



Roof/Top/Topics

In This Issue...Design Errors Can Cost You Money

When we do roof evaluations we typically find that at least 50% of the significant (expensive) problems we identify on a building can be directly traced to design choices which were made at the time the building was originally constructed. We know that this newsletter is going primarily to owners of existing buildings, but we thought it was valuable to point out these things, because they are often repeated when the building is reroofed or additions added. Most design errors actually cost their owners quite a bit of money. They are often easy to avoid.

We have chosen these two examples for very specific reasons. The picture below shows a coping at the front of a shopping center which is made from synthetic stucco, also called EIFS. As you can easily see, the material is crumbling off the slanted top surfaces and a close up photo would show that these wall caps are already taking on water, like a sponge.



While this specific problem is uncommon it clearly represents a very common issue. Architects usually do not know much about waterproofing! (We also know this because they often call us for advice!) This design choice was made to effect a certain finished appearance on the building. But the results are going to create huge headaches and expenses for the building owner because fixing this problem will be much more expensive than doing it correctly to begin with and will also compromise the appearance of the building, unavoidably. We recommend you never rely solely on your architect to design good waterproofing details into your building addition, renovation or new construction.

Whereas the specific problem in the first photo is not common, the photo below illustrates a very common problem. The gutter on the back of this building is leaking. The arrow points to water stains on the wall. It was actually leaking before the project was ever finished. Again this is a design related problem. The rear edge of this building is approximately 175 feet long and the gutter was assembled in one long piece. WRONG! Metal moves. The gutter should have been fabricated in lengths not to exceed about 40 feet in length and separated with expansion joint covers. The joints are pulling themselves apart from contraction and expansion!

These leaks are not just aesthetic issues. If you would go inside the building you would see that some of this water is now penetrating the wall (after about 8 years) and creating problems inside the building. Not only does the gutter need to be reworked, but the rear of the



building is going to have to be repaired and repainted very prematurely. This problem is easily avoidable at the time of construction at very low additional cost, if any. The proper details are actually very standard and widely known, but gutter problems such as this are very common on many buildings we see.

Our point in sharing these design issues is to first make you acutely aware that design choices can have a very big impact on long term maintenance costs. Secondly, we suggest that you insist that your architects always employ a qualified, professional roof consultant to insure that you get the best possible value in your new investments.