

SECTION 06100 - ROUGH CARPENTRY

PART 1 - GENERAL

SUMMARY

This Section includes the following:

- Wood framing.
- Wood supports.
- Wood blocking.
- Wood cants.
- Wood nailers.
- Wood furring.
- Wood grounds.
- Wood sheathing.
- Wood subflooring.
- Wood underlayment.
- Plywood backing panels.
- Building wrap.

PART 2 - PRODUCTS

WOOD PRODUCTS, GENERAL

Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review.

- Factory mark each piece of lumber with grade stamp of grading agency.
- Provide dressed lumber, S4S, unless otherwise indicated.
- Provide dry lumber with 19 percent maximum moisture content at time of dressing for 2-inch nominal (38-mm actual) thickness or less, unless otherwise indicated.

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.

Wood Structural Panels:

- Comply with "Code Plus" provisions in APA Form No. E30K, "APA Design/Construction Guide: Residential & Commercial."

WOOD-PRESERVATIVE-TREATED MATERIALS

Preservative Treatment by Pressure Process: AWPA C2 (lumber), 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).

Kiln-dry material after treatment to a maximum moisture content of 19 percent for lumber.

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Mark each treated item with treatment quality mark of an inspection agency approved by the American Lumber Standards Committee Board of Review.

Application: Treat items indicated on Drawings, and the following:

- Wood cants, nailers, curbs, equipment support bases, blocking, stripping, and similar members in connection with roofing, flashing, vapor barriers, and waterproofing.
- Wood sills, sleepers, blocking, furring, stripping, and similar concealed members in contact with masonry or concrete.
- Wood floor plates that are installed over concrete slabs directly in contact with earth.

DIMENSION LUMBER

General: Of grades indicated according to the American Lumber Standards Committee National Grading Rule provisions of the grading agency indicated.

Non-Load-Bearing Interior Partitions: Construction, Stud, or No. 2 grade and the following species:

Eastern softwoods; NELMA.

Framing Other Than Non-Load-Bearing Partitions: Construction or No. 2 grade and the following species:

Spruce-pine-fir.

Exposed Framing: Hand select material for uniformity of appearance and freedom from characteristics that would impair finish appearance.

Species and Grade: As indicated above for load-bearing construction of same type.

TIMBER AND MISCELLANEOUS LUMBER

Provide miscellaneous lumber for support or attachment of other construction, including the following:

- Blocking.
- Cants.
- Nailers.
- Furring.
- Grounds.

For items of dimension lumber size, provide Construction, Stud, or No. 2 grade lumber with 19 percent maximum moisture content of any species.

For concealed boards, provide lumber with 19 percent maximum moisture content and the following species and grades:

Eastern softwoods, No. 3 Common grade; NELMA.

ENGINEERED WOOD PRODUCTS

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Laminated-Veneer Lumber: Composite of wood veneers with grain primarily parallel to member lengths, manufactured with exterior-type adhesive complying with ASTM D 2559. Allowable design values determined according to ASTM D 5456.

Available Manufacturers:

Boise Cascade Corporation.
Georgia-Pacific Corporation.
Louisiana-Pacific Corporation.
Pacific Woodtech Corp.
Trus Joist MacMillan.
Union Camp Corp.; Building Products Division.
Willamette Industries, Inc.

Extreme Fiber Stress in Bending, Edgewise: 2600 psi (17.9 Mpa for 12-inch nominal- (286-mm actual-) depth members.

Modulus of Elasticity, Edgewise: 1,800,000 psi (12 400 MPa).

Wood I-Joists: Prefabricated units complying with APA PRI-400; depths and performance ratings not less than those indicated.

Available Manufacturers:

Boise Cascade Corporation.
Georgia-Pacific Corporation.
Louisiana-Pacific Corporation.
Pacific Woodtech Corp.
Poutrelles International Inc.
Standard Structures Inc.
Stark Truss Company, Inc.
Superior Wood Systems, Inc.
Trus Joist MacMillan.
Union Camp Corp.; Building Products Division.
Willamette Industries, Inc.

Web Material: Either oriented strand board or plywood, Exposure 1.

Structural Capacities: Establish and monitor structural capacities according to ASTM D 5055.

Trademark: Factory mark I-joists with APA trademark indicating nominal joist depth, joist class, span ratings, mill identification, and I-joist compliance with APA standard.

Rim Boards: Performance-rated product complying with APA PRR-401.

Thickness and Grade: 1-inch (25-mm) rim board.

Trademark: Factory mark with APA trademark indicating thickness, grade, and compliance with APA standard.

SHEATHING

Plywood Wall Sheathing: Exterior, Structural I sheathing.

Oriented-Strand-Board Wall Sheathing: Exposure 1, Structural I sheathing.

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Plywood Roof Sheathing: Exterior, Structural I sheathing.

Oriented-Strand-Board Roof Sheathing: Exposure 1, Structural I sheathing.

SUBFLOORING AND UNDERLAYMENT

Plywood Subflooring: Exterior, Structural I. single-floor panels or sheathing.

Plywood Underlayment for Resilient Flooring: DOC PS 1, Exposure 1 Underlayment with fully sanded face.

Plywood Underlayment for Ceramic Tile: DOC PS 1, Exterior, C-C Plugged, 5/8 inch (15.9 mm) thick, for ceramic tile set in organic adhesive.

Plywood Underlayment for Carpet: DOC PS 1, Exterior, C-C Plugged.

MISCELLANEOUS MATERIALS

Fasteners:

Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide fasteners with hot-dip zinc coating complying with ASTM A 153/A 153M.

Power-Driven Fasteners: CABO NER-272.

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.

Metal Framing Anchors: Made from hot-dip, zinc-coated steel sheet complying with ASTM A 653/A 653M, G60 (Z180) coating designation.

Available Manufacturers:

Alpine Engineered Products, Inc.
Cleveland Steel Specialty Co.
Harlen Metal Products, Inc.
KC Metals Products, Inc.
Silver Metal Products, Inc.
Simpson Strong-Tie Company, Inc.
Southeastern Metals Manufacturing Co., Inc.
United Steel Products Company, Inc.

Research/Evaluation Reports: Provide products acceptable to authorities having jurisdiction and for which model code research/evaluation reports exist that show compliance of metal framing anchors, for application indicated, with building code in effect for Project.

Allowable Design Loads: Meet or exceed those indicated per manufacturer's published values determined from empirical data or by rational engineering analysis and demonstrated by comprehensive testing performed by a qualified independent testing agency.

Building Wrap: Air-retarder sheeting made from polyolefins; cross-laminated films, woven strands, or spun-bonded fibers; coated or uncoated; with or without perforations; and complying with ASTM E 1677, Type I.

Thickness: Not less than 3 mils (0.08 mm).

Permeance: Not less than 10 perms (575 ng/Pa x s x sq. m).

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Flame-Spread Index: 25 or less per ASTM E 84.
Allowable Exposure Time: Not less than three months.

Building Wrap Tape: Pressure-sensitive plastic tape recommended by building wrap manufacturer for sealing joints and penetrations in building wrap.

Sheathing Tape: Pressure-sensitive plastic tape for sealing joints and penetrations in sheathing and recommended by sheathing manufacturer for use with type of sheathing required.

Sill-Sealer Gaskets: Glass-fiber-resilient insulation, fabricated in strip form, for use as a sill sealer; 1-inch (25-mm) nominal thickness, compressible to 1/32 inch (0.8 mm); selected from manufacturer's standard widths to suit width of sill members indicated.

Adhesives for Field Gluing Panels to Framing: Formulation complying with ASTM D 3498 that is approved for use with type of construction panel indicated by both adhesive and panel manufacturers.

PART 3 - EXECUTION

INSTALLATION

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.

Apply field treatment complying with AWPA M4 to cut surfaces of preservative-treated lumber and plywood.

Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:

CABO NER-272 for power-driven fasteners.
Published requirements of metal framing anchor manufacturer.
Table 2305.2, "Fastening Schedule," in the BOCA National Building Code.

Use finishing nails for exposed work, unless otherwise indicated. Countersink nail heads and fill holes with wood filler.

Framing Standard: Comply with AFPA's "Manual for Wood Frame Construction," unless otherwise indicated.

Framing with Engineered Wood Products: Install engineered wood products to comply with manufacturer's written instructions.

Comply with applicable recommendations contained in APA Form No. E30K, "APA Design/Construction Guide: Residential & Commercial," for types of structural-use panels and applications indicated.

Comply with "Code Plus" provisions in above-referenced guide.

Fastening Methods:

Subflooring: Glue and nail to wood framing.
Sheathing: Nail to wood framing.
Underlayment: Nail to subflooring.
Plywood Backing Panels: Nail or screw to supports.

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Building Wrap Application: Cover wall sheathing with building wrap as indicated. Cover upstanding flashing with 4-inch (102-mm) overlap. Seal seams, edges, and penetrations with tape.

Apply sheathing tape to joints between sheathing panels and at items penetrating sheathing. Apply at upstanding flashing to overlap both flashing and sheathing.

END OF SECTION 06100