

## SECTION 06100 – ROUGH CARPENTRY

### PART 1 – GENERAL

#### 1.01 RELATED SECTIONS

The General Provisions of the contract, including the General Provisions for Construction Projects (2016), Special Provisions, and General Requirements of the Specifications, apply to the work specified in this section.

#### 1.02 SUMMARY

##### A. Section Includes:

1. Framing with dimension lumber.
2. Framing with engineered wood products.
3. Shear wall panels.
4. Rooftop equipment bases and support curbs.
5. Wood blocking, cants, and nailers.
6. Wood furring and grounds.
7. Wood sleepers.
8. Plywood backing panels.

#### 1.03 ACTION SUBMITTALS

##### A. Product Data: For each type of process and factory-fabricated product.

1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements
2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements.

#### 1.04 INFORMATIONAL SUBMITTALS

- A. Material Certificates: For dimension lumber specified to comply with minimum allowable unit stresses. Indicate species and grade selected for each use and design values approved by the ALSC Board of Review.
- B. Evaluation Reports: For the following, from ICC-ES:
  - 1. Wood-preservative-treated wood.
  - 2. Fire-retardant-treated wood.
  - 3. Engineered wood products.
  - 4. Shear panels.
  - 5. Power-driven fasteners.
  - 6. Powder-actuated fasteners.
  - 7. Expansion anchors.
  - 8. Metal framing anchors.

### PART 2 – PRODUCTS

#### 2.01 WOOD PRODUCTS, GENERAL

- A. Certified Wood: Materials shall be produced from wood obtained from forests certified by an FSC-accredited certification body to comply with FSC STD-01-001, "FSC Principles and Criteria for Forest Stewardship for the following:
  - 1. Dimension lumber framing.
  - 2. Miscellaneous lumber.
- B. Lumber: DOC PS 20 and applicable rules of grading agencies indicated. If no grading agency is indicated, provide lumber that complies with the applicable rules of any rules-writing agency certified by the ALSC Board of Review. Provide lumber graded by an agency certified by the ALSC Board of Review to inspect and grade lumber under the rules indicated.
  - 1. Factory mark each piece of lumber with grade stamp of grading agency.

2. For exposed lumber indicated to receive a stained or natural finish, omit grade stamp and provide certificates of grade compliance issued by grading agency.
  3. Provide dressed lumber, S4S, unless otherwise indicated.
- C. Grade and Species: All lumber, timbers and boards shall be Douglas Fir-Larch, S4S. The lumber shall be graded I accordance with the West Coast Lumber Inspection Bureau (WCLIB), "Standard No. 17, Grading Rules for Coastal Douglas Fir," and/or Western Wood Products Association (WWPA), "Western Lumber Grading Rules." Use the following Grades or better:
1. 2" to 4" thick, 2" to 4" wide: Structural Light Framing No. 2
  2. Non-bearing Studs, miscellaneous blocking, nailers, etc.: Structural Light Framing No. 2
  3. 2" to 4" thick, 5" and wider: Structural Joists and Planks No. 1
  4. Beams and stringers: No. 1 Structural
  5. Posts and timbers: No. 1 Structural
- D. Maximum Moisture Content of Lumber: 19 percent and 15 percent for 2-inch nominal (38-mm actual) thickness or less unless otherwise indicated. Engineered Wood Products: Provide engineered wood products acceptable to authorities having jurisdiction and for which current model code research or evaluation reports exist that show compliance with building code in effect for Project.
1. Allowable Design Stresses: Provide engineered wood products with allowable design stresses, as published by manufacturer, that meet or exceed those indicated. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

## 2.02 PLYWOOD AND STRUCTURAL-USE PANELS

- A. Comply with U.S. Product Standard PS 1-74 for plywood, Group 1, Douglas Fir unless otherwise specified or noted. Use exterior grade only without visible patches or repairs on exposed sides. For roof sheathing use Structural II, C-D EXT-APA. For wall sheathing use Structural II C-D EXT-APA.

## 2.03 DIMENSION LUMBER FRAMING

### A. Non-Load-Bearing Interior Partitions: Construction or No. 2 grade.

1. Application: All non load bearing interior partitions.
2. Species:
  - a. Mixed southern pine; SPIB.
  - b. Northern species; NLGA.
  - c. Eastern softwoods; NeLMA.
  - d. Western woods; WCLIB or WWPA.

### B. Framing Other Than Non-Load-Bearing Interior Partitions: Structural No. 1 grade.

1. Application: Framing other than non load-bearing partitions.
2. Species:
  - a. Hem-fir (north); NLGA.
  - b. Southern pine; SPIB.
  - c. Douglas fir-larch; WCLIB or WWPA.
  - d. Mixed southern pine; SPIB.
  - e. Spruce-pine-fir; NLGA.
  - f. Douglas fir-south; WWPA.
  - g. Hem-fir; WCLIB or WWPA.
  - h. Douglas fir-larch (north); NLGA.
  - i. Spruce-pine-fir (south); NeLMA, WCLIB, or WWPA.

### C. Exposed Framing: Provide material hand-selected for uniformity of appearance and freedom from characteristics, on exposed surfaces and edges, that would impair finish appearance, including decay, honeycomb, knot-holes, shake, splits, torn grain, and wane.

1. Application: Exposed exterior and interior framing indicated to receive a stained or natural finish as noted on drawings.
2. Species and Grade: As noted on drawings.

#### 2.04 MISCELLANEOUS LUMBER

- A. General: Provide miscellaneous lumber indicated and lumber for support or attachment of other construction, including the following:
  1. Blocking.
  2. Nailers.
  3. Rooftop equipment bases and support curbs.
  4. Cants.
  5. Furring.
  6. Grounds.
- B. For items of dimension lumber size, provide Construction or No. 2 grade lumber 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. 3 Common grade; NeLMA.
  3. Northern species; No. 3 Common grade; NLGA.
  4. Western woods; Construction or No. 2 Common grade; WCLIB or WWPA.

#### 2.05 PLYWOOD BACKING PANELS

- A. Equipment Backing Panels: DOC PS 1, Exposure 1, C-D Plugged in thickness indicated or, if not indicated, not less than 3/4-inch (19-mm) nominal thickness.

## 2.06 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, pressure-preservative treated, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.
- B. Power-Driven Fasteners: NES NER-272.
- C. Bolts: Steel bolts complying with ASTM A 307, Grade A (ASTM F 568M, Property Class 4.6); with ASTM A 563 (ASTM A 563M) hex nuts and, where indicated, flat washers.

## 2.07 METAL FRAMING ANCHORS

- A. Manufacturers: Subject to compliance with requirements, Simpson Strong – Tie Co. Inc. or approved equal:
- B. Allowable Design Loads: Provide products with allowable design loads, as published by manufacturer, that meet or exceed those of products of manufacturers listed. Manufacturer's published values shall be determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.
- C. Galvanized steel is typical for most manufacturers and is suitable for most applications.
- D. Galvanized-Steel Sheet: Hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G90 (Z180) coating designation.
  - 1. Use for interior locations unless otherwise indicated.
- E. Hot-Dip, Heavy-Galvanized Steel Sheet: ASTM A 653/A 653M; G90 coating.
  - 1. Use for wood-preservative-treated lumber and where indicated.

## 2.08 MISCELLANEOUS MATERIALS

- A. Flexible Flashing: Composite, self-adhesive, flashing product consisting of a pliable, rubberized-asphalt compound, bonded to a high-density polyethylene film, to produce an overall thickness of not less than 0.025 inch (0.64 mm), with

rubberized asphalt adhesive, in widths to match studs runners. Grace Vycor Plus or equal.

- B. Primer: Provide Perm-A-Barrier WB primer or equal for unprepped surfaces per manufacturer's recommendation.

## PART 3 – EXECUTION

### 3.01 INSTALLATION, GENERAL

- 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, and similar supports to comply with requirements for attaching other construction.
- B. Framing Standard: Comply with AF&PA's WCD 1, "Details for Conventional Wood Frame Construction," unless otherwise indicated.
- C. Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's written instructions.
- D. Install fire-retardant treated plywood backing panels with classification marking of testing agency exposed to view. Secure panels to studs.
- E. Shear Wall Panels: Install shear wall panels to comply with manufacturer's written instructions.
- F. Metal Framing Anchors: Install metal framing anchors to comply with manufacturer's written instructions. Install fasteners through each fastener hole.
- G. Do not splice structural members between supports unless otherwise indicated.
- H. Comply with AWP A M4 for applying field treatment to cut surfaces of preservative-treated lumber.
- I. Where wood-preservative-treated lumber is installed adjacent to metal decking, install continuous flexible flashing separator between wood and metal decking.
- J. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
  - 1. NES NER-272 for power-driven fasteners.
  - 2. Table 2304.9.1, "Fastening Schedule," in ICC's International Building Code.

3. Table R602.3(1), "Fastener Schedule for Structural Members," and Table R602.3(2), "Alternate Attachments," in ICC's International Residential Code for One- and Two-Family Dwellings.

### 3.02 PROTECTION

- A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.
- B. Protect rough carpentry from weather. If, despite protection, rough carpentry becomes sufficiently wet that moisture content exceeds that specified apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

## PART 4 – MEASUREMENT AND PAYMENT

### 4.01 BASIS OF MEASUREMENT AND PAYMENT

- A. Work under this section will not be measured nor paid for separately, but shall be considered incidental to and included in the price bid for the various items of work in this project.

END OF SECTION