KITTITAS COUNTY
COMMUNITY DEVELOPMENT SERVICES
411 NORTH RUBY STREET SUITE #2 ■ ELLENSBURG, WA 98926
PHONE (509) 962-7506 ■ FAX (509) 962-7682

B-004
BULLETIN

ENGINEERING DESIGN CRITERIA FORM
(MUST BE LISTED ON THE DRAWINGS AND/OR CALCULATIONS COVER PAGE)

FOR MORE INFORMATION VISIT THE CDS WEBSITE AT: WWW.CO.KITTITAS.WA.US/CDS

OWNER'S NAME:	**DATE:**	**REVIEW # (office use):**
SITE ADDRESS:		**TAX PARCEL NUMBER:**
CONTACT PERSON:		**Phone:**
Mailing Address:		**Fax #:**
Firm or Company Name:		**E-Mail:**

LIVE LOADS:		**DEAD LOADS:**	
FLOOR:	**psf:**	**FLOOR:**	**psf:**
ROOF SNOW LOAD:	**Pf:**	**ROOF:**	**psf:**
SEISMIC LOADS:		**WIND LOADS:**	
S_S = _____	**S_1 =** _____	**3-SECOND GUST:** _____	
DESIGN CATEGORY: _____		**EXPOSURE:** _____	
SITE CLASS: _____		**SOIL BEARING:** _____	

GROUND SNOW LOAD: The design snow loads shall be determined in accordance with the current edition of Section 7 of ASCE-7. Contact the KCCDS for ground snowload (509) 962-7506.

ELEVATION: _____ **X ISO LINE:** _____ **= GROUND SNOW LOAD (Pg):** _____ **PSF**

FLAT ROOF SNOW LOADS: Pf = (0.7)(Ce)(Ct)(I)(Pg). The flat roof snowload, Pf, on a roof with a slope equal to or less than 5 degrees shall be calculated in accordance with Section 7.3 of ASCE-7 using the above formula.

Heated Areas of Structure:

Pf _____ **= (0.7) (Ce** _____ **) (Ct** _____ **) (I** _____ **) (Pg** _____ **)**

Unheated Areas of Structure:

Pf _____ **= (0.7) (Ce** _____ **) (Ct** _____ **) (I** _____ **) (Pg** _____ **)**

Exposure Factor, Ce. The value for Ce is determined by ASCE 7 Table 7-2.
(Note: Ce must be 1.2 in sheltered areas if trees are within 10h of the structure, where h is height of tree above the roof line).

Thermal Factor, Ct. The value for Ct is determined by ASCE 7 Table 7-3.
(Note: Ct must be 1.1 for heated structures and 1.2 for unheated structures).

Importantance Factor, I. The value for I is determined by ASCE 7 Table 7-4.

Rain-on-Snow Surcharge. Roofs with a slope less than ½-inch per foot shall be designed for a surcharge load determined in accordance with Section 7.10 of ASCE-7.

Ponding Instability. Roofs with a slope less than ¼ -inch per foot shall be designed for ponding instability in accordance with Section 7.11 of ASCE 7.

SLOPED ROOF SNOW LOADS: Ps = (Cs)(Pf). The snow load, Ps, on a roof with a slope greater than 5 degrees shall be calculated in accordance with Section 7.4 of ASCE-7 using the above formula. Values for Cs, the sloped roof factor, are determined from Sections 7.4.1 through 7.4.4 of the ASCE-7.

- **Caution! Be aware that roof slope reductions vary according to the slipperiness of the roofing material and if the snow can slide unobstructed off the roof at the eaves. Do not reduce snowloads in valleys or where the snow is retained on the roof because of lower lowers or snow gaurds.**

Warm Roof Slope Factor, Cs.	**Ps** _____ **=** **(Cs** _____ **)** **(Pf** _____ **)**
Cold Roof Slope Factor, Cs.	**Ps** _____ **=** **(Cs** _____ **)** **(Pf** _____ **)**

PARTIAL LOADING: The effect of not having the balanced snow load over the entire loaded roof area shall be analyzed in accordance with Section 7.5 of ASCE-7.

Partial Loading Shall be Calculated?	☐ **Done**	**If yes, include formula below. Formula is too lengthy to include here see Section 7.5 ASCE-7.**

UNBALANCED SNOW LOADS: Unbalanced roof snow loads shall be determined in accordance with Section 7.6 of ASCE-7.

Unbalanced Loads Shall be Calculated?	☐ **Done**	**Include formula below. Formula is too lengthy to include here see Section 7.6 ASCE-7.**

DRIFTS ON LOWER ROOFS: In areas where the ground snow load, Pg, is equal to or greater than 5psf, roof shall be designed to sustain localized loads from snow drifts in accordance with Section 7.7 of ASCE-7.

Drifting Loads Shall be Calculated?	☐ **Done**	**Include formula below. The formula is too lengthy to include here see Section 7.7 ASCE-7.**

SLIDING SNOW LOADS: The extra load caused by snow sliding off a sloped roof onto a lower roof shall be determined in accordance with Section 7.9 of ASCE-7.

Sliding Snow Loads Shall be Calculated?	☐ **Done**	**Include formula below. Formula is too lengthy to include here see Section 7.9 ASCE-7.**