Robert J. Elsdon, RRO
President

GARDEN ROOFS

What a Wonderful Idea! OR What Were They Thinking?!

At some time in the future, and perhaps not too long from now, the roofing industry will be assessing the environmental value of vegetative roof systems. We will also be evaluating life cycle cost of these systems. At this time, I have no personal conclusions regarding the actual value to our environment, but I do strongly suspect that the life cycle costs will not be a bargain.

I had some experience with these systems as a roof consultant as much as 12 - 14 years ago. I was hesitant to get involved in the first place and worried for years after completion that one day the phone would ring and the horror would start.

Before I say what I *really* think, I must state that the views expressed in this message are not necessarily those of RCI, Inc. In fact, I may be the *only* person who thinks this way (but I doubt it).

What I really think is that vegetative roof systems are too expensive to install, too expensive to maintain, and too expensive to replace compared with their value to our inner-city environment.

The energy used to produce and install materials required to support the dead load of garden roofs must be factored into the equation. The cost of maintenance, irrigation, and ongoing replenishment of soil, plants, and fertilizer are just a few expenses that are not required on a conventional roof system. The cost to repair any type of roof leak would be, at best, disheartening. The cost of future roof membrane replacement would give most building owners heart failure.

I admit that I'm not a scientist or a biologist, and I cannot produce specific scientific evidence. In fact, I may not even be particularly smart. Nevertheless, I do not see how using our urban water resources to keep rooftop plants alive in hot weather is being environmentally responsible. The argument that enhanced water run-off retention (of several inches of soil) is desirable could be duplicated with control flow drains or other time-tested methods at minimal cost.

I have read a number of papers on the oxygen produced by typical garden roof plants. What I understand is that their oxygen production is pretty much nonexistent at least six months a year in cold winter climates when plants are dormant; and in warm/arid climates, extensive irrigation is required to keep the plant life alive. If kept alive, the plants apparently do not produce any significant amounts of oxygen compared to tree-lined streets or even residential lawn areas.

From a practical point of view, I think that garden roofs are not very practical at all. I would rather see city officials mandate more park areas with trees, shrubs, flowers, and grass for all of us to enjoy. Sure, there would be maintenance costs and possibly no tax revenue from the park land, but I think the visual beauty and the enjoyment kids and grown-ups alike would experience are worth the tax loss. Roofs might be better used for photovoltaic equipment that would make it easier for roof system maintenance and cut back on the negative environmental issues that surround other types of electricity production.

I'm sure that there are people reading this who totally disagree with me. Maybe I have it all wrong. Whether I'm right or wrong, if you include an RCI Professional member on your team, your chances of getting a proper roof system application below your garden roof will definitely increase.

Regards,
Bob