

SECTION 06100
ROUGH CARPENTRY

PART 1 - GENERAL

1.01 PROVISIONS INCLUDED

- A. The general provisions of the Contract, including General and Supplementary Conditions and Division 1 - General Requirements, apply to work specified in this Section.

1.02 SUMMARY

- A. This Section includes the following:
 - 1. Wood nailers and blocking for attachment of roofing.
 - 2. Wood nailers and blocking for attachment of support of other work.
 - 3. Backing panels for support of telephone, electrical, and communication equipment.
- B. Related Work Specified in Other Sections:
 - 1. Plywood underlayment in floor of elevator cab: Section 14240.

1.03 REFERENCED STANDARDS

- A. U. S. Department of Commerce Product Standards:
 - 1. PS 1, "U. S. Product Standard for Construction and Industrial Plywood."
 - 2. PS 2, "Performance Standard for Wood-Based Structural Use Panels."
 - 3. PS-20, "American Softwood Lumber Standard."
- B. American Plywood Association Standards:
 - 1. APA PRP-108, "Performance Standards and Policies for Structural-Use Panels."
 - 2. APA E30, "Design/Construction Guide - Residential and Commercial."
- C. Inspection Agencies, Abbreviations used:
 - 1. SPIB - Southern Pine Inspection Bureau.
 - 2. WWPA - Western Wood Products Association.
 - 3. WCLIB - West Coast Lumber Inspection Bureau.
- D. American Wood Preservers Association:
 - 1. AWWA C2: Lumber, Timbers, Bridge Ties and Mine Ties - Preservative Treatment by Pressure Process.
 - 2. AWWA C9: Plywood - Preservative Treatment by Pressure Process.
 - 3. AWWA C20: Structural Lumber - Fire-Retardant Treatment by Pressure Process.
 - 4. AWWA C27: Plywood - Fire-Retardant Treatment by Pressure Process.
 - 5. AWWA M4: Standard for the Care of Preservative Treated Wood Products.

1.04 SUBMITTALS

- A. Product data for metal framing anchors and construction adhesives.

- B. Wood treatment data as follows including chemical treatment manufacturer's instructions for handling, storing, installation, and finishing of treated material:
1. For each type of preservative treated wood product include certification by treating plant stating type of preservative solution and pressure process used, net amount of preservative retained, and compliance with applicable standards.
 2. For water-borne treated products include statement that moisture content of treated materials was reduced to levels indicated prior to shipment to project site.
 3. For fire-retardant-treated wood products include certification by treating plant that treated material complies with specified standard and other requirements.
 4. Material test reports from qualified independent testing laboratory indicating and interpreting test results relative to compliance of fire-retardant-treated wood products with requirements indicated.
 5. Warranty of chemical treatment manufacturer for each type of treatment.
- C. Model Code Evaluation Research Reports: Submit research reports required under the Quality Assurance Article.

1.05 QUALITY ASSURANCE

- A. Lumber Standard: Furnish lumber manufactured to comply with PS 20 and with applicable grading rules of inspection agencies certified by American Lumber Standards Committee's (ALSC) Board of Review.
- B. Lumber Grading and Control Marks: Provide lumber with each piece factory-marked with grade stamp of applicable inspection agency evidencing compliance with grading rule requirements and identifying grading agency, species, stress grade level, moisture content at time of surfacing, and mill.
- C. Construction Panel Standards: Comply with PS 1 for plywood construction panels and, for products not manufactured under PS 1 provisions, with APA PRP-108.
1. Furnish construction panels that are each factory-marked with APA trademark evidencing compliance with grade requirements.
- D. Fire-Retardant Treated Wood: Treat according to specified AWPAs standards. Obtain each type of fire-retardant chemical from one source, and each type of treated wood product from one source. Mark each piece with appropriate classification marking of Underwriter's Laboratories, U.S. Testing, Timber Products Inspection, Inc., or other qualified testing and inspecting agency acceptable to authorities having jurisdiction.
- E. Pressure-Preservative Treated Wood: Treat according to specified AWPAs standards. Mark each treated item with the AWPB (American Wood Preservers Bureau) or SPIC (Southern Pine Inspection Bureau) Quality Mark.

- F. Model Code Evaluation/Research Reports: Where model code evaluation/research reports are required by authorities having jurisdiction as evidence of compliance with the National Building Code, provide products for which such evaluation reports exist. Reports may be required for the following items:
 - 1. Metal framing anchors.
 - 2. Fire retardant treatment.
 - 3. Power driven fasteners.

1.06 DELIVERY, STORAGE, AND HANDLING

- A. Delivery and Storage: Keep materials under cover and dry. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber as well as plywood and other panels; provide for air circulation within and around stacks and under temporary coverings including polyethylene and similar materials.
 - 1. For lumber and plywood pressure treated with waterborne chemicals, place spacers between each bundle to provide air circulation.

PART 2 - PRODUCTS

2.01 MISCELLANEOUS LUMBER (NAILERS, BLOCKING AND SIMILAR MEMBERS)

- A. Grade: "Standard" grade light-framing-size lumber of any species or board-size lumber as required. "No. 3 Common" or "Standard" grade boards per WCLIB or WWPA rules or "No. 2 Boards" per SPIB rules.
- B. For wood nailers used for securement of roof perimeter flashing, provide Douglas Fir, Southern Yellow Pine, or other wood having similar decay resistant properties.
- C. Moisture content: 19 percent maximum for lumber items not specified to receive fire-retardant treatment or wood preservative treatment.
- D. Treat with preservative:
 - 1. Wood cants, nailers, curbs, equipment support bases, blocking, 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.
- E. Treat for fire-retardance: Wood blocking inside walls.

2.02 CONSTRUCTION PANELS

- A. Comply with PS 1 for plywood construction panels and, for products not manufactured under PS 1 provisions, with APA PRP-108.
- B. Furnish construction panels each factory-marked with APA trademark.

- C. Electrical, Telephone and Communications Equipment Backing Panels: PS-1, APA C-D Plugged, Exposure 1, fire-retardant-treated plywood; 3/4 inch thick.

2.03 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this article for material and manufacture.
 - 1. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with a hot-dip zinc coating per ASTM A 153 or of AISI Type 304 stainless steel.
- B. Nails, Wire, Brads, and Staples: FS FF-N-105.
- C. Power Driven Fasteners: National Evaluation Report NER-272.
- D. Wood Screws: ANSI B18.6.1.
- E. Steel Stud Screws: Corrosion-resistant screws with bugle-shaped head, self-drilling points; minimum length long enough to penetrate stud 1/2":
 - 1. ASTM C 954 for steel studs 0.033 to 0.112 inch thick.
 - 2. ASTM C 1002 for lighter-gauge steel studs.
- F. Lag Bolts: ANSI B18.2.1.
- G. Bolts: Steel bolts complying with ASTM A 307, Grade A; with ASTM A 563 hex nuts and where indicated, flat washers.

2.04 PRESERVATIVE WOOD TREATMENT BY PRESSURE PROCESS

- A. General: Comply with applicable requirements of AWWA Standards C2 (Lumber) and C9 (Plywood).
- B. Pressure-treat above-ground items with water-borne preservatives to a minimum retention of 0.25 pcf. For interior uses, after treatment, kiln-dry lumber and plywood to a maximum moisture content, respectively, of 19 percent and 15 percent.
- C. Pressure-treat wood members in contact with the ground or fresh water with water-borne preservatives to a minimum retention of 0.40 pcf.
- D. Complete fabrication of treated items prior to treatment, where possible. If cut after treatment, coat cut surfaces to comply with AWWA M4. Inspect each piece of lumber or plywood after drying and discard damaged or defective pieces.

2.05 FIRE-RETARDANT TREATMENT BY PRESSURE PROCESS

- A. General: Pressure impregnate lumber and plywood with fire-retardant chemicals to comply with AWWA C20 and C27, respectively.

1. Current Evaluation/Research Reports: Provide fire-retardant-treated wood for which a current model code evaluation/research report exists that is acceptable to authorities having jurisdiction and that evidences compliance of fire-retardant-treated wood for application indicated.
- B. Interior Type: For interior locations use fire-retardant chemical formulation that produces treated lumber and plywood with the following properties under conditions present after installation:
1. No reduction in bending strength, stiffness, and fastener holding capacities below values published by manufacturer of chemical formulation, based on tests of treated wood products identical to those indicated for this Project under elevated temperature and humidity conditions simulating installed conditions.
 2. No degradation due to acid hydrolysis.
 3. No corrosion of metal fasteners in contact with treated wood.
 4. Acceptable Products:
 - a. "Dricon," Hickson Corporation.
 - b. "Pyro-Guard," Hoover Treated Wood Products.
 - c. "Flameproof LHC-HTT," Osmose Wood Preserving Co, Inc.
- C. Inspect each piece of treated wood after drying and discard damaged or defective pieces.

PART 3 - EXECUTION

3.01 INSTALLATION, GENERAL

- A. Discard units of material with defects that impair quality of rough carpentry construction and that are too small to use in fabricating rough carpentry with minimum joints or optimum joint arrangement.
- B. Set rough carpentry to required levels and lines, with members plumb and true to line and cut and fitted.
- C. Fit rough carpentry to other construction; scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, and similar supports to allow attachment of other construction.
- D. Securely attach rough carpentry to substrates by anchoring and fastening as indicated.
 1. Where nailing is indicated, use common wire nails, unless otherwise indicated. Countersink nail heads on exposed carpentry work and fill holes.
 2. Select fasteners of size that will not penetrate members where opposite side is exposed or will receive finish materials.

3. Install fasteners without splitting wood; predrill as required.

3.02 WOOD NAILERS AND BLOCKING FOR INTERIOR AND WALL-MOUNTED ITEMS

- A. General: Provide lumber for support or attachment of other construction including nailers, blocking, furring, sleepers, and similar members. Fabricate miscellaneous lumber from dimension lumber of sizes indicated and into shapes shown.
- B. Install wood nailers and blocking where shown and where required for attachment of other work. Form to shapes as shown and cut as required for true line and level of work to be attached. Coordinate location with other work involved.
 1. Provide blocking for support of wall-mounted items such as hand rails, bumper rails, plumbing fixtures, cabinets and casework, wall paneling, adjustable shelving, closet shelving and poles, fire extinguishers, drapery rods, and light fixtures, whether or not shown.
 2. Provide blocking of size shown, or if not shown, of size required to support load and not less than 3/4" thick.
- C. Attach to substrates as required to support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise indicated. Build into masonry during installation of masonry work. Where possible, anchor to formwork before concrete placement.

3.03 WOOD BLOCKING AND NAILERS FOR ATTACHMENT OF ROOFING

- A. General: Install nailers and blocking for attachment of roofing and flashing and for support or attachment of rooftop equipment curbs and support bases. Fabricate from decay-resistant lumber or pressure-preservative treated lumber of sizes indicated and into shapes shown.
- B. Install continuous blocking or nailers where shown, where required by the roofing manufacturer's standard details, and at other locations required by field conditions for nailing membrane edges and for securing gravel stops, copings and similar sheet metal work. Principal locations include, but are not limited to:
 1. At edges of roof for securement of roofing membrane and gravel stops; use minimum 1-1/2" x 5-1/2" (2 x 6) nailers.
 2. Around penetrations which are 12" or larger in any dimension.
 3. At tops of parapets for attachment of copings.

3.04 INSTALLATION OF CONSTRUCTION PANELS

- A. General: Comply with applicable recommendations contained in APA E30 and APA T625 for types of construction panels and applications indicated.
- B. Electrical and Telephone Backing Panels: Screw or bolt plywood backing panels to blocking. Provide sufficient fasteners to support weight of equipment which is going to be mounted on the backing panel.

3.05 CLEAN UP

- A. As work progresses, and at the end of each day's work, remove scraps of wood, loose fasteners, and other debris; sweep clean; and leave the work area safe and free of debris such as screws and nails that may damage other Work in place.

END OF SECTION 06100