
**Washroom Buildings Recapitalization
Buildings 32, 34 & 38
Newman Sound Campground
Terra Nova National Park, NL
Proj. No.: R.079272.001**

Issued April 4, 2016

Section 06 17 53 – Shop-Fabricated Wood Trusses

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PART 1 **GENERAL**

1.1 **RELATED SECTIONS**

- .1 Section 01 33 00 – Submittal Procedures.
- .2 Section 06 10 00 – Rough Carpentry.

1.2 **REFERENCES**

- .1 Canadian Standards Association (CSA)
 - .1 CAN/CSA-O80 Series, Wood Preservation.
 - .2 CAN/CSA-O86.1, Engineering Design in Wood.
 - .3 CAN/CSA-O141, Softwood Lumber.
 - .4 CSA S307-, Load Test Procedure for Wood Roof Trusses for Houses and Small Buildings.
 - .5 CSA S347, Method of Test for Evaluation of Truss Plates Used in Lumber Joints.
 - .6 CSA W47.1, Certification of Companies for Fusion Welding of Steel.
- .2 National Lumber Grades Authority (NLGA)
 - .1 NLGA, Standard Grading Rules for Canadian Lumber.
- .3 Truss Plate Institute of Canada (TPIC)
 - .1 TPIC, Truss Design Procedures and Specifications for Light Metal Plate Connected Trusses (Limit States Design)

1.3 **DESIGN REQUIREMENTS**

- .1 Design trusses, bracing and bridging in accordance with CAN/CSA-O86.1 for loads indicated and minimum uniform and minimum concentrated loadings stipulated in NBC commentary.
- .2 Limit live load deflection to 1/360th of span where plaster gypsum board ceilings are hung directly from trusses.
- .3 Limit live load deflections to 1/240th of span unless otherwise specified or indicated.
- .4 Provide camber for trusses as indicated.

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1.4 SOURCE QUALITY CONTROL

- .1 Identify lumber by grade stamp of an agency certified by Canadian Lumber Standards Administration Board.
- .2 Certify preservative and fire retardant treated wood in accordance with CAN/CSA-O80 Series.

1.5 QUALIFICATION OF MANUFACTURERS

- .1 Fabricator for welded steel connections to be certified in accordance with CSA W47.1.

1.6 QUALITY ASSURANCE

- .1 Provide Certificate of Quality Compliance from truss manufacturer upon completion of fabrication.
- .2 Provide Certificate of Quality Compliance upon satisfactory completion of installation.

1.7 SUBMITTALS

- .1 Each shop drawing submission shall bear signature and stamp of professional Engineer registered or licensed in Province of Newfoundland and Labrador, Canada.
- .2 Indicate TPIC Truss Design Procedure and CSA O86 Engineering Design in Wood and specific CCMC Product Registry number of the truss plates.
- .3 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.
- .4 Submit stress diagram or print-out of computer design indicating design load for truss members. Indicate allowable load and stress increase.
- .5 Indicate arrangement of webs or other members to accommodate ducts and other specialties.
- .6 Show lifting points for storage, handling and erection.
- .7 Show location of lateral bracing for compression members.

1.8 DELIVERY AND STORAGE

- .1 Deliver, handle, store and protect materials in accordance with wood truss fabricator's requirements.

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- .2 Store trusses on job site in accordance with manufacturer's instructions. Provide bearing supports and bracings. Prevent bending, warping and overturning of trusses.

PART 2 PRODUCTS

2.1 MATERIALS

- .1 Lumber: Spruce (S-P-F) species, No. 1 grade, softwood, 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-O86.1.

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.

PART 3 EXECUTION

3.1 ERECTION

- .1 Erect wood trusses in accordance with reviewed erection drawings.
- .2 Indicated lifting points to be used to hoist trusses into position.
- .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.

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- .8 Remove chemical and other surface deposits on treated wood, in preparation for applied finishes.

3.2 CLEANING

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

END OF SECTION