SECTION 064000 - ARCHITECTURAL WOODWORK

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. This Section includes the following:

- 1. Custom interior standing and running trim.
- 2. Wood shelving units.
- 3. Solid-surfacing-material countertops and vanity tops.
- 4. Corridor handrails.
- 5. Room mailboxes.
- 6. Wood wall caps.
- 7. Window sills and aprons.
- 8. Shop finishing of interior woodwork and casework, except standing and running trim.
- B. Related Sections include the following:
 - 1. Division 06 Section "Rough Carpentry" for wood blocking, shims, and hanging strips required for installing woodwork and concealed within other construction before woodwork installation.
 - 2. Division 06 Section "Finish Carpentry" for interior carpentry exposed to view that is not specified in this Section.
 - 3. Division 09 Section "Painting" for field finishing of interior standing and running trim and for field finishing of counter brackets.
 - 4. Division 12 Section "Residential Casework" for manufactured stock cabinets and standing and running trim for cabinets, and for postformed countertops.

1.3 DEFINITIONS

- A. Interior architectural woodwork includes wood furring, blocking, shims, and hanging strips for installing woodwork items unless concealed within other construction before woodwork installation.
- B. Exposed Surfaces of Casework: Surfaces visible when doors and drawers are closed, including visible surfaces in open cabinets or behind glass doors.
- C. Semiexposed Surfaces of Casework: Surfaces behind opaque doors or drawer fronts, including interior faces of doors and interiors and sides of drawers. Bottoms of wall cabinets are defined as "semiexposed."
- D. Concealed Surfaces of Casework: Surfaces not usually visible after installation, including sleepers, web frames, dust panels, bottoms of drawers, and ends of cabinets installed directly against and completely concealed by walls or other cabinets. Tops of wall cabinets and tall cabinets are defined as "concealed."

1.4 ACTION SUBMITTALS

- A. General: Submit in accordance with Division 01 Section "Submittal Procedures."
- B. Product Data: For each type of product indicated, including handrail brackets, and finishing materials and processes.
 - 1. Adhesives: Manufacturers' product data for shop and installation adhesives, including printed statement of VOC content.
- C. Shop Drawings: Show location of each item, dimensioned plans and elevations, large-scale details, attachment devices, and other components.
 - 1. Show details full size.
 - 2. Show locations and sizes of blocking, and hanging strips, including concealed blocking and reinforcement specified in other Sections.
 - 3. Show locations and sizes of cutouts and holes for grommets installed in architectural woodwork.
- D. Samples for Initial Selection:1. Shop-applied transparent (stained) finishes.
- E. Samples for Verification:
 - 1. Lumber with or for transparent (stained) finish, not less than 5 inches wide by 24 inches long, for each species and cut, finished on 1 side and 1 edge.

1.5 INFORMATIONAL SUBMITTALS

A. Qualification Data: For Installer and fabricator.

1.6 QUALITY ASSURANCE

- A. Fabricator Qualifications: Shop that employs skilled workers who custom-fabricate products similar to those required for this Project and whose products have a record of successful inservice performance.
- B. Installer Qualifications: An experienced Installer who has completed architectural woodwork similar in material, design, and extent to that indicated for this Project and whose work has resulted in construction with a record of successful in-service performance.
- C. Quality Standard: Unless otherwise indicated, comply with AWI's "Architectural Woodwork Quality Standards, Eight Edition" for grades of interior architectural woodwork indicated for construction, finishes, installation, and other requirements.

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Protect woodwork during transit, delivery, storage, and handling to prevent damage, soilage, and deterioration.
- B. Do not deliver woodwork until painting and similar operations that could damage woodwork have been completed in installation areas. If woodwork must be stored in other than installation areas, store only in areas where environmental conditions comply with requirements specified in "Project Conditions" Article.

1.8 PROJECT CONDITIONS

- A. Environmental Limitations: Do not deliver or install woodwork until building is enclosed, wet work is complete, and HVAC system is operating and maintaining temperature and relative humidity at occupancy levels during the remainder of the construction period.
- B. Field Measurements: Where woodwork is indicated to fit to other construction, verify dimensions of other construction by accurate field measurements before fabrication, and indicate measurements on Shop Drawings. Coordinate fabrication schedule with construction progress to avoid delaying the Work.
 - 1. Locate concealed framing, blocking, and reinforcements that support woodwork by field measurements before being enclosed, and indicate measurements on Shop Drawings.

1.9 COORDINATION

A. Coordinate sizes and locations of framing, blocking, reinforcements, and other related units of Work specified in other Sections to ensure that interior architectural woodwork can be supported and installed as indicated.

PART 2 - PRODUCTS

2.1 MATERIALS

- A. General: Provide materials that comply with requirements of AWI's quality standard for each type of woodwork and quality grade specified, unless otherwise indicated.
- B. Wood Species and Cut for Transparent Finish: Cherry, plain sawn or sliced, no sap wood for exposed surfaces.
- C. Wood Species for Opaque Finish: Any closed-grain white hardwood.
- D. Wood Products: Comply with the following:
 - 1. Medium-Density Fiberboard (MDF): ANSI A208.2, Grade MD.
 - 2. Particleboard: ANSI A208.1, Grade M-2.
 - 3. Hardwood Plywood and Face Veneers: HPVA HP-1, Grade A veneers.
 - a. Veneer Core Construction, All Locations Except as Noted: Veneer core plywood, no voids.
 - 1) 3/4-Inch Thickness: 7 plies.
 - 2) 1/2-Inch Thickness: 5 plies.
- E. Solid-Surfacing Material: Homogeneous solid sheets of filled plastic resin complying with ISSFA-2.
 - 1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
 - a. E. I. du Pont de Nemours and Company.
 - b. Formica Corporation.
 - c. LG Hausys, Ltd.
 - 2. Type: Standard type, unless Special Purpose type is indicated.
 - 3. Colors and Patterns: As selected by Architect from manufacturer's full range.
 - 4. Vanity Sinks: LG Hausys, Ltd., Model 1612, ADA compliant configuration for integral under mount application in vanity tops. Color as selected by Architect.

2.2 CABINET HARDWARE

- A. Hinges for Room Mailboxes: Mortised hinges with US 26D finish; provide two per mailbox.
- B. Grommets for Cable Passage through Countertops: Molded-plastic grommets and matching plastic caps with slot for wire passage; color and size as selected by Architect during Shop Drawing review.
 - 1. Manufacturer: Subject to compliance with requirements, provide products from one of the following:
 - a. Doug Mockett and Co., Inc.
 - b. Outwater Plastics, (800) 631-8375.
- C. 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 (US26D) for brass or bronze base; BHMA 652 for steel base.
- D. For concealed hardware, provide manufacturer's standard finish that complies with product class requirements in BHMA A156.9.

2.3 CABINET ACCESSORY MATERIALS

- A. Counter Bracket Supports: Fabricated of 6063 T-6, T-shaped extruded aluminum; MIG welded along 45 degree miters and along back; pre-punched for 1/4-inch fasteners; provide rubber grommet in 7/8-inch hole; powder coated finish.
 - 1. Size: Varies as required for condition; coordinate with Drawings.
 - 2. Mounting Style: Exposed and concealed mounting; coordinate with Drawings.
 - 3. Product: Rakks, Rangine Corp., Millis, MA.
- B. Brackets for Wood Handrails: Two heavy gage aluminum, adjustable mounting brackets; one for mounting to wall and one for mounting to handrail; sized to provide 1-1/2 inch clearance between handrail and wall.
 - 1. Product: Rakks Handrail Mounting Bracket HR-303; Rangine Corp., Millis, MA.
- C. Mailbox Signage: PVC sheet, 1/8 inch thick, with ADA compliant room number and slot with clear covering for resident's name.
 - 1. Font Style and Size: As selected by Architect.
 - 2. Letterform: Apply 1/32-inch computer precision cut tactile copy. Tactile letters will be applied in a manner that avoids scoring of the sign's surface at base of tactile letters. Coordinate text with Architect.
 - 3. Braille: Use raster process to create all Braille cells. Drill holes in each dot location and fit clear raster balls into each hole.
 - 4. Sheet Color: As selected by Architect.
 - 5. Size: As indicated.

2.4 MISCELLANEOUS MATERIALS

A. Anchors: Select material, type, size, and finish required for each substrate for secure anchorage. Provide nonferrous-metal or hot-dip galvanized anchors and inserts on inside face of exterior walls and elsewhere as required for corrosion resistance. Provide toothed-steel or lead expansion sleeves for drilled-in-place anchors.

2.5 FABRICATION, GENERAL

- A. Interior Woodwork Grade: Provide materials that comply with requirements of the AWI quality standard for each type of woodwork and quality grade indicated and any additional requirements of this Section. When quality grade is not indicated, provide Custom quality grade.
- B. Wood Moisture Content: Comply with requirements of referenced quality standard for wood moisture content in relation to ambient relative humidity during fabrication and in installation areas.
- C. Fabricate woodwork to dimensions, profiles, and details indicated. Ease edges to radius indicated for the following:
 - 1. Corners of Cabinets and Edges of Solid-Wood (Lumber) Members 3/4 Inch Thick or Less: 1/16 inch.
 - 2. Edges of Rails and Similar Members More Than 3/4 Inch Thick: 1/8 inch.
- D. Complete fabrication, including assembly, finishing, and hardware application, to maximum extent possible before shipment to Project site. Disassemble components only as necessary for shipment and installation. Where necessary for fitting at site, provide ample allowance for scribing, trimming, and fitting.
- E. Shop-cut openings to maximum extent possible to receive grommets. Locate openings accurately and use templates or roughing-in diagrams to produce accurately sized and shaped openings. Sand edges of cutouts to remove splinters and burrs.

2.6 CUSTOM INTERIOR STANDING AND RUNNING TRIM FOR TRANSPARENT FINISH

- A. Grade: Custom.
- B. Wood Species and Cut: Cherry, plain sawn or sliced, no sap wood for exposed surfaces.

2.7 WOOD CABINETS FOR TRANSPARENT FINISH

- A. Quality Standard: Comply with AWI Section 400 and additional specified requirements for wood cabinets.
- B. Grade: Custom.
- C. Wood Species and Cut for Exposed Surfaces: Cherry, plain sawn or sliced.
 - 1. Matching of Veneer Leaves: Book match.
 - 2. Veneer Matching within Panel Face: Running match.

2.8 SOLID-SURFACING-MATERIAL COUNTERTOPS AND VANITY TOPS

- A. Grade: Custom.
- B. Solid-Surfacing-Material Thickness: 1/2 inch unless indicated otherwise.
- C. Colors, Patterns, and Finishes: Provide materials and products that result in colors of solidsurfacing material complying with the following requirements:
 - 1. As selected by Architect from manufacturer's full range.

- D. Fabricate tops in one piece to configurations indicated, unless otherwise indicated. Comply with solid-surfacing-material manufacturer's written recommendations for adhesives, sealers, fabrication, and finishing.
 - 1. Fabricate tops with shop-applied edges of materials and configuration indicated.
 - 2. Fabricate tops with shop-applied backsplashes with scribe strip along top and exposed vertical edgess.
 - 3. Fabricate tops with shop installed under mount integral sink bowls.

2.9 CORRIDOR HANDRAILS AND WALL CAPS

- A. Quality Standard: Comply with AWI Section 300, Premium Grade.
- B. Corridor Handrails:
 - 1. Wood Species for Transparent (Stained) Finish: Cherry, plain sawn or sliced, no sap wood for exposed surfaces.
 - 2. Size and Configuration: As indicated.
- C. Wall Caps:
 - 1. Wood Species for Transparent (Stained) Finish: Cherry, plain sawn or sliced, no sap wood for exposed surfaces.
 - 2. Size and Configuration: As indicated.

2.10 WINDOW TRIM

- A. Quality Standard and Grade: Comply with AWI Section 300, Custom Grade.
- B. Window Sills (Stools), Opaque Finish: Any closed-grain white hardwood; fabricate to detail.
- C. Window Aprons, Opaque Finish: Any closed-grain white hardwood; fabricate to detail.
- 2.11 SHOP FINISHING
 - A. Quality Standard: Comply with AWI Section 1500, unless otherwise indicated.
 - B. General: Finish architectural woodwork at fabrication shop as specified in this Section, except as noted. Defer only final touchup, cleaning, and polishing until after installation.
 - 1. Shop apply the prime coat including backpriming, if any, for standing and running trim specified to be field finished.
 - C. Preparation for Finishing: Comply with referenced quality standard for sanding, filling countersunk fasteners, sealing concealed surfaces, and similar preparations for finishing architectural woodwork, as applicable to each unit of work.
 - 1. Backpriming: Apply one coat of sealer or primer, compatible with finish coats, to concealed surfaces of woodwork.
 - D. Transparent Finish:
 - 1. Grade: Premium system for all casework grades.
 - 2. AWI Finish System: Catalyzed polyurethane.
 - 3. Staining: Match approved sample for color.
 - a. Stain for shelving unit sitting on manufactured casework at Entertainment Unit in Community Rooms 153 and 253 shall match manufactured casework.
 - 4. Sheen: Satin, 31-45 gloss units measured on 60-degree gloss meter per ASTM D 523.

E. Opaque Finish: Field finish in Division 09 Section "Painting."

PART 3 - EXECUTION

3.1 PREPARATION

- A. Before installation, condition woodwork to average prevailing humidity conditions in installation areas.
- B. Before installing architectural woodwork, examine shop-fabricated work for completion and complete work as required, including removal of packing and backpriming.

3.2 INSTALLATION

- A. Grade: Install woodwork to comply with requirements for the same grade specified in Part 2 for fabrication of type of woodwork involved.
- B. Assemble woodwork and complete fabrication at Project site to comply with requirements for fabrication in Part 2, to extent that it was not completed in the shop.
- C. Install woodwork level, plumb, true, and straight. Shim as required with concealed shims. Install level and plumb (including tops) to a tolerance of 1/8 inch in 96 inches.
- D. Scribe and cut woodwork to fit adjoining work, refinish cut surfaces, and repair damaged finish at cuts.
- E. Anchor woodwork to anchors or blocking built in or directly attached to substrates. Secure with countersunk, concealed fasteners and blind nailing as required for complete installation. Use fine finishing nails for exposed fastening, countersunk and filled flush with woodwork and matching final finish if transparent finish is indicated.
- F. Standing and Running Trim: Install with minimum number of joints possible, using full-length pieces (from maximum length of lumber available) to greatest extent possible. Do not use pieces less than 60 inches long, except where shorter single-length pieces are necessary. Scarf running joints and stagger in adjacent and related members.
 - 1. Fill gaps, if any, between top of base and wall with plastic wood filler, sand smooth, and finish same as wood base if finished.
 - 2. Install standing and running trim with no more variation from a straight line than 1/8 inch in 96 inches.
 - 3. Wall Caps: Secure with countersunk head wood screws in concealed locations. Install with minimum number of joints practical, using full-length pieces from maximum lengths of lumber available. Do not use pieces less than 24 inches long, except where necessary. Use scarf joints for end-to-end joints.
- G. Corridor Handrails:
 - 1. General: Install rails with no more than 1/8 inch in 96-inch variation from a straight line.
 - 2. Corridor handrails shall be installed to withstand a downward load of at least 200 lbf, when tested according to method in ASTM F 446.

H. Cabinets:

1. Install cabinets with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.

- 2. Maintain veneer sequence matching of cabinets with transparent finish.
- 3. Fasten wall cabinets through back, near top and bottom, at ends and not more than 16 inches o.c.
- I. Countertops: Anchor securely by screwing through corner blocks of base cabinets or other supports into underside of countertop.
 - 1. Align adjacent solid-surfacing-material countertops and form seams to comply with manufacturer's written recommendations using adhesive in color to match countertop. Scribe backsplash to walls. Carefully dress joints smooth, remove surface scratches, and clean entire surface.
 - 2. Install countertops with no more than 1/8 inch in 96-inch sag, bow, or other variation from a straight line.
 - 3. Install countertop brackets specified in Part 2. Painting of bracket specified in Division 09 Section "Painting."
 - 4. Calk space between back of backsplash scribe and wall with sealant specified in Division 07 Section "Joint Sealants."
- J. Touch up finishing work specified in this Section after installation of woodwork. Fill nail holes with matching filler where exposed.
- K. Refer to Division 09 Section "Painting" for final finishing of installed architectural woodwork not indicated to be shop finished.
- 3.3 ADJUSTING AND CLEANING
 - A. Repair damaged and defective woodwork, where possible, to eliminate functional and visual defects; where not possible to repair, replace woodwork. Adjust joinery for uniform appearance.
 - B. Clean, lubricate, and adjust hardware.
 - C. Clean woodwork on exposed and semiexposed surfaces. Touch up shop-applied finishes to restore damaged or soiled areas.

END OF SECTION 064000