

SECTION 122113

HORIZONTAL LOUVER BLINDS

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.3 SUMMARY

- A. This Section includes horizontal louver blinds with aluminum slats.
- B. Related Sections include the following:
 - 1. Division 06 Section "Rough Carpentry" for wood blocking and grounds for mounting horizontal louver blinds and accessories.

1.4 SUBMITTALS

- A. Make Submittals in accordance with Division 01 Section "Submittal Procedures."
- B. Product Data: For each type of product indicated.
- C. Shop Drawings: Show fabrication and installation details for horizontal louver blinds.
- D. Samples for Verification: For each type and color of horizontal louver blind indicated.
 - 1. Slat: Not less than 12 inches long.
 - 2. Horizontal Louver Blind: Full-size unit, not less than 16 inches wide by 24 inches long.
 - 3. Valance or Cornice: Full-size unit, not less than 12 inches wide.
- E. Window Treatment Schedule: For horizontal louver blinds; use same room designations as indicated on the Drawings.
- F. Product Certificates: For each type of horizontal louver blind, signed by product manufacturer.
- G. Maintenance Data: For horizontal louver blinds to include in maintenance manuals.

1.5 QUALITY ASSURANCE

- A. Source Limitations: Obtain blinds through one source and from a single manufacturer.
- B. Fire-Test-Response Characteristics: Provide horizontal louver blinds 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. Identify materials with appropriate markings of applicable testing and inspecting agency.

1. Flame-Resistance Ratings: Passes NFPA 701.

C. Product Standard: Provide horizontal louver blinds complying with WCSC A 100.1.

1.6 DELIVERY, STORAGE, AND HANDLING

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

1.7 PROJECT CONDITIONS

A. Environmental Limitations: Do not install horizontal louver blinds until construction and wet and dirty finish work in spaces, including painting, is complete and dry and ambient temperature and humidity conditions are maintained at the levels indicated for Project when occupied for its intended use.

B. Field Measurements: Where horizontal louver blinds 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.

1.8 EXTRA MATERIALS

A. Furnish extra materials described below that match products installed and that are packaged with protective covering for storage and identified with labels describing contents.

1. Horizontal Louver Blinds: Before installation begins, for each size, color, texture, pattern, and gloss indicated, full-size units equal to 5 percent of amount installed, but no fewer than 8 units.

PART 2 - PRODUCTS

2.1 HORIZONTAL LOUVER BLINDS, ALUMINUM SLATS

A. Basis-of-Design Product: Subject to compliance with requirements, provide "Reveal" by Hunter Douglas or a comparable product by one of the following:

1. Levolor, a Newell Rubbermaid Company.
2. Springs Window Fashions Division, Inc.

B. Slats: Aluminum; alloy and temper recommended by producer for type of use and finish indicated; with crowned profile and radiused corners.

1. Width: 1 inch; manufacturer's standard thickness and spacing.
2. Finish: One color; as selected by Architect from manufacturer's full range. Provide ionized coating, antistatic, dust-repellent with baked polyester finish.

C. Headrail: Formed steel or extruded aluminum; long edges returned or rolled; fully enclosing operating mechanisms on three sides and ends and the following:

1. Capacity: One blind per headrail.
 2. Integrated Headrail/Valance: Flat face.
 3. Tilt limiter with preselected degree settings.
- D. Bottom Rail: Formed-steel or extruded-aluminum tube, with plastic or metal capped ends top contoured to match crowned shape of slat; with enclosed ladders and tapes to prevent contact with sill. Match color, texture, pattern, and gloss of slats.
- E. Ladders: Evenly spaced to prevent long-term slat sag.
1. For Blinds with Nominal Slat Width 1 Inch or Less: Manufacturer's standard.
 - a. Tape Color, Texture, and Pattern: Color, texture, and pattern as selected by Architect from manufacturer's full range.
- F. Lift Cords: Manufacturer's standard.
- G. Tilt Control: Enclosed worm-gear mechanism and linkage rod, and the following:
1. Tilt Operation: Manual with clear plastic wand.
 2. Length of Tilt Control: Length required to make operation convenient from floor level.
 3. Tilt: Full.
- H. Lift Operation: Manual, top-locking cord lock; locks pull cord to stop blind in either fully opened or fully closed position only and is equipped with a ring pull not more than 4 inches long.
- I. Tilt-Control and Cord-Lock Position: Tilt-Control and Cord-Lock Position: Right side of headrail, unless otherwise indicated
- J. Valance: Manufacturer's standard. Match color, texture, pattern, and gloss of slats.
- K. Mounting: Wall mounting, permitting easy removal and replacement without damaging blind or adjacent surfaces and finishes; with spacers and shims required for blind placement and alignment indicated.
1. Provide intermediate support brackets if end support spacing exceeds spacing recommended by manufacturer for weight and size of blind.
- L. Hold-Down Brackets and Hooks or Pins: Manufacturer's standard.
- M. Colors, Textures, Patterns, and Gloss: As selected by Architect from manufacturer's full range.

2.2 HORIZONTAL LOUVER BLIND FABRICATION

- A. Concealed Components: Non-corrodible or corrosion-resistant-coated materials.
1. Lift-and-Tilt Mechanisms: With permanently lubricated moving parts.
- B. Unit Sizes: Obtain units fabricated in sizes to fill window and other openings as follows, measured at 74 deg F:
1. Blind Units Installed between (inside) Jamb: Width equal to 1/4 inch per side or 1/2 inch total, plus or minus 1/8 inch, less than jamb-to-jamb dimension of opening in which each blind is installed. Length equal to 1/4 inch, plus or minus 1/8 inch, less than head-to-sill dimension of opening in which each blind is installed.

2. Blind Units Installed outside Jamb: 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.
- C. Installation Brackets: Designed for easy removal and reinstallation of blind, for supporting headrail, valance, and operating hardware, and for hardware position and blind mounting method indicated.
- D. Installation Fasteners: No fewer than two fasteners per bracket, fabricated from metal noncorrosive to blind hardware and adjoining construction; type designed for securing to supporting substrate; and supporting blinds and accessories under conditions of normal use.
- E. Color-Coated Finish:
 1. Metal: For 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.
- F. Component Color: Provide rails, cords, ladders, and exposed-to-view metal and plastic matching or coordinating with slat color, 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 and other conditions affecting performance.
 1. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install horizontal louver blinds level and plumb and aligned with adjacent units according to manufacturer's written instructions, and located so exterior slat edges in any position are not closer than 2 inches to interior face of glass. Install intermediate support as required to prevent deflection in headrail. Allow clearances between adjacent blinds and for operating glazed opening's operation hardware if any.
- B. Exterior Windows: Jamb Mounted - Install headrail flush with face of opening jamb and head.
- C. Interior Borrowed Lights - Head Mounted: Install headrail on face of opening head.

3.3 ADJUSTING

- A. Adjust horizontal louver blinds to operate smoothly, easily, safely, and free of binding or malfunction throughout entire operational range.

3.4 CLEANING AND PROTECTION

- A. Clean horizontal louver blind surfaces after installation, according to manufacturer's written instructions.
- B. Provide final protection and maintain conditions, in a manner acceptable to manufacturer and Installer, which ensures horizontal louver blinds are without damage or deterioration at time of Substantial Completion.
- C. Replace damaged horizontal louver blinds 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 systems. Refer to Division 01 Section "Demonstration and Training."

3.6 SCHEDULE

- A. Provide horizontal louver blinds at all exterior window openings, including aluminum curtain wall. Do not provide on exterior doors and new entrance aluminum storefront.
- B. Provide horizontal louver blinds at all interior borrowed lights. Do not include any door vision panels.

END OF SECTION 122113

SECTION 123530

RESIDENTIAL CASEWORK

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. Section Includes:

1. Wood cabinets, accessories and hardware.
2. Plastic-laminate countertops and backsplashes.

- B. Related Sections:

1. Division 06 Section "Rough Carpentry" for wood blocking for anchoring casework.
2. Division 06 Section "Architectural Woodwork" for standing and running trim.
3. Division 09 Section "Non-Structural Metal Framing" for reinforcements in metal-framed partitions for anchoring casework.
4. Division 09 Section "Resilient Base and Accessories" for base applied to casework.
5. Division 11 Section "Appliances".
6. Division 22 Section "Plumbing Fixtures" for sinks and plumbing fittings.

1.3 DEFINITIONS

- A. MDF: Medium-density fiberboard.
- B. Exposed Portions of Cabinets: Surfaces visible when doors and drawers are closed, including bottoms of cabinets more than 48 inches above floor, and surfaces visible in open cabinets or behind glass doors.
- C. Semi-exposed Portions of Cabinets: Surfaces behind opaque doors, such as interiors of cabinets, shelves, dividers, interiors and sides of drawers and interior faces of doors. Tops of cases 78 inches or more above floor are defined as semi-exposed.
- D. Concealed Portions of Cabinets: Surfaces not usually visible after installation, including sleepers, frames, dust panels, ends and backs placed directly against walls or other cabinets.

1.4 SUBMITTALS

- A. Product Data: For each type of product indicated.
- B. Shop Drawings: Include plans, elevations, details and attachments to other work. Show materials, finishes, filler panels, types and locations of hardware, edge and backsplash profiles, methods of joining countertops and cutouts for plumbing fixtures. Indicate manufacturer's catalog numbers for casework.

- C. Samples for Initial Selection: For each type of material exposed to view.
- D. Samples for Verification: 8 by 10 inch samples for each type of finish, including top material and the following:
 - 1. Wood-veneered panels with transparent finish, 8 by 10 inches, for each species.
 - 2. Solid wood trim with transparent finish, 8 inches long, for each species.
 - 3. Plastic laminate for countertops, 8 by 10 inches, showing top, front edge and backsplash.
 - 4. Exposed hardware, for each type of item.
 - 5. One full-size, finished base and wall cabinet complete with hardware, doors, shelves and drawers but without countertop. Maintain full-size Samples at Project site during construction in an undisturbed condition as a standard for judging the completed Work. Unless otherwise indicated, approved sample units may become part of the completed Work if in undisturbed condition at time of Substantial Completion. Notify Architect of their exact locations.
- E. Qualification Data: For qualified manufacturer and Installer.
- F. Product Certificates: For casework, from manufacturer.
- G. Warranty: Sample of special warranty.

1.5 QUALITY ASSURANCE

- A. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for installation of units required for this Project.
- B. Source Limitations: Obtain cabinets from a single source and from a single manufacturer.
- C. Product Options: Drawings indicate size, configurations, and finish material of cabinets by referencing designated manufacturer's catalog numbers. Other manufacturers' cabinets of similar sizes and door and drawer configurations, same finish material, and complying with the Specifications may be considered. See Division 01 Section "Product Requirements."

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver casework only after painting, utility roughing-in, and similar operations that could damage, soil, or deteriorate casework have been completed in installation areas. If casework must be stored in other than installation areas, store only in areas where environmental conditions meet requirements specified in "Project Conditions" Article.
- B. Keep finished surfaces covered with polyethylene film or other protective covering during handling and installation.

1.7 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install casework until building is enclosed and weather tight, wet work in spaces is complete and dry, work above ceilings is complete and HVAC system is operating and maintaining ambient temperature between 60 and 90 deg F and relative humidity between 25 and 55 percent during the remainder of the construction period.

- B. Field Measurements: Verify actual dimensions of construction contiguous with casework by field measurements before fabrication and indicate measurements on Shop Drawings. Provide fillers and scribes to allow for trimming and fitting.

1.8 COORDINATION

- A. Coordinate layout and installation of blocking and reinforcement in walls and partitions for support of casework.
- B. Coordinate locations of utilities that will penetrate countertops or backsplashes.

1.9 WARRANTY

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace components of casework which fail in materials or workmanship within specified warranty period. Failures include, but are not limited to delamination of components or other failures of glue bond, warping of components, failure of operating hardware and deterioration of finishes.
 - 1. Warranty Period: Minimum of Five years from date of Substantial Completion.

1.10 EXTRA MATERIALS

- A. Furnish complete touchup kit for each type and finish of casework and countertop provided. Include scratch fillers, stains, finishes and other materials necessary to perform permanent repairs to damaged items.

PART 2 - PRODUCTS

2.1 CABINETS

- A. Basis of Design Product: "Atwood" door style by Kraftmaid Cabinery, Inc. or equal.
- B. Quality Standard: Provide cabinets that comply with KCMA A161.1.
 - 1. KCMA Certification: Provide cabinets with KCMA's "Certified Cabinet" seal affixed in a semi-exposed location of each unit and showing compliance with the above standard.
- C. Face Style: Flush overlay; door and drawer faces cover cabinet fronts with only enough space between faces for operating clearance.
- D. Cabinet Style: Frameless.
- E. Door and Drawer Fronts: Solid-wood stiles and rails, 3/4 inch thick, with 1/4-inch-thick, veneer-faced plywood center panels.
- F. Exposed Cabinet End Finish: Wood veneer on 1/2-inch-thick particleboard or plywood.
- G. Cabinet End Construction: 5/8-inch-thick particleboard or 1/2-inch-thick plywood.

- H. Cabinet Tops and Bottoms: Wood veneer on 1/2-inch-thick particleboard or plywood; fully supported by and secured in rabbets in end panels, front frame, and back rail.
- I. Back, Top, and Bottom Rails: 3/4-by-2-1/2-inch solid wood, interlocking with end panels and rabbeted to receive top and bottom panels. Back rails secured under pressure with glue and with mechanical fasteners.
- J. Wall-Hung-Unit Back Panels: 3/16-inch thick veneer plywood fastened to rear edge of end panels and to top and bottom rails.
- K. Base-Unit Back Panels: 3/16-inch thick veneer plywood fastened to rear edge of end panels and to top and bottom rails.
- L. Front Frame Drawer Rails: 3/4-by-1-1/4-inch solid wood mortised and fastened into face frame.
- M. Drawers: Fabricate with exposed fronts fastened to sub-front with mounting screws from interior of body.
 - 1. Join sub-fronts, backs, and sides with glued rabbeted joints supplemented by mechanical fasteners or glued dovetail joints.
 - 2. Sub-fronts, Backs, and Sides: 3/4-inch thick solid wood.
 - 3. Bottoms: 3/16-inch- thick plywood.
- N. Shelves: 3/4-inch-thick particleboard or 5/8-inch-thick plywood.
- O. Joinery: Rabbet backs flush into end panels and secure with concealed mechanical fasteners. Connect tops and bottoms of wall cabinets and bottoms and stretchers of base cabinets to ends and dividers with mechanical fasteners. Rabbet tops, bottoms, and backs into end panels.
- P. Factory Finishing: Finish cabinets at factory. Defer only final touchup until after installation.

2.2 CABINET MATERIALS

- A. General:
 - 1. Low-Emitting Materials: Provide manufactured casework, including countertops, made with adhesives and composite wood products containing no urea formaldehyde.
 - 2. Adhesives and Composite Wood and Agrifiber Products: Do not use products that contain urea formaldehyde.
 - 3. Hardwood Lumber: Kiln dried to 7 percent moisture content.
 - 4. Softwood Lumber: Kiln dried to 10 percent moisture content.
 - 5. Hardwood Plywood: HPVA HP-1, made with adhesive containing no urea formaldehyde.
 - 6. Softwood Plywood: DOC PS 1.
 - 7. Hardboard: ANSI A135.4, Class 1 Tempered.
 - 8. Particleboard: Straw-based or recycled content particleboard complying with requirements in ANSI A208.1, Grade M-2, except for density.
 - a. Products: Subject to compliance with requirements, provide one of the following:
 - 1) Dakota Burl by Environ Biocomposites Manufacturing, LLC, Mankato, MN (telephone 507-388-3434.)
 - 2) Biofiber Wheat by Environ Biocomposites Manufacturing, LLC, Mankato, MN (telephone 507-388-3434.)
 - 3) Arreis by Sierra Pine (telephone 800-676-3339.)

- B. Exposed Materials:
1. Exposed Wood Species: Maple.
 - a. Select materials for compatible color and grain. Do not use two adjacent exposed surfaces that are noticeably dissimilar in color, grain, figure or natural character markings.
 - b. Staining and Finish: As selected by Architect from manufacturer's full range.
 2. Solid Wood: Clear hardwood lumber of species indicated, free of defects.
 3. Plywood: Hardwood plywood with face veneer of species indicated, with Grade A faces and Grade C backs of same species as faces.
 - a. Edge band exposed edges with minimum 1/8-inch-thick, solid-wood or veneer edging of same species as face veneer.
- C. Semi-exposed Materials: Unless otherwise indicated, provide the following:
1. Solid Wood: Sound hardwood lumber, selected to eliminate appearance defects. Same species as exposed surfaces or stained to be compatible with exposed surfaces.
 2. Plywood: Hardwood plywood with Grade C faces and not less than Grade 3 backs of same species as faces. Face veneers of same species as exposed surfaces.
- D. Concealed Materials: Solid wood or plywood, of any hardwood or softwood species, with no defects affecting strength or utility; particleboard; medium-density fiberboard; or hardboard. Particleboard: ANSI A208.1, Grade M-2.

2.2 CABINET HARDWARE

- A. General: Manufacturer's standard units complying with BHMA A156.9, of type, size, style, material, and finish as selected by Architect from manufacturer's full range.
- B. Exposed Hardware Finishes: For exposed hardware, provide finish that complies with BHMA A156.18 for BHMA finish number indicated.
1. Satin Chromium Plated: BHMA 626 for brass or bronze base; BHMA 652 for steel base.
 2. Satin Stainless Steel: BHMA 630.
- C. For concealed hardware, provide manufacturer's standard finish that complies with product class requirements in BHMA A156.9.
- D. Pulls: Back-mounted decorative pulls.
- E. Hinges: Concealed European-style, 6-way adjustable, self-closing hinges.
- F. Drawer Guides: Self-closing drawer guides; designed to prevent rebound when drawers are closed; with nylon-tired, ball-bearing rollers; and complying with BHMA A156.9, Type B05011 or B05091. Provide side mounted; full-over travel-extension type.

2.3 PLASTIC-LAMINATE COUNTERTOPS

- A. General: Provide smooth, clean exposed tops and edges in uniform plane free of defects. Provide front and end overhang of one inch over base cabinets.
- B. Quality Standard: KCMA A161.2.

- C. Plastic Laminate: High-pressure decorative laminate complying with NEMA LD 3.
 - 1. Grade HGS.
 - 2. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. Formica Corporation.
 - b. Nevamar Company, LLC; Decorative Products Div.
 - c. Wilsonart International; Div. of Premark International, Inc.
 - 3. Colors, Textures, and Patterns: As selected by Architect from plastic-laminate manufacturer's full range. See Finish Schedule for additional information.
- D. Configuration: Provide countertops with the following front, backsplash, and endsplash style:
 - 1. Front: 3mm thick rigid PVC edge banding, through color with satin finish.
 - 2. Backsplash & Endsplash: Square edge without scribe.
 - 3. Provide PVC edge banding 3mm thick, on front edge of top, on top edges of backsplashes and end splashes, and on ends of tops and splashes.
 - 4. Where indicated, provide separate back, side and end splashes tightly fitted to top.
- E. Plastic-Laminate Substrate: 1-1/8-inch thick plywood or particleboard.
 - 1. For countertops at sinks, use Grade M-2-Exterior-Glue particleboard or exterior-grade plywood.
 - 2. Composite Wood and Agrifiber Products: Provide products that comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers," including 2004 Addenda.
 - 3. Plywood: Exterior softwood plywood complying with DOC PS 1, Grade C-C Plugged, touch sanded.
- F. Backer Sheet: Provide Grade BKL backer sheet on underside of countertop substrate.
- G. Adhesives: Do not use adhesives that contain urea formaldehyde.

2.4 MISCELLANEOUS HARDWARE AND ACCESSORIES

- A. Grommets for Cable Passage through Countertops: Molded-plastic grommets and matching plastic caps with slot for wire passage; sized to suit countertop thickness.
 - 1. Product: Subject to compliance with requirements, provide "BG series" by Doug Mockett & Company, Inc. Color to be selected from manufacturer's full range.
- B. Countertop Support Brackets: Rakks Counter Bracket Model No. EH-1824 by Rangine Corporation, Millis, MA or equal.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine areas, with Installer present, for compliance with requirements for installation tolerances, location of framing and reinforcements and other conditions affecting performance of casework.

- B. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 CASEWORK INSTALLATION

- A. Install cabinets with no variations in flushness of adjoining surfaces; level, plumb, and true; shim as required, using concealed shims. Where cabinets abut other finished work, scribe and cut for accurate fit. Provide filler strips, scribe strips and moldings in finish to match cabinet face. Use concealed fasteners where practical.
- B. Install cabinets level and plumb to a tolerance of 1/8 inch in 8 feet.
- C. Install casework without distortion so doors and drawers fit openings and are aligned.
- D. Base Cabinets: Adjust sub tops within 1/16 inch of a single plane. Fasten cabinets to masonry or framing, wood blocking or reinforcements in walls and partitions with fasteners spaced 24 inches o.c. Bolt adjacent cabinets together with joints flush, tight, and uniform. Align similar adjoining doors and drawers to a tolerance of 1/16 inch.
 - 1. Where base cabinets are not installed adjacent to walls, fasten to floor at toe space with fasteners spaced 16 inches o.c. Secure sides of cabinets to floor, where they do not adjoin other cabinets, with not less than two fasteners.
- E. Wall Cabinets: Adjust fronts and bottoms within 1/16 inch of a single plane. Fasten to hanging strips, masonry, or framing, blocking, or reinforcements in walls or partitions. Align similar adjoining doors to a tolerance of 1/16 inch.
 - 1. Maintain veneer sequence matching of cabinets with transparent finish.
 - 2. Fasten wall cabinets through back, near top and bottom, at ends and not more than 16 inches o.c. with No. 10 wafer-head screws sized for 1-inch penetration into wood framing, blocking, or hanging strips and with No. 10 wafer-head sheet metal screws through metal backing or metal framing behind wall finish.
 - 3. Use toggle bolts at hollow masonry and at plaster on metal lath.
 - 4. Use expansion anchors at solid masonry.
- F. Install hardware uniformly and precisely. Set hinges snug and flat in mortises unless otherwise indicated. Adjust and align hardware so moving parts operate freely and contact points meet accurately. Allow for final adjustment after installation.
- G. Adjust casework and hardware so doors and drawers operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.

3.3 INSTALLATION OF COUNTERTOPS

- A. Field Jointing: Where possible make in the same manner as shop jointing, using dowels, splines, adhesives, and fasteners recommended by manufacturer. Prepare edges to be joined in shop so Project-site processing of top and edge surfaces is not required. Locate field joints where shown on Shop Drawings.
 - 1. Secure field joints in plastic-laminate countertops with concealed clamping devices located within 6 inches of front and back edges and at intervals not exceeding 24 inches. Tighten according to manufacturer's written instructions to exert a constant, heavy-clamping pressure at joints.
- B. Provide cutouts for sinks and lavatories, including holes for faucets and accessories.

- C. Secure tops to cabinets by screwing through corner blocks of base units into underside of countertop, using two or more fasteners at each front, end and back.
- D. Abut top and edge surfaces in one true plane, with internal supports placed to prevent deflection.
- E. Secure backsplashes, side and end splashes to countertops with concealed metal brackets at 16 inches o.c. and walls with adhesive.
- F. Seal junctures of tops, splashes and walls with mildew-resistant silicone sealant or another permanently elastic sealing compound recommended by countertop material manufacturer.

3.4 ADJUSTING, CLEANING AND PROTECTION

- A. Adjust cabinets and hardware so doors and drawers are centered in openings and operate smoothly without warp or bind. Lubricate operating hardware as recommended by manufacturer.
- B. Repair or remove and replace defective work as directed on completion of installation.
- C. Clean casework on exposed and semi-exposed surfaces. Touch up factory-applied finishes to restore damaged or soiled areas to match original factory finish, as approved by Architect.
- D. Protection: Provide 6-mil plastic or other suitable water-resistant covering over countertop surfaces. Tape to underside of countertop at a minimum of 48 inches o.c. Remove protection at Substantial Completion.

END OF SECTION 123530