. Nonferrous-Metal Substrates: Clean nonferrous and galvanized surfaces according to manufacturer's written instructions for the type of service, metal substrate, and application required.
 - a. Remove pretreatment from galvanized sheet metal fabricated from coil stock by mechanical methods.
- D. Material Preparation: Carefully mix and prepare coating materials according to manufacturer's written instructions.
 - 1. Maintain containers used in mixing and applying coatings in a clean condition, free of foreign materials and residue.
 - 2. Stir materials before applying to produce a mixture of uniform density. Stir as required during application. Do not stir surface film into the material. Remove film and, if necessary, strain coating material before using.
 - 3. Use only the type of thinners approved by manufacturer and only within recommended limits.
 - 4. Tinting: Tint each undercoat a lighter shade to simplify identification of each coat when multiple coats of same material are applied. Tint undercoats to match the color of the finish coat but provide sufficient differences in shade of undercoats to distinguish each separate coat.

3.3 APPLICATION

- A. General: Apply paint according to manufacturer's written instructions. Use applicators and techniques best suited for substrate and type of material being applied.
- B. General: Apply high-performance coatings according to manufacturer's written instructions.
 - 1. Use applicators and techniques best suited for the material being applied.
 - 2. Do not apply high-performance coatings over dirt, rust, scale, grease, moisture, scuffed surfaces, or conditions detrimental to forming a durable coating film.
 - 3. Coating surface treatments, and finishes are indicated in the coating system descriptions.
 - 4. Provide finish coats compatible with primers used.
 - 5. The term "exposed surfaces" includes areas visible when permanent or built-in fixtures, convector covers, grilles, covers for finned-tube radiation, and similar components are in place. Extend coatings in these areas, as required, to maintain system integrity and provide desired protection.
- C. Application Procedures: Apply coatings by brush, roller, spray, or other applicators according to manufacturer's written instructions.
 - 1. The number of coats and film thickness required is the same regardless of application method.
 - 2. Completed Work: Match approved Samples for color, texture, and coverage. Remove, refinish, or recoat work that does not comply with specified requirements.

3.4 FIELD QUALITY CONTROL

- A. Owner reserves the right to invoke the following test procedure at any time and as often as Owner deems necessary during the period when paint is being applied:
 - 1. Owner will engage a qualified independent testing agency to sample paint material being used. Samples of material delivered to Project will be taken, identified, sealed, and certified in the presence of Contractor.
 - 2. Owner may direct Contractor to stop painting if test results show material being used does not comply with specified requirements. Contractor shall remove non-complying paint from Project site, pay for testing, and repaint surfaces previously coated with the non-complying paint. If necessary, Contractor may be required to remove non-complying paint from previously painted surfaces if, on repainting with specified paint, the two coatings are incompatible.

3.5 CLEANING

- A. After completing painting, clean glass and paint-spattered surfaces. Remove spattered paint by washing and scraping without scratching or damaging adjacent finished surfaces.

3.6 PROTECTION

- A. Protect work of other trades, whether being painted or not, against damage from painting. Correct damage by cleaning, repairing, or replacing, and repainting, as approved by Architect.
- B. Provide "Wet Paint" signs to protect newly painted finishes. After completing painting operations, remove temporary protective wrappings provided by others to protect their work.
- C. After work of other trades is complete, touch up and restore damaged or defaced painted surfaces.

END OF SECTION

SECTION 10 00 00

MISCELLANEOUS SPECIALTIES

PART 1 – GENERAL

1.01 SECTION INCLUDES:

- A. Provide and install specialty and built-in items as indicated on the Drawings and specified here.
 - 1. Black out Curtains.
 - 2. Aluminum Mini-blinds.
- B. Provide miscellaneous, and incidental items under the work of this section for all items indicated on the Drawings but not specifically addressed in other sections or not necessarily scheduled herein.

1.02 RELATED SECTIONS:

- A. The General Conditions, Supplementary Conditions and Division 1 are fully applicable to this Section, as if repeated herein.

1.03 STANDARDS:

- A. Individual items or assemblies scheduled or as indicated on the Drawings, shall conform to respective industry and governmental standards.

1.04 QUALITY ASSURANCE:

- A. Installation of items or assemblies shall be by personnel thoroughly trained and experienced in the required skills and completely familiar with respective manufacturer's methods of installation.
- B. CBC, California Building Code - 2022 Edition, as amended.

1.05 SUBMITTALS:

- A. Before any specialty items are delivered to the job site, submit Shop Drawings and catalog cuts with product data in accordance with Division 0&1. Show all details of installation and assembly, all requirements for work by other trades, and all colors available from the selected manufacturer in the quality specified.

1.06 DELIVERY, STORAGE AND HANDLING:

- A. Deliver undamaged products or materials to site in manufacturer's sealed containers or wrappings with legends intact. Store on site secure from weather, soil and physical damage.

PART 2 – PRODUCTS

2.01 GENERAL:

- A. All items or assemblies shall be as scheduled in Article 3.05 of this Section, or approved equal items as set forth in Division 0&1, covering submission and review of substitutions.
- B. Items which are not scheduled herein and not addressed in other Sections, but are noted or otherwise indicated on the Drawings, will be clarified by the Architect prior to or after the Bid upon the Contractor's request. Such clarification will not be considered as grounds for an increase to the contract cost or to the contract time when such a clarification is requested after the Bid.

PART 3 – EXECUTION

3.01 INSPECTION:

- A. Coordinate with other trades as required to ensure proper and adequate provision in framing and wall finish for the installation of the selected specialties in the correct locations.
- B. Prior to installation, carefully inspect and verify that the installed work of other trades is complete to the point where this installation may properly commence.
- C. Verify that specified items can be installed in accordance with the approved design.
- D. In the event of discrepancy, immediately notify Architect. Do not proceed in discrepant areas until discrepancies have been fully resolved.
- E. Upon completion of installation, and as a condition of acceptance, visually inspect the entire work of this Section, adjust all components for proper alignment and use, and touch up all abrasions and scratches to make them completely invisible.

3.02 INSTALLATION:

- A. Install all specialty items where indicated on the Drawings and in full accordance with all pertinent regulations and the manufacturer's recommendations, anchoring all components firmly in place for long life under hard use.

3.03 PROTECTION:

- A. Protect work and materials of this Section prior to and during installation, and protect the installed work and materials of other trades.
- B. In the event of damage, make all repairs and replacements necessary to the satisfaction of the Architect at no additional cost to the Owner.

3.04 CLEAN UP:

- A. Keep building and premises free from accumulated waste materials, rubbish and debris resulting from Work herein. Upon completion of work, remove tools, appliances, surplus materials, waste materials, rubbish, debris and accessory items used in or resulting from installation, and legally dispose of off site.

3.05 SCHEDULE OF MISCELLANEOUS SPECIALTIES:

- A. **Black-out Drapes:** Provide where located on the Drawings, coated polyester black-out drapes and track system. Curtain shall be 18 oz. per sq/yd coated vinyl meeting flame resistance standards CFM, NFPA-701 & ASTM E-84. Color shall be chosen from full line of manufactures colors. See www.steelguardsafety.com for product information. Existing track shall be reused. Contractor to provide for twenty(20) roller hooks to be replaced per curtain location. Provide new heavy duty nylon pull cord per curtain location. Field verify all locations prior to submittal.
- B. **Mini-Blinds:** Provide where located on the Drawings, 1" aluminum mini-blinds. Blinds shall be Simplelift lift control with a wanded tilt with 1" slat sizes. Color shall be chosen from the full line of manufacturers colors. See <https://www.hunterdouglas.com/window-treatments/blinds/metal-blinds/modern-precious-metals> for product information.

END OF SECTION