

SECTION 06100
ROUGH CARPENTRY

PART 1 – GENERAL

1.01 SUMMARY

- A. This section includes the following:
1. Wood blocking.
 2. Wood nailers, furring and grounds.
 3. Plywood backing panels.
 4. Underlayment materials.

1.02 RELATED WORK

- A. Related Sections Include:
1. See structural drawings for specific framing materials and accessories not specified herein.

1.03 SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product indicated.
1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that materials comply with requirements.

PART 2 – PRODUCTS

2.01 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.
1. Factory mark each piece of lumber with grade stamp of grading agency.
 2. Provide dressed lumber, S4S, unless otherwise indicated.
 3. Provide dry lumber with 19 percent maximum moisture content at time of dressing for 2-inch nominal thickness, unless otherwise indicated.

2.02 WOOD-PRESERVATIVE-TREATED MATERIALS

- A. Preservative Treatment by Pressure Process: AWPA C2 (lumber) and AWPA C9 (plywood), except that lumber that is not in contact with the ground and is continuously protected from liquid water may be treated according to AWPA C31 with inorganic boron (SBX).
1. Preservative treatment material shall be compatible with zinc coated fasteners and framing connectors.
- B. Fire Retardant Treated Lumber:
1. Except as allowed by the governing codes, wood used for framing, blocking, and fire-blocking shall be Fire Retardant Treated.
 2. Manufacturer: Chemical Specialties, Inc. (CSI). One Woodlawn Green, Suite 250, 200 East Woodlawn Road, Charlotte, NC 28217; Telephone: (800) 4218661, (704) 522-0825; Fax: (704) 527-8232; E-mail: productinfo@chemspec.com; Web site: www.treatedwood.com.

3. Fire Retardant Treatment: Manufacturer's proprietary solution for fire retardant treatment of wood. Treatment Testing: Provide D-Blaze FRT wood treatment which has been tested by Underwriters Laboratories, Inc., (UL) of Northbrook, IL, and has been designated UL classification FRS which signifies a flamespread and smoke developed rating of 25 or less. When tested for 30 minutes, there shall be no evidence of significant progressive combustion. Each piece of treated material shall bear a UL classification stamp and meet or exceed requirements for Class 1 or Class A flamespread ratings.
- C. Kiln-dry material after treatment to a maximum moisture content of 19 percent for lumber and 15 percent for plywood.
 - D. Mark each treated item with treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.
 - E. Application: Treat items indicated on Drawings, and the following:
 1. Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
 2. Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
 3. Wood framing members less than 18 inches above grade.
 4. Wood floor plates that are installed over concrete slabs directly in contact with earth.

2.03 DIMENSION LUMBER

- A. General: Of grades indicated according to the American Lumber Standards Committee National Grading Rule provisions of the grading agency indicated.
- B. Non-Load-Bearing Interior Partitions: Construction, Stud, or No. 2 grade and any of the following species:
 1. Mixed southern pine; SPIB.
 2. Eastern softwoods; NELMA.
 3. Northern species; NLGA.
 4. Western woods; WCLIB or WWPA.
- C. Framing Other Than Non Load-Bearing Framing: See structural plans.

2.04 MISCELLANEOUS LUMBER

- A. Provide miscellaneous lumber for support or attachment of other construction, including the following: Plates, Gussets, Clips: Formed Sheet Steel, 16 gauge.06-inch thickness; finish to match framing components.
 1. Blocking.
 2. Nailers.
 3. Furring.
 4. Grounds.
- B. For items of dimension lumber size, provide Construction, Stud, or No. 2 grade lumber with 19 percent maximum moisture content of any species.
- C. For concealed boards, provide lumber with 19 percent maximum moisture content and any of the following species and grades:
 1. Mixed southern pine, No. 2 grade; SPIB.
 2. Eastern softwoods, No. 2 Common grade; NELMA.
 3. Northern species, No. 2 Common grade; NLGA.
 4. Western woods, Construction or No. 2 Common grade; WCLIB or WWPA.

2.05 PLYWOOD BACKING PANELS

- A. Telephone and Electrical Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged, fire-retardant treated, in thickness indicated or, if not indicated, not less than 1/2 inch thick.

2.06 UNDERLAYMENT MATERIALS

- A. Roofing Felt: Asphalt-saturated organic felt complying with ASTM D 226, 30 lb. Asphalt saturated felt, unperforated.
 - 1. Installed in the following locations.
 - a. Install at time roof sheathing is placed

2.07 MISCELLANEOUS MATERIALS

- A. Fasteners:
 - 1. Power-Driven Fasteners: CABO NER-272.
 - 2. Bolts: Steel bolts complying with ASTM A 307, GRADE A; with ASTM A 563 hex nuts and, where indicated, flat washers.

PART 3 –EXECUTION

3.01 EXAMINATION

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- B. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
 - 1. CABO NER-272 for power-driven fasteners.
 - 2. Published requirements of metal framing anchor manufacturer.
 - 3. Table 2304.9.1, "Fastening Schedule," in the International Building Code.
- C. Fastening Methods:
 - 1. Wall and Roof Sheathing: See structural drawings.
 - 2. Decking: Use finishing nails. Countersink nail heads and fill holes with wood filler.
 - 3. Plywood Backing Panels: Nail or screw to supports.
 - 4. Building paper at roofing: Galvanized staples or roofing nails.
- D. Apply building paper and roofing felts shingle lapped with 2-inch overlap and 6-inch end lap. At roofing locations, cover upstanding flashing with 4-inch overlap.

END OF SECTION

SECTION 06200

FINISH CARPENTRY

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Includes but is not limited to the materials and installation of:
 - 1. Fixed and adjustable shelving, including wall standards.
 - 2. Interior wood standing and running trim items.
 - 3. Other items shown or as may be required to complete the Work.

1.02 RELATED SECTIONS

- A. Section 06100 - Rough Carpentry: Treated wood nailers and blocking required for the installation of finish carpentry items.
- B. Section 06415 - Cabinetry and Millwork: Applicable portions of this Section apply to Section 06415 as if repeated therein.
- C. Section 08710 - Finish Hardware: Wood doors to be machined to receive finish hardware items.
- D. Section 09250 - Gypsum Wallboard: Coordination of gypsum wallboard construction with the finish carpentry installations.
- E. Section 09900 - Painting: Finishing of finish carpentry items.

1.03 QUALITY ASSURANCE

- A. Woodworking Standards
 - 1. Design and Construction Features: Comply with details and profiles shown. Where not otherwise shown, comply with applicable AWI Quality Standards, with alternate details at fabricator's option.
 - 2. All shelving shall be manufactured to meet the quality standards of the Architectural Woodwork Institute, AWI Section 600, Premium Grade.
 - 3. All wood trim shall be manufactured and installed to meet the quality standards of the Architectural Woodwork Institute, AWI Section 300, Custom Grade.
 - a. Comply with details shown for profile and construction wood trim and millwork items. Where not otherwise shown, comply with applicable AWI Quality Standards, with alternate details at fabricator's option.
 - 4. Installation of Interior Millwork Items: Comply with requirements of the Architectural Woodwork Institute, AWI Section 1700.
- B. Grading Standards
 - 1. Moisture Content: The maximum moisture content of treated or untreated finish lumber, trim and millwork is not to exceed 10% at the time of delivery.
 - 2. Grading Standards: Softwood framing lumber shall comply with Product Standard 20 and with the specific grading association standards and specifications listed below:
 - a. Southern Pine: Standard Grading Rules for Southern Pine Lumber, published by Southern Pine Inspection Bureau and trademarked SPIB.
 - 3. All plywood shall be manufactured in accordance with U.S. Product Standard PS-10 and grademarked.
 - 4. All board lumber shall comply with PS 20 and grademarked by either of the associations listed in paragraph above.
 - 5. Hardwood lumber shall comply with National Hardwood Lumber Association rules.

1.04 SUBMITTALS

- A. Submit shop drawings for the following:
 - 1. Shelving: Show shelving layouts, shelf spacing and standards anchorage as well as types of anchorages for the substrates involved. Submittals shall also show shelf construction and materials used in manufacture.
 - 2. Standing and running trim shapes, and materials.
- B. Samples – Wood and Flexible Trim: Two (2) samples of each profile, 24" long (moldings and trim), with finish applied.
- C. Submit product data for shelf standards and brackets and clothes rod. Include manufacturer's suggested anchorage requirements.

1.05 PRODUCT DELIVERY, STORAGE, HANDLING, AND PROTECTION

- A. Protect materials during transit, delivery and handling to prevent damage, soiling and deterioration.
- B. Inspect all materials delivered and reject all not qualifying completely with the requirements, damaged in transit or in handling, or otherwise unsatisfactory.
- C. Deliver, store and handle cabinets in a manner to prevent damage and deterioration. Defer delivery to job until the installation and storage areas are complete and dry of all wet-type construction. Relative humidity in storage areas shall be maintained at and shall not exceed 60 percent.

1.06 JOB CONDITIONS

- A. Do not install finish carpentry until required temperature and relative humidity conditions have been stabilized and will be maintained in installation areas.
- B. Maintain temperature and humidity in installation area as required to maintain moisture content of the installed finish carpentry within 1.0% tolerance of optimum moisture content, from date of installation through remainder of construction period.

PART 2 - PRODUCTS

2.01 MATERIALS

- A. Painted Interior Trim Material including door frames and windowsills: Paint grade Poplar, manufactured to sizes, patterns and profiles detailed. Finger jointed material will be acceptable where opaque finish is to be applied.
- B. Plywood: Comply with U.S. Product Standard PS 1, Group 1, Douglas Fir unless otherwise specified or noted. Use exterior grade only, without visible patches or repairs on exposed sides.
 - 1. A-B Grade: Where both faces are exposed.
 - 2. A-C Grade: Where only one face is exposed.
- C. Wood Glue: Waterproof type as recommended by AWI standards for the particular application.
- D. Veneer Plywood
 - 1. Paint Grade Yellow Poplar to match trim or stain grade birch, except at reception counter and check in desk.
 - 2. Stain grade, Red Birch, grade A, quarter sawn, book matched at reception counter and check in desk.
 - 3. Type: A/C.

- E. Adjustable Shelf System
 - 1. Shelf Standards: Bronze colored steel standard; 5/8" wide x 3/16" thick; length as shown in drawings; pre-drilled for screw mounting.
 - 2. Adjustable heavy duty steel shelf brackets. Depth shown in drawings.
- F. Windowsills
 - 1. Paint grade, Yellow Poplar.
 - 2. See drawings for sizes and profile. All windowsill profiles shall be mitered back to wall per the drawings.
- G. Flexible Trim: Flexible, paintable, polyurethane trim, in profiles shown in the drawings, sufficiently flexible to accommodate the required radiuses.
 - 1. As manufactured by Flex Trim by Carter Millwork, or equal product approved by the Architect.
- H. Resilient base: See section 09660 – Resilient Flooring.

2.02 FABRICATION

- A. Woodwork
 - 1. Interior trim shall be "Custom Grade". Trim shall be manufactured from solid stock meeting the following requirements:
 - a. Minor warp which can be held flat and straight with normal nailing.
 - b. Natural and manufacturing defects in excess of those permitted in the grade specified are permitted if such defects are to be covered by adjoining members or otherwise concealed.
 - c. Trim members for application on flat surfaces shall have the reverse side "backed out", except members with exposed ends.
 - d. Custom grade pieces shall be smoothly machined with top flat surfaces machine sanded. Depressed flat surfaces and molded contours shall be smoothly machined.
 - 2. Carefully fit equipment to be installed into millwork. Provide filler pieces when required.
 - 3. Protection: Exposed ends of millwork to be sealed with two coats of spar varnish.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Inspect all materials delivered and reject all not qualifying completely with the requirements, damaged in transit or in handling, or otherwise unsatisfactory.
- B. All finish carpentry shall be executed by skilled mechanics in strict accordance with the details. Protect finish carpentry items against dampness during and after delivery. Store under cover in well ventilated spaces, not exposed to extreme changes in temperature and excess humidity. Make field measurements where required for close fit.
- C. Install with minimum number of joints possible, using full-length material to greatest extent possible. Stagger joints in adjacent and related members. Cope at returns; miter at corners, to produce tight fitting joints with full surface contact throughout the length of the joint. Use scarf joints for end-to-end joints.
- D. Secure work to grounds, otherwise fasten in position to hold correct surfaces, lines, levels. Make finished work flat, plumb, true. As far as possible, conceal fastenings; where not possible locate them in inconspicuous places.
 - 1. Install all woodwork items in accordance with referenced standards; use blind nailing or glue. Any face nails shall be set in and puttied.
 - 2. Screws shall be used for attachment to metal; setting and stopping of screws shall be in the same manner as required where nails are used.
 - 3. Set all nail heads. Counter-sink all screw heads.

- E. Loose Joints: Use judgment in locating loose joints to render them inconspicuous as possible in finished work.
- F. Expansion Joints: Construct to permit sections to expand and contract without buckling, warping, causing other conditions which will detract from appearance, durability.
- G. Flexible trim shall be joined and finished smooth without visible joints.

3.02 CLEANING

- A. At the completion of this work, remove from the job site all excess materials and debris. Leave entire work ready to receive the specified or scheduled finish.

3.03 PROTECTION

- A. Protect finished installations from damage until date of Substantial Completion. Repair or replace any damage at no additional cost to the Owner as directed by the Architect.

END OF SECTION

SECTION 06415

CABINETS AND MILLWORK

PART 1 - GENERAL

1.01 SECTION INCLUDES

- A. Includes but not limited to the materials, manufacture, and installation of:
 - 1. Plastic laminate countertops, aprons, and backsplashes.
 - 2. Plastic laminate faced cabinetry.
 - 3. Custom manufactured cabinetry and millwork.
 - 4. Other items as indicated on the Drawings.
- B. See section 01010 – Summary of Work for Owner Furnished Contractor Installed Cabinets specified herein.

1.02 RELATED SECTIONS

- A. Section 06100 - Rough Carpentry: Treated wood nailers and blocking required for the installation of cabinetry and millwork items.
- B. Section 09250 - Gypsum Wallboard: Completion of the gypsum wallboard installation prior to installation of the cabinetry and millwork.
- C. Section 09660 - Resilient Flooring: Coordination of flooring and base installation with the setting in place of the cabinetry and millwork.
- D. Section 09300 - Tile: Coordination of tile installation with the setting in place of the cabinetry and millwork.
- E. Section 09900 - Painting: Completion of painting operations prior to installing cabinetry and millwork items.

1.03 QUALITY ASSURANCE

- A. Woodworking Standards
 - 1. Design and Construction Features: Comply with details shown for profile and construction of tops and cabinetry. Where not otherwise shown, comply with applicable AWI Quality Standards, with alternate details at fabricator's option.
 - 2. All cabinetry and tops shall be manufactured to meet the quality standards of the Architectural Woodwork Institute, AWI Sections 400, 400-S-4 and 400B, Custom Quality with high-pressure plastic laminate factory finish and transparent, as detailed. AWI Section 400-S-4 shall be used for thickness of materials for cabinet construction.
- B. Installation: Comply with requirements of the Architectural Woodwork Institute, AWI Section 1700.

1.04 SUBMITTALS

- A. Submit copies of shop drawings and technical data and two (2) physical samples of cabinet material and top with finishes applied, to the Architect in accordance with Section 01340. Shop drawings shall show all cabinet/millwork layouts with Room Numbers indicated, materials, construction, joinery, species of wood and finish(es).
- B. Submit plastic laminate color chips for Architect's color selection. Submit millwork samples with transparent finish applied, as directed by the Architect. Submit plastic laminate edge profiles. Submit all hardware exposed to view, including pulls and knobs.

1.05 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle cabinetry and millwork items in a manner to prevent damage and deterioration. Defer delivery to job until the installation and storage areas are complete and dry of all wet-type construction. Relative humidity in storage areas shall be maintained at and shall not exceed 60 percent.

PART 2 - PRODUCTS

2.01 GENERAL

- A. All Cabinetry, Millwork, and Tops shall be factory fabricated and delivered to the job site completely finished with hardware installed. All glue used in millwork manufacturing shall be waterproof, as recommended by AWI for the particular application involved. Cabinetry will be provided with factory applied plastic laminate finish with melamine liner.
- B. Provide cutouts for plumbing fixtures, inserts, appliances, outlet boxes and other fixtures and fittings.

2.02 PLASTIC LAMINATE COUNTERTOPS, APRONS, BACKSPLASHES

- A. Plastic Laminate: Shall be standard grade, 1/16" thick, general purpose material complying with current NEMA Standard and LD-3. Comply with ANSI A161.2. Provide the following:
 - 1. GP 50: Horizontal Grade.
 - 2. GP28: Vertical Grade.
 - 3. CL 20: Cabinet Liner.
 - 4. BK 20: Backing Sheet.
 - 5. PF-40: Post Forming Grade.
 - 6. FR 32: Vertical application, fire retardant material.
- B. Plastic Laminate Acceptable Manufacturers
 - 1. Formica Corporation
 - 2. WilsonArt International, Inc.
 - 3. Laminart
 - 4. Nevamar/International Paper Decorative Products
 - 5. Pionite/Pioneer Plastics Corporation
- C. Core
 - 1. Shall be Particleboard, complying with ANSI A208-2, 45-lb. density, minimum 3/4" thick fire retardant type, formaldehyde free binders, in accordance with ASTM E84 and the following:
 - a. Flame Spread: 25 maximum
 - b. Smoke Developed: 25 maximum
 - c. Fuel Contributed: 25 maximum
- D. Adhesives
 - 1. Wood Glue: Waterproof types as recommended by AWI standards for the particular application.
 - 2. Plastic Laminate: Provide one (1) of the following products subject to conformance with the requirements specified.
 - a. Non-Flammable:
 - (1) "DAP Weld-Wood, Non-Flammable Type" - DAP, Inc.
 - (2) Molded Trim Adhesive - As recommended by molding manufacturer for intended use.
- E. Where shown, countertops shall have 3/4" x 4" high separate matching backsplash and matching aprons.
- F. In locations as required by local codes or ordinances, provide fire retardant countertop assemblies, as tested in accordance with ASTM E 84.

2.03 WOOD CABINETRY WITH PLASTIC LAMINATE FINISH

- A. General: Cabinet interiors shall have melamine surface on interiors. Drawer heads and door backs shall have BK-20 backing sheet.
- B. Hardwood Plywood: ANSI/HPMA HP hardwood and decorative plywood, Good Grade (1) or better, of thickness, species, cut, and core construction indicated.
- C. Hardwood Lumber: Clear, dry, sound, and free of defects selected from First Grade lumber (NHLA), of species indicated.
- D. Hardboard: ANSI A135.4, Class 1, tempered.
- E. Solid Lumber: Dry, sound, selected to eliminate appearance defects, of any species of hardwood or softwood with color and grain characteristics similar exposed portions
- F. Plastic Laminate: As specified under Paragraph 2.02 A and B. Provide on all exposed faces, edges and ends.
- G. Style of face construction for base, wall, and full-height units, if any, with drawer fronts, doors, and fixed panels as follows:
 - 1. Reveal overlay design or as shown on Drawings.
 - 2. Door Construction: Lumber core plywood, 5-ply with hardwood face veneer and crossbanding.
 - 3. Drawer Front Construction: Same as door or, where standard with manufacturer, solid or glued-up lumber, not less than 1/2" thick.
- H. Construction for face frame style casework as follows:
 - 1. Rails and Stiles: Not less than 1-inch by 1-5/8 inch solid lumber with glued mortise and tendon joints.
 - 2. Exposed Ends: Not less than 1/2 inch thick, medium-density particle board core with exterior veneer to match door and drawer fronts and not less than 4-mil vinyl laminate on interior surfaces. Connect to stile with pressure-glued tongue and plow joint and supplement by concealed mechanical fasteners.
 - 3. Unexposed Ends: Not less than 1/2 inch thick, medium-density particle board with not less than 4-mil prefinished vinyl laminate on interior surfaces. Attach to front frame in same manner as exposed ends.
 - 4. Back, Top, and Bottom Rails: Not less than 3/4 inch by 3 inch solid lumber, machined to interlock with end panels, and rabbeted to receive top and bottom panels; with back rails secured under pressure with glue and mechanical fastening devices.
 - 5. Shelving: Not less than 5/8 inch thick particle board core plywood or 1/2 inch thick medium-density particle board prefinished with melamine finish on top, bottom, and exposed (front) edge.
- I. Construction for wall units with doors and fixed panels as follows:
 - 1. Tops and Bottoms: Not less than 1/2 inch thick particle board or 3/8 inch thick hardwood plywood, fully supported by and secured in rabbets in end panels, front frame, and back rail. Provide with melamine finish on cabinet interior.
 - 2. Backs: Not less than 1/8 inch hardboard or 3/16 inch plywood with melamine finish, fastened to machined rear edge of ends and to top and bottom hanger rails.
- J. Construction for base units with doors and fixed panels as follows:
 - 1. Front Frame Drawer Rails: Not less than 1 inch by 1-1/4 inch lumber mortised and fastened into face frame.
 - 2. Bottoms: Not less than 1/2 inch thick particle board with melamine finish or 3/8 inch thick, 5-ply veneer core plywood with melamine finish, fully supported by and secured in rabbets in end panels, front frame, and back bottom rail.
 - 3. Back Panels: Not less than 1/8 inch thick hardboard fastened to machine rear edge of end panels and to top and bottom rails. Interior surface shall be melamine.
 - 4. Toe Boards: Not less than 5/8 inch particle board core attached between end panels and extended from bottom panel to floor.
 - 5. Corner Blocks: Glued and fastened in each of four top corners to maintain cabinet squareness and rigidity.

K. Construction for drawer units as follows:

1. Drawer Body: Not less than 3/8 inch thick with melamine finish subfront, back, and sides. Provide box-type construction with subfront and back rabbeted into sides and secured with glue and mechanical fasteners. Exposed fronts fastened to subfront with mounting screws from interior of body. Drawer bottom of not less than 1/4 inch thick hardboard, set into rabbets in back, sides, and front.

L. Millwork Hardware Manufacturers

1. Grant Hardware Company (Grant).
2. The Engineered Products Company (EPCO).
3. Grass America Inc. (Grass).
4. Häfele America Company (Häfele).
5. Knappe & Vogt Manufacturing Company (K&V).
6. Liberty Hardware Mfg. Company (Liberty).
7. National Lock Cabinet Hardware (National).
8. Stanley Hardware, Div. of the Stanley Works (Stanley).
9. Universal Industrial Products Company (SOSS).

M. Hardware Items

1. Door and drawer pulls: Hickory Hardware P9720-10B, 3-1/2" centers.
2. Knobs: Hickory Hardware K344-10B, 1-1/4" knobs.
3. Magnetic catches: EPCO; #560.
4. Concealed cabinet hinges:
 - a. 95° self-closing 3D type, zinc die cast with cover caps: Häfele; Duomatic 329.01 Series.
 - b. 165° self-closing 3D type, zinc die cast with cover caps: Häfele; Duomatic 329.07 Series.
 - c. Mortised concealed hinges: SOSS Invisible Hinge.
5. Drawer slides, side mount: Accuride; Model 3837, full extension, 100 lb. capacity.
6. Accessories: Bolts, nuts, washers, screws, toggle bolts, and fasteners indicated or required to attach and secure work under this section.

N. Hardware Finishes: Coordinate finishes of exposed cabinet hardware with adjacent finish hardware as specified in Section 08710.

2.04 FABRICATION

A. General

1. Shop assemble casework for delivery to site in units easily handled and to permit passage through building openings.
2. When necessary to cut and fit on site, provide materials with ample allowance for cutting. Provide trip for scribing and site cutting.
3. Provide cutouts for plumbing fixtures, inserts, appliances, outlet boxes, and other fixtures and fittings.

B. Woodwork

1. Construction shall be "Custom Grade":
 - a. Natural and manufacturing defects in excess of those permitted in the grade specified are permitted if such defects are to be covered by adjoining members or otherwise concealed.
 - b. "Custom grade" pieces shall be smoothly machined with top flat surfaces machine sanded. Depressed flat surfaces and molded contours shall be smoothly machined.
2. Carefully fit equipment to be installed into millwork. Provide filler pieces when required.
3. Protection: Exposed ends of millwork to be sealed with two coats of spar varnish. See Section 09900 - Paints and Coatings.

C. Plastic Laminate Work

1. Self edge tops with same grade of laminate as top surface unless indicated otherwise.
2. Counters and work tops with sinks: Apply trim and edging prior to surface sheet. Substrate for back splashes and at edges shall be trimmed lumber. Use only exterior grade or marine grade Plywood near wet areas. All adhesives used near water shall be formulated to be specially water resistant.

3. Apply veneers or plastic laminate finish in full uninterrupted sheets consistent with manufactured sizes. Make corners and joints hairline. Locate counter butt joints minimum 2 feet from sink cut-outs.
4. Apply laminate backing sheet to reverse side of plastic laminate finished surfaces, where shown on Drawings.

PART 3 - EXECUTION

3.01 INSTALLATION

- A. Installation of all cabinetry and millwork items shall comply with the Quality Assurance section of this specification.
- B. Cabinetry and millwork items shall be mounted and set into place in accordance with the approved shop drawings. All work shall be straight, plumb, level and in true alignment. Fit all joints closely and fasten all pieces rigidly in place. Coordinate installation of cabinetry with Owner-provided items/appliance installations.
 1. Use threaded steel concealed joint fasteners to align and secure adjoining cabinet units and counter tops.
 2. Carefully scribe casework which is against other building materials, leaving gaps of 1/32 inch maximum. Do not use additional overly trim for this purpose.
 3. Secure cabinet and counter bases to floor using appropriate angles and anchorages.
 4. Countersink anchorage devices at exposed locations used to wall-mount components, and conceal with solid plugs of species to match surrounding wood. Finish flush with surrounding surfaces.
- C. All hardware shall be demonstrated to operate properly. Drawer units shall slide freely without bind. Doors shall remain open in any position beyond the closing mechanism of the hinges.

3.02 ADJUSTING AND CLEANING

- A. Adjust doors, drawers, hardware, fixtures and other moving or operating parts to function smoothly and correctly.
- B. Clean casework, counters, shelves, hardware, fittings and fixtures.
- C. Clean surfaces of plastic laminate with a damp cloth or ordinary bar soap and water. Harsh abrasive cleansers shall not be used. Stubborn dirt may be removed with lacquer thinner, methlethyl Ketone, contact adhesive solvents or cleaner waxes.

3.03 PROTECTION

- A. Completed installations shall be protected from damage until the Date of Substantial Completion. Cabinet work, millwork and other items damaged prior to Date of Substantial Completion shall be repaired or replaced at no expense to the Owner.

END OF SECTION