

STANDARD SPECIFICATION
JANUARY 2010

DIVISION 6

SECTION 6B - FINISH CARPENTRY

6B.01 GENERAL: Comply with all of the Contract Documents.

6B.02 SCOPE OF WORK: Refer to "Division Scope of Work"

6B.03 WORK NOT INCLUDED

- A. The following items are excluded from the work of this Section:
1. Providing kitchen cabinets, vanity cabinets and counter tops by Section 11B.
 2. Providing medicine cabinets by Section 11A.
 3. Providing cutouts for sink, by Section 11B and Section 15B.
 4. Wood doors, by Section 8B

6B.04 GENERAL

- A. This section specifies interior finish millwork.
- B. Items specified:
1. Wood moldings (base, cove, crown, trims, etc.)
 2. Wood shelving and cleats
 3. Closet poles
 4. Wood handrail
 5. Partition caps
 6. Pass thru window
 7. Wood grounds
 8. Window stools
 9. Aprons
 10. Flooring
 11. Wood stairs

NOTE: See Architect Drawings for design items not listed above

6B.04 REFERENCES

- A. All work of this Section shall comply with the applicable provisions of the "Architectural Woodwork Quality Standards, Guide Specification and Quality Certification Program" of the Architectural Woodwork Institute (AWI), except as otherwise specified herein.

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B. Applicable publications:

1. The publications listed below form a part of this specification to the extent referenced.
 - a. American Society of Testing and Materials (ASTM)
 - b. American Hardboard Association (AHA)
 - c. Builders Hardware Manufacturers Association (BHMA)
 - d. Hardwood Plywood and Veneer Association (HPVA)
 - e. American Wood-Preservers Association (AWPA)
 - f. National Electrical Manufacturers Association (NEMA)
 - g. U.S. Department of Commerce, Product Standard (PS)

6B.05 MATERIALS

A. General:

1. The grade of materials shall be as defined by the rules of the recognized association of lumber manufacturers producing the material herein specified.
2. Finished carpentry shall not be delivered to the job site, until buildings are enclosed, partitions and walls are ready for painting or at such time, as approved by Architect/Engineer.
3. Moisture content of finish lumber and millwork at time of delivery to site.
 - a. Interior finish lumber, trim, and millwork 1 1/4" or less in nominal thickness: 12% (percent) on 85 % (percent) of the pieces and 15 % (percent) on the remainder.
 - b. Exterior treated or untreated finish lumber and trim 4" or less in nominal thickness: 15 % (percent)
 - c. Moisture content of other materials shall be in accordance with the standards under which the products are produced.
4. All paintable woodwork shall be free from defects or blemishes on surfaces exposed to the view.

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5. Lumber or environmentally responsible materials for various items of millwork shall be in accordance with the following schedule.

B. Schedule of Materials:

<u>ITEM</u>	<u>GRADE</u>	<u>KIND</u>
Interior Miscellaneous Finish Carpentry (base, cove, crown moldings, trims, etc.)	No.2 Common	White Pine or and Yellow Poplar
<u>Or *</u>		
Interior Miscellaneous Finish Carpentry (base, cove, crown moldings, trims, etc.)	Interior industrial grade, formaldehyde and emission free	MDF, Low-VOC pre-primed moldings
Shelving and Cleats	No.2 Shelving	White Pine, Ponderosa or Poplar - 3/4" thick ~ 12" deep**
<u>Or *</u>		
Shelving and Cleats	Exterior industrial grade, formaldehyde and emission free	3/4" thick MDF board, laminated with white melamine both sides and front edge, ~ 12" deep**
<u>Note:</u>	<ul style="list-style-type: none"> - * - See Architect Drawings & Finish Schedule - ** - See Architect Drawings for Details - Closet Maid's shelving system or equal may be used, subject to Architect's/Engineer's approval. 	
Closet Poles	Fir	1 3/8" diameter with heavy-duty pole/shelf bracket
Wood handrails and partition caps	Select	White Oak
Grounds	Merchantable	Spruce
Base, Trim, Stools Aprons	No.1 Common	White Pine

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Flooring	Un-Finished No.2 Common tongue and groove 3/4" x 2 1/4"	Red Oak (WFI and/or NOFMA Certified)
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OPTIONAL: (See Architect Drawings & Finish Schedule)

Flooring I	Un-Finished Or Pre-Finished solid strip Bamboo flooring 3/4" x 3 5/8" (Vertical grain) manufactured by Teragren ® or approved equal	Flat Natural or Flat Caramelized as selected by Architect (See Finish Schedule)
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Flooring II	Pre-Finished solid tongue and groove 3/4" x 2 1/4" or 3/4" x 3 1/4", manufactured By Mohawk Hardwood Flooring or approved equal	Red/White Oak (WFI and/or NOFMA Certified). Finish as selected by Architect (See Finish Schedule)
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Flooring III	Engineered, pre-finished 9/16" x 3" or 9/16" x 5" oak laminated, manufactured by Mohawk Hardwood Flooring or approved equal	Matte aluminum oxide finish: Natural Oak, Honey Oak, Cocoa Oak as selected by Architect (See Finish Schedule and installation details)
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Wood Stairs (if applicable):

Outer, inner and center carriage	No. 1 common	Spruce
Stringer 2" thick.	Select B	White Pine
Treads 1 1/4" thick.	Select B	White Oak
Risers 3/4" thick.	Select B	White Pine

6B.04 MISCELLANEOUS REQUIREMENTS

A. General Utility Items:

1. Wood for support or attachment of other finish work shall be No.2 Common Grade of any (WWPA) Western Wood Products Association or No.2 Southern

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Pine Boards of any Standard Grading Rules for Southern Pine Lumber, published by the (SPIB) Southern Pine Inspection Bureau.

B. Anchorage and Fastening Materials:

1. Select proper type, size, material and finish for each application.

C. Priming:

1. All surfaces of millwork installed under this section that will be concealed in the finish work, shall be back primed.

6B.05 INSTALLATION AND WORKMANSHIP

A. Finished woodwork shall be:

1. Dressed and sanded.
2. Free from machine and tool marks, abrasions, raised grain, or other defects on surfaces exposed to view in the finished work.

B. Joints:

1. Joints shall be tight and formed as to concealed shrinkage.
2. Mortise and tendon joints shall be set up in glue with wedges, and may be pinned for interior work.
2. Shop joints for interior work shall be set in hot glue under pressure;
 - a. Joints on internal angles shall be copped joints.

C. Remaining finish shall have minimum number of splices and where these occur they shall be beveled and jointed where solid fastenings are inside.

D. All nails heads in finished work shall be sunk with a nail set. Screws in finished work shall be counter-sunk.

E. All work shall be left clean, free from warp, twist, open joints and other defects.

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F. General:

1. Coordination;
 - a. Obtain measurements and verify dimensions shown and shop drawing details before proceeding with carpentry work.
 - b. Correlate location of furring, nailers, blocking, grounds and similar supports so that attached work will comply with design requirements.
 - c. Measurements: Before proceeding with wood work required to be fitted to other construction, obtain measurements and verify dimensions and shop drawings details as required for accurate fit.
2. Timely delivery and installation of carpentry work to avoid delaying other trades whose work is dependent on or affected by the carpentry work, and to comply with protection and storage requirements.
3. Examine all parts of the supporting structure and the conditions under which the carpentry work is to be installed, and notify Architect/Engineer in writing of any conditions detrimental to the proper and timely completion of the work. Do not proceed with the installation until unsatisfactory conditions have been corrected in a manner acceptable to the installer.
4. Keep carpentry materials dry during delivery. Store lumber and plywood in stacks with provision for air condition through stacks. Protect bottom of stacks against contact with damp or wet surfaces. Protect exposed materials against weather.
5. Do not store dressed or treated lumber or plywood outdoors. Store materials for which a maximum moisture content is specified, only in areas where relative humidity has been reduced to a level where specified moisture content can be maintained with a tolerance of plus or minus 1%.
6. Adhere to heating or cooling requirements for installation areas and for maintaining required temperature until owner's acceptance of the work.
7. Protect installed work from damage by work of other trades until owner's acceptance of the work. Adhere to required protection procedures.
8. For installation of architectural woodwork and finished carpentry items, employ only tradesmen experienced in the fabrication and installation of architectural woodwork.
9. This section shall do all cutting and fitting, drilling and taping of other work as required to secure or otherwise construct the work included herein, and do all

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cutting and fitting of carpentry and millwork as required for the work of other trades.

10. Broken or damaged millwork shall not be used in the work, and shall be removed and replaced if damaged after installation.
11. This Section shall furnish and apply all rough hardware such as nails, screws, bolts, rods, anchors and other items, as well as all metal fastenings of any nature, for the proper fastening or installation of all items of work under this Section.
12. Fastenings to concrete and other masonry for attachment to metal studs, for wood grounds, furring and other engaging woodwork shall be of an approved type. Do all required drilling.
13. Wood finish shall be set straight, plumb, and level, in true alignment, a nail set and screws shall be countersunk.
14. All work shall be left clean, and free from warp, twist, open joints and other defects.

G. Receiving and Installation of Kitchen Cabinets:

1. This Section shall receive at tail end of truck, protect, distribute and erect in place complete including countertops, and prefabricated kitchen cabinets, scribe and other loose moldings and fillers.
2. This Section shall coordinate with Section 6A for all necessary wood grounds and blocking to secure the work of this Section in place.
3. All cabinets shall be erected straight, level and plumb and shall be rigidly and securely anchored in place to proper grounds or blocking by screws, bolts etc.,. Doors and drawers shall open and close without binding.
4. All work shall be fully and adequately protected against damage of any action. At completion of the entire work, the cabinets, countertops and shelving shall be undamaged and in perfect condition and any part or parts not meeting this requirement shall be replaced or repaired as directed by the Architect/Engineer. Damaged cabinets, as determined by Architect/Engineer, shall not be installed.

H. Installation of Trim and Molding, Window Stools:

1. Install single length of molding with out any joints, for openings and for runs less than 10'. For runs longer, use no piece less than 10' in any straight run. Stagger joints in adjacent members.

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2. Cope moldings at returns and miter corners.
3. Trim shall be installed tightly against walls, floors, ceilings etc.
4. Fill all excessive spaces between trim and mounting surface to the satisfaction of Architect/Engineer, when existing conditions prohibit a snug fit.
5. Attach woodwork securely in place with uniform joints providing for thermal and building movements.
 - a. Nailing: Blind nail where possible. Use fine finishing nails where exposed. Set exposed nail heads for filling, except for exterior wood which is to receive a natural finish (if any).
 - b. Anchoring: Secure woodwork to anchors or blocking built-in or directly attached to substrates.

I. Closet Shelving and Closet Poles:

1. Trim all shelving in a neat and workmanlike manner. Remove all rough edges.
2. All shelves shall be supported on shelf cleats across the entire back and both ends. Shelves shall be securely anchored in place. Cleats shall be mechanically fastened as shown on drawings.
3. Hook strips shall extend across the back of closets and be returned at end.
4. Location, width and number of shelves shall be as shown on drawings.
5. Shelves may be either of one solid width of board or be of two or more widths and glued together and fastened with crimped galvanized toothed sheet metal connectors.
6. Clothes poles shall be supported mid-length for lengths greater than 5'-0" with shelf and rod support No.1195 as manufactured by Knape and Vogt. Replace any warped, bent, twisted, split or rough poles. Clothes poles supported at each end with pole sockets No.735&734 as manufactured by Knape and Vogt Hardware or approved equal.

J. Finish Wood Flooring:

1. Finish wood flooring installation shall be provided according Installation Manual and Nailing Schedule by the NOFMA (the Wood Flooring Manufacturers Associations)

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2. With plywood sub-floor, start installation of the finish wood flooring by re-nailing any loose areas and sweeping the sub-floor clean.
3. Cover sub-floor with a good grade of 15 lb. asphalt felt/building paper, lapped 2" – 4" along the edge seams.
4. Direction of finish flooring should be at right angle angles to the joists. This is generally should be the longest dimension of the room.
5. Installation of the flooring shall begin along the longest continuous wall, parallel to the flooring directions of most rooms.
6. Provide ¾" expansion space between starting wall and flooring. Lay the first strip along starting line, tongue out, pre-drill and drive 6d or 8d flooring nails or casing nails 1" from the grooved edge. Nails should be driven into the top surface of strips and counter sunk. All blind nailing shall be done according "NOFMA Nailing Schedule". Continue installing across the room, ending up on the far wall with the same ¾" expansion space as on the beginning wall.
7. Flooring strips shall run continuously trough doorways into adjoining rooms, without thresholds. End pieces shall be ½" of the end wall.
8. Entire flooring shall fit perfectly side-by-side and end-to-end. End jointing should be staggered, so as to avoid having two or three joints clustered together.
9. Scraping and sanding must be done after all other interior work is completed.
10. Floors shall be swept clean.
11. Sanding machine shall be traversed several times across floor, working the first traverse across the grain and then lengthwise with the grain. The floor shall then receive a final buffing or cleaning with fine sandpaper.

K. Wood Base:

1. Wood base shall be 3 1/2" high, "clam shell" type, spruce or white pine with 1" radius quarter round molding at junction of base and floor. End Joints shall be butt or scarf. Cope base at returns and miter corners.

L. Installation of Finish Hardware:

1. Finish hardware shall be furnished as specified herein under the Section 8D "Finish Hardware".
2. No finish hardware shall be installed in the building, until all doors and frames receive finish coat of paint.

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3. Finish hardware shall be installed in accordance with manufacturer's printed instructions, and adjusted for smooth operation.
 4. Use proper tools and methods to prevent scratches, burns or other defacements.
 5. Locate hardware, as follows:
 - a. Hinges; Top hinge 5 inches from jamb rabbet to top edge of barrel.
Bottom hinge 10 inches from bottom edge of barrel to the finished floor.
Intermediate hinge centered between top and bottom hinges.
 - b. Knobs and Levers; Centerline 3'-2" from finished floor. 4'-0" for doors with armor plate.
 - c. Exit Devices; Centerline of cross bar 3'-1" from finished floor.
 - d. Deadlocks; Centerline of cylinder 4'-0" from finished floor.
 - e. Push Plates; Centerline 4'-0" from finished floor.
 - f. Door Pulls; Centerline 3'-2" from finished floors.
 - g. Push Bars; Trough bolted to top (or both ends) of door pull.
 - h. Kick Plates; 1/8 inch from door bottom.
 6. Post installation inspection: Architect/Engineer representative shall inspect installed hardware and request any corrections required due to errors or improper installation.
 7. After installation, all hardware shall be protected with cloth or paper to prevent damage during remaining construction. After protection removed, tag, label all keys and deliver them to the Management / or Architect/Engineer upon completion of construction work.
 8. When directed by Architect/Engineer within one (1) year after the completion of the contract, the Contractor shall return to the building and adjust and refit doors and hardware as required, and leave all items in satisfactory working order.
 9. Install key cabinet where directed. Cabinet supplied by Section 8D.
- M. Wood Stairs (If required):

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1. Stairs shall be designed to support a live load of not less than 100 pounds per square foot and shall not sag, squeak or sway when in use.
2. Closed stringers (against wall) shall be accurately cut to receive treads and risers with provisions for wedges. Face stringers and ends of risers at this location shall be mitered. The face stringer shall be covered with sheet metal (kalamein) or treated with fire retardant chemical.
3. Risers and treads shall be tongued and grooved together.
4. Risers shall not exceed 7 1/2 inches and run less than 10 inches.
5. Stairs shall be solidly secured in place. Wedges shall be used where treads and risers are housed into stringers. Wherever possible nailing shall be concealed. Exposed nails shall be finished or casing type with heads set for "Putty Stopping".
6. The contractor has the option to have a center carriage or blocking at intersection of riser and tread. If blocking is used it shall be screwed in place.
7. The existing metal work balusters face plate, etc. (where existing is to remain) shall be scraped clean of all rust and loose paint. Paint with metal primer and finish coat.
8. Where new balustrade is required it shall have a top and bottom channel shaped bar, 1" x 1/2". Balusters shall be 1/2" solid steel square bars, spaced 5" o.c., welded to top and bottom channel shaped bar of balustrade. A 2" diameter oak handrail shall be attached to top baluster channel shaped bar.
9. Face plate shall be firmly secured to outer stringers.
10. Paint all exposed wood surfaces with wood primer and finish coat.
11. Stair Covering:
 - a. Provide new vinyl composition floor tile at all risers and treads.
 - b. The installation of tile and adhesive used shall be in conformance to manufacturer's recommendations.
 - c. Treads shall be finished with approved type non-slip nosing.

NOTE: THE CONTRACTOR HAS THE OPTION TO INSTALL HEAVY DUTY MOLDED RUBBER STAIR TREADS AND RISERS. SEE ARCHITECT DRAWINGS FOR DETAILS.

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12. Gypsum Board:

- a. Provide at the underside of stairs 5/8" 1 hour rated gypsum board. All four edges of gypsum board shall have bearing in wood members.

6B.06 SAMPLES AND CERTIFICATIONS

- A. Submit samples and certifications for all work provided under this section.

6B.07 GUARANTEES

- A. Guarantee all items of work furnished and installed under this Section for (1) one year, in addition to manufacturer's standard warranties. All guarantees to be from the date, when **Final Certificate of Occupancy** is issued from Department of Buildings.

END OF SECTION