Design of Solar Building Overhangs
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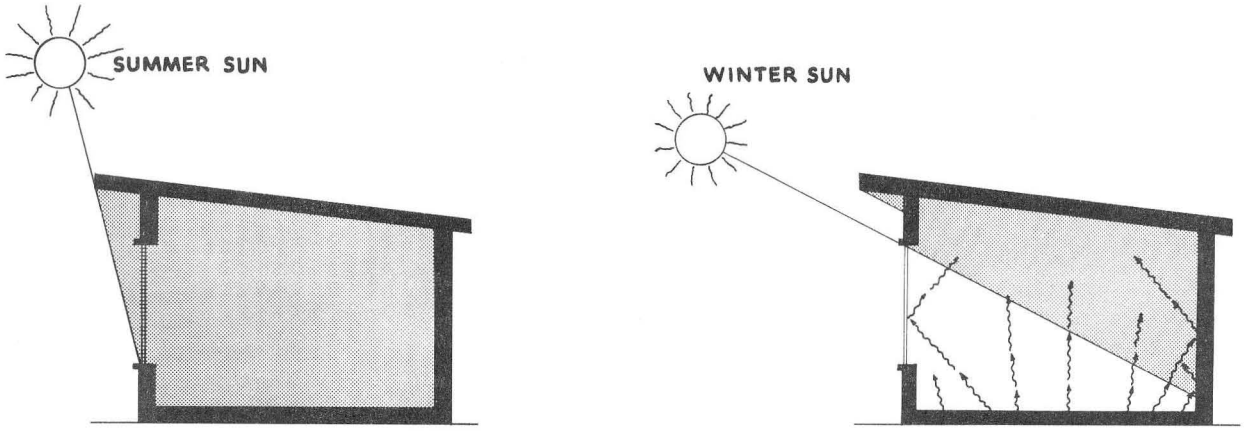

	FOR	
Cooler buildings		Warmer buildings
Maximum light		Less disease hazard
No direct sun		Better ventilation

A good solar building design should have:

1. Large windows on south side.
2. Double glass windows.
3. Insulated walls and ceiling.
4. A good ventilating system.
5. Long side toward the south.

The angle at which the sun shines on a building depends on the time of day, the time of year, and how far the building is from the equator. A solar building takes advantage of the changing position of the sun with a specially designed overhang that lets sunshine through the south windows in winter but not in summer.

The table and chart on the back side of this circular can be used to determine the overhang needed for a solar building design. With them, the length of the overhang can be constructed so the sun will shine into the south windows during winter and not in summer. The chart and table are for the position of the sun at noon. Different dates are given in the table because it may be desirable to have the sun shine into some buildings longer than others. Suggested dates for average conditions are shown with heavy type in the table.

The winter warmth is obtained in a solar building because the sun is low in winter, allowing the rays to pass through the windows into the building. In the building, the rays heat the floor and walls, which warm the air. The double glass and insulation in the walls and ceiling reduce the heat loss so the building stays warm. In summer, the sun is high and never hits the window because of the large overhang. In addition, the insulated walls and roof keep the heat outside the building.

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EAST LANSING

Instructions for use:

1. From the table, select the point to use in column 2.
2. Draw a straight line through the point and the height "H" (column 3). Extend the line until it crosses column 1.
3. Where the line crosses column 1 is the inches of overhang needed ("L").

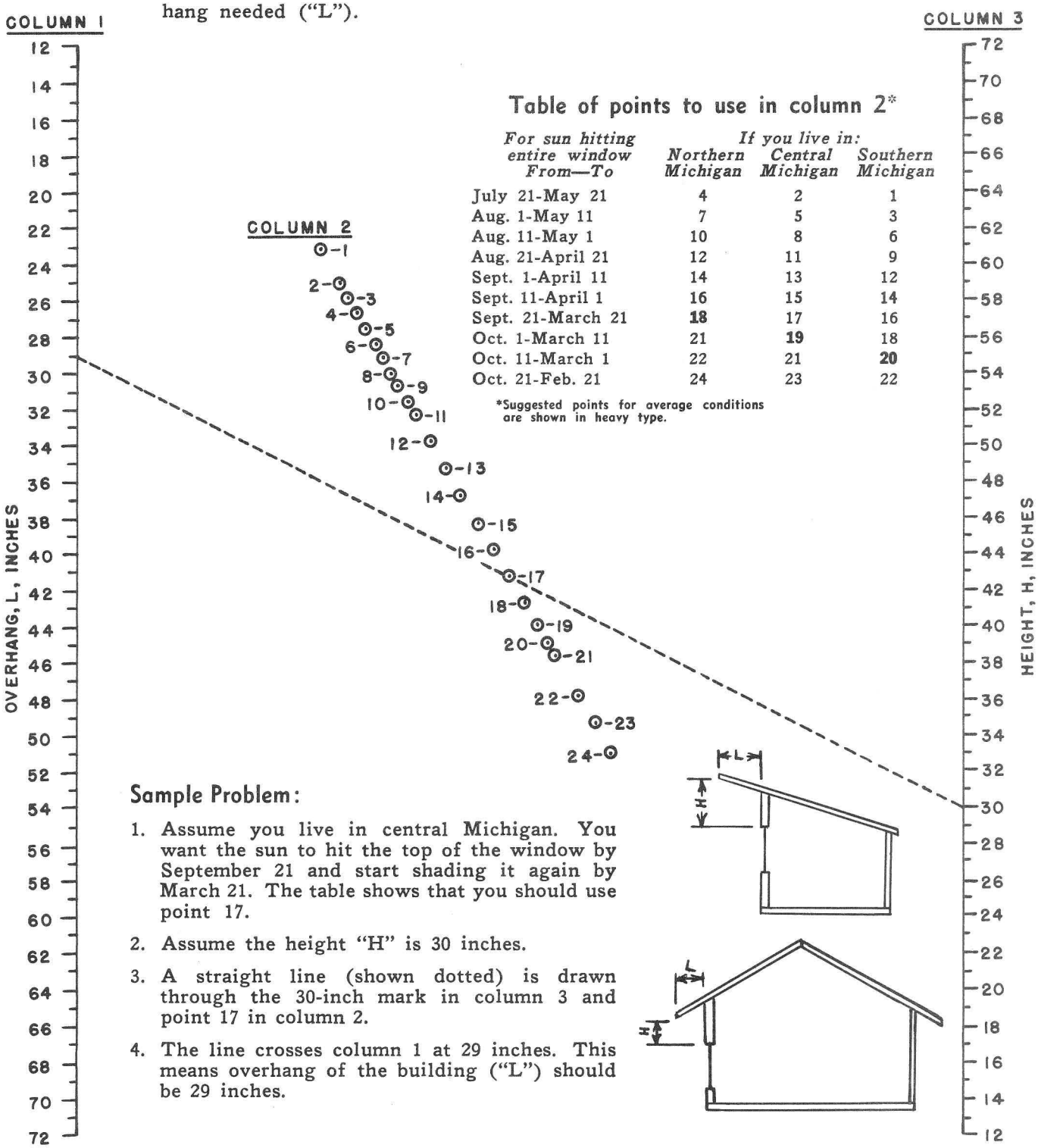

Table of points to use in column 2*

For sun hitting entire window From—To	*If you live in: Northern Michigan*	*Central Michigan*	*Southern Michigan*
July 21-May 21	4	2	1
Aug. 1-May 11	7	5	3
Aug. 11-May 1	10	8	6
Aug. 21-April 21	12	11	9
Sept. 1-April 11	14	13	12
Sept. 11-April 1	16	15	14
Sept. 21-March 21	**18**	17	16
Oct. 1-March 11	21	**19**	18
Oct. 11-March 1	22	21	**20**
Oct. 21-Feb. 21	24	23	22

*Suggested points for average conditions are shown in heavy type.

Sample Problem:

1. Assume you live in central Michigan. You want the sun to hit the top of the window by September 21 and start shading it again by March 21. The table shows that you should use point 17.
2. Assume the height "H" is 30 inches.
3. A straight line (shown dotted) is drawn through the 30-inch mark in column 3 and point 17 in column 2.
4. The line crosses column 1 at 29 inches. This means overhang of the building ("L") should be 29 inches.

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