

When windows and other openings are not weather-stripped an allowance of 10 to 15 per cent for exposure due to prevailing winds should be added to the computed heat losses.

As the room mentioned faces the north, and is not weather stripped add 15 per cent of computed heat losses.

Then, $6520 \times 1.15 = 7498$, total heat loss

If the ceiling construction in the room was lath and plaster with floor above and the space above was not heated the room should be figured as follows:

Referring to Table 7 it is found that the heat loss per degree, per square foot to be 0.26 B.t.u. per hr. Special note should be taken that this space will be only 35 deg. fahr. when it is zero outside, and as the room is heated to 70 deg. fahr. the temperature difference will be $70 - 35 = 35$ deg.

Cubical contents $800 \times 1\frac{1}{2} \times 0.02 \times 70 = 1480$ B.t.u.
 Glass $30 \times 1.1 \times 70 = 2310$ B.t.u.
 Net wall $130 \times 0.3 \times 70 = 2730$ B.t.u.
 Ceiling $100 \times 0.26 \times 35 = 910$ B.t.u.

Total Heat Loss from Room = 7430 B.t.u.
 Adding 15 per cent for Northern Exposure = 8544 B.t.u.

EFFECT OF EXPOSURE AND WIND VELOCITY

As shown in the section on calculation of heat loss, it is customary to add 10 per cent to 15 per cent to the heat loss of rooms on the sides of the building exposed to the prevailing winds in coldest weather. The coldest exposure varies with the location. North and west are usually considered the coldest exposure. According to the U. S. Weather Bureau (Table 14), the coldest exposure in Salt Lake City is S.E.; in Denver, S.; in Chicago, S.W.; in Albany, S., which indicates how important it is to know not only the average and lowest temperatures of a place but also the prevailing wind directions in winter. Every plan should show the "points of the compass."

TABLE 13. DROP IN TEMPERATURE FOR EACH MILE WIND VELOCITY

Temp. Deg. Fahr.	Wind Velocity	Deg. of Temp. Drop
50 deg. to 40 deg.	1 mile per hr. equals	0.75 deg. drop
40 deg. to 30 deg.	1 mile per hr. equals	1.0 deg. drop
30 deg. to 20 deg.	1 mile per hr. equals	1.1 deg. drop
20 deg. to 10 deg.	1 mile per hr. equals	1.2 deg. drop
10 deg. to 0 deg.	1 mile per hr. equals	1.3 deg. drop
0 deg. to -10 deg.	1 mile per hr. equals	1.4 deg. drop
-10 deg. to -20 deg.	1 mile per hr. equals	1.5 deg. drop

In other words a temperature of 5 deg. above zero with a 30-mile wind should be equivalent to 34 deg. below zero with no wind blowing. It will be found, however, that the coefficients for transmission allow for a wind velocity of from 10 to 15 miles per hr.

TABLE 14. CLIMATIC CONDITIONS COMPILED FROM U. S. WEATHER BUREAU RECORDS

COL. A	COL. B	COL. C	COL. D	COL. E	COL. F
State	City	Average Temp., Oct. 1st-May 1st	Lowest Temperature	Average Wind Velocity Dec., Jan., Feb., Miles per Hr.	Direction of Prevailing Wind, Dec., Jan., Feb.
Ala.	Mobile	57.7	-1	8.3	N
	Birmingham	53.9	-10	8.6	N
Ariz.	Phoenix	59.5	16	3.9	E
	Flagstaff	34.9	-25	6.7	SW
Ark.	Fort Smith	49.5	-15	8.0	E
	Little Rock	51.6	-12	9.9	NW
Cal.	San Francisco	54.3	29		N
	Los Angeles	58.6	28		NE
Colo.	Denver	39.3	-29	7.4	S
	Grand Junction	39.2	-16	5.6	SE
Conn.	New Haven	38.0	-14	9.3	N
D. C.	Washington	43.2	-15	7.3	NW
Fla.	Jacksonville	61.9	10	8.2	NE
Ga.	Atlanta	51.4	-8	11.8	NW
	Savannah	58.4	8	8.3	NW
Idaho	Lewiston	42.5	-13	4.7	E
	Pocatello	36.4	-20	9.3	SE
Ill.	Chicago	36.4	-23	17.0	SW
	Springfield	39.9	-24	10.2	NW
Ind.	Indianapolis	40.2	-25	11.8	S
	Evansville	44.1	-15	8.4	S
Iowa	Dubuque	33.9	-32	6.1	NW
	Sioux City	32.1	-35	12.2	NW
Kans.	Concordia	38.9	-25	7.3	N
	Dodge City	40.2	-26	10.4	NW
Ky.	Louisville	45.2	-20	9.3	SW
La.	New Orleans	61.5	7	9.6	N
	Shreveport	56.2	-5	7.7	SE
Me.	Eastport	31.1	-23	13.8	W
	Portland	33.6	-17	10.1	NW
Md.	Baltimore	43.6	-7	7.2	NW
Mass.	Boston	37.6	-13	11.7	W
Mich.	Alpena	29.1	-27	11.3	W
	Detroit	35.4	-24	13.1	SW
	Marquette	27.6	-27	11.4	NW
Minn.	Duluth	25.1	-41	11.1	SW
	Minneapolis	29.6	-33	11.5	NW
Miss.	Vicksburg	56.0	-1	7.6	SE
Mo.	St. Joseph	40.3	-24	9.1	NW
	St. Louis	43.3	-22	11.8	NW
	Springfield	43.0	-29	11.3	SE
Mont.	Billings	34.7	-49		W
	Havre	27.7	-57	8.7	SW
Nebr.	Lincoln	37.0	-29	10.9	N
	North Platte	34.6	-35	9.0	W
Nev.	Tonopah	39.6	-7	9.9	SE
	Winnemucca	37.9	-28	9.5	NE
N. H.	Concord	33.4	-35	6.0	NW
N. J.	Atlantic City	41.6	-7	10.6	NW
N. Y.	Albany	35.1	-24	7.9	S
	Buffalo	34.7	-14	17.7	W
	New York	40.3	-6	13.3	NW
N. M.	Santa Fe	38.0	-13	7.3	NE