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1.01 Description of Work

- A. Extent of each type of architectural millwork and casework as indicated on drawings. Types of architectural casework shall include both stained and plastic laminated casework.
- B. In-wall blocking and supports for wall hung casework are the responsibility of the General Contractor and/or Owner. The GC and/or Owners shall coordinate the locations of in-wall blocking using the shop drawings provided Architectural casework provider.
- C. Rubber and/or vinyl base molding responsibility of others.

1.02 Summary of Items

Base cabinets.
Wall cabinets.
Shelving units.
Teachers cabinets.
Storage cabinets.
Mail box units.
Cubbie units.
Plastic laminate countertops.
Corian countertops.
Stainless steel countertops.
Finishing of stained casework.
Installation of casework.
Teacher / Storage cabinet 1 3/8" Solid core doors.
Hardware for Teacher / Storage cabinets.

1.03 Quality Assurance

- A. AWI Quality Assurance: Comply with applicable requirements of "Architectural Woodwork Quality Standards" published by the Architectural Woodwork Institute (AWI) and American Laminators Association (ALA), except as otherwise noted.

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- B. Installer Qualifications: Arrange for installation of architectural casework items by same firm which fabricated them. Installers must have a minimum of 5 years experience installing commercial casework items.
- C. Warranty: All architectural casework items subject to a minimum 5 year full warranty against defects in fabrication and installation.
- D. Sample Units: Provide both upper and lower unit including countertop of style casework to be installed. Units can be actual units for the job.

1.04 Submittals

- A. Shop Drawings: Submit (8) sets of shop drawings showing location of each item, dimensioned plans and elevations, large scale details, joinery, attachment devices and other components. All shop drawings shall indicate use of plywood and hardwood at all locations. Particle board shall not be permitted.
- B. Samples: Submit samples of plastic laminate, hardware and one unit of each type of finish.

1.05 Project Condition

- A. Site Access: The General Contractor or Owner shall provide access for vehicle delivery to tailgate delivery area. The storage area provided shall be kept clear of materials from other trades.
- B. Building Finish: Upon delivery of architectural casework to the jobsite, it must be possible to allow complete distribution and commencement of physical installation in the rooms where the casework is designated to be installed.

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2.01 Wood Casework

- A. Definitions: The following definitions apply to wood laboratory casework units.
1. Exposed portions of casework include surface visible when doors and drawers are closed. Bottoms of cases more than 2'-0" above finished floor shall be considered as exposed. Visible shelves and members in open cases or behind glass doors shall be considered as exposed portions.
 2. Semi-exposed portions of casework includes those members behind opaque doors, such as shelves, divisions, interior faces of ends, case back, drawer sides, backs and bottoms and back face of doors. Tops of cases 6'-6" or more above floor shall be considered semi-exposed.
 3. Concealed portions of casework include sleepers, web frames and surfaces not usually visible after installation.
- B. Woods: All woods shall be air-dried, then kiln-dried by the manufacturer to a moisture content of 5 to 6%. Temper kiln-dried lumber to a moisture content of 6 to 8% before use. Woods shall be free of knots and imperfections.
- C. Exposed Materials: Do not use exposed faces of lighter than average color joined with exposed faces of darker than average color. Do not use two adjacent faces which are dissimilar in grain, figure and natural markings.
1. Solid lumber shall be clear, dry, premium grade FAS free from defects and selected for coatible grain and color.
 2. Plywood Face Veneer. Same species as exposed lumber, clear, selected for grain and color compatible with exposed solid lumber, no defects. Provide solid crossbanding without voids. Edgeband exposed edges with solid wood of same species as face veneer. Rotary cut face plies shall not be acceptable. Particle board core shall not be acceptable.

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- D. Semi-Exposed Materials
 - 1. Solid lumber: Dry, sound, selected to eliminate appearance defects. Any species of hardwood, of similar color and grain to exposed portions.

- E. Concealed Members:
 - 1. Solid lumber or plywood. Any species, with no defects affecting strength and utility.
 - 2. Particle board not acceptable.

- F. Glass for Glazed Doors:
 - 1. Provide min. 3/16" thick tempered glass only. All locations.

- G. Glass for sliding doors:
 - 1. Provide min. 1/4" thick tempered glass only.

- H. Transparent Finish:
 - 1. General: Provide complete factory finish to comply with chemical and physical resistance requirements. After installation, touch up or refinish damaged portions equal to original factory finish.

 - 2. Preparation: Sand exposed and semi-exposed components, using matching and hand methods. Machine marks, cross sanding, tool marks, sanding swirls or other surface blemishes are not acceptable.

 - 3. Exposed Portions: Sand finish after each surface treatment. Apply as follows.
 - a. Stain, hand wiped, match color chosen by owner.
 - b. Apply (2) coats of sealer. Sand between each application.
 - c. Apply (2) coats of catalyzed laquer. Sand between each coat to produce smooth, satin luster. Air bubbles, fish eyes nor blush acceptable.

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I. Base Cabinets

1. End panels, dividers, and bottom shelves shall be min. 3/4" thick plywood.
2. Cabinet frames shall be 3/4" thick hardwood. Mortise and tenon construction. Styles shall be a min. of 2" and rails 1 3/4". No doweled or pocket screw frames acceptable.
3. Cabinet backs shall be a min. of 1/4" thick plywood. No hardboard backs acceptable. Backs shall be recessed in 1" from back of header.
4. Provide base cabinets with full-width, adjustable shelves. Shelves to 3/4" thick plywood with 3/4" x 3/4" hardwood nosing. Banded edging not acceptable.
5. Provide pressure treated toe kicks at all base cabinets and other floor mounted units.
6. Provide removable panels allowing access to plumbing chase at all sink and cupboard units, but design to protect interiors from dust or vermin.
7. Drawer boxes: Provide 1/2" thick, 11ply, plywood drawer sides with 1/4" thick plywood bottoms dadoed into drawer sides. Back rail to be 3/4" thick plywood.
8. Drawer front: Provide 3/4" thick, 7ply min. plywood drawer front with hardwood edging.
9. Drawer suspension: All drawers shall utilize a suspension consisting of mechanical slides.
10. Access panels: Provide 1/2" thick plywood panels at all access locations. Provide (4) removable stainless steel screws with finish washers at panels.
11. Chase walls: Chase walls to be constructed using 1 x uprights with 3" diameter access holes drilled for plumbing and electrical. Bottom plate to be 2 x pressure treated pine. Chase wall at island locations to be covered with 1/2" thick plywood at face and 3/4" solid lumber at end caps. See elevation for location of removable access panels.

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- J. Wall Cabinets
 - 1. Same design as base cabinets.

- K. Shelving Units.
 - 1. End panels, dividers, top and bottom shelves shall be 3/4" thick plywood.
 - 2. Cabinet frames shall be 3/4" thick. Design may vary on frame design.
 - 3. Cabinet backs shall be 1/4" thick min. plywood. Backs to be recessed 1" from back of header. Backs shall be dadoed into cabinet headers. Provide 3" wide nail strip at top, middle and bottom of back.
 - 4. Provide 1/4" chamfered edge at all end panels where units adjoin to each other.

- M. Cabinet doors.
 - 1. Provide 9 ply VC plywood doors with banded edges at base and wall cabinets.
 - 2. Provide 1 3/8" solid core doors at teacher / storage cabinets. Hollow core doors not acceptable.

- N. Scribe strips.
 - 1. Provide 1/4" thick solid hardwood trim strips at all locations where base, wall and shelving units adjoin side walls.

2.02 Accessories

- A. Hardware Finish: Provide manufacturer's standard, satin finish on all hardware unless noted otherwise below.

- B. Hinges:
 - 1. Provide one pair for doors less than 4' high and 1 1/2 pair for doors over 4' high. Provide fully concealed self closing 170 degree opening hinge at all casework locations. Blum 916550 or equal.
 - 1. 2 3/4" 5 Knuckle Institutional Hinge suggested at hospital and high traffic areas. Rockford Process 554 or equal.

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2. Provide 3 1/2 x 3 1/2 square corner butt hinge at 1 3/8" thick doors. McKinney or equal.

C. Pulls:

1. Provide at all door and drawer location, one wire pull mounted with two screws fastened from back. Provide two pulls for drawers over 24" wide. Use of pulls design not compatible with the Americans with Disabilities Act (ADA) will not be acceptable. Satin chrome finish.

D. Lever Locksets:

Lever locksets one lockset per 1 3/8" thick doors. Approved manufacturers: Best, Sargent and Yale. Locksets to be commercial grade. Residential locksets not acceptable. Sargent 6500 Series or equal.

E. Drawer guides:

For all drawers provide (2) 3/4 extension drawer runners. A min. of 100 lbs. load capacity. KV 1300 or equal.

F. Drawer and Door locks:

Provide lock cores with removable cylinders for any combination locking system. Provide (5) master key and keying schedule upon completion of casework installation. Timberline Lock series 210 or equal.

G. Adjustable Shelf Standards:

Provide KV 255 alum. shelf standard recessed into cabinet body or;
Optional
Provide 5mm dia. line boring on 32mm centers.

H. Shelf Supports:

Provide KV 256 alum. shelf supports (4) per shelf or,
Optional
Provide twin pin, anti tip shelf supports. 32 mm line bore with double pin reinforced supports tested for over 250 lbs with anti-lift supports to provide a non-tip feature suitable for 3/4" or 1" thick shelving.

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- I. Exposed fasteners.
 - 1. All exposed fasteners to be stainless steel flat head Phillips head screws with stainless steel counter sunk finishing washers.
 - 2. All concrete and wood fasteners used to attach casework to walls shall be covered with either tap caps or snap caps. Color of caps to match casework at close as possible.

2.03 Fabrication:

- A. Fabricate furniture to dimensions, profiles and details shown on the drawings.
- B. Assemble units in the shop in as large of components as practicable to minimize field joining.
- C. Install hardware after final finishing is complete. Adjust and align hardware so that moving parts operate freely and contact points meet. Allow for final field adjustment after installation.

2.04 Countertops:

- A. Architectural counter tops.
 - 1. Grade: Custom
 - 2. Substrate: 3/4" plywood. Particle board not acceptable.
 - 3. Front edging. Provide 3/4" x 1 1/2" front edge.
 - 4. Joints. Countertops to joined together using both biscuits and countertop bolts. Min. of 5 bolts per joint.

3.01 Casework Installation:

- A. Install plumb, level, true and aligned with no distortions. Shim, using concealed shims. Where casework abutts other finished work, scribe and apply filler strips for accurate fit with concealed fasteners. Fit scribe strips to irregularities of adjacent surfaces. Maximum gap openings shall be 0.025".
- B. Workmanship: Abut top and edge surfaces in one true plane, with internal supports placed to prevent any deflection. Provide flush hairline joints in tops using clamping devices.

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- C. Tolerances: Provide joint widths not more than 1/16" wide at any location, filled and flush with abutting edges. Horizontal alignment of top surface of all joints for their entire length shall be within 1/32". Front edges of all abutting pieces shall align.
- D. Verify field dimensions and squareness of adjacent walls prior to installation.

4.01 Cleaning and protection:

- A. Repair, remove or replace any defective work as directed by owner upon completion of installation.
- B. Clean shop-finished surfaces, touch-up and remove or refinish damaged or solid areas, as acceptable to Owner. Clean and polish all cabinets and countertops.
- C. Protection: Protect materials and install casework from damage by work of other trades.
- D. Broom clean all areas where casework installation took place.

End of Section 06400.