ADDENDUM NO. 2

February 16, 2024

MEMORIAL OPERA HOUSE – BID PACKAGE #3 – INTERIORS PACKAGE

TO: ALL BIDDERS OF RECORD

This Addendum forms a part of and modifies the Bidding Requirements, Contract Forms, Contract Conditions, the Specifications, and the Drawings dated January 12, 2024 by Schmidt Associates. Acknowledge receipt of the Addendum in the space provided on the Bid Form. Failure to do so may subject the Bidder to disqualification.

This Addendum consists of Page ADD 2-1 and attached Addendum No. 2 from Schmidt Associates dated February 15, 2024 and consisting of 16 pages and 4 drawings including revised Specification sections 06 40 23 - Interior Architectural Woodwork and 12 24 13 - Roller Window Shades.

ADDENDUM NO. 2 FEBRUARY 15, 2024

PREPARED BY SCHMIDT ASSOCIATES FOR:

RENOVATION OF MEMORIAL OPERA HOUSE PORTER COUNTY BOARD OF COMMISSIONERS

This Addendum consists of 1 Addendum page and 19 attachment pages totaling 20 pages.

Acknowledge receipt of this Addendum by inserting its number on the Bid Form. Failure to do so may subject the Bid to disgualification. This Addendum is part of the Contract Documents.

Bidder is encouraged to verify with reprographer of record all Addenda issued (do not rely exclusively on third party plan room services).

PART 1 - CHANGES TO PRIOR ADDENDA (NOT APPLICABLE)

PART 2 - CHANGES TO THE PROJECT MANUAL

Modifications described herein shall be incorporated in the Project Manual. All other Work shall remain unchanged.

2.1 DIVISION 06 – WOOD, PLASTICS, AND COMPOSITES

- A. Section 064023 "INTERIOR ARCHITECTURAL WOODWORK"
 - 1. DELETE AND REPLACE Section in its entirety.

2.2 DIVISION 12 – FURNISHINGS

- A. Section 122413 "ROLLER WINDOW SHADES"
 - 1. DELETE AND REPLACE Section in its entirety.

PART 3 - CHANGES TO THE DRAWINGS

Modifications described herein shall be incorporated in the Drawings. All other Work shall remain unchanged.

3.1 DRAWING SHEETS: ADDITIONS, DELETIONS AND REPLACEMENTS DRAWING NO INDICATE ACTION: ADD (A) DELETE (D)

DIAWING NO.	INDICATE ACTION: ADD (A), DELETE (D),
	DELETE & REPLACE (R),
I-SERIES DRAWINGS	
IN100.3	DELETE AND REPLACE
IN101.3	DELETE AND REPLACE
IN102.3	DELETE AND REPLACE
I-210.3	DELETE AND REPLACE

END OF ADDENDUM 2

ADDENDUM NO. 2

SECTION 064023 - INTERIOR ARCHITECTURAL WOODWORK

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:

- 1. Interior standing and running trim (WD)STAIN.
- 2. Custom Millwork
- 3. Interior frames and jambs.
- 4. Interior wood railings.
- 5. Miscellaneous materials.
- 6. Wood furring, blocking, shims, and hanging strips for installing interior architectural woodwork items that are not concealed within other construction.
- 7. Shop priming of interior architectural woodwork
- 8. Shop finishing of interior architectural woodwork.
- 9. Specialty Bar Shelving (SH)
- 10. Decorative Panel (DP)
- 11. Brass Plate (BR)

B. Related Requirements:

1. Section Section 061053 "Miscellaneous Rough Carpentry" for wood furring, blocking, shims, and hanging strips required for installing interior architectural woodwork that are concealed within other construction before interior architectural woodwork installation.

1.2 COORDINATION

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

1.3 ACTION SUBMITTALS

A. Product Data, Shop Drawings:

- 1. Product Data: For high-pressure decorative laminate, adhesive for bonding plastic laminate, solid-surfacing material, and finishing materials and processes.
- 2. Shop Drawings:
 - a. Include the following:
 - 1) For interior architectural woodwork.
 - 2) Dimensioned plans, elevations, and sections.

- 3) Attachment details.
- 4) Show locations and sizes of furring, blocking, and hanging strips, including blocking and reinforcement concealed by construction and specified in other Sections.
- B. Samples: For each exposed product and for each shop-applied color and finish specified.
 - 1. Size:
 - a. Manufacturer's or fabricator's standard size.
- C. Samples for Verification: For the following:
 - 1. Lumber for Transparent Finish: Not less than 5 inches wide by 12 inches long, for each species and cut, finished on one side and one edge.

1.4 INFORMATIONAL SUBMITTALS

- A. Qualification Data: For architectural woodwork fabricator.
- B. Product Certificates: For the following:
 - 1. Adhesives.

1.5 QUALITY ASSURANCE

- A. Fabricator's Qualifications: Shop that employsEmploys skilled workers who custom fabricate products similar to those required for this Project and whose products have a record of successful in-service performance.
 - 1. Installer Qualifications: Fabricator of products.
- B. Mockups: Build mockups to verify selections made under Sample submittals, to demonstrate aesthetic effects, and to set quality standards for materials and execution.
 - 1. Build mockups of typical interior architectural woodwork as shown on Drawings.
 - 2. Approval of mockups does not constitute approval of deviations from the Contract Documents contained in mockups unless Owner specifically approves such deviations by Change Order.
 - 3. Subject to compliance with requirements, approved mockups may become part of the completed Work if undisturbed at time of Substantial Completion.

1.6 DELIVERY, STORAGE, AND HANDLING

A. Do not deliver interior architectural woodwork until painting and similar finish operations that might damage woodwork have been completed in installation areas.

B. Store woodwork in installation areas or in areas where environmental conditions comply with requirements specified in "Field Conditions" Article.

1.7 FIELD CONDITIONS

- A. Environmental Limitations without Humidity Control: Do not deliver or install interior architectural woodwork until building is enclosed, wet-work is complete, and HVAC system is operating and maintaining temperature and relative humidity at levels designed for building occupants for the remainder of the construction period.
- B. Field Measurements: Where interior architectural woodwork is indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication, and indicate measurements on Shop Drawings.
 - 1. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being concealed by construction, and indicate measurements on Shop Drawings.
- C. Established Dimensions: Where interior architectural woodwork is indicated to fit to other construction, establish dimensions for areas where woodwork is to fit. Provide allowance for trimming at site, and coordinate construction to ensure that actual dimensions correspond to established dimensions.

PART 2 - PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

- A. Fire-Rated Frames: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for fire-protection ratings indicated on Drawings, based on testing at positive pressure in accordance with NFPA 252 or UL 10C.
 - 1. Smoke- and Draft-Control Assemblies: Listed and labeled for smoke and draft control by a qualified testing agency acceptable to authorities having jurisdiction, based on testing in accordance with UL 1784 and installed in compliance with NFPA 105.
- B. Fire-Rated, Borrowed-Lite Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing in accordance with NFPA 257 or UL 9.

2.2 ARCHITECTURAL WOODWORK, GENERAL

A. Quality Standard: Unless otherwise indicated, comply with the Architectural Woodwork Standards for grades of interior architectural woodwork indicated for construction, finishes, installation, and other requirements.

1. The Contract Documents contain requirements that are more stringent than the Architectural Woodwork Standards. Comply with Contract Documents and Architectural Woodwork Standards.

2.3 INTERIOR STANDING AND RUNNING TRIM FOR TRANSPARENT FINISH

- A. Architectural Woodwork Standards Grade: Custom.
- B. Wood Species and Cut: Match species and cut indicated for other types of transparent-finished architectural woodwork located in same area of building unless otherwise indicated.
 - 1. Species: White Maple.
 - 2. Cut: Plain sliced/plain sawn.
 - 3. Finish:
 - a. Basis-of-Design: VT Industries, color: Chocolate Finish, CH18
 - b. Sheen: Satin
 - 4. For trim items other than base wider than available lumber, use veneered construction. Do not glue for width.
 - 5. Crown molding is to have a profile matching or similar to the "Basis of Design" image on I-Series drawings.
 - 6. Crown Molding face is to be 6 inches wide.

C. Hardwood Lumber:

- 1. Wood Species and Cut: Match species and cut indicated for other types of transparent-finished architectural woodwork located in same area of building unless otherwise indicated.
- 2. Species: White Maple.
- 3. Cut: Plain sliced/plain sawn.
- 4. Staining:
 - a. Basis-of-Design: VT Industries, color: Chocolate Finish, CH18
 - b. Sheen: Satin
- 5. Finish: WDMA TR-6 catalyzed polyurethane.

2.4 CUSTOM MILLWORK

- A. Provide custom millwork bars as indicated on Drawings. Provide accessories, finishing, and hardware as indicated on Drawings and specified in this Section.
 - 1. Materials:
 - a. Decorative Panel (DP):
 - 1) Manufacturer: Richelieu

2023-084.RMO - Memorial Opera House - Interiors Package

- 2) Collection: Decor Tambours Solid Woods
- 3) Product: 383M08
- 4) Species: Maple
- 5) Slat Length: 95 inches
- 6) Slat Width: 3/4 inch
- 7) Thickness: 5/16 inches
- 8) Orientation of slats: Vertical
- 9) Staining: To match stain of Plastic Laminate, PL-1 (Brushed Walnut)
- b. Brass Toekick (BR):
 - a) Basis of Design:
 - 2) Manufacturer: Chemetal
 - 3) Product: 900 Series/Anodized Series/Anodized Aluminum/Brass
 - 4) Finish/Color: 915 Brushed Brass Aluminum
 - 5) Seaming: Joints to be tightly abutted to create seamless appearance
 - 6) Thickness: .025 inches
- c. Second Floor Custom Bar (arch to mimic window)
 - 1) Wood Veneer is to be used for bar front and sides. "Element" thicknesses to be achieved using a standard substrate.
 - 2) Wood Veneer Finish: To match plastic laminate, PL-1: Brushed Walnut
 - 3) Toe Kick should meet ADA requirements.

2.5 INTERIOR STANDING AND RUNNING TRIM FOR OPAQUE FINISH

- A. Architectural Woodwork Standards Grade: Custom.
 - 1. Wood Species: White Maple.
 - 2. Cut: Plain sliced/plain sawn.
 - 3. Staining:
 - a. Basis-of-Design: VT Industries, color: Chocolate Finish, CH18
 - 4. Sheen: Satin
 - 5. Reference "I" series drawings for details to match existing profiles.

2.6 INTERIOR FRAMES AND JAMBS FOR TRANSPARENT FINISH

- A. Architectural Woodwork Standards Grade: Custom.
- B. Reference "I" series drawings for details to match existing profiles.

- C. Wood Species and Cut: Match species and cut indicated for other types of transparent-finished architectural woodwork located in same area of building unless otherwise indicated.
 - 1. Species: White Maple.
 - 2. Cut: Plain sliced/plain sawn.
 - 3. Staining:
 - a. Basis-of-Design: VT Industries, color: Chocolate Finish, CH18
 - b. Sheen: Satin
 - 4. Finish: WDMA TR-6 catalyzed polyurethane.

2.7 INTERIOR FRAMES AND JAMBS FOR OPAQUE FINISH

A. Architectural Woodwork Standards Grade: Custom.

2.8 INTERIOR WOOD STAIRS AND RAILINGS

- A. Architectural Woodwork Standards Grade: Custom.
- B. Wood for Transparent Finish:
 - 1. Existing Stair Railings
 - a. Staining:
 - 1) Basis-of-Design: VT Industries, color: Chocolate Finish, CH18
 - b. Finish: WDMA TR-6 catalyzed polyurethane
 - c. Sheen: Satin
- C. Wood for Opaque Finish:
 - 1. Existing woodwork to recieve paint, as indicated on "I" series drawings.

2.9 WOOD MATERIALS

- A. Wood Products: Provide materials that comply with requirements of the referenced quality standard for each type of interior architectural woodwork and quality grade specified unless otherwise indicated.
 - 1. Do not use plain-sawn softwood lumber with exposed, flat surfaces more than 3 inches wide.
 - 2. Wood Moisture Content: 5 to 10 percent.

2.10 MISCELLANEOUS MATERIALS

- A. Furring, Blocking, Shims, and Nailers: Softwood or hardwood lumber, kiln-dried to less than 15 percent moisture content.
- B. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage.
 - 1. Provide metal expansion sleeves or expansion bolts for post-installed anchors.
 - 2. Use nonferrous-metal or hot-dip galvanized anchors and inserts at inside face of exterior walls and at floors.
- C. Specialty Bar Shelving (SH)
 - 1. Provide products by the following manufacturer:
 - a. Gallery Metalworks
 - 1) SH-1: Ball Fitting Ceiling Mounted
 - 2) 2 Post, 3 Shelves, Ball Fittings, Crossers
 - 3) Quantity: 4 units (2 shelves per bar area)
 - 4) Dimensions: 4'-0" wide x 4'-0" high
 - 5) Finish: Mirror Polished Brass
 - 6) Tube Size: 1-1/2" dia.
 - b. Reference "I" series drawings for quantity and placement.

2.11 FABRICATION

- A. Fabricate interior architectural woodwork to dimensions, profiles, and details indicated.
 - 1. Ease edges to radius indicated for the following:
 - a. Edges of Solid-Wood (Lumber) Members: 1/16 inch unless otherwise indicated.
 - b. Edges of Rails and Similar Members More Than 3/4 Inch Thick: 1/8 inch.
- B. Complete fabrication, including assembly, to maximum extent possible before shipment to Project site.
 - 1. Disassemble components only as necessary for shipment and installation.
 - 2. Where necessary for fitting at site, provide allowance for scribing, trimming, and fitting.
 - 3. Notify Architect seven days in advance of the dates and times interior architectural woodwork fabrication will be complete.
 - 4. Trial fit assemblies at fabrication shop that cannot be shipped completely assembled.
 - a. Install dowels, screws, bolted connectors, and other fastening devices that can be removed after trial fitting.

b. Verify that parts fit as intended, and check measurements of assemblies against field measurements indicated on approved Shop Drawings before disassembling for shipment.

2.12 SHOP PRIMING

- A. Preparations for Finishing: Comply with the Architectural Woodwork Standards for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing interior architectural woodwork, as applicable to each unit of work.
- B. Interior Architectural Woodwork for Opaque Finish: Shop prime with one coat of wood primer as specified in Section 099123 "Interior Painting."
 - 1. Backpriming: Apply one coat of primer, compatible with finish coats, to concealed surfaces of woodwork. Apply two coats to surfaces installed in contact with concrete or masonry and to end-grain surfaces.
- C. Interior Architectural Woodwork for Transparent Finish: Shop-seal concealed surfaces with required pretreatments and first coat of finish as specified in Section 099300 "Staining and Transparent Finishing."

2.13 SHOP FINISHING

- A. Finish interior architectural woodwork with transparent finish at fabrication shop. Defer only final touchup, cleaning, and polishing until after installation.
- B. Preparation for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing interior architectural woodwork, as applicable to each unit of work.
 - 1. Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of interior architectural woodwork. Apply two coats to end-grain surfaces.

C. Transparent Finish:

- 1. Architectural Woodwork Standards Grade: Same as item to be finished.
- 2. Finish System:
 - a. 5: Varnish, Conversion.
- 3. Wash Coat for Closed-Grain Woods: Apply wash-coat sealer to woodwork made from closed-grain wood before staining and finishing.
- 4. Staining: Match approved sample for color.
- 5. Filled Finish for Open-Grain Woods: After staining, apply wash-coat sealer and allow to dry. Apply paste wood filler and wipe off excess. Tint filler to match stained wood.
- 6. Sheen: Semigloss, 46-60 gloss units measured on 60-degree gloss meter in accordance with ASTM D523.

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before installation, condition interior architectural woodwork to humidity conditions in installation areas for not less than 72 hours prior to beginning of installation.
- B. Before installing interior architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming of concealed surfaces.

3.2 INSTALLATION

- A. Grade: Install interior architectural woodwork to comply with same grade as item to be installed.
- B. Assemble interior architectural woodwork and complete fabrication at Project site to the extent that it was not completed during shop fabrication.
- C. Install interior architectural woodwork level, plumb, true in line, and without distortion.
 - 1. Shim as required with concealed shims.
 - 2. Install level and plumb to a tolerance of 1/8 inch in 96 inches.
- D. Scribe and cut interior architectural woodwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- E. Anchor interior architectural woodwork to anchors or blocking built in or directly attached to substrates.
 - 1. Secure with countersunk, concealed fasteners and blind nailing.
 - 2. Use fine finishing nails or finishing screws for exposed fastening, countersunk and filled flush with interior architectural woodwork.
 - 3. For shop-finished items, use filler matching finish of items being installed.

F. Standing and Running Trim:

- 1. Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible.
- 2. Do not use pieces less than 36 inches long, except where shorter single-length pieces are necessary.
- 3. Scarf running joints and stagger in adjacent and related members.
- 4. Fill gaps, if any, between top of base and wall with plastic wood filler; sand smooth; and finish same as wood base if finished.
- 5. Install standing and running trim with no more variation from a straight line than 1/8 inch in 96 inches.

G. Custom Millwork

1. Assemble and attach custom bar as indicated on Drawings with fasteners of sufficient size, depth, and methods to comply with Quality Standards specified. Refer to "I" series drawings for details.

3.3 REPAIR

- A. Repair damaged and defective interior architectural woodwork, where possible, to eliminate functional and visual defects and to result in interior architectural woodwork being in compliance with requirements of Architectural Woodwork Standards for the specified grade.
- B. Where not possible to repair, replace defective woodwork. Adjust joinery for uniform appearance.
- C. Shop Finish: Touch up finishing work specified in this Section after installation of interior architectural woodwork.
 - 1. Fill nail holes with matching filler where exposed.
 - 2. Apply specified finish coats, including stains and paste fillers if any, to exposed surfaces where only sealer/prime coats are shop applied.

3.4 CLEANING

A. Clean interior architectural woodwork on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION

SECTION 122413 - ROLLER WINDOW SHADES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section includes roller window shades (RWS).
- B. Related Sections include the following:
 - 1. Division 06 Section "Miscellaneous Rough Carpentry" for wood blocking and grounds for mounting roller shades and accessories.
 - 2. Division 26 Sections for electrical service and connections for motor operators, controls, limit switches, and other powered devices and for system disconnect switches for motorized shade operation.

1.3 ACTION SUBMITTALS

- A. Product Data with Shop Drawings and Window Treatment Schedule:
 - 1. Product Data: For each type of product indicated. Include styles, material descriptions, construction details, dimensions of individual components and profiles, features, finishes, and operating instructions.
 - 2. Shop Drawings: Show location and extent of roller shades. Include elevations, sections, details, and dimensions not shown in Product Data. Show installation details, mountings, attachments to other work, operational clearances, and relationship to adjoining work.
 - a. Wiring Diagrams: Power, system, and control wiring.
 - 3. Window Treatment Schedule: For roller shades. Use same designations indicated on Drawings.

1.4 QUALITY ASSURANCE

- A. Installer Qualifications: Fabricator of products.
- B. Source Limitations: Obtain roller shades through one source from a single manufacturer.

- C. Fire-Test-Response Characteristics: Provide roller shade band materials with the fire-test-response characteristics indicated, as determined by testing identical products per test method indicated below by UL or another testing and inspecting agency acceptable to authorities having jurisdiction:
 - 1. Flame-Resistance Ratings: Passes NFPA 701.
- D. Product Standard: Provide roller shades complying with WCMA A 100.1.

1.5 DELIVERY, STORAGE, AND HANDLING

A. Deliver shades in factory packages, marked with manufacturer and product name, fire-test-response characteristics, and location of installation using same designations indicated on Drawings and in a window treatment schedule.

1.6 PROJECT CONDITIONS

- A. Environmental Limitations: Do not install roller shades until construction and wet and dirty finish work in spaces, including painting, is complete and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.
- B. Field Measurements: Where roller shades are indicated to fit to other construction, verify dimensions of other construction by field measurements before fabrication and indicate measurements on Shop Drawings. Allow clearances for operable glazed units' operation hardware throughout the entire operating range. Notify Architect of discrepancies. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

PART 2 - PRODUCTS

2.1 ROLLER SHADES (RWS-1)

- A. Products: Subject to compliance with requirements, provide the following:
 - 1. Hunter Douglas, Inc.; Hunter Douglas Window Fashions Division; Insert product name or designation.
- B. Shade Band Material: PVC-coated polyester.
 - 1. Fabric Width: 36 inches: field verification required to ensure fit.
 - 2. Pattern: As selected by Architect from manufacturer's full range.
 - 3. Style: As selected by Architect from manufacturer's full range.
 - 4. Colors: As selected by Architect from manufacturer's full range
 - 5. Material Openness Factor: 1 percent.
 - 6. Bottom Hem: Straight.
 - 7. Rectangular windows to be outfitted with rectangular, manual shades.

- 8. In auditorium, where applicable, windows with an arched top are to receive a custom shade designed to fit arched opening. These shades are to be fixed and static.
- C. Rollers: Electrogalvanized or epoxy primed steel or extruded-aluminum tube of diameter and wall thickness required to support and fit internal components of operating system and the weight and width of shade band material without sagging; designed to be easily removable from support brackets; with removable spline fitting integral channel in tube for attaching shade material. Provide capacity for one roller shade band(s) per roller, unless otherwise indicated.
- D. Direction of Roll: Regular, from back of roller.
- E. Mounting Brackets: Fascia end caps, fabricated from steel finished to match fascia or headbox.
- F. Fascia: L-shaped, formed-steel sheet or extruded aluminum; long edges returned or rolled; continuous panel concealing front and bottom of shade roller, brackets, and operating hardware and operators; length as indicated; removable design for access.
- G. Bottom Bar: Steel or extruded aluminum, with plastic or metal capped ends. Provide concealed, by pocket of shade material, internal-type bottom bar with concealed weight bar as required for smooth, properly balanced shade operation.
- H. Mounting: Manufacturer's standard for fixing shade in place, keeping shade band material taut, and reducing light gaps when shades are closed.
 - 1. Shade Operation: Manufacturer's standard spring assist for balancing roller shade weight and lifting heavy roller shades.
 - 2. Loop Length: Length required to make operation convenient from floor level.
 - 3. Bead Chain: Stainless steel.
 - 4. Operating Function: Stop and hold shade at any position in ascending or descending travel.

2.2 ROLLER SHADE FABRICATION

- A. Product Description: Roller shade consisting of a roller, a means of supporting the roller, a flexible sheet or band of material carried by the roller, a means of attaching the material to the roller, a bottom bar, and an operating mechanism that lifts and lowers the shade.
- B. Concealed Components: Noncorrodible or corrosion-resistant-coated materials.
 - 1. Lifting Mechanism: With permanently lubricated moving parts.
- C. Unit Sizes: Obtain units fabricated in sizes to fill window and other openings as follows, measured at 74 deg F:
 - 1. Shade Units Installed between (Inside) Jambs: Edge of shade not more than 1/4 inch from face of jamb. Length equal to head to sill dimension of opening in which each shade is installed.
 - 2. Shade Units Installed Outside Jambs: Width and length as indicated, with terminations between shades of end-to-end installations at centerlines of mullion or other defined vertical separations between openings.

- D. Installation Brackets: Designed for easy removal and reinstallation of shade, for supporting fascia, roller, and operating hardware and for hardware position and shade mounting method indicated.
- E. Installation Fasteners: No fewer than two fasteners per bracket, fabricated from metal noncorrosive to shade hardware and adjoining construction; type designed for securing to supporting substrate; and supporting shades and accessories under conditions of normal use.
- F. Color-Coated Finish: For metal components exposed to view, apply manufacturer's standard baked finish complying with manufacturer's written instructions for surface preparation including pretreatment, application, baking, and minimum dry film thickness.
- G. Colors of Metal and Plastic Components Exposed to View: As selected by Architect from manufacturer's full range, unless otherwise indicated.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances, operational clearances, accurate locations of connections to building electrical system, and other conditions affecting performance.
 - 1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 ROLLER SHADE INSTALLATION

- A. Install roller shades level, plumb, and aligned with adjacent units according to manufacturer's written instructions, and located so shade band is not closer than 2 inches to interior face of glass. Allow clearances for window operation hardware.
- B. Connections: Connect motorized operators to building electrical system.

3.3 ADJUSTING

A. Adjust and balance roller shades to operate smoothly, easily, safely, and free from binding or malfunction throughout entire operational range.

3.4 CLEANING AND PROTECTION

- A. Clean roller shade surfaces after installation, according to manufacturer's written instructions.
- B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, that ensure that roller shades are without damage or deterioration at time of Substantial Completion.

C. Replace damaged roller shades that cannot be repaired, in a manner approved by Architect, before time of Substantial Completion.

3.5 DEMONSTRATION

A. Engage a factory-authorized service representative to train Owner's maintenance personnel to adjust, operate, and maintain roller shades. Refer to Division 01 Section Demonstration and Training."

END OF SECTION







