

Roof Drain Sumps

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If there is one thing that is for sure in the world of roof drains and roofing is that in many cases the plumbing contractor and the roofing contractor do not talk as much as they should. Getting the roof drain and roofing elevation correct can save the owner and the contractors a lot of money. With that said what might the answer be to assure that the installation is done correctly?

To start off a drain height elevation off of the deck put on the mechanical drawings would be a great start. The reason being that the plumber rarely looks at the architectural drawings and in some cases they do not have the actual drain installed elevation. Sometimes there is only a generic drain detail and the insulation drain height is not known until the tapered insulation drawings are done by the roof insulation manufacturer and approved by the architect. But this in most cases is done well before the drains are installed and probably purchased. So it is possible that the roof drain can be installed so they do not cause any ponding on the roof.

Roof sumps help the roof shed water more effectively and help eliminate the water pond size if the drain was not installed at the correct height. One mistake that is commonly made with roof sumps is that they are made with extended flat areas. Now to have a nicely tapered roof only to lead to a 3' by 3' flat sump is going to make a white membrane roof look terrible as the following picture shows plus it is also a magnet for debris and considerable increases the need for maintenance.



Now if this sump had had positive slope it would not have this problem, but if the drain is installed too high in regard to the roof insulation outside of the sump and sump depth positive slope may not be possible. The next picture is from the same job where a sump was not installed and it eliminated the dirt and debris this sump draws but it also creates ponding away from the drain. Now the ponding away from the drain shows no

dirt or debris but this project was just completed why these wet areas may dry quicker than the sump problem it will eventually begin to trap debris especially as it goes thru the winter.



Using a bi-functional drain helps make the problem a little easier due to the fact that only one drain body needs to be dealt with. If you are using two drains for your roof drainage the possibility of drains being installed at the wrong elevation doubles.



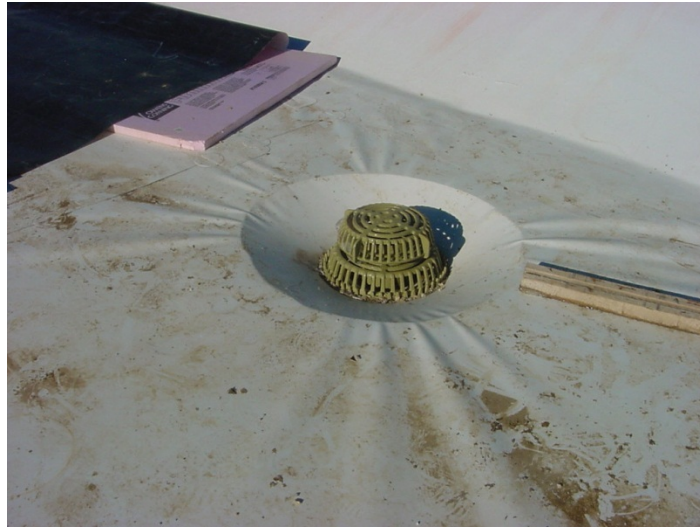


As the two above photos show with two drains that the overflow drain can easily become a ponding problem also.

There are many different ways to create roof sumps as the following pictures show



Now this example looks very neat and they did install the drain lower than the sump area so water will be minimal but it is flat so it will hold some water and stain the sump area over time.



This example will not hold any water but with the steep sides of the sump it will trap debris. This drastic elevation change is also not recommended by some of the roofing material manufacturers due to the stress it puts on the membrane. The ideal slope of a sump is 1 ½" per foot slope. There are panels made by the manufacturers in different widths just for this application.