

ATTACHMENT B
WINDOW COVERING SPECIFICATIONS

HORIZONTAL MINI BLINDS

HORIZONTAL MINI BLINDS

PART 1 - GENERAL

1.1 SUMMARY

- A. Section Includes:
 - 1. Horizontal mini blinds with **aluminum** slats.
 - 2. Head rails

1.2 DEFINITIONS

- A. Head Rail – Heavy duty commercial
- B. Horizontal Slats – 1" wide

1.3 SUBMITTALS

- A. Successful bidder to provide written quotes that reflect field conditions (on a case by case basis).
- B. Maintenance and Warranty data (following each installation) including the following:
 - 1. Methods for maintaining Horizontal Mini Blinds and finishes not including ultrasonic methods.

1.4 QUALITY ASSURANCE (Submit the following information with the bid)

- A. Fire-Test-Response Characteristics: Provide blinds identical to those tested for the following fire-test-response characteristics as determined by UL or another testing and inspecting agency and that they comply with Boston or California Class 1 Fire Codes:
 - 1. Test Method: NFPA 701
 - 2. Rating: Pass

1.5 DELIVERY, STORAGE AND HANDLING

- A. Deliver Horizontal Mini Blind units in original manufacturer's cartons, clearly labeled with identification of manufacturer, brand name, and installed location.
- B. Store inside, in a well ventilated area protected from weather, blocked off ground to prevent sagging, twisting or warping.
- C. Inspect products upon delivery to ensure compliance with Contract Documents, and to ensure that products are undamaged and properly protected.
- D. Store products at the site to facilitate inspection and measurement of quantity or counting of units.

1.6 PROJECT CONDITIONS

- A. Roof must be tight, windows and frames installed and glazed

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- B. Wet work, including concrete, masonry, plaster, stucco, terrazzo, sheetrock, spackling, and taping (including sanding) shall be complete and dry.
- C. Ceilings, window pockets, electrical, and mechanical work above the product shall be complete.

1.7 SEQUENCING AND SCHEDULING

- A. Schedule delivery to minimize long-term storage at the site, to prevent overcrowding of construction spaces and minimize the possibility of theft or other losses.

1.8 EXTRA MATERIALS

- A. Maintenance materials of slats, (quantity to be determined on a case by case basis) exclusive of materials required to properly complete installation, to be boxed and tagged with labels identifying the manufacturer, brand name, quality or grade, color, dye lot, pattern, fire hazard classification, and size.
- B. Maintenance materials to be stored by Contractor at their warehouse for future use by Pima County. All Pima County product to be consolidated in one section designated Pima County.
- C. Contractor to maintain a written inventory of products in storage. Update this inventory and submit to Pima County Facilities Management on a monthly basis.

1.9 GUARANTEES

- A. The Contractor shall guarantee the installation of the head rail for a period of three (3) years.
- B. If Pima County has reasonable cause to doubt the performance of the installed goods, a sample of the questionable materials will be sent to an accredited and industry approved testing facility. If any part of the goods are found to be lower than written specifications, monetary compensation will be made by the Contractor/manufacturer to Pima County.

PART 2 - PRODUCTS

2.1 HORIZONTAL LOUVER BLINDS, ALUMINUM SLATS

- A. Slats: Aluminum; alloy and temper recommended by producer for type of use and finish indicated; with crowned profile and radius corners.
 - 1. Width: **1 inch (25 mm)**.
 - 2. Thickness: .008" before painting
 - 3. Features:
 - a. Lift-Cord Rout Holes: Minimum size required for lift cord and located near back (outside) edge of slat to maximize slat overlap and minimize light gaps between slats.
- B. Headrail: Formed steel or extruded aluminum; long edges returned or rolled. Head rails fully enclose operating mechanisms on three sides.
 - 1. Manual Lift Mechanism:
 - a. Lift-Cord Lock: **Variable; stops lift cord at user-selected position within blind full operating range**

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- b. Operator: Extension of lift cord(s) through lift-cord lock mechanism to form cord pull.
 2. Manual Tilt Mechanism: Enclosed worm-gear mechanism and linkage rod that adjusts ladders.
 - a. Tilt: 180 degrees +/-
 - b. Operator: **Clear-plastic wand**
 3. Manual Lift-Operator and Tilt-Operator Lengths: **Manufacturer's standard**
 4. Manual Lift-Operator and Tilt-Operator Locations: **Manufacturer's standard** unless otherwise indicated.
- C. Bottom Rail: Formed-steel or extruded-aluminum tube that secures and protects ends of ladders and lift cords and has plastic- or metal-capped ends.
 1. Type: **Manufacturer's standard**
- D. Ladders: **Braided cord**
- E. Valance: **Manufacturer's standard**
- F. Mounting Brackets: With spacers and shims required for blind placement and alignment indicated.
- G. Hold-Down Brackets and Hooks or Pins: **Manufacturer's standard.**
- H. Side Channels and Perimeter Light Gap Seals: **Manufacturer's standard.**
- I. Colors, Textures, Patterns, and Gloss:
 1. Slats: **As selected by from manufacturer's standard range**

2.2 HORIZONTAL LOUVER BLIND FABRICATION

- A. Product Safety Standard: Fabricate horizontal louver blinds to comply with WCMA A 100.1 including requirements for corded, flexible, looped devices; lead content of components; and warning labels.
- B. Unit Sizes: Fabricate units in sizes to fill window and other openings as follows, measured at 74 deg F (23 deg C):
 1. Between (Inside) Jamb Installation: Width equal to jamb-to-jamb dimension of opening in which blind is installed less 1/4 inch (6 mm) per side or 1/2 inch (13 mm) total, plus or minus 1/8 inch (3.1 mm). Length equal to head-to-sill dimension of opening in which blind is installed less 1/4 inch (6 mm), plus or minus 1/8 inch (3.1 mm).
 2. Outside of Jamb Installation: Width and length as indicated, with terminations between blinds of end-to-end installations at centerlines of mullion or other defined vertical separations between openings.

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PART 3 - EXECUTION

3.1 INSTALLATION

- A. Install horizontal louver blinds level and plumb, aligned and centered on openings, and aligned with adjacent units according to manufacturer's written instructions.
 - 1. Locate so exterior slat edges are not closer than **1 inch (25 mm)** from interior faces of glass and not closer than **1/2 inch (13 mm) 1-1/2 inches (38 mm)** from interior faces of glazing frames through full operating ranges of blinds.
 - 2. Install mounting and intermediate brackets to prevent deflection of headrails.
 - 3. Install with clearances that prevent interference with adjacent blinds, adjacent construction, and operating hardware of glazed openings, other window treatments, and similar building components and furnishings.
- B. Adjust horizontal louver blinds to operate free of binding or malfunction through full operating ranges.
- C. Clean horizontal louver blind surfaces after installation according to manufacturer's written instructions.

VERTICAL LOUVER BLINDS

PART 1 - GENERAL

1.1 SCOPE

- A. Per each installation, comply with and provide all labor, materials, equipment and services necessary to furnish and install Vertical Louver Blind units and heavy duty head rails.

1.2 SUMMARY

- A. Section Includes:
 - 1. Vertical louver blinds with PVC, and Fabric vanes.
 - 2. Head Rails

1.3 DEFINITIONS

- A. Head Rail – Extra Heavy Duty Commercial Spiral Traverse Operating System
- B. Louver – 3-1/2" wide

1.4 SUBMITTALS

- A. Successful bidder to provide written quotes that reflect field conditions (on a case by case basis).
- B. Maintenance and Warranty data (following each installation).

1.5 QUALITY ASSURANCE

- A. Fire -Test-Response Characteristics: Provide Vertical Louver Blinds identical to those tested for the following fire-test-response characteristics as determined by UL or another testing and inspecting agency and that they comply with Boston or California Class 1 Fire Codes.
 - 1. Test Method: NFPA 701
 - 2. Rating: Pass

1.6 DELIVERY, STORAGE AND HANDLING

- A. Deliver Vertical Louver Blind units in original manufacturer's cartons, clearly labeled with identification of manufacturer, brand name, and installed location.
- B. Store inside, in a well ventilated area protected from weather, blocked off ground to prevent sagging, twisting or warping.
- C. Inspect products upon delivery to ensure compliance with Contract Documents, and to ensure that products are undamaged and properly protected.
- D. Store products at the site to facilitate inspection and measurement of quantity or counting of units.

1.7 PROJECT CONDITIONS

- A. Roof must be tight, windows and frames installed and glazed.
- B. Wet work, including concrete, masonry, plaster, stucco, terrazzo, sheetrock, spackling, and taping (including sanding) shall be complete and dry.
- C. Ceilings, window pockets, electrical, and mechanical work above the product shall be complete.
- D. Field measure before fabrication.

1.8 SEQUENCING AND SCHEDULING

- A. Schedule delivery to minimize long-term storage at the site, to prevent overcrowding of construction spaces and minimize the possibility of theft or other losses.

1.9 EXTRA MATERIALS

- A. Maintenance materials of vanes, (quantity to be determined on a case by case basis) exclusive of materials required to properly complete installation, to be boxed and tagged with labels identifying the manufacturer, brand name, quality or grade, color, dye lot, pattern, fire hazard classification, and size.
- B. Maintenance materials to be stored by vendors at their warehouse for future use by Pima County. All Pima County products to be consolidated in one section designated Pima County.
- C. Vendor to maintain a written inventory of products in storage. Update this inventory and submit to Pima County Facilities Management on a monthly basis.

1.10 GUARANTEES/WARRANTIES

- A. The Vendor shall guarantee the installation of the head rail for a period of three (3) years.
- B. If Pima County has reasonable cause to doubt the performance of the installed head rail, vanes, and related parts, samples of the questionable materials will be sent to an accredited and industry approved testing facility. If any part of the goods are found to be lower than written specifications, monetary compensation will be made by the Contractor/manufacturer to Pima County.

PART 2 - PRODUCTS

2.1 VERTICAL LOUVER BLINDS, PVC VANES

- A. Vanes: Lead-free, UV-stabilized, integrally colored, opaque, permanently flexible, extruded PVC that will not crack or yellow; with not less than 3/8-inch (9.5-mm) overlap when vanes are rotated fully closed.
 - 1. Width: 3-1/2 inches.
 - 2. Profile: Crowned.
 - 3. Flame-Resistance Rating: Comply with NFPA 701; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.

VERTICAL LOUVER BLINDS

- B. Headrail: Channel, formed steel or extruded aluminum with long edges returned or rolled and ends capped. Headrail encloses operating mechanisms including carrier-spacing mechanism that provides uniform vane spacing when blinds are traversed fully across headrail (closed).
 - 1. Manual Traverse Control: Nickel-plated, metal bead chain.
 - 2. Manual Rotation Control: Wand.
 - 3. Manual Control Locations: As indicated on drawings
 - 4. Draw and Stack: As indicated on Drawings.
 - 5. Cord-Tensioner Mounting: Wall.
- C. Carriers: Allow vane removal and replacement.
- D. Valance: Manufacturer's standard with vane insert.
- E. Mounting Brackets: With spacers and shims required for blind placement and alignment indicated.
- F. Colors, Textures, and Patterns:
 - 1. Vanes: As indicated on Drawings.
 - 2. Components: Provide materials exposed to view matching or coordinating with vanes unless otherwise indicated.

2.2 VERTICAL LOUVER BLINDS, FABRIC VANES

- A. Vanes: [Manufacturer's standard] [PVC-coated fiberglass mesh] [PVC-coated polyester mesh] <insert fabric description> free-hanging fabric with hemmed, non-raveling edges; stain and fade resistant; with not less than 3/8-inch (9.5-mm) overlap when vanes are rotated fully closed.
 - 1. Width: 3-1/2 inches (89 mm).
 - 2. Flame-Resistance Rating: Comply with NFPA 701; testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
 - 3. Features:
 - a. Weight, sewn in at bottom of vanes.
 - b. Bottom chain.
 - c. <insert feature>.
- B. Headrail: Channel, formed steel or extruded aluminum with long edges returned or rolled and ends capped. Headrail encloses operating mechanisms including carrier-spacing mechanism that provides uniform vane spacing when blinds are traversed fully across headrail (closed).
 - 1. Manual Traverse Control: Nickel-plated, metal bead chain.
 - 2. Manual Rotation Control: Nickel-plated, metal bead chain.
 - 3. Manual Control Locations: As indicated on Drawings.
 - 4. Draw and Stack: As indicated on Drawings.
 - 5. Cord-Tensioner Mounting: Wall.
- C. Carriers: Allow vane removal and replacement.
- D. Valance: Manufacturer's standard with vane insert.
- E. Mounting Brackets: With spacers and shims required for blind placement and alignment indicated.
- F. Colors, Textures, and Patterns:
 - 1. Vanes: As indicated on Drawings.
 - 2. Components: Provide materials exposed to view matching or coordinating with vanes unless otherwise indicated.

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2.3 VERTICAL LOUVER BLIND FABRICATION

- A. Fabricate blind units to have:
 - 1. One way draw to the left or right
 - 2. Split draw, even or un-even to end stacks
 - 3. End to center stack
- B. Fabricate blind units installed between jamb:
 - 1. Width equal to 1/4" per side or 1/2" total less than the jamb to jamb dimension.
 - 2. Length equal to 1/4" plus or minus 1/8" less than head rail to sill dimension.
- C. Fabricate blind units installed outside jambs:
 - 1. Width and length as indicated (on a case by case basis) with termination between blinds of end-to-end installations at centerline of mullions or other defined vertical separations between openings.
- D. Limit the light gap between the top portion of the louver and channel track to a maximum of 3/8".
- E. Space louvers for a minimum overlap of 3/8" when in a fully closed position.
- F. Tag all head rails and at least one louver with a metallic inventory tag indicating the manufacturer, vendor, phone, Pima County purchase order or contract number and date.
- G. Fabricate entire unit not to exceed one-hundred (100) square feet or equal to the width of the head rail times the length of one louver. Head rail must accommodate a maximum weight of louvers in each unit up to eighty-five (85) pounds. Units exceeding above dimensions or weights will require engineering.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of Vertical Louver Blinds. Do not proceed with installation until satisfactory conditions have been corrected.

3.2 PREPARATION

- A. Remove any existing window coverings, hardware, brackets and fasteners and any other materials or substances that will interfere with the proper installation and operation of the Vertical Louver Blinds.

3.3 INSTALLATION

- A. Install vertical louver blinds level and plumb, aligned and centered on openings, and aligned with adjacent units according to manufacturer's written instructions.
 - 1. Locate so exterior vane edges are not closer than 2 inches (51 mm) from interior faces of glass and not closer than 1-1/2 inches (38 mm) from interior faces of glazing frames through full operating ranges of blinds.
 - 2. Install mounting and intermediate brackets to prevent deflection of headrails.
 - 3. Install with clearances that prevent interference with adjacent blinds, adjacent construction, and operating hardware of glazed openings, other window treatments, and similar building components and furnishings.

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- B. Adjust vertical louver blinds to operate free of binding or malfunction through full operating ranges.
- C. Clean vertical louver blind surfaces after installation according to manufacturer's written instructions.

3.4 FIELD TESTING/ADJUSTMENTS

- A. Test operation of each blind unit and adjust as required to provide smooth operation.
- B. Repair or replace damaged units as directed.

3.5 CLEANING AND PROTECTION

- A. Clean blind surfaces, according to manufacturer's instructions, after installation.
- B. Remove surplus materials, packaging, rubbish, and debris resulting from installation.
- C. Leave installation areas neat, clean, and ready for use.
- D. Protect tested and installed units to ensure optimum operating conditions without damage, blemishes or indication of use at completion of project.

ROLLER WINDOW SHADES

PART 1 - GENERAL

1.1 SCOPE

- A. Per each installation, comply with and provide all labor, materials, equipment and services necessary to furnish and install Roller Shade units and heavy-duty head rails.

1.2 SUMMARY

- A. Section Includes:
 - 1. Manually operated roller shades with single rollers.
 - 2. Shade Materials
 - 3. Clutch Operating System
 - 4. Hardware
 - 5. Accessories / Options

1.3 Definitions

- A. Clutch Operating System – Heavy Duty Commercial
- B. Roller Shades – Solar and Blackout

1.4 SUBMITTALS

- A. Successful bidder to provide written quotes that reflect field conditions (on a case by case basis).
- B. Maintenance and Warranty data (following each installation).
 - 1. Methods for maintaining Roller Shades finishes not including ultrasonic methods.

1.5 QUALITY ASSURANCE

- A. Fire -Test-Response Characteristics: Provide vertical Roller Shades identical to those tested for the following fire-test-response characteristics as determined by UL or another testing and inspecting agency and that they comply with Boston or California Class 1 Fire Codes.
 - 1. Test Method: NFPA 701
 - 2. Rating: Pass

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver Roller Shade units in original manufacturer's cartons clearly labeled with identification of manufacturer, brand name, and installed location.
- B. Store inside, in a well-ventilated area protected from weather, blocked off ground to prevent sagging, twisting or warping.

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- C. Inspect products upon delivery to ensure compliance with Contract Documents, and to ensure that products are undamaged and properly protected.
- D. Store products at the site to facilitate inspection and measurement of quantity or counting of units.

1.7 PROJECT CONDITIONS

- A. Roof must be tight, windows and frames installed and glazed.
- B. Wet work, including concrete, masonry, plaster, stucco, terrazzo, sheetrock, spackling, and taping (including sanding) shall be complete and dry.
- C. Ceilings, window pockets, electrical, and mechanical work above the product shall be complete.
- D. Field measure before fabrication.

1.8 SEQUENCING AND SCHEDULING

- A. Schedule delivery to minimize long-term storage at the site, to prevent overcrowding of construction spaces and minimize the possibility of theft or other losses.

1.9 MATERIALS

- A. Maintenance materials of Roller Shades, (quantity to be determined on a case by case basis) exclusive of materials required to properly complete installation, to be boxed and tagged with labels identifying the manufacturer, brand name, quality or grade, color, dye lot, pattern, fire hazard classification, and size.
- B. Maintenance materials to be stored by vendors at their warehouse for future use by Pima County. All Pima County products to be consolidated in one section designated Pima County.
- C. Vendor to maintain a written inventory of products in storage. Update this inventory and submit to Pima County Facilities Management on a monthly basis.

1.10 GUARANTEES

- A. The Vendor shall guarantee the installation of the clutch roller system for a period of three (3) years.
- B. If Pima County has reasonable cause to doubt the performance of the installed operating system and parts, samples of the questionable materials will be sent to an accredited and industry approved testing facility. If any part of the goods are found to be lower than written specifications, monetary compensation will be made by the vendor/manufacturer to Pima County.

PART 2 - PRODUCTS

2.1 ROLLER SHADES, MANUALLY PERATED SHADES WITH SINGLE ROLLERS

- A. Manufacturers: Hunter Douglas or Mecho Shades

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- B. "Chain-and-Clutch Operating Mechanisms" or "Crank-and-Gear Operating Mechanisms" Paragraph below or, if more than one type of manual operating mechanism is required, indicate locations of each on Drawings or in a window-treatment schedule. Chain-and-Clutch Operating Mechanisms: With continuous-loop bead chain and clutch that stops shade movement when bead chain is released; permanently adjusted and lubricated.
1. Chain-Retainer Type: Clip, jamb mount
 2. Spring Lift-Assist Mechanisms: Provide for shadebands that weigh more than 10 lb (4.5 kg) or for shades as recommended by manufacturer, whichever criterion is more stringent.
- C. Rollers: Corrosion-resistant steel or extruded-aluminum tubes of diameters and wall thicknesses required to accommodate operating mechanisms and weights and widths of shadebands indicated without deflection. Provide with permanently lubricated drive-end assemblies and idle-end assemblies designed to facilitate removal of shadebands for service.
1. Roller Drive-End Location: As indicated on Drawings.
 2. Direction of Shadeband Roll: Regular, from back (exterior face) of roller.
- D. Mounting Hardware: Brackets or endcaps, corrosion resistant and compatible with roller assembly, operating mechanism, installation accessories, and mounting location and conditions indicated.
- E. Roller-Coupling Assemblies: Coordinated with operating mechanism and designed to join up to three inline rollers into a multiband shade that is operated by one roller drive-end assembly.
- F. Shadebands:
1. Shadeband Material: Light-filtering fabric, Light-blocking fabric.
 2. Shadeband Bottom (Hem) Bar: Steel or extruded aluminum.
 - a. Type: Exposed with endcaps.
 - b. Color and Finish: Ivory, Bronze, Gray, Aluminum, Black, White.
- G. Installation Accessories:
1. Exposed Headbox: Rectangular, extruded-aluminum enclosure including front fascia, top and back covers, endcaps, and removable bottom closure.
 2. Endcap Covers: To cover exposed endcaps.
 3. Recessed Shade Pocket: Rectangular, extruded-aluminum enclosure designed for recessed ceiling installation; with front, top, and back formed as one piece, end plates, and removable bottom closure panel.
 4. Closure Panel and Wall Clip: Removable aluminum panel designed for installation at bottom of site-constructed ceiling recess or pocket and for snap-in attachment to wall clip without fasteners.

2.2 SHADEBAND MATERIALS

- A. Shadeband Material Flame-Resistance Rating: Comply with NFPA 701. Testing by a qualified testing agency. Identify products with appropriate markings of applicable testing agency.
- B. Light-Filtering Fabric: Woven fabric, stain and fade resistant.
1. Source: Roller shade manufacturer.
 2. Type: Woven PVC-coated fiberglass and PVC-coated polyester.

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3. Weave: Basketweave.
4. Thickness: 0.019".
5. Roll Width: 96 inches (2438 mm)
6. Openness Factor: 1 and 3 percent
7. Color: White, Bone, White/Bone, White/Platinum, Bone/Platinum, Bronze, Platinum.

C. Light-Blocking Fabric: Opaque fabric, stain and fade resistant.

1. Source: Roller shade manufacturer.
2. Type: Laminated 3 ply vinyl and 1 ply fiberglass
3. Roll Width: 84 inches (2134 mm).
4. Color: White, Ivory, Grey, Black

2.3 ROLLER SHADE FABRICATION

A. Product Safety Standard: Fabricate roller shades to comply with WCMA A 100.1

B. Unit Sizes: Fabricate units in sizes to fill window and other openings as follows, measured at 74 deg F.(23 deg C):

1. Between (Inside) Jamb Installation: Width equal to jamb-to-jamb dimension of opening in which shade is installed less 1/2 inch (12 mm) each side.
2. Railroaded Materials: Railroad material where material roll width is less than the required width of shadeband and where indicated. Provide battens and seams as required by railroaded material to produce shadebands with full roll-width panel(s) plus, if required, one partial roll-width panel located at top of shadeband.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates, areas, and conditions for compliance with requirements for installation tolerances and other conditions affecting performance of vertical roller shade. Do not proceed with installation until satisfactory conditions have been corrected.

3.2 PREPARATION

- A. Remove any existing window coverings, hardware, brackets and fasteners and any other materials or substances that will interfere with the proper installation and operation of the roller shades.

3.3 INSTALLATION

- A. Install blinds level, plumb, and located so hem bar in any position is not closer than 1" (25mm) to interior face of glass lights.
- B. Do not remove warning labels describing hazards of roller shades.
- C. Isolate metal parts of blind units from concrete or mortar to prevent galvanic action.
- D. Use tape, thick coating of epoxy or other means recommended by the manufacturer to effect separation.

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- E. Securely anchor units with clips, brackets and anchorages suited to type of mountings.
- F. Provide adequate provision for unencumbered operation of window sash hardware.
- G. Some installations will occur after regular working hours and on weekends.
- H. During construction sequence roller shade installation with other work to minimize the possibility of damage and soiling during the remainder of construction.

3.4 FIELD TESTING/ADJUSTMENTS

- A. Test operation of each blind unit and adjust as required to provide smooth operation.
- B. Repair or replace damaged units as directed.

3.5 CLEANING AND PROTECTION

- A. Clean roller shade surfaces, according to manufacturer's instructions, after installation.
- B. Remove surplus materials, packaging, rubbish, and debris resulting from installation.
- C. Leave installation areas neat, clean, and ready for use.
- D. Protect tested and installed units to ensure optimum operating conditions without damage, blemishes or indication of use at completion of project.