## ROOF DRAIN TO RODF AREA SIZING SCHEDULE



Use the above sketch in combination with the table of the variable rainfall rates below to determine the appropriate quantity and size of the roof drains required when you know:
a) the total roof area $\quad$ b) the approximate drain diameter you will use

Note: When determining the number roof drains required recognize that the smaller the roof drain outlet diameter the more drains you will need. Conversely, the larger the drain outlet diameter the fewer you will need.
How to calculate the quantity of drains required:
1.) Calculate the roof area to be drained.
Example: Roof area is $200^{\prime} \times 500=100,000 \mathrm{sq}$. ft .
2.) Estimate the roof drain outlet size you will likely use. Example: 4' roof drain
3.) Determine your building's location on the above map to determine the approximate rainfall as measured in inches per hour. Example: The location of Kansas City, MO shows $\mathbf{6 "}$ of rainfall per hour.
4.) Select a reference of a roof drain size with hourly rainfall together with the roof area square footage you have estimated and then determine from the chart below how many roof drains you require.
Example: Each $4^{\prime \prime}$ drain size in a $6^{\prime \prime}$ hourly rainfall area will accommodate drainage of $\mathbf{3 , 0 7 0} \mathrm{sq}$. ft . of roof area.
Therefore, the $\mathbf{1 0 0 , 0 0 0} \mathrm{sq}$. ft. area roof will require $100,000 \div 3070=32.5$ or 33 roof drains for ideal drainage.
CALCULATE AREA DRAINAGE BY ROOF DRAIN SIZE AT VARIOUS RAINFALL RATES

| DRAIN OUTLET SIZE |  | HOURLY RAINFALL (in inches) |  |  |  |  |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| PIPE | OPEN | 1 | 1.5 | 2 | 2.5 | 3 | 4 | 5 | 6 | 7 | 8 |
| $\begin{aligned} & \text { (inches) } \\ & \text { SIZE } \end{aligned}$ | AREA <br> (sq. inches) | ROOF AREA SQUARE FOOTAGE |  |  |  |  |  |  |  |  |  |
| 2 | 3.14 | 2,880 | 1,920 | 1,440 | 1,150 | 960 | 720 | 575 | 480 | 410 | 360 |
| 3 | 7.06 | 8,880 | 5,860 | 4,440 | 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 |

