

STEVENS 1450 MODERN SERIES

SECTION - 12400

PART 1 GENERAL

1.01 GENERAL PROVISIONS

- A. Applicable provisions of General Conditions, Special Conditions and General Requirements shall apply to this section as if repeated in full herein. Reference other Sections and Divisions for work in connection with this section.

1.02 SCOPE OF WORK

- A. Cabinets: Furnish prefabricated cabinetry and related components as specified herein. Refer to plans and equipment lists for details and requirements. Cabinetry shall include all fillers, scribes, finished ends, finished backs and materials for completed installation.
- B. Countertops: Provide prefabricated countertops in Laminate and Solid Surface (Polymer), as specified in connection with cabinetry.
- C. Sinks and Fixtures: Provide sinks, fixtures, electrical outlets and fittings specified as part of complete model numbered units. Provide materials to appropriate trades for final hook ups and installation.
- D. Locks: Install locks in cabinetry where shown on casework drawings or as specified in equipment lists.

1.03 RELATED WORK NOT INCLUDED

- A. Sinks and Fittings: Sinks and fittings, connection, piping, traps, supplies, shut offs and special plumbing applicable to codes. Electrical fittings, devices, conduit, wiring, fans, blowers, motors, ductwork and special grilles not specified as part of furnishings. (Specified in electrical, plumbing and heating/ventilation/air conditioning sections.)
- B. Blocking, Framing and Reinforcements: In walls, ceilings and floors for cabinetry anchorage and mountings. (Specified in carpentry section.)
- C. Locks: Master keyed to room doors or specialty locking systems. (Specified in lock section.)
- D. Vinyl Base Molding: (Specified in resilient flooring section.)

1.04 QUALIFICATION

- A. Casework Standards: Casework shall be High Pressure Plastic Laminate Fronts with Thermally Fused Laminate Cabinets. Catalog numbers and specification details shall be based on 1450 Modern Series by Stevens Industries, Inc., Teutopolis, Illinois. Configuration, size, material options, offerings and quality to be adhered to.

B. Approvals:

1. Casework of other manufacturers shall be considered for approval, providing written request is received and approved at least ten (10) days prior to announced bid date and approved by addendum. Bidder shall state in writing any deviations from requirements and specifications. The casework shall conform to the configuration, arrangement, design, material quality, joinery, panel thickness and surfacing of that specified and shown on drawings.
2. Manufacturers requesting approval shall submit samples with cut-aways showing cabinet construction, joinery, drawer and door construction, hardware and materials, along with catalogs and specification, in order that accurate evaluations can be made. Manufacturers shall show full size working samples. Catalogs and specifications shall be submitted with written request, along with detailed list of compliance and deviations from these documents for approval. Samples may be impounded by owner and retained until completion of job for verification and compliance of specifications.

Other acceptable manufacturers (must comply with specifications):

- TMI Systems
- Case Systems
- LSI Corporation of America

3. Manufacturer must be Architectural Woodwork Institute (AWI) Premium Certified.
4. Manufacturer's fully assembled cabinets must be GREENGUARD GOLD certified.
5. Manufacturer shall show evidence of being dedicated to environmentally responsible practices. Manufacturer shall be certified as achieving this goal by the Composite Panel Association (CPA).
6. Manufacturers requesting approvals shall have independently tested their products and be able to submit documentation of results meeting Scientific Equipment and Furniture Association (SEFA) requirements. Testing under SEFA 8 Cabinet Structural Tests (Sections 4.0, 5.0, 6.0, 7.0 and 9.0) and Table Structural Tests (Section 10.0) required.
7. Manufacturer shall show evidence of having a minimum of five (5) years' experience in the manufacture and installation of casework for projects of similar size and complexity.

1.05 SUBMITTALS

- A. A preliminary set of submittal drawings shall accompany the quotation.
- B. Shop Drawings: Shall be submitted for approval after formal notification of award of contract. Drawings shall consist of floor plans indicating arrangement and relation to adjacent work and equipment and complete elevations of casework. Centerline of service requirements shall be noted for use by other trades. A schedule of all sinks, fittings and accessories that are part of this contract shall be provided.

- C. Color Samples: Shall be submitted for selection and coordination at time of shop drawing submittals. Samples of actual materials and color shall be available as required.
- D. Catalog Cuts: Additional catalog cuts, details and samples as requested by architect for evaluation and coordination.

1.06 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Protection: Protect casework and related materials during transit, delivery, storage and handling to prevent damage, soiling and deterioration.
- B. Storage: Store casework and related materials at project site in installation and storage areas with similar ambient conditions as final installation. Storage areas must be kept dry, heated with low relative humidity and away from construction work such as painting, wet work, grinding and similar operations.
- C. Site Conditions: Shall be in accordance with AWI's *Quality Standards Illustrated* (current edition) and Stevens Industries, Inc.'s *Site Conditions*.

1.07 WARRANTY – refer to The Stevens Standard Warranty

- A. Casework manufacturer shall warrant for a period of three (3) years that its manufactured product is free from defects in materials and workmanship when properly installed and under normal use and conditions.
- B. Accessory equipment (sinks, fittings, etc.) shall be warranted by appropriate manufacturer's guarantee to the limit of that manufacturer's standard warranties.

PART 2 PRODUCTS

2.01 SURFACE MATERIALS

- A. Cabinet:
 - 1. Fronts shall be faced with vertical grade PF-28 (.028") (.7mm) High Pressure Laminate (HPL), tested under National Electrical Manufacturers Association (NEMA) LD3-2005. Decorative laminate shall be thermoset to core using catalyzed Polyvinyl Acetate (PVA) glue with minimum 80 Pounds per Square Inch (PSI) pressure and average 180 degree F temperature. (Lower pressure and cold curing glues not acceptable.)
 - 2. Panels with exterior PF-28 surfaces shall have Cabinet Liner Surface (CLS) (.020") (.5mm) interior cabinet liner.
 - 3. Exposed finished ends, modesty panels and finished backs shall be Thermally Fused Laminate (TFL) two (2) sides. Laminate shall be homogenous, thermofused to core face resulting in panel structure warranted against any delamination. TFL shall be tested under LD3-2005 vertical grade GP-28 standards. TFL lamination shall use high pressure 350-400 PSI with thermosetting temperature of 380-400 degrees F under precision controlled press cycle with textured surface finishes.

- B. Interior: Semi-exposed surfaces shall be TFL.
- C. Drawers: Shall be finished entirely in TFL.
- D. Semi-Exposed Backs: Shall be prefinished Medium Density Fiberboard (MDF).

2.02 CORE MATERIALS

- A. CARB Compliant Particleboard: Shall be high performance industrial grade M2 core. Particleboard shall be 45# - 48# density 3-ply type formation conforming to American National Standards Institute (ANSI) A208.1 and American Society for Testing and Materials (ASTM) D1037-91A standards and current applicable California Air Resources Board (CARB) standards.
- B. Moisture Resistant (MR) / No Added Formaldehyde (NAF) Particleboard: Shall be high performance industrial grade core. Particleboard shall be 45# - 48# density 3-ply type formation conforming to ANSI A208.1 and ASTM D1037-91A standards. Cores shall have MR and NAF resin formulation.
- C. Medium Density Fiberboard (MDF): Core shall be minimum 48# density conforming to ANSI A208.2 MD-130 standards and current applicable CARB standards.

2.03 EDGINGS

- A. Cabinet Edges: All vertical and horizontal leading cabinet edges, adjustable shelves and interior vertical and horizontal components shall be edged with (.020") flat edge Polyvinyl Chloride (PVC) extrusion. Automated hot melt adhesive application and trimming.
- B. Door and Drawer Fronts: Vertical edges shall be seamless wrap 90 degree postform. Top and bottom edges shall have 3mm PVC extrusion. Automated hot melt adhesive application and trimming.
- C. Drawer Components: 3/4" sides shall be edged with (.020") flat edge PVC extrusion. Automated hot melt adhesive application and trimming.

2.04 SELECTIONS AND APPLICATIONS

- A. Cabinet: Laminates for exposed finished ends, fronts, modesty panels and finished backs shall be selected from Stevens Standard offering.
- B. Interior: Semi-exposed surfaces shall be selected from Stevens Standard White solid color or Maple woodgrain pattern.
- C. Drawers: Drawer box shall be selected from Stevens Standard White solid color or Maple woodgrain pattern.
- D. Edgings: Edgebanding shall be selected from Stevens Standard offering and commercially available stock patterns.

- E. Laminate Countertops: Shall be selected from Stevens Standard offering.
- F. Solid Surface (Polymer) Countertops: Shall be selected from manufacturer's standard offering.
- G. Countertop Supports: Shall be available in powder coated Black, White and Nickel.
- H. Table Legs and Metal Table Frames: Shall be available in powder coated Black.

2.05 HARDWARE

- A. Stevens 1450 Modern Series has one (1) standard hinge style.
 - 1. 120 Degree Concealed Hinges: Shall be commercial grade 120 degree pivot overlay style. Hinges shall be two (2) piece construction with door hinge and cabinet mounting plate. Hinges shall be compact design with "minimal intrusive" mechanism into compartment space. Hinges shall have spring loaded self-close feature. Doors less than 48" in height shall have two (2) hinges per door. Doors 48" through 63" in height shall have three (3) hinges per door. Doors exceeding 63" in height shall have four (4) hinges per door. Concealed hinges shall have 3-way (vertical, in-out, horizontal) alignment adjustments. Hinges shall be mounted with 5mm thread fasteners and nylon screw mount inserts.
- B. Door Catches: Shall be heavy duty spring loaded, large diameter (16mm) roller catches mounted at door bottom. Catch strike plate shall be injection molded with integral molded engagement ridge and wide face bumper door stop. Doors exceeding 48" shall have catches at both top and bottom.
- C. Pulls: Shall be offered in easy grip 128mm (5") size and shall be available as selected from the Stevens Pull Collections.

Pull Collection required:

- Bentwire
- Essentials
- Stainless Steel
- Artisan
- Studio
- Antimicrobial

- D. Drawer Slides:
 - 1. Standard Drawer Slides: Extension slides shall be bottom and side mounted epoxy powder coated steel slides. Lateral stability is achieved through a formed captive slide profile, and slides shall glide on nylon rollers. Slides shall have both in and out positive stop with self close feature. Slides shall meet AWI 100# static load rating, exceeding Grade 1 as tested SEFA 8 Section 6.0 and/or PL 6.5.1 drawer suspension systems under ANSI/BHMA (Builders Hardware Manufacturers Association) A156.9.

2. File and Paper Storage Drawer Slides: Shall have full extension side mounted ball bearing slides. Ball bearing slides shall be tested under The Business and Institutional Furniture Manufacturer's Association (BIFMA) X5.5 Section 7. Slides shall pass 50,000 cycle test with 120# load.
 3. Lateral File Drawer Slides: Shall have full extension side mounted ball bearing slides with 200# load rating.
- E. Hanger Bars: Shall be heavy chrome plated oval tubing mounted in adjustable end wall sockets.
- F. Trays and Bins: High impact polystyrene or polyethylene formed trays and bins shall be provided where indicated by model numbers. Trays and bins shall be suspended on welded wire powder coated rack system. System includes side suspension rack uprights with top and bottom horizontal guideways to avoid inadvertent tip out.
- G. Shelf Supports: Adjustable shelf supports shall be injection molded clear polycarbonate. Supports shall incorporate integral molded lock tabs to retain shelf from tipping or inadvertent lift out. Supports shall have 5mm diameter double pin engagement into precision bored cabinet vertical hole patterns. Adjustment shall be 1-1/4" (32mm) spacing. Supports shall have a compression ridge effecting force against shelf edge to maintain positive pin engagement. Supports shall have molded-in screw attachment feature. Static test load shall exceed 200# per clip. Shelf spans above 27" shall have 5-point support with backs drilled to receive a mid-span shelf support, further reducing deflection. Shelf spans 27" or less shall have end 4-point support.
- H. Locks: High security 6-tumbler dead bolt lock system shall be provided where noted by model number or indicated on drawings. Locks shall have diecast body with dead bolt engagement tang. (Cylinder locks with attached rotating cams not acceptable.) Locks shall have removable and interchangeable 6-tumbler core for easy field and customer re-keying options. Locks shall be master keyed and available key-alike or key-different. Each lock provided with a double bit key and face of lock stamped with key number.
- I. Sliding Doors: Solid 3/4" doors shall have double channel extrusion tracks both top and bottom. Glass sliding doors shall be tempered and have aluminum top and bottom channel track (bottom track with fiber inserts). Tempered glass doors above 30" tall shall include door bottom extrusion with track rollers.
- J. Coat Hooks: Under mount and wall mount hooks shall be selected from the Stevens Gallery Collection designs. Hooks shall be formed cold roll steel with ball end tips and welded in stamped steel base. Gallery Collection includes three (3) under mount designs (double, triple, wardrobe) and three (3) wall mount designs (single, double, schoolhouse). Styles shall be design coordinated with quality powder coated nickel finish. (Cast hooks susceptible to breakage, non-matching finishes or designs not acceptable.)

2.06 COMPONENT DETAILS AND CONSTRUCTION

A. Fronts:

1. Door and Drawer Fronts: Shall be 3/4" thick, with face laminate as described in 2.01.A. Vertical edges shall be seamless wrap 90 degree postform. Top and bottom edges shall have 3mm PVC extrusion. Automated hot melt adhesive application and trimming.
 2. Glazed Framed Doors: Shall be 3/4" thick, one (1) piece panel with cutout for insertion of tempered glass pane, held in place with extruded trim mounting.
 3. Glass Doors: Sliding glass or hinged glass doors shall be tempered glass.
- B. Mounting Frames: Shall be 3/4" thick structural members.
- C. Wall Cabinets: Components shall be 3/4" thick members throughout. Wall cabinet tops and bottoms shall include back groove and minimum four (4) dowel pins per joint for insertion into cabinet ends. Wall cabinet ends shall be 3/4" thick with back groove and precision Computer Numerical Control (CNC) drill pattern for accurate location of fixed members, hardware and shelf supports. Wall cabinets shall have two (2) integral (dowel into end) mounting frames. (Designs with simple spacer rails or rails without dowel pin engagement into ends are not acceptable.)
- D. Tall Cabinets: Components shall be 3/4" thick members throughout. Tall cabinet tops and bottoms shall include back groove and up to eight (8) total dowels per end joint (based on cabinet depth). Tall cabinet ends shall be 3/4" thick with back groove and precision CNC drill pattern for accurate location of fixed members, hardware and shelf supports. Tall cabinets shall have three (3) integral (dowel into end) mounting frames. (Designs with simple spacer rails or rails without dowel pin engagement into ends are not acceptable.)
- E. Base Cabinets: Components shall be 3/4" members throughout. Base unit bottoms shall incorporate back groove and up to eight (8) dowel pins per end joint (based on cabinet depth). Base units shall have wide subtop rail and back frame feature. A subtop rail (8" wide) in the flat horizontal plane at cabinet front shall provide stable squaring of the top area. A mounting frame (8" wide) in the vertical plane behind back shall provide stable side-to-side rack resistance. Construction shall provide lateral and vertical stability. A second mounting frame shall be doweled into ends at lower rear. Open rear top area allows for easy wall mounting and ease of installation of mechanical services. (Subtops without horizontal and vertical plane ridged frame members not acceptable.) Base cabinet ends shall be 3/4" thick with back groove and precision CNC drill pattern for accurate location of fixed members, hardware and shelf supports.
- F. Toe Kicks: Base and Tall cabinets shall be an integral base design. Construction of end panels, cabinet bottoms and horizontal toe kick members shall be integrally joined together for greater structural strength. This design facilitates load transfer from upper loaded areas directly through cabinet end to floor, reducing lower joint stresses. (Separate attached bases not acceptable.)
- G. Backs:
1. Cabinet Back System: Shall be composed of 1/4" prefinished MDF back captured in side and horizontal grooves. Unit back shall be further integrated with attachment to 3/4"

doweled-in mounting frames. Fixed backs shall be mechanically fastened into grooves and sealed with hot melt adhesive. Combination of back with 3/4" frame shall create a 1" integrated structural mounting system. (Compliant to AWI Premium Grade and SEFA Performance Testing)

2. Removable Backs: Shall be in sink cabinets, set in bottom groove and attached to back frames with screws.
- H. Adjustable Shelves: Shelves 36" or less in length shall be 3/4" thick. Shelves over 36" in length shall be 1" thick.
- I. Drawers: Four (4) sided full box design with separate attached front shall be provided. Drawer members shall be 3/4" thick with dowel pin construction at all four (4) corners. Drawer bottoms shall be 1/4" MDF trapped in groove four (4) edges as well as mechanically fastened. Entire drawer box shall be TFL laminated. (Drawers with overlay applied bottoms, non-captured groove or with staple butt or lap joint construction not acceptable.)
- J. File Drawers: Shall be a four (4) sided box design with separate attached front. Drawer members shall be laminated and have dowel pin construction at all four (4) corners. Drawer bottom shall be laminated 1/4" MDF core trapped in groove four (4) edges, as well as mechanically fastened. 1/2" file drawer sides shall include file hanging rails. Full extension ball bearing suspensions shall be BIFMA 120# load tested slides.
- K. Lateral File Drawers: Shall have dowel pin and bolt-through construction. Lateral file drawers shall have full extension side mounted ball bearing slides with 200# load rating.

2.07 COUNTERTOPS

Countertops shall be provided based on drawings and specific applications. Laminate and Solid Surface (Polymer) countertops are used and shall be provided as indicated on this project.

Choose one or more countertop types:

- A. Laminate Countertops: Shall be 1-1/16" (27mm) thick with solid core structures and laminated with backer sheet. Countertops shall be HPL, thermoset to core using catalyzed PVA glue with minimum average pressure of 80 PSI and average 180 degree F temperature. Decorative laminate shall meet NEMA LD3-2005 Horizontal Grade Standard (HGS) specification standards. Laminate patterns shall be selected from Stevens Standard offering.

Laminate Countertop design required:

- LS00C: 90 degree postform seamless front edge countertop with matching applied 90 degree postform edge backsplash and applied self edge endsplash.
- LS05C: 3mm PVC edge countertop with applied 3mm PVC edge backsplash and endsplash. Matching 3mm edging from Stevens Standard offering.

- B. Solid Surface (Polymer) Countertops: Shall be fabricated from 1/2" thick acrylic cast sheets. Sheets shall be continuous cast thermoset acrylic resins in combination with Aluminum Trihydrate (ATH) and pigments. Solid surface countertops shall have downturned leading edges with overall top thickness of 1-1/8" (29mm). Faces shall be polished to a matte suede

finish with 3mm corners as standard. Countertops shall be additionally strengthened with adhesive-applied longitudinal composite wood understructure for mounting to cabinets and supports. Spans shall not exceed 36" without intermediate supports. Acrylic sink bowls shall be factory installed, integral one (1) piece. Solid surface patterns shall be selected from manufacturer's standard color offering.

Solid Surface Countertop design required:

- PS59C: 3R/3R profile edge countertop with applied .5B/0 profile edge backsplash and endsplash.
- PS79C: 3R/3R profile edge countertop with integral coved .5B/0 profile edge backsplash and applied .5B/0 profile edge endsplash.

2.08 STEVENS STANDARD OPTIONS

- 3mm radius cabinet edges in lieu of standard (.020") flat edges.
- Wall top and bottom 1" thick (not available with 3mm cabinet edge option).
- Matching wall bottoms to exterior.
- Matching open interiors to exterior.
- TFL cabinet backs in lieu of prefinished MDF.
- 165 degree pivot concealed overlay hinges.
- 5-knuckle 270 degree pivot overlay hinges.
- Stainless steel 5-knuckle 270 degree pivot overlay hinges.
- Full extension 120# ball bearing slides throughout job in lieu of standard 100# epoxy.
- Plywood ladder base material.
- Special Order Pionite and Nevamar laminates.
- Isolation supports applied in toe base.

PART 3 EXECUTION

3.01 INSTALLATION

- A. The installer shall examine the job site and the conditions under which the work in this section is to be performed and notify the contractor in writing of any unsatisfactory conditions. Do not proceed with work under this section until unsatisfactory conditions have been corrected in accordance with AWI's *Quality Standards Illustrated* (current edition) and Stevens Industries, Inc.'s *Site Conditions*.

- B. Casework, countertops and related materials to be conditioned to average prevailing humidity condition in installation areas prior to start of work.
- C. Install casework and countertops with factory-trained supervision, authorized by manufacturer. Casework shall be installed plumb, level, true and straight with no distortions (shim as required). Casework shall be securely attached to building structure with anchorage devices of appropriate type, size and quantity to meet applicable codes, specifications and safety conditions. Where casework and countertops abut other finished work, scribe and trim to accurate fit, and caulk as required.
- D. Adjust casework and hardware so that doors and drawers operate smoothly without warp or bind. Lubricate operating hardware as needed.
- E. Repair, or remove and replace, defective work as directed upon completion of installation.
- F. Advise project site superintendent of problems and precautions for protection of casework and countertops from damage by other trades until acceptance of the work by the owner.
- G. Cover tops with a satisfactory corrugated material and casework with 4-mil polyethylene film for protection against soiling and deterioration during remainder of construction period.

END OF SECTION