1. PB core is either 1000 or 2000
2. TFL tells me it is in the 2000s. Exterior and interior colors to be matching is key for 2800
3. 3 mm on door and drawer fronts, and flat edge on casebody matches 2800

Section 06 20 00 Finish Carpentry

Part 1 General

1.1 General

Applicable provisions found in the Bid/Contract Requirements and Division 1, General Requirements apply to the Work under this Section.

1.2 Scope

A. The work required under this Specification consists of ready made woodwork, such as is customarily purchased in a ready-to-use form, such as standard pattern wood trim, mouldings, appearance lumber, and other wood construction exposed to view in the finish work that is to be installed by a carpenter.

B. Items of specialized fabrication that are manufactured on a production basis, or are catalog items, such as commercial plastic laminate casework, are specified in 12 32 00 Manufactured Wood Casework and related sections.

1.3 Applicable Standards

A. The Quality Standards of the American Woodwork Institute (AWI) shall apply and, by reference, are made a part of this specification.

B. Millwork materials and workmanship not shown, specified, or normally furnished, as a higher degree of quality shall conform to premium grade requirements of the AWI Quality Standards.

1.4 Delivery and Storage

A. When all millwork items are ready for shipment to the job site, the Architect shall be notified through the Contractor so that the Architect and the Contractor may, if either or both desire, inspect the work in the mill prior to shipment.

B. All materials shall be inspected by the Contractor's superintendent upon receipt at the job site. No faulty or damaged materials shall be received. It shall be the Contractor's responsibility to produce finished items of work in first class condition, free from all defects.

C. No interior millwork shall be delivered until drywall finishing, tile setting and other water has been out of the entire building for at least 10 days.

D. When stored at fabricator's shop or at project site, items shall be stored at temperature and humidity conditions such as will be present when building is occupied (in conditions comfortable to humans). Keep protected from other construction activities such as painting, drywall finishing, etc.

E. No trim shall be delivered or placed until the areas of the building in which the trim is to be placed are thoroughly dry and ready for the trim installation. The building shall be enclosed and heated.

Part 2 Products

2.1 Interior Woodwork

A. Interior woodwork shall be constructed to the quality level of "AWI Premium Grade". All

proposed deviations from this standard shall be clearly shown and labeled as such on the shop drawings.

B. Exposed surfaces indicated as wood shall be as shown on the Drawings, either veneer or solid, as applicable.

2.3 Thickness Of Members

All thicknesses shall be in accordance with the maximum possible dressed size from standard lumber. If widths or thicknesses are not available in hardwood, gluing may be used on widths over 5-1/2" or thicknesses over 1-1/6".

Part 3 Execution

3.1 Assembly and Installation – General

Set components in place, level, true, and plumb. Shim, scribe, trim and plane as necessary. Secure to walls and floors as appropriate.

3.2 Field Assembly

A. The Contractor, when installing items not shop assembled, shall distribute to the best overall advantage the defects allowed in the quality grade specified.

B. Finished surfaces of woodwork shall be left ready for treatment by the painter. The joining and framing of all members of the finished woodwork shall be executed in accordance with the best and latest recognized practices.

C. Continuous moldings shall be in long lengths and miter jointed in running lengths, tight fitted, and perfectly membered.

D. Neatly set all nailheads for putty.

3.3 Post-Installation

A. Thoroughly clean all components.

B. Protect from damage by subsequent construction activities.

C. Replace and/or remedy substandard work. Remedy damage caused due to installation and post-installation damage.

End Of Section

Section 12 32 00 Manufactured Wood Casework

Part 1 General

1.1 General
Applicable provisions found in the Bid/Contract Requirements and Division 1, General Requirements apply to the Work under this Section.

1.2 Scope
The work required under this Specification consists of commercially manufactured casework, custom millwork, countertops and related components as specified herein.

1.3 Work Included
A. Furnish, deliver, and install to Architects satisfaction, all prefabricated plastic laminate casework as shown on drawings, schedules and equipment lists.
B. Furnish and install all fillers, scribes, finished ends, finished backs, work surfaces/backsplashes, and cutouts required to provide a complete and finished project. Plastic laminate work surfaces shall include backer sheet.
C. Provide locks where shown on casework drawings.

1.4 Related Work
A. "Plumbing" as specified in DIVISION 22.
B. "Electrical" as specified in DIVISION 26.

1.5 Submittals
Prior to fabrication, submit to the Architect for approval the following:
1. Complete and fully descriptive manufacturer's literature, the manufacturer's specifications, and a full size sample with hardware.
2. Complete shop drawings including "rough-in" requirements, dimensions, sections, details, descriptions of material and equipment including hardware, and other necessary data for proper construction and connection to adjacent surfaces, fabrication and installation.
3. Physical samples of plastic laminate facing material for color selection.

1.6 Field Measurements
Field measurements shall be taken to verify that the equipment will fit into the designated space. Entryways, corridors and door openings shall be verified to ensure that the equipment be manufactured in a manner to permit it to be moved through properly into place.

1.7 Product Delivery/Storage
A. Protect cabinets and countertops during transit, delivery, storage and handling to prevent damage, soiling, and deterioration.
B. Store cabinets and countertops 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 as painting, wet work, grinding and

similar operations.

1.8 Warranty

A. Casework manufacturer warrants for a period of three (3) years the product manufactured by it to be free from defects in material and workmanship when properly installed under normal use.

B. Accessory equipment (sinks, fittings, etc.) shall be warranted by appropriate manufacturers guarantee.

Part 2 Products

2.1 Approved Manufacturers

Stevens Cabinet Co., Inc., Teutopolis, IL; TMI, Inc., Dickinson, ND; Nolan Products, Inc., Knoxville, TN; LSI Corp., Minneapolis, MN; or approved substitute. The basis for the specification is Stevens Advantage 2800 Designer Series.

2.2 Core Material

PB core is either 1000 or 2000

A. Cabinet components having particleboard core materials shall be minimum 45 lb. – 48 lb. density industrial grade. The particleboard used shall have been tested under ANSI A 208.1 and or ASTM D-1037-91A standards.

B. Medium density fiberboard (MDF) used in high stress areas as drawer members and shall be minimum 48 lb. density and shall have been tested under ANSI A 208.2 standards.

C. Hardboard shall be nominal 1/4" thick, tempered, smooth two sides and shall be minimum 63 lb. density.

2.3 Surface Materials

TFL on exposed and semi-exposed to be color matching. This is the key that differs 2800 series from others

A. Cabinet: All exposed/semi-exposed surfaces shall be color matching thermofused or high pressure laminate. Color and pattern shall be same on both panel faces with balanced construction, and shall be chosen from a full range of WilsonArt or Formica standard finishes. Laminate shall become homogenous, thermofused to core face resulting in a unitized structure. Lamination shall be under precision controlled press cycle using high pressures of 350-400 Pounds per Square Inch (PSI) and thermosetting temperatures of 380-400 degrees F. Resin impregnated decorative faces shall be thermofused and chemically cross linked within laminate face and to core structure. Surface texture finishes to be formed against precision engraved chromed press plates. Laminates shall be tested under National Electrical Manufacturers Association (NEMA) LD3-2005 Vertical Grade GP-28 standards. Laminates shall be warranted for life against delamination. All non-exposed interior surfaces shall be thermofused melamine laminate. It is not a requirement that the non-exposed interior surfaces match the exposed and semi-exposed surfaces.

B. Door and Drawer fronts: Shall be balanced construction, finished entirely in matching high pressure laminate materials on both the fronts and backs or the doors and drawers. While the rest of the exposed/semi-exposed cabinet components may be either color matching thermofused or matching HPL, the door and drawer fronts must be matching high pressure laminate on both sides.

3 mm edge banding on door and drawer fronts aligns with 2800

2.4 Edgings

A. Door and Drawer Fronts: Edges shall have 3mm radius extrusion banding. 3mm pattern selection from Stevens Advantage 3mm Edge Selector. Fronts shall have radius edges and corners applied utilizing automated hot melt adhesive application and trimming.

Flat edge on casebody fits 2800 series

B. Cabinet Edges: Cabinet sides, top, bottom, adjustable shelves, and other interior components shall be edged with (.020") flat edge extrusion. Automated hot melt adhesive application and trimming.

Drawer Components: 3/4" sides shall be edged with (.020") flat edge extrusion. Automated hot melt adhesive application and trimming.

2.5 Hardware

A. Hinges shall be fully concealed type for reveal overlay and permit 176-degree door swing. Hinge crank shall be heavy-duty steel with a concealed integral self-closing spring mechanism and hinge boss shall be heavy-duty die-cast steel. Nylon expansion inserts shall be provided in door for positive screw attachment. Hinge attachment to sides shall employ special 5mm thread fasteners for maximum strength. Hinges shall incorporate mounting features providing three-dimensional adjustment and have the lifetime guarantee as warranted by the manufacturer. Doors less than 48" in height shall have two (2) hinges per door, doors, 40" to 63" in height shall be three (3) hinges per door, and all doors over 63" in height shall have four (4) hinges per door.

B. Door Catches: Shall be heavy duty spring loaded, large diameter (17.5mm) roller catches mounted at door bottom. Doors over 48" shall have catch at both top and bottom. Catch strike plate shall be injection molded with integral molded engagement ridge and wide face bumper door stop.

C. Pulls: Back mounted, easy grip 128mm, 5" long, Matte Nickel.

D. Drawer Slides: Extension slides shall be bottom and side mount epoxy steel slides. Lateral stability achieved through a formed captive slide profile. Slides shall glide on nylon rollers and carry a 100# dynamic load rating. Slides feature both in and out drawer stop with 3" self close and adjustable cam side alignment. Slides shall also be tested under The Scientific Equipment and Furniture Association (SEFA) 6.5 Drawer Cycle Test.

E. 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 (32mm) 1 1/4" spacings. 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 below 27" shall have end 4-point support.

F. Locks: High security 6-tumbler lock system shall be provided where 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 with 250 standard key changes. Each lock provided with a double bit key and face of lock stamped with key number.

2.6 Work Surfaces

A. Countertops shall be high pressure decorative plastic laminate, thermoset to core using catalyzed Polyvinyl Acetate (PVA) glue with minimum average pressure of 80 PSI and average 180 degree F. temperature. Decorative laminate shall meet NEMA LD3-2005 PF-42 (.042") specification standards.

B. Laminate tops shall be 1 1/16" thick with solid particleboard core structures and laminated with backer sheet. Moisture Resistant cores shall be used at all wet locations. 90 degree postform seamless front edge with matching applied backsplash.

C. Backsplashes and endsplashes shall be provided as indicated on drawings and shall be surfaced with same laminate as top.

D. Continuous tops shall be joined with minimum number of splice joints and aligned with tight joint fasteners as required to provide a uniform and gapless joint.

2.7 Component Details & Construction

A. Fronts: Door and drawer fronts shall be 3/4" thick. Fronts shall be edged with 3mm radius edge extrusion with face laminate as described in 2.01.B. Automated hot melt adhesive application and trimming.

B. 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 to 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.)

C. Mounting Frames: Incorporated in wall units, tall units, and base units, shall be 3/4" thick with minimum two (2) dowel pins per mounting frame end joint for wall and tall units. Base units shall have a minimum of three (3) dowel pins per mounting frame end joint.

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 to 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.)

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 a wide top and back frame feature. A wide frame in the flat horizontal plane at cabinet front with minimum three (3) dowels per end joint provides stable squaring of the top area. A second wide frame in the vertical plane

behind back provides stable side-to-side rack resistance. Construction shall provide lateral and vertical stability. Open rear top area allows for easy wall mounting and ease of installation of mechanical services. (Sub tops 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: Separate exterior grade plywood ladder-base. Cabinet sides shall not extend to the floor.
G. Cabinet Backs: Shall be in an integrated system of a 1/4" prefinished Medium Density Fiberboard (MDF) back captured in side and horizontal grooves. Unit back to be further integrated with attachment to 3/4" doweled-in mounting frames. Fixed backs are mechanically fastened into grooves and sealed with hot melt adhesive. Removable backs shall be set in groove and attached with screws.
H. Adjustable Shelves: Shelves shall be 3/4" thick. Shelving shall have end 4-point support for spans under 27". Spans above 27" shall have 5-point support with backs drilled to receive additional mid-span shelf support, reducing deflection under heavier loads.
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 to be Stevens Advantage TF laminated. (Drawers utilizing 1/2" members or with overlay applied bottoms, non-captured groove, or staple joint construction not acceptable.)
J. File Drawers: Shall have formed cold roll 16 gauge metal sides. Sides shall be powder coated and include formed in file hanger rails. Optional cross bar file hanging adapters to be provided where legal or special hanging files are specified. File drawers shall be suspended on full extension ball bearing side mounted slides. Full extension ball bearing suspensions shall be BIFMA 120# load rated slides.

2.8 Custom Millwork and Reception Desks

A. Build all custom millwork items, excluding the casework per AWI Custom grade construction standards.
B. Holes should be routed in the studs of the reception desk for wire management.
C. All vertical grade surfaces should be GP28 premium grade plastic laminate. All horizontal surfaces should be GP50 plastic laminate.
D. All field joints must be laminated to resist moisture and allow for tighter seam installation.
E. Exterior grade plywood should be used at all locations where the custom millwork desk(s) contact the floor.
F. All millwork should be constructed in a climate controlled environment to minimize potential expansion and contraction conditions.
G. All parts should be cut using CNC computer software and machinery to assure consistent part sizes.
H. All glues used should have a minimum of at least 30% rubber contact for increased laminate adhesion.

I. All radiused wood edging, trim, etc. should be laminated wood and not segmented. (if applicable)

J. All wood trim items should comply with AWI custom grade construction standards. Species and stain shall be provided per the architectural drawings and/or finish schedule.

Part 3 Execution

3.1 Coordination

A. The casework manufacturer's representative shall cooperate with the general contractor and with associated trades to coordinate the delivery and installation of this equipment.

B. General conditions indicating readiness for delivery include:
   1. Overhead ceiling work-ductwork, lighting, acoustical ceiling, etc., is complete.
   2. Windows and exterior doors are installed. Building is secured and weathertight.
   3. Air circulation control system is functioning and maintaining relatively constant temperature and humidity conditions closely approximating those to be maintained by the Owner.

C. All paintings shall be completed in the areas in which casework is to be installed prior to such installation. Casework may be installed over finished flooring.

3.3 Installation

A. The casework specified herein shall be delivered to the building in prefinished modular units. It shall be set in place, leveled, secured to walls or floors as necessary, trimmed or scribed to make a neat installation. Installation shall be by the manufacturer or under the manufacturers direct supervision.

B. Remove all debris, dirt, and rubbish and excess material accumulated as a result of the installation of this equipment and leave casework clean and orderly.

3.4 Protection

After installation, casework shall be protected from damage during subsequent construction activities. Damaged casework shall be replaced with new casework at no additional cost to the Owner.

End Of Section