



Snow Load Report

1. Roof and Building Data

Ground Snow Load (Pg): 36.0 psf
 Roof Pitch: 6 /12
 Risk Category: II
 Eave-to-Ridge (W): 21.56 ft.
 Terrain Category: C
 Exposure: Partially Exposed
 Thermal Factor (C_t): 1.00
 Roof Surface: Asphalt Shingles
 Roof System: Common Truss
 Spacing: 24 in. o/c
 Overhang: 18 in.

2. Design Loads

Top Chord Dead Load: 15 psf
 Bottom Chord Dead Load: 10 psf
 SF (Slope Factor) = 1/Cosine(Φ) = 1.12 (Dead loads specified on a projected horizontal basis take into account the effect of the pitch via a slope factor.)
 Adj. TCDL (TCDL x SF): 16.8 psf

3. Design Assumptions

Code Standard: ASCE 7-10
 Number of Plies: 1 PLY
 Bottom Chord Pitch: 0 /12

4. Snow Load Calculations

Calculate flat roof snow load p_f using the following equation:

$$p_f = 0.7C_eC_tI_s p_g$$

where:

p_f = Flat Roof Snow Load in psf
 C_e = 1.00 = Exposure Factor, as determined by ASCE 7-10 Table 7-2 (Terrain Cat. C, Exp. Partially Exposed)
 C_t = 1.00 = Thermal Factor, as determined by ASCE 7-10 Table 7-3
 I_s = 1.00 = Importance Factor, as determined by ASCE 7-10 Table 1.5-2 (Risk Cat. II)
 p_g = 36.0 psf = Ground Snow Load in psf

$$p_f = 0.7C_eC_tI_s p_g = 0.7(1.00)(1.00)(1.00)(36.0) = 25.2 \text{ psf}$$

Subject	Customer	Location	Job No.
Snow Loads	ANTON STETNER	17323 58TH ST SE SNOHOMISH WA 98290	2067
Engr.	UPSTATE ENGINEERING, INC. 22002 64TH AVE W, STE E MOUNTLAKE TERRACE, WA 98043 ph. (425) 354-4105 https://upst8.com/		Rev.
Date			Page
2/26/2026	 22002 64TH AVE W - SUITE 20, MOUNTLAKE TERRACE, WA 98043 SERVICES@UPST8.COM TEL: (425) 354-4105 FAX: JUST DON'T Copyright © 2026		1

$$p_{\text{windward}} = 0.3p_s = (0.3)(25.2) = 7.6 \text{ psf}$$

$$p_{\text{leeward}} = p_s = 25.2 \text{ psf}$$

$$\gamma = 0.13(36.0) + 14 = 18.68 \text{ pcf}$$

$$h_d = .43 \sqrt[3]{21.56} \sqrt[4]{36.0 + 10} - 1.5 = 1.62 \text{ ft. } [l_u = 21.56 \text{ ft.}]$$

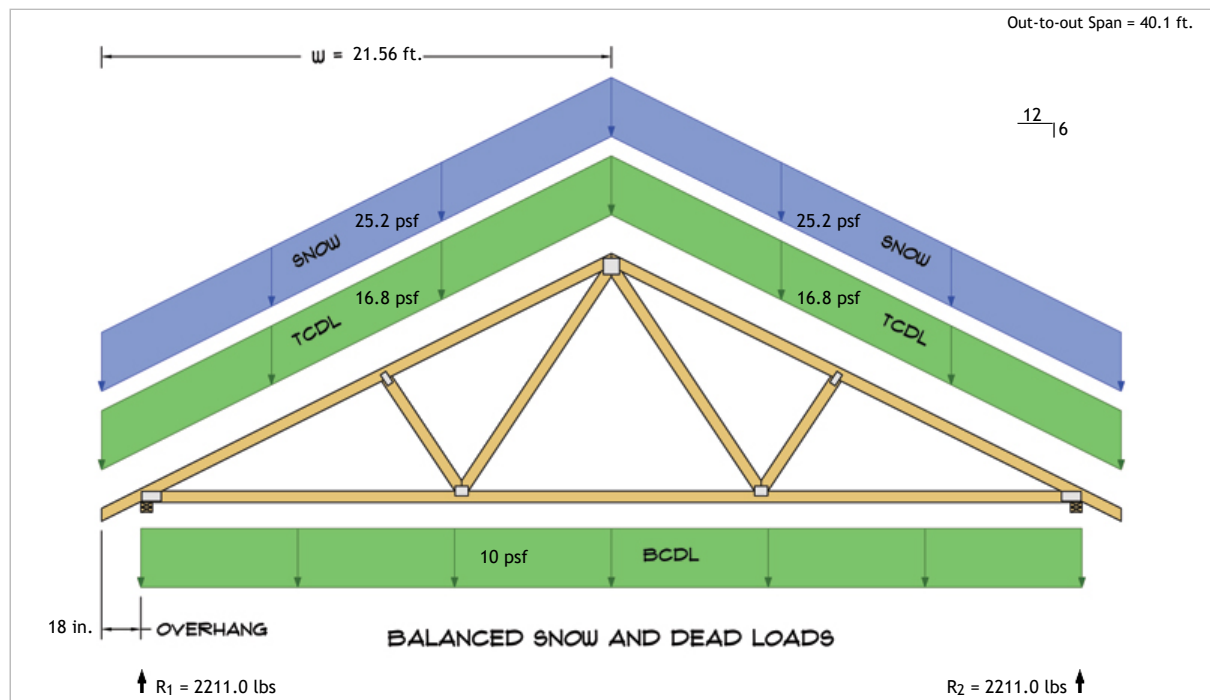
$$l_d = \frac{8}{3} \times 1.62 \times \sqrt{12/6} = 6.10 \text{ ft.}$$

$$p_d = \frac{1.62 \times 18.68}{\sqrt{12/6}} = 21.4 \text{ psf}$$

On warm roofs apply a distributed 2pf snow load on all overhanging portions as per ASCE 7-10 section 7.4.5.

No other loads except dead loads shall be present on the roof when this uniformly distributed load is applied.

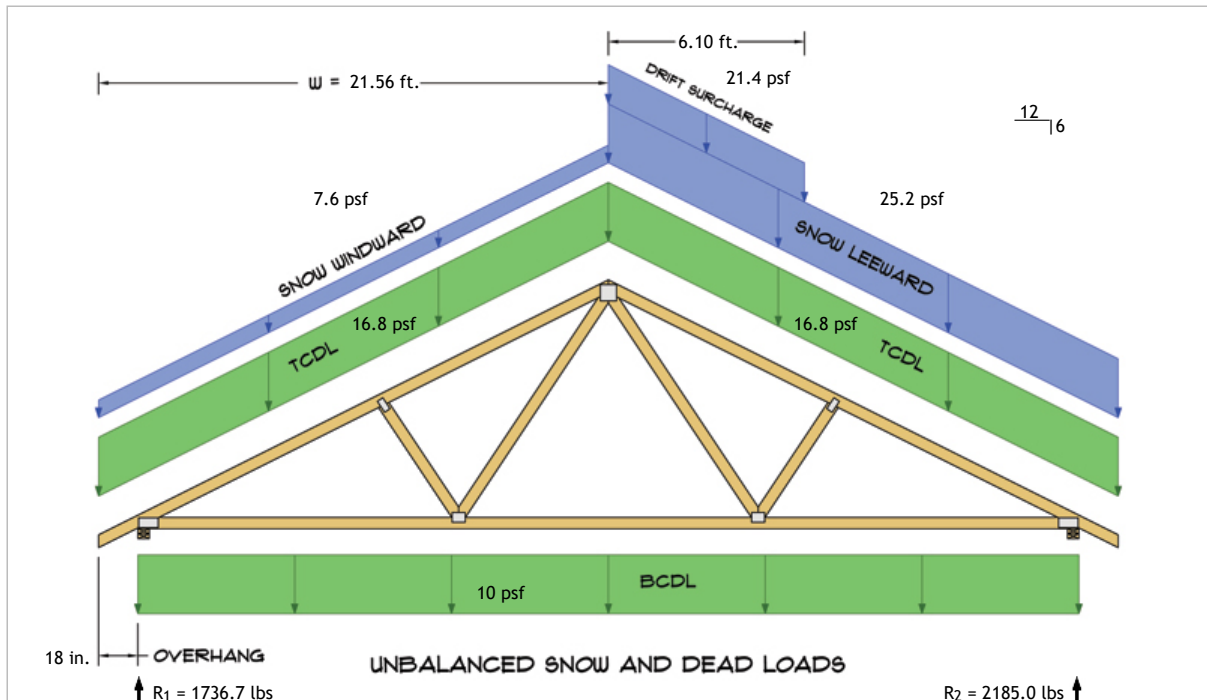
$$2p_f = (2)(25.2) = 50.4 \text{ psf}$$



$$R_1 = D + S = 1124.3 \text{ lbs} + 1086.6 \text{ lbs}$$

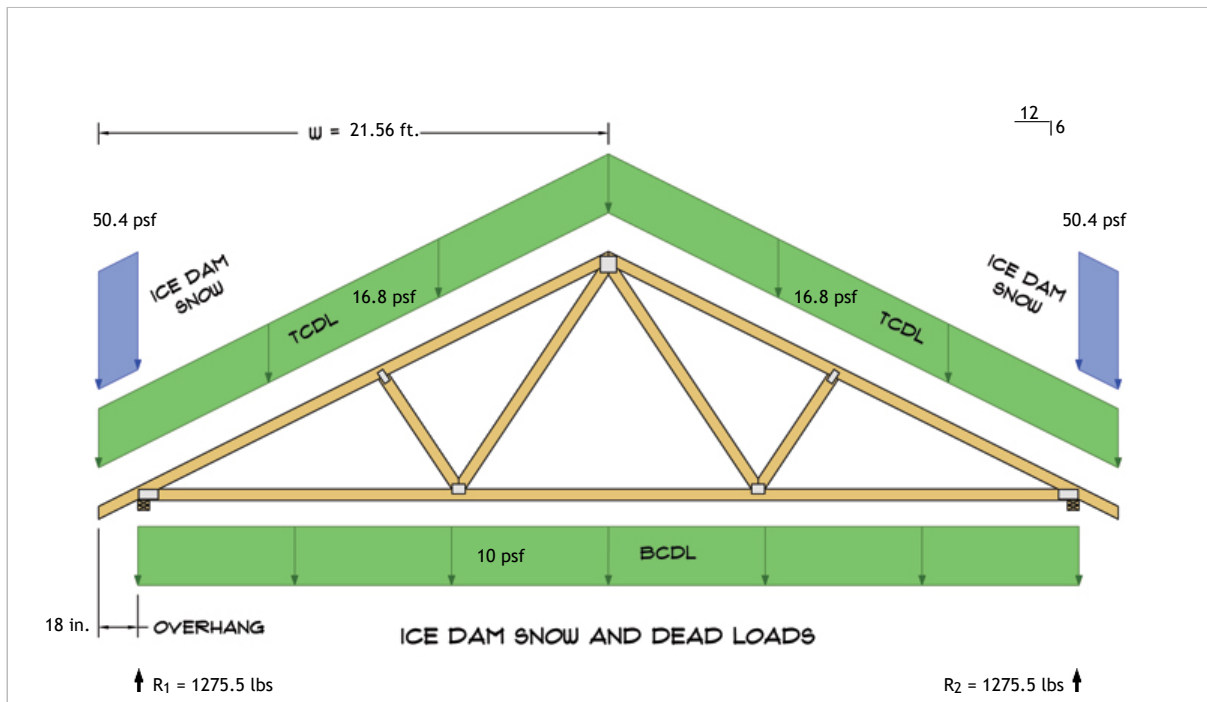
$$R_2 = D + S = 1124.3 \text{ lbs} + 1086.6 \text{ lbs}$$

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Date	2/26/2026					Page	3



$$R_1 = D + S = 1124.3 \text{ lbs} + 612.4 \text{ lbs}$$

$$R_2 = D + S = 1124.3 \text{ lbs} + 1060.7 \text{ lbs}$$



$$R_1 = D + S = 1124.3 \text{ lbs} + 151.2 \text{ lbs}$$

$$R_2 = D + S = 1124.3 \text{ lbs} + 151.2 \text{ lbs}$$

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Date	2/26/2026					Page	4