

Roof Loading Data Sheet

Authority: 1972 PA 230  
 form is to be completed and given to the building official with the application for plan review and building permit. The applicant shall give a copy of the completed form to the truss manufacturer.

Completion: This

Jurisdictional information should be included in this space

Township		County	
Applicant's Name:		Date:	
Applicant's Address:		Permit Number:	
City:	State:	Zip:	
Applicant's Signature:			
Job Location:			
Address:			
Township/Village/City:		County:	

Where prescriptive design is used, the ground snow load,  $P_g$ , from Table R301.2(1) shall be used as the design roof snow except, where section R802.10.2.1 applies the design roof snow load shall be  $.7P_g$ . Additional unbalanced loads for drifting across the ridge are not required. Where engineered design is used, this form is to be completed by the permit applicant or design professional. The flat roof snow load,  $P_f$  is defined as:  $P_f = .7P_g(C_e)(C_t)(I)$ . For factors  $C_e$ ,  $C_t$ , and  $I$ , place an "X" in the appropriate box below that best describes the structure and the particular jobsite and substitute the corresponding values in the formula above. The result is the flat roof snow load and is applied as the truss top chord live load, TCLL1. All live loads and snow loads, including unbalanced loads and minimum loads, are to be applied per ASCE 7, chapters 4 and 7 and this code.

Ground Snow Load,  $P_g =$  \_\_\_\_\_ From Figure R301.2(5) or MRC Table R301.2(5)

Exposure Factor $C_e$			
Exposure	Fully Exposed <sup>1</sup>	Partially Exposed <sup>2</sup>	Sheltered <sup>3</sup>
A Urban and suburban areas, wooded areas or other terrain with closely spaced objects having the size of single-family dwellings or larger.			
B Open terrain with scattered obstructions having heights less than 30 ft. (flat open country)			
C Flat unobstructed areas exposed to wind flowing over open water for a distance of at least 1 mile. (i.e. Great Lakes.)			

Mark only one of the 9 boxes under the exposure factor with an "X".

<sup>1</sup>Fully Exposed: Roofs exposed on all sides with no shelter by terrain, higher structures, or trees.

<sup>2</sup>Partially Exposed: All roofs except those designated as "fully exposed" or "sheltered."

<sup>3</sup>Sheltered: Roofs located tight among conifers that qualify as obstructions.

Thermal Factor  $C_t$

Thermal Condition <sup>4</sup>		
All structures except as listed below		
Structures kept just above freezing and those with cold, ventilated roofs with an R factor of 25 or greater between the ventilated and heated spaces, such as attics		
Unheated structures and those intentionally kept below freezing, such as seasonal building or storage buildings		
Continuously heated greenhouse with a roof R Value less than 2 and having an interior temperature maintained at about 50 degrees 3 ft above the floor during winter months and a temperature alarm system or an attendant to warn of a heating failure.		

Mark only 1 of the 4 boxes under the Thermal Factor with an "X".

Importance Factor (I)

Category		
I Building and other structures representing low hazard to human life, i.e.: Agricultural, Temporary, and Minor Storage Facilities.		
II All buildings except those listed in Categories III and IV.		
III Building and other structures representing substantial hazard to human life in the event of failure.		
IV Buildings and other structures designated as essential facilities.		

Mark only 1 of the 4 boxes under the Importance Factor with an "X"

Note: All roof trusses have additional live (storage) loads applied to the bottom chord where required per Table R301.5.

FIGURE 802.10.1  
 ROOF LOADING DATA SHEET

## R802.10 Wood trusses.

**R802.10.1 Truss design drawings.** Truss design drawings, prepared in conformance with Section R802.10.1, shall be provided to the building official and approved prior to installation. The truss design data sheet, Figure R802.10.1, may be provided to the building official at the time of permit application, as an alternative to design drawings as permitted in Section R106.1.4. Truss design drawings shall include, at a minimum, the information specified below. Truss design drawings shall be provided with the shipment of trusses delivered to the jobsite.

- (1) Slope or depth, span, and spacing.
- (2) Location of all joints.
- (3) Required bearing widths.
- (4) Design loads as applicable.
  - (a) Top chord live load (including snow loads).
  - (b) Top chord dead load.
  - (c) Bottom chord live load.
  - (d) Bottom chord dead load.
  - (e) Concentrated loads and their points of application.
  - (f) Controlling wind and earthquake loads.
- (5) Adjustments to lumber and joint connector design values for conditions of use.

required by the statutes of the jurisdiction in which the project is to be constructed in accordance with Section R106.1.

**R802.10.2.1 Applicability limits.** The provisions of this section shall control the design of truss roof framing when snow controls for buildings, not greater than 60 feet (18 288 mm) in length perpendicular to the joist, rafter or truss span, not greater than 36 feet (10 973 mm) in width parallel to the joist, rafter or truss span, not more than three stories above grade plane in height, and roof slopes not smaller than 3:12 (25 percent slope) or greater than 12:12 (100-percent slope). Truss roof framing constructed in accordance with the provisions of this section shall be limited to sites subjected to a maximum design wind speed of 140 miles per hour (63 m/s), Exposure B or C, and a maximum ground snow load of 70 psf (3352 Pa). For consistent loading of all truss types, roof snow load is to be computed as:  $0.7 p_g$ .

**R802.10.3 Bracing.** Trusses shall be braced to prevent rotation and provide lateral stability in accordance with the requirements specified in the *construction documents* for the building and on the individual truss design drawings. In the absence of specific bracing requirements, trusses shall be braced in accordance with accepted industry practice such as the SBCA *Building Component Safety Information (BCSI) Guide to Good Practice for Handling, Installing & Bracing of Metal Plate Connected Wood Trusses*.