

2. MATERIALS

2.1 Lumber Sizes and Grades

- 1) Net section properties shall be used for all truss designs.
- 2) Minimum nominal chord size for all trusses shall be 38 x 64 except for trusses used in mobile homes.
- 3) All trusses shall be manufactured using lumber graded by NLGA rules, with specified strengths as per CSA 086.1
- 4) All trusses shall be manufactured with No. 2 grade lumber or better for top and bottom chords.
- 5) All truss webs, except as those described in 2.1.6, shall be designed with any lumber grade provided the grade is listed and assigned a specified strength in CSA 086.1.
- 6) Truss webs of 38 x 64 lumber shall be No. 2 grade or better.

2.2 Steel

- 1) Truss Plates shall be manufactured from galvanized sheet steel conforming to or exceeding ASTM Standard A653/A653M-94 Standard specification for Sheet Steel, Zinc coated (Galvanized) by the Hot-Dip Process, Structural (Physical) Quality and shall have the following minimum properties.

Table 2.2(1) ASTM Specification A653/A653M-94 for Structural Quality Sheet Steel

GRADE (Old Designation)	230 (A)	255 (B)	275 (C)
Ultimate Tensile Strength, MPa	310	360	380
Minimum Yield, MPa	230	255	275
Elongation (at failure) in 50 mm length, %	20	18	16

Note: Alternatively, plates may be manufactured from appropriate type and grade high strength sheet steel conforming to specifications as per ASTM A653/A653M-94 HSLA. The ratio of tensile strength to yield point shall be not less than 1.2 and the total elongation shall not be less than 16% for a 50 mm gauge length.

- 2) Corrosion resistant coating shall conform to ASTM A924, "Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) by the Hot-Dip Process, General Requirements", Coating Designation G90, or ASTM A924, "Standards Specification for Electrolytic Zinc-Coated Steel Sheets", Coating Class C, or such treatment as will give equivalent corrosion protection as applied to steel sheet before connector plates are stamped out. It is not necessary to re-coat connectors after stamping.
- 3) On metal connector plates there shall be provided some means such as holes, dimples, bosses, marked pattern, etc., to indicate location of any separately applied nails or fasteners so that nails or fasteners will not be spaced too closely together in the wood and cause excessive splitting. Plate Designer shall determine this nail or fastener minimum spacing. Blank metal plates without any type of indicated minimum spacing for nails or fasteners shall not be acceptable. The above applies only where supplementary fasteners are intended to augment the gripping value of plates.

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- 4) All plate manufacturers must have their plates listed in the Registry of Product Evaluations published by Canadian Construction Materials Centre, Institute for Research in Construction, Ottawa, Ontario.