

SECTION 06 10 00  
ROUGH CARPENTRY

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Plywood sheathing and backing panels.
- B. Concealed plywood blocking for shelving.
- C. Wood blocking, cants, and nailers.
- D. Spaced board sheathing over furring for slate shingle roof.
- E. Wood furring and grounds.
- F. Rooftop equipment bases and support curbs.

1.02 RELATED SECTIONS

- A. Section 01 81 13 – Sustainable Design Requirements: Source of materials
- B. Section 06 13 00 – Sheathing: Rough wood in sheathing

1.03 REFERENCES

- A. AFPA T10 – Wood Frame Construction Manual; American Forest and Paper Association
- B. ASTM E 84 – Standard Test Method for Surface Burning Characteristics of Building Materials
- C. NeLMA (GR) – Grading Rules, Northeastern Lumber Manufacturer's Association
- D. SPIB (GR) – Grading Rules; Southern Pine Inspection Bureau, Inc.

1.04 DEFINITIONS

- A. Dimension Lumber: Lumber of 2 inches nominal or greater but less than 5 inches nominal in the least dimension.
- B. Exposed Framing: Framing that is not concealed
- C. Lumber grading agencies and the abbreviations used to reference them include:
  - 1. NeLMA: Northeastern Lumber Manufacturer's Association.
  - 2. NLGA: National Lumber Grades Authority.

3. RIS: Redwood Inspection Service.
4. SPIB: The Southern Pine Inspection Bureau.
5. WCLIB: West Coast Lumber Inspection Bureau.
6. WWPA: Western Wood Products Association.

#### 1.05 ACTION SUBMITTALS

- A. Product Data: Provide technical data for each type of process and pre-fabricated product. Indicate materials, dimensions, construction and application details
  1. Include data from wood-preservative treatment.
  2. Include data from fire-retardant treatment.
- B. Manufacturer's Certificate: Certify that wood products meet or exceed specified requirements.
- C. LEED Submittals:
  1. Product Data for IEQ 4.1: For adhesives.
  2. Product Data for IEQ 4.4: For composite wood products.
  3. Certificates for Credit MR 7; Chain-of-custody certificates that indicates compliance with forest certification requirements.

#### 1.06 INFORMATIONAL SUBMITALLS

- A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate grade and species for each use and design.
- B. Evaluation Reports:
  1. Expansion anchors.
  2. Fire-retardant-treated wood.
  3. Metal framing anchors.
  4. Powder-actuated fasteners.
  5. Power-driven fasteners.
  6. Wood-preservative-treated wood.

#### 1.07 QUALITY ACCURANCE

- A. Testing Agency Qualifications: An inspection agency accepted by all authorities having jurisdiction that intermittently performs inspections to verify that each material has the mark that is representative of the material tested.

## 1.08 DELIVERY, STORAGE, AND HANDLING

- A. Cover wood products to protect from moisture. Support stacked products to allow air circulation and to prevent deformation.
- B. For fire-retardant-treated wood, prevent exposure to the elements during shipping, storage, and installation.

## PART 2 PRODUCTS

### 2.01 GENERAL WOOD PRODUCTS

- A. Certified Wood: All materials will be produced from wood obtained from forests certified by an FSC-accredited body to comply with FSC STD-01-001.
- B. Lumber: DOC PS 20 and applicable grading rules indicated.
  - 1. Factory must mark each piece of lumber with grade stamp.
  - 2. Provide actual sizes as required by DOC PS 20 for moisture content specified.
  - 3. Provide dressed lumber unless otherwise indicated.
- C. Maximum Moisture Content of Lumber: 19 percent unless otherwise indicated.

### 2.02 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Treated Lumber and Plywood: Must comply with requirements of AWWA U1 – Use Category system for treatments determined by use categories, expected service conditions and specific applications.
  - 1. Preservative Chemicals: Must be acceptable to all authorities and contain no arsenic or chromium.
  - 2. If wood is exposed, indicate whether to receive a stained or natural finish
- B. Do not use materials that are deformed or do not comply with requirements for untreated material if the material is kiln dry lumber.
- C. Mark all lumber with quality mark of an inspection agency approved by authorities.
  - 1. If lumber is indicated to be exposed or receive a stained or natural finish, omit marking but provide certificates of treatment compliance.
- D. Application: Treat all items as indicated on Drawings and:
  - 1. Wood floor plates that are installed over concrete slabs-on-grade.

2. Wood framing and furring attached to interior of below-grade exterior masonry or concrete walls. Also framing members less than 18 inches above the ground in unexcavated areas and crawlspaces.

## 2.03 FIRE-RETARDANT-TREATED MATERIALS

- A. General: Where indicated, use materials complying with requirements that are acceptable to authorities concerned and with fire-test-response characteristics as determined by testing identical products by a qualified testing agency.
- B. Fire-Retardant-Treated Lumber and Plywood by Pressure Process: When tested according to ASTM E 84, products must have a flame spread index of 25 or less, and have no evidence of progressive combustion when the test is extended an extra 20 minutes, and the flame front not extending more than 10.5 feet past the centerline of the burners at any time.
  1. Exterior Type: Treated materials will comply with ASTM D 2898. Use for exterior locations and where indicated.
  2. Interior Type A: Materials with moisture content of 28 percent or less when tested according to ASTM D 3201. Use where exterior type is not indicated.
  3. Use the treatment that does not promote the corrosion of metal fasteners.
  4. Design Value Adjustment Factors: Treated lumber and plywood shall be tested according to ASTM D 5664 and ASTM D 6841.
- C. Identify all fire-retardant-treated wood with a marking from a qualified testing agency.
  1. If lumber is indicated to be exposed or receive a stained or natural finish, omit marking but provide certificates of treatment compliance.
- D. Treat all rough carpentry unless otherwise indicated.

## 2.04 MISCELLANEOUS LUMBER

- A. Provide lumber indicated and lumber support or attachment of other construction:
  1. Blocking
  2. Cants
  3. Furring
  4. Grounds
  5. Nailers
  6. Rooftop equipment bases and support curbs.
- B. Provide No. 2 or Construction grade lumber of any species for items of dimension lumber size.

- C. Provide lumber with 19 percent maximum moisture content for concealed boards from any of the following species and grades:
1. Hem-fir
  2. Mixed southern pine
  3. Spruce-pine-fir
  4. Eastern softwoods
  5. Northern species
  6. Western woods
- D. For blocking not used for attachment use No. 3, Utility, or Stud grade lumber of any species, provided it is cut and selected to eliminate defects.
- E. For nailers and blocking used for attachment of other construction, use cut lumber to avoid knots and other defects.
- F. For furring strips for hardboard paneling and plywood, use boards with no knots so there will be no bent-over nails and damage to paneling.

## 2.05 PLYWOOD BACKING PANELS

- A. Equipment Backing Panels: DOC PS 1, Exposure 1, C-D plugged, fire-retardant treated in thickness indicated or no less than ½ inches nominal thickness.

## 2.06 FASTENERS

- A. General: Provide fasteners of size and type indicate that follow requirements
1. Where rough carpentry is exposed to the elements, pressure-preservative treated, in ground contact, or in an area of high humidity, use fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
- B. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M), ASTM A 563 with hex nuts and flat washers, where indicated.
- C. Nails, Brads, Staples: ASTM F 1667.
- D. Wood Screws: ASME B18.6.1.
- E. Lag Bolts: ASME B18.2.1.
- F. Power-Driven Fasteners: NES NER-272.
- G. Expansion Anchors: Anchor bolt and sleeve assembly with the capability to sustain, without failing, a load six times the load imposed as per ASTM E 488

1. Material: Stainless steel bolts and nuts
2. Carbon-steel components, zinc plated components.

## 2.07 MISCELLANEOUS MATERIALS

- A. Flexible Flashing: Composite, self-adhesive, flashing products consisting of rubber or rubberized-asphalt compound. Overall thickness no less than 0.025 inch.

## PART 3 EXECUTION

### 3.01 INSTALLATION

- A. Set all rough carpentry to its levels with all members plumb, cut and fitted. Select material sizes to minimize waste.
- B. Do not splice structural members between supports, unless indicated otherwise.
- C. If treated wood is used on interior, provide ventilation during and after installation to remove indoor air contaminants.
  1. Comply with AWPA M4 for preservative treated lumber.
- D. Plywood backing panels will be installed by fastening to studs. Install fire-retardant components with marking exposed.
- E. Provide framing and blocking as indicated to support materials.
  1. Space metal clips for fastening gypsum board or that not more than 16 inches o.c.
- F. Use lumber so its natural characteristics do not interfere with installation.
- G. Attach rough carpentry securely by anchoring and fastening securely and comply with following:
  1. Table 2304.9.1, "Fastening Schedule," in IBC
  2. NES NER-272 for power driven fasteners.
- H. Use steel common nails unless stated otherwise. Use fasteners of a size such that they do not completely penetrate to the opposite side.
- I. If work is exposed, arrange fasteners in straight parallel rows.

### 3.02 WOOD GROUND, SLEEPER, BLOCKING, AND NAILER INSTALLATION

- A. Install at indicated positions in forms and shapes indicated.
- B. Recess bolts and nuts flush with surfaces unless indicated otherwise. To support applied loading, attach items to substrates.

- C. Install flexible flashing separator where wood-preservative-treated is installed.

### 3.03 WOOD FURRING INSTALLATION

- A. Install all level and plumb at edges and openings.
- B. Furring to Receive Plywood or Hardboard Paneling: Install 1 by 3 inch nominal furring horizontally at 24 inches o.c.
- C. Furring to Receive Gypsum Board: Install 1 by 2 inch nominal size furring vertically at 16 inches o.c.

### 3.04 PROTECTION

- A. Protect rough carpentry from weather. Apply borate solution to comply with EPA registered label.
- B. Protect wood that has treated with boron from weather. Apply borate solution to comply with EPA registered label.

### 3.05 WASTE MANAGEMENT

- A. Minimize packaging without compromising protection of materials.
- B. Separate waste in accordance with Construction Waste Management Plan. If recyclable, recycle the following:
  - 1. Aluminum.
  - 2. Corrugated cardboard packaging.
  - 3. Plastic materials and gaskets.
- C. Preference is given to installers and suppliers who take back waste for reuse or recycling.
- D. Separate following for disposal and place in designated areas for hazardous materials
  - 1. Treated, painted, contaminated, or stained wood.

END OF SECTION 06 10 00