

PART 1 - GENERAL

- 1.1 RELATED SECTIONS
- .1 Section 01 74 21 Construction and demolition...
  - .2 Section 07 21 16 Blanket Insulation

1.2 REFERENCES

SPEC NOTE: Edit the following paragraphs, required for this specific project.

- .1 Canadian General Standards Board (CGSB)
  - .1 CAN/CGSB-11.3, Hardboard.
  - .2 CAN/CGSB-51.32, Sheathing, Membrane, Breather Type.
  - .3 CAN/CGSB-51.34, Vapour Barrier, Polyethylene Sheet for Use in Building Construction.
- .2 Canadian Standards Association (CSA International)
  - .1 CSA A123.2, Asphalt Coated Roofing Sheets.
  - .2 CAN/CSA-A247, Insulating Fiberboard.
  - .3 CSA B111, Wire Nails, Spikes and Staples.
  - .4 CAN/CSA-G164, Hot Dip Galvanizing of Irregularly Shaped Articles.
  - .5 CSA O112, CSA Standards for Wood Adhesives.
  - .6 CSA O12, Douglas Fir Plywood.
  - .7 CSA O122, Structural Glued-Laminated Timber.
  - .8 CSA O141, Softwood Lumber.
  - .9 CSA O151, Canadian Softwood Plywood.
  - .10 CSA O153, Poplar Plywood.
  - .11 CAN/CSA-O325, Construction Sheathing.
  - .12 CSA O437, Standards on OSB and Waferboard.
- .3 National Lumber Grades Authority (NLGA)
  - .1 Standard Grading Rules for Canadian Lumber.
- .4 Truss Design and Procedures for Light Metal Connected Wood Trusses, Truss Plate Institute of Canada.

1.4 QUALITY ASSURANCE

- .1 Lumber by grade stamp of an agency certified by Canadian Lumber Standards Accreditation Board.

- .2 Plywood, particleboard, OSB and wood based composite panels in accordance with CSA and ANSI standards.

1.5 WASTE MANAGEMENT AND DISPOSAL

.1 Waste Management and Disposal:

- .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.

PART 2 - PRODUCTS

2.1 FRAMING AND STRUCTURAL MATERIALS

- .1 Lumber: unless specified otherwise, softwood, S4S, moisture content 19% (S-dry) or less in accordance with following standards:
  - .1 CSA O141.
  - .2 NLGA Standard Grading Rules for Canadian Lumber.
- .2 Light-frame trusses in accordance with "Truss Design and Procedures for Light Metal Connected Wood Trusses", Truss Plate Institute of Canada.

2.3 PANEL MATERIALS

- .1 Plywood, OSB and wood based composite panels: to CAN/CSA-O325.0.
- .2 Douglas fir plywood (DFP): to CSA O121, standard construction.
- .3 Canadian softwood plywood (CSP): to CSA O151, standard construction.
- .4 Canadian softwood plywood (CSP): to CSA O151, standard construction.
- .5 Poplar plywood (PP): to CSA O153, standard construction.

2.4 ACCESSORIES

- .1 Exterior wall sheathing paper: to CAN/CGSB-51.32 single ply.
- .2 Sealants: Sikaflex 15LM (Sika)

- .3 Subflooring adhesive: to CGSB-71.26, cartridge loaded.
- .4 General purpose adhesive: to CSA O112 Series.
- .5 Nails, spikes and staples: to CSA B111.
- .6 Bolts: unless indicated otherwise, complete with nuts and washers.
- .7 Roof sheathing H-Clips: formed "H" shape, thickness to suit panel material.

### PART 3 - EXECUTION

#### 3.1 PREPARATION

- .1 Store wood products.

#### 3.2 INSTALLATION

- .1 Comply with requirements of NBC 2005 Part 9 supplemented by following paragraphs.
- .2 Install members true to line, levels and elevations, square and plumb.
- .3 Construct continuous members from pieces of longest practical length.
- .4 Install spanning members with "crown-edge" up.

#### 3.3 ERECTION

- .1 Frame, anchor, fasten, tie and brace members to provide necessary strength and rigidity.
- .2 Countersink bolts where necessary to provide clearance for other work.
- .3 Use nailing disks for soft sheathing as recommended by sheathing manufacturer.

## PART 1 - GENERAL

### 1.1 SUMMARY

- .1 Related Requirements
  - .1 Section 01 33 00 Submittal Procedures.
  - .2 Section 01 74 21 Construction and Demolition...

### 1.2 REFERENCES

- .1 Canadian Standards Association (CSA International)
  - .1 CAN/CSA-O86, Engineering Design in Wood.
  - .2 CAN/CSA-O141, Softwood Lumber.
  - .3 CSA S307, Load Test Procedure for Wood Roof Trusses for Houses and Small Buildings.
  - .4 CSA S347, Method of Test for Evaluation of Truss Plates Used in Lumber Joints.
- .2 Health Canada/Workplace Hazardous Materials Information System (WHMIS)
  - .1 Material Safety Data Sheets (MSDS).
- .3 National Lumber Grades Authority (NLGA)
  - .1 NLGA-[03], Standard Grading Rules for Canadian Lumber.
- .4 National Research Council (NRC)/Institute for Research in Construction (IRC) - Canadian Construction Materials Centre (CCMC)
  - .1 CCMC, Registry of Product Evaluations.
- .5 Truss Plate Institute of Canada (TPIC)
  - .1 TPIC, Truss Design Procedures and Specifications for Light Metal Plate Connected Wood Trusses (Limit States Design).

### 1.3 DESIGN REQUIREMENTS

- .1 Design light metal plate connected wood trusses in accordance with TPIC truss design procedures for wood truss chords and webs in accordance with engineering properties in CAN/CSA-O86.

- .2 Design light metal plate connected wood trusses in accordance with TPIC truss design procedures for truss joint designs to test engineering properties in accordance with CSA S347 and listed in CCMC Registry of Product Evaluations.
- .3 Design trusses, bracing, bridging in accordance with CAN/CSA-O86.1 for loads indicated for building locality as ascertained by NBC, Climatic Information for Building Design in Canada and minimum uniform and minimum concentrated loadings stipulated in NBC commentary.
- .4 Limit live load deflections to 1/300 of span unless otherwise specified or indicated.

#### 1.4 QUALITY ASSURANCE

- .1 Qualifications:
  - .1 Fabricator for trusses to show evidence of quality control program such as provided by regional wood truss associations, or equivalent.

#### 1.5 ACTION AND INFORMATIONAL SUBMITTALS

- .1 Submittals in accordance with Section 01 33 00 - Submittal Procedures.
- .2 Product Data:
  - .1 Submit manufacturer's printed product literature, specifications and datasheet in accordance with Section 01 33 00 - Submittal Procedures.
- .3 Shop Drawings:
  - .4 Each shop drawing submission to be signed and stamped by professional engineer registered or licensed in Province of New Brunswick Canada.
  - .5 Indicate special structural application and specification as according to local authorities having jurisdiction.
  - .6 Indicate TPIC Truss Design Procedure and CSA O86 Engineering Design in Wood and specific CCMC Product Registry number of the truss plates

- .7 Indicate species, sizes, and stress grades of lumber used as truss members. Show pitch, span, camber, configuration and spacing of trusses. Indicate connector types, thicknesses, sizes, locations and design value. Show bearing details. Indicate design load for members.
- .8 Submit stress diagram or print-out of computer design indicating design load for truss members. Indicate allowable load and stress increase.
- .9 Indicate arrangement of webs or other members to accommodate ducts and other specialties.
- .10 Show location of lateral bracing for compression members.

#### 1.6 DELIVERY, STORAGE AND HANDLING

- .1 Deliver, handle, store and protect materials in accordance with Section 01 61 00 - Common Product Requirements.
- .2 Storage and Protection:
  - .1 Store trusses on job site in accordance with manufacturer's instructions. Provide bearing supports and bracings. Prevent bending, warping and overturning of trusses.
- .3 Waste Management and Disposal:
  - .1 Separate waste materials for reuse and recycling in accordance with Section 01 74 21 - Construction/Demolition Waste Management and Disposal.
  - .2 Remove from site and dispose of packaging materials at appropriate recycling facilities.
  - .3 Collect and separate for disposal packaging material in appropriate on-site bins for recycling in accordance with Waste Management Plan (WMP).
  - .4 Separate for reuse and recycling and place in designated containers waste in accordance with Waste Management Plan (WMP).
  - .5 Fold up metal and plastic banding, flatten and place in designated area for recycling.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- .1 Lumber: softwood SPF1 – S4S, with maximum moisture content of 19% at time of fabrication and to following standards:
  - .1 CAN/CSA-O141.
  - .2 NLGA (National Lumber Grading Association), Standard Grading Rules for Canadian Lumber.
- .2 Fastenings: to CAN/CSA-O86.

### 2.2 FABRICATION

- .1 Fabricate wood trusses in accordance with reviewed shop drawings.
- .2 Provide for design camber and roof slopes when positioning truss members.
- .3 Connect members using metal connector plates.

### 2.3 SOURCE QUALITY CONTROL

- .1 Identify lumber by grade stamp of an agency certified by Canadian Lumber Standards Administration Board.

## PART 3 - EXECUTION

### 3.1 MANUFACTURER'S INSTRUCTIONS

- .1 Compliance: comply with manufacturer's written recommendations or specifications, including product technical bulletins, handling, storage and installation instructions, and datasheet.

### 3.2 ERECTION

- .1 Erect wood trusses in accordance with reviewed shop drawings.
- .2 Handling, installation, erection, bracing and lifting in accordance with manufacturer's instructions.
- .3 Make adequate provisions for handling and erection stresses.
- .4 Exercise care to prevent out-of-plane bending of trusses.

- .5 Install temporary horizontal and cross bracing to hold trusses plumb and in safe condition until permanent bracing and decking are installed.
- .6 Install permanent bracing in accordance with reviewed shop drawings, prior to application of loads to trusses.
- .7 Do not cut or remove any truss material without approval of Departmental Representative.
- .8 Remove chemical and other surface deposits on treated wood, in preparation for applied finishes.

### 3.3 CLEANING

- .1 Remove surplus materials, excess materials, rubbish, tools and equipment on completion of installation.