

SECTION 06100

ROUGH CARPENTRY

PART 1 – GENERAL

1.1 DESCRIPTION

A. Scope:

1. CONTRACTOR shall provide all labor, material, tools, equipment, and incidentals as shown, specified, and required to furnish and install all rough carpentry Work.
2. The Work also includes:
 - a. Providing openings in rough carpentry to accommodate the Work under this and other Sections and building into rough carpentry items such as sleeves, anchorages, inserts and other items to be embedded in or penetrating rough carpentry for which placement is not specifically provided under other Sections.
3. Extent of rough carpentry is shown or indicated.
4. Types of materials required include:
 - a. Miscellaneous blocking, furring strips, and other miscellaneous wood framing.
 - b. Lumber for temporary protection.
 - c. Lumber for temporary support.
 - d. Miscellaneous accessories.

B. Coordination:

1. Review installation procedures under this and other Sections and coordinate installation of items to be installed with or before Rough Carpentry Work.

C. Related Sections:

1. Section 05051, Anchor Bolts, Toggle Bolts and Concrete Inserts.

1.2 REFERENCES

A. Standards referenced in this Section are:

1. ALSC PS 20, American Softwood Lumber Standard.
2. ASME B18.2.1 Square and Hex Bolts and Screws, Inch Series.
3. ASME B18.6.1 Wood Screws, Inch Series.
4. ASTM A653/A653M, Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
5. ASTM D2898, Standard Practice for Accelerated Weathering of Fire-Retardant-Treated Wood for Fire Testing
6. ASTM D5516, Test Method for Evaluating the Flexural Properties of Fire-Retardant Treated Softwood Plywood Exposed to Elevated Temperatures.

7. ASTM D5664, Test Method for Evaluating the Effects of Fire-Retardant Treatments and Elevated Temperatures on Strength Properties of Fire-Retardant Treated Lumber.
8. ASTM D6305, Practice for Calculating Bending Strength Design Adjustment Factors for Fire-Retardant-Treated Plywood Roof Sheathing.
9. ASTM D6841, Practice for Calculating Design Value Treatment Adjustment Factors for Fire-Retardant-Treated Lumber.
10. ASTM F1667, Specification for Driven Fasteners: Nails, Spikes, and Staples.
11. AWPA M4, Care of Preservative Treated Wood Products.
12. AWPA P5, Waterborne Preservatives.
13. AWPA P17, Fire Retardant Formulations.
14. AWPA T1, Use Category System: Processing and Treatment Standard.
15. AWPA U1, Use Category System: User Specification for Treated Wood.
16. APA E445S, Performance Standards and Policies for Structural-Use Panels (APA PRP-108).
17. NIST PS-1, Construction and Industrial Plywood.
18. National Lumber Grade Authority (NLGA), Standard Grading Rules for Canadian Lumber.
19. Northeastern Lumber Manufacturers Association (NELMA), Standard Grading Rules for Northeastern Lumber.
20. Southern Pine Inspection Bureau (SPIB), Standard Grading Rules for Southern Pine Lumber.
21. West Coast Lumber Inspection Bureau (WCLIB), Standard Grading Rules.
22. Western Wood Products Association (WWPA), Western Lumber Grading Rules.

1.3 QUALITY ASSURANCE

- A. Regulatory Requirements: Comply with requirements of authorities having jurisdiction and the building code referred to in Section 01420, References for size, spacing and attachment of wood members, unless more stringent requirements are shown or specified in the Contract Documents.
- B. Certifications:
 1. Certificates of Grade: Where appearance of wood is important and grade marks will deface the Work, in lieu of grade markings on wood, submit certificates attesting that materials comply with grade requirements specified.

1.4 SUBMITTALS

- A. Action Submittals; Submit the following:
 1. Shop Drawings:
 - a. List of species and grade of lumber proposed for each use.
 - b. Fastener schedule with location, size, material and type of each fastener to be used in the Work.

- B. Informational Submittals: Submit the following:
 - 1. Certificates:
 - a. Lumber treater's certification of compliance, in accordance with Paragraph 1.3.B.1 of this Section.
 - b. Certificates of grade in accordance with Paragraph 1.3.B.2 of this Section.

1.5 DELIVERY, STORAGE AND HANDLING

- A. Packing, Shipping, Handling, and Unloading:
 - 1. Deliver products to Site to ensure uninterrupted progress of the Work. Deliver anchorage products that are to be embedded in concrete or masonry in ample time to prevent delaying the Work.
 - 2. Comply with Section 01651, Transportation and Handling of Products.
- B. Storage and Protection:
 - 1. Keep materials dry during delivery and storage.
 - 2. Keep materials off ground using pallets, platforms, or other appropriate supports. Protect materials from corrosion and deterioration. Stack lumber, and provide air circulation within stacks.
 - 3. Comply with Section 01661, Storage and Protection of Products.

PART 2 – PRODUCTS

2.1 MATERIALS

- A. Lumber, General:
 - 1. Factory-mark each piece of lumber with type, grade, mill and grading agency. Surfaces that will be exposed to view shall not have grade marks or other types of identifying marks.
 - 2. Nominal sizes are shown or indicated, unless otherwise shown or indicated in the Contract Documents. Provide actual sizes as required by ALSC PS 20 for moisture content specified for each use.
 - a. Provide dressed lumber, surfaced four sides (S4S), unless otherwise shown or specified.
 - b. Provide seasoned lumber with 19 percent maximum moisture content at time of dressing.
 - 3. Provide the following grade and species:
 - a. Construction Grade.
 - b. Douglas Fir, WWP, or Southern Pine, SPIB, or Redwood.
 - 4. Lumber for Protection and Temporary Support: Size and grades to conform to Laws and Regulations, including OSHA.
- B. Fasteners and Anchorages:

1. Fasteners exposed to the weather as well as fasteners embedded in, or in contact with, preservative treated wood shall be hot-dip galvanized.
2. Fasteners for fire retardant-treated lumber exposed to the weather shall be copper alloy.
3. Common wire nails shall conform to ASTM F1667.
4. Wood screws shall conform to ASME B18.6.1.
5. Lag screws and lag bolts shall conform to ASME B18.2.1.
6. Anchorage devices shall conform to Section 05051, Anchor Bolts, Toggle Bolts, and Concrete Inserts.
7. Use joist hangers, framing anchors and clips where shown or specified.
 - a. Joist hangers shall be steel, zinc coated, sized to fit the supporting member, of sufficient strength to develop full strength of the supported member in accordance with applicable building code, and furnished complete with special nails required by joist hanger manufacturer.
 - b. Framing anchors shall be hot-dip galvanized steel conforming to ASTM A653/A653M, Z275 G90. Steel shall not be lighter than 18-gage. Use special nails furnished by manufacturer for nailing.
 - c. Clips shall consist of hot-dip galvanized conforming to ASTM A653/A653M, Z275 G90 steel angles, minimum 3/16-inch thick.

PART 3 – EXECUTION

3.1 INSPECTION

- A. Examine substrates and supporting structure and conditions under which rough carpentry Work will be installed and notify ENGINEER in writing of conditions detrimental to proper completion of the Work. Do not proceed with installation until unsatisfactory conditions are corrected.

3.2 INSTALLATION

- A. Coordination: Fit rough carpentry Work to other Work and work under other contracts, as applicable, and scribe and cope as required for accurate fit. Correlate location of furring, nailers, blocking, grounds and similar supports to allow proper attachment of other construction.
- B. General:
 1. Discard units of material with defects that might impair quality of the Work, and units too small to fabricate the Work with minimum joints or optimum joint arrangement.
 2. Set rough carpentry Work accurately to required levels and lines, with members plumb and true, accurately cut and fitted.
 3. Securely attach rough carpentry Work to substrates by anchoring and fastening as shown and indicated in the Contract Documents. Countersink nail heads on

exposed rough carpentry Work and fill holes. Make tight connections between members.

4. Install fasteners without splitting of wood, pre-drill as required and for masonry anchors fastened to wood stud wall framing.

C. Wood Grounds, Nailers, and Blocking:

1. Provide where shown or indicated, and where required for attachment of other construction. Form to shapes as shown or indicated and cut as required for true line and level of Work to be attached. Coordinate location with other work involved.
2. Attach substrates as required to support applied loading. Countersink bolts and nuts flush with surfaces, unless otherwise shown or indicated.
3. Provide permanent grounds of dressed, preservative-treated, key-bevelled lumber not less than 1.5-inch wide and of thickness required to bring face of ground to exact thickness of finish material involved. Remove temporary grounds when no longer required.

++ END OF SECTION ++

