

SIZING DATA (For Conventional Drainage)

Zurn makes it easy to size roof drains. The four things you will need to know are: 1) rate of precipitation; 2) total area of roof; 3) size of leader required; and 4) area handled by each drain.

When sizing roof drains, the limiting factor for the amount of water each drain will carry away is the size of leader. Therefore, increasing leader size decreases the number of drains required.

STEP-BY-STEP SIZING OF ZURN DRAINS

Step 1: A. Calculate total roof area.

Example: Roof area is 300 x 500 ft; $300 \times 500 = 150,000$ sq. ft.

B. Determine the size of leader to be used.

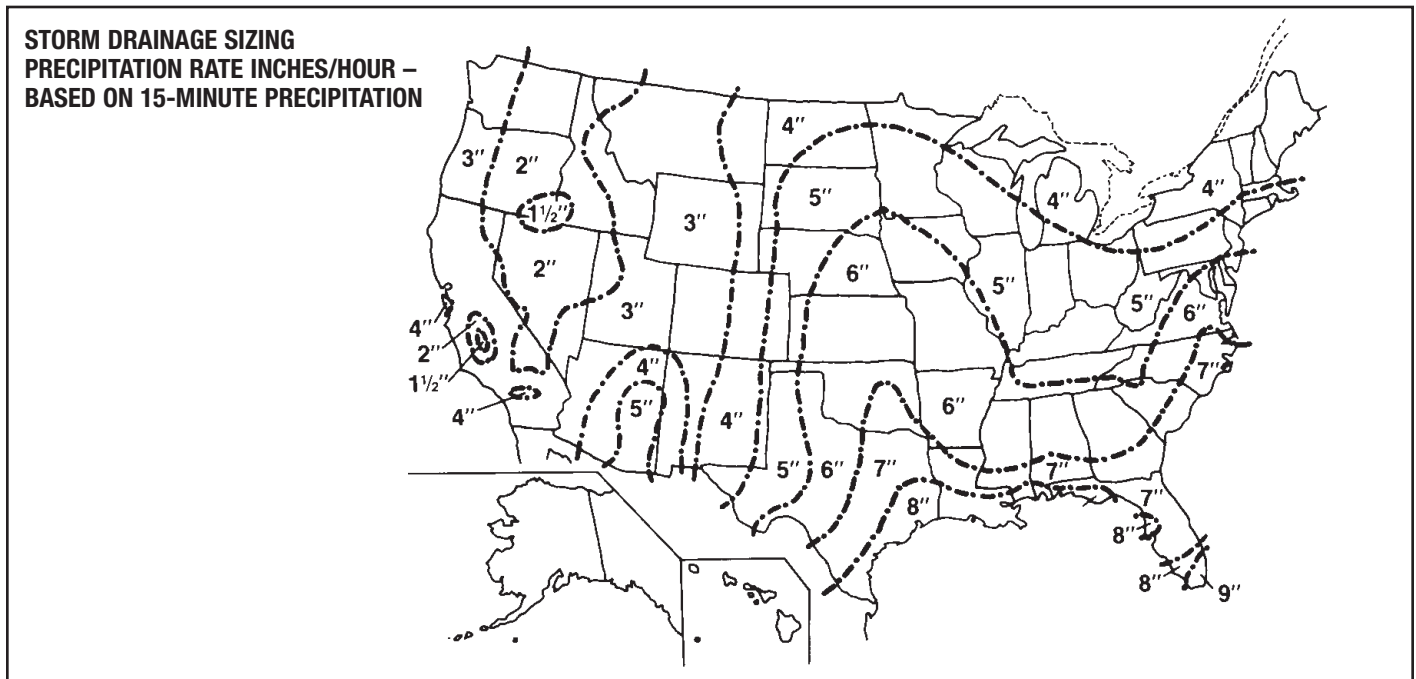
Example: 4" leader size is selected.

Step 2: Locate building site on map below to find rainfall rate.

Note: This map is taken from the National Standard Plumbing Code, Appendix A, and should only be used for general reference. Consult local codes for more precise data. **Example:** For a building located in Erie, PA, the map shows a 4" hourly rainfall.

Step 3: Cross reference leader size with hourly rainfall in chart below to obtain roof area that can be handled by each leader. **Example:** For a 4" hourly rainfall and 4" leader, each drain can handle 4,600 sq. ft. of roof area.

Step 4: Divide total roof area by area found in Step 3 to obtain the number of drains required. **Example:** 150,000 sq. ft. divided by the 4,600 sq. ft. equals 32.6, or 33 drains required. The drains should be equally spaced and located symmetrically about the roof.



ROOF DRAIN VERTICAL REQUIREMENT FOR HORIZONTAL ROOF AREAS AT VARIOUS RAINFALL RATES*											
Leader Size		Hourly Rainfall In Inches									
Pipe Size (Inches)	Open Area (Sq. In.)	1	1-1/2	2	2-1/2	3	4	5	6	7	8
		Total Square Footage Covered Per Drain									
2	3.14	2,880	1,920	1,440	1,150	960	720	575	480	410	360
3	7.06	8,880	5,860	4,400	3,520	2,930	2,200	1,760	1,470	1,260	1,100
4	12.56	18,400	12,700	9,200	7,360	6,130	4,600	3,680	3,070	2,630	2,300
5	19.60	34,600	23,050	17,300	13,840	11,530	8,650	6,920	5,765	4,945	4,325
6	28.30	54,000	36,000	27,000	21,600	18,000	13,500	10,800	9,000	7,715	6,750
8	50.25	116,000	77,400	58,000	46,400	38,660	29,000	23,200	19,315	16,570	14,500

*Above sizing data is offered as a guide only. For actual applications consult local codes.