

**PART 1 - GENERAL**

1.1 RELATED SECTIONS

- .1 Section 01 74 21: Construction / Demolition Waste Management and Disposal
- .2 Section 07 21 00: Building Insulation
- .3 Section 07 27 00: Sheet Membrane Air Barrier.
- .4 Section 07 62 00: Sheet Metal Flashing and Trim.
- .5 Section 07 92 10: Joint Sealing.

1.2 REFERENCES

- .1 American Society for Testing and Materials International (ASTM)
  - .1 ASTM D1761-12, Standard Test Methods for Mechanical Fasteners in Wood.
  - .2 ASTM A307-12, Standard Specification for Carbon Steel Bolts, Studs, and Threaded Rod 60 000 PSI Tensile Strength
- .1 Canadian Standards Association (CSA International)
  - .1 CSA B111-1974 (R2003), Wire Nails, Spikes and Staples.
  - .2 CSA O121-08 (R2013), Douglas Fir Plywood.
  - .3 CSA O141-05 (R2009), Softwood Lumber.
  - .4 CSA O151-09, Canadian Softwood Plywood.
  - .5 CAN/CSA-O325-07 (R2012), Construction Sheathing.
  - .6 CAN/CSA-O80 Series-08 (R2012) Consolidated - Wood Preservation.
    - .1 CAN/CSA-O80.20-1.1 - Fire Retardant Treatment of Lumbering Pressure Processes.
    - .2 CAN/CSA-O80.27-1.1 - Fire Retardant Treatment of Plywood by Pressure Processes.
- .2 Forest Stewardship Council (FSC)
  - .1 FSC-STD-01-001 (V5-0 D5-0 EN), FSC Principle and Criteria for Forest Stewardship.
  - .2 FSC-STD-20-002 (V3-0 EN), Structure, Content and Local Adaptation of Generic Forest Stewardship Standards.
  - .3 FSC Accredited Certified Bodies.
- .3 National Lumber Grades Authority (NLGA)
  - .1 Standard Grading Rules for Canadian Lumber (R2010).
- .4 American Wood Protection Association
  - .1 AWPA M2-01 – Standard for Inspection of Treated Wood Products.

1.3 ACTION AND INFORMATION SUBMITTALS

- .1 Submit Submittal submissions: in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Quality assurance submittals:
  - .1 Submit certificates in accordance with Section 01 33 00 - Submittal Procedures.

1.3 ACTION AND INFORMATION SUBMITTALS (continued)

- .2 For products treated with fire-retardant by pressure impregnation, submit the following information certified by authorized signing officer of treatment plant:
  - .1 Information listed in AWPA M2-01 and revisions specified in CSA O80 Series, Supplementary Requirement to AWPA M2-01 applicable to specified treatment.
  - .2 Moisture content after drying following treatment with fire-retardant.
  - .3 Acceptable types of paint, stain, and clear finishes that may be used over treated materials to be finished after treatment.

1.4 QUALITY ASSURANCE

- .1 All lumber shall be sound, straight, dressed and kiln dried, and moisture content at any time during shipment and storage shall not exceed 19%.
- .2 Lumber identification: by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.
- .3 Plywood identification: by grade mark in accordance with CSA and ANSI standards.
- .4 Fire-retardant treated plywood panel to bear ULC label indicating Flame Spread Classification (FSC), and smoke developed.

1.5 DELIVERY, STORAGE AND HANDLING

- .1 Store materials on site to prevent deterioration, loss or impairment of their structural and other essential properties. Prevent excessive moisture gain of materials.

1.6 WASTE MANAGEMENT AND DISPOSAL

- .1 Separate and recycle waste materials in accordance with Section 01 74 21 Construction/ Demolition Waste Management & Disposal.
- .2 Remove from Site and dispose of all packaging materials at appropriate recycling facilities.
- .3 Collect and separate for disposal paper, plastic, polystyrene corrugated cardboard and packaging material in appropriate on site bins for recycling in accordance with Waste Management Plan.
- .4 Place materials defined as hazardous or toxic in designated containers.
- .5 Unused wood materials are to be diverted from landfill to a recycling/ reuse facility as approved by Departmental Representative.
- .6 Fold up metal banding, flatten and place in designated area for recycling.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS**

- .1 Lumber: unless specified otherwise, softwood, S4S, moisture content 19% (S-dry) or less in accordance with following standards:
  - .1 CAN/CSA-O141.
  - .2 National Lumber Grading Authority (NLGA) Standard Grading Rules for Canadian Lumber.
  - .3 All lumber to be Grade S-P-F No. 1/No. 2 unless noted otherwise.
  - .4 Forestry Stewardship Council (FSC) certified.
- .2 Furring, blocking, nailing strips, grounds and rough bucks, cants, curbs and fascia backing:
  - .1 S2S is acceptable for all work. "Standard" S-P-F.
  - .2 Board sizes: "Standard" or better grade.
  - .3 Dimension sizes: "Standard" light framing or better grade.
  - .4 Forestry Stewardship Council (FSC) certified.

### **2.2 PANEL MATERIALS**

- .1 Douglas fir plywood (DFP): to CSA O121-08, standard construction, square edge, urea-formaldehyde free, thickness as indicated on drawings and details.
  - .1 Forestry Stewardship Council (FSC) certified.
- .2 Plywood sheathing (wall and roof): Canadian Softwood Plywood (CSP) to CSA O151, unsanded, exterior sheathing grade, square edge, urea-formaldehyde free, thickness as indicated on drawings and details or to match existing.
  - .1 Forestry Stewardship Council (FSC) certified.

### **2.3 2ACCESSORIES**

- .1 Fasteners and Connecting Hardware
  - .1 Nails: to CSA B111, hot dip galvanized steel. Unless otherwise indicated use common spiral flathead nails.
  - .2 Bolts: ASTM A307, hot dip galvanized steel, 12.5 mm diameter unless indicated otherwise, complete with nuts and washers.
  - .3 Connectors, anchors, brackets, spikes: hot dip galvanized structural quality steel.
  - .4 Concrete/masonry anchors: self tapping screw anchors: Tapcon.
  - .5 Screws: zinc, cadmium or chrome plated.

### **2.4 WOOD TREATMENT**

- .1 Fire-Retardant: to CAN/CSA-O80.27, to provide:
  - .1 Flame Spread Classification: FSC of not more than 25.
  - .2 Smoke developed of not more than: 50.
- .2 Treat plywood materials by pressure impregnation with fire-retardant chemicals in accordance with CAN/CSA-O80.27.
- .3 Following treatment, kiln-dry material to maximum moisture content of 19% or less.

**PART 3 - EXECUTION**

3.1 GENERAL

- .1 Comply with the requirements of National Building Code of Canada (NBC) 2010-Part 9 supplemented by the following paragraphs.
- .2 Install members true to line, levels and elevations, square and plumb. Ensure that materials are rigidly and securely attached to each other and to adjacent building elements and will not be loosened by work of other trades.
- .3 Where other materials and components are to be applied directly over wood members recess heads of fastening devices below wood surfaces.
- .4 Construct continuous members from pieces of longest practical length.
- .5 Select exposed framing for appearance. Install lumber and panel materials so that grade-marks and other defacing marks are concealed or are removed by sanding where materials are left exposed.

3.2 INSTALLATION

- .1 Install wood blocking, wood cants, fascia backing, nailers, curbs and other rough carpentry components to sizes and in locations required and secure using hot dipped galvanized steel fasteners.
- .2 Unless otherwise indicated, provide minimum 38 mm thick material. Grounds may be 19 mm thick material unless otherwise indicated.
- .3 Install wall sheathing in accordance with requirements of NBC.
- .4 Install roof sheathing as indicated on Structural drawings.
- .5 Install furring and blocking as required to space-out and support casework, cabinets, facings, fascia, electrical mounting backboards and other work as required.
- .6 Install rough bucks and nailers to rough openings as required to provide backing for frames and other work.
- .7 Install wood cants, fascia backing, nailers, curbs and other wood blocking and supports as required and as shown on drawings. Secure using galvanized steel fasteners or as required.
- .8 Install sleepers as indicated.
- .9 Use dust collectors and high quality respirator masks when cutting and sanding wood panels.
- .10 Provide fire-retardant treated plywood sheathing in gypsum board partitions where indicated on drawings.

### 3.3 ERECTION

- .1 Provide all anchors and fasteners including nails, screws, bolts, washers, brackets, hangers, and fastening devices of all types.
- .2 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.
- .3 Countersink bolts where necessary to provide clearance for other work.
- .4 Unless otherwise indicated, attach wood members at maximum 600 mm o.c. as follows:
  - .1 To concrete and solid masonry with expansion type anchor bolts or self tapping screw anchors.
  - .2 To hollow masonry with toggle bolts.
  - .3 To heavy gauge metal with bolts.
  - .4 To light gauge metal with screws or bolts.
  - .5 To wood with nails, screws or bolts as required to ensure stability.

### 3.4 ELECTRICAL EQUIPMENT MOUNTING BACKBOARDS

- .1 Where required by Division 26 and other trades, provide minimum 19 mm thick fire retardant pressure treated plywood backboards mounted on strapping if required.
- .2 Size backboards to adequately accommodate equipment to be mounted. Secure boards with countersunk fasteners to supporting walls in manner which will carry equipment load without damaging wall.

**END OF SECTION**