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MOVING A ROOF: UNBUILDING AND REBUILDING THE COOK FOX GREEN ROOF IN NEW YORK

BY GWEN SCHANTZ, FOUNDING PARTNER, BROOKLYN GRANGE

We've built several green roofs in New York City, and the big ones that we install with cranes over the course of several weeks always get all the attention. But it's the small roofs, on tall buildings and accessible only by stairs and elevators, that we put the most thought into.

One of the most notable small projects we've built came about in the fall of 2016, when Cook Fox Architects reached out because they were moving to a new office space. We were excited to work with them– they're one of the leading firms in New York specializing in sustainable design and LEED projects. We were also fans of their old office, a historic penthouse where the architects themselves had built a green roof in 2006, where they grew vegetables, sedum, wildflowers and even kept bees.

The staff had developed a loyalty to their green roof over the years; so a decade later, when the firm had outgrown its office and was knee-deep in the renovation of their new space thirty blocks uptown, they reached out to us, asking if we could move it for them. Their landlords at the old office didn't want to keep the 5,000 sf sedum installation, and rather than dumpstering the whole thing, Cook Fox employees hoped to move it to the terraces of their new office. They had built this green roof themselves, had cultivated it and watched it grow for years, and throwing it out was not in keeping with their commitment to sustainability. It also didn't hurt that the cost of moving the green roof was less than the cost of dumpstering it and building a new one from scratch. Plus, they had anticipated this day when they built the green roof, and they had prepared for it: the green roof was a modular system made with knitted polyethelyne green paks.

Full disclosure: I wasn't a big fan of modular green roof systems. When we build green roofs, they tend to be intensive agricultural or meadow systems with deep growing medium, and it doesn't make sense to use modular systems for this kind of work. When we've built sedum green roofs, we like the

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Photos courtesy Gwen Schantz

efficiencies and savings that come with laying out green roof materials, raking out the soil, and rolling out sedum blankets.

This project gave our team the opportunity to put the green paks to the test, moving 5,000 sf of them from one roof, and trucking them 30 blocks uptown to another roof - in December. We showed up on-site bright and early on a Saturday morning as a fairly heavy snow was blanketing New York City. There was about an inch of accumulation already topping the green paks, which made it difficult to interpret Cook Fox's color code – orange, yellow, pink and green spray-painted spots indicating whether the paks contained sedum, grasses, or flowers. Based on the code, we would know where to take the paks-some would be going to a totally new location: the Starrett-Lehigh building, in Chelsea, which had agreed to take about a third of the paks to install on one of their massive terraces.

Over the course of the morning, the weather warmed above freezing – just enough for the snow to switch over to sleet, and then rain, but not warm enough to thaw the frozen green paks or our icicle fingers. We used flat shovels to pry the 80-pound, slushy and mud-filled green paks from the EPDM roof, loading them

on carts and wheeling them to the office window. Then we handed off the paks to the indoor team, threading them one by one through the window to be loaded onto other hand trucks, down a small back elevator, to the street level where we had box trucks waiting. As the trucks filled, they sped off through the slushy rain to their destinations – some just a few blocks away to Starrett Lehigh, and the rest to West 57th Street, up another small elevator, and out through the office to three terraces at the new Cook Fox headquarters.

The whole move took two long days, 22 people, two trucks, and a whole lot of planning and cleanup. It was a fun exercise calculating the necessary resources prior to the move, estimating the time, people, elevator trips, hand trucks, and moving vans that we'd need, not to mention the square feet of drop cloth we'd use to protect the office floors and elevator from all the mud. Our Director of Design/Build, Cecide Corral, spent days organizing people and ordering materials, and she and I sat together for an hour just plotting out the routes between elevators, the number of bags we could move per hour, and how many people we'd need at each station along the way. On the other side of town, Cook Fox was assessing their green paks, marking them, and planning out how to integrate them into the design for their new site. I can attest that both of our plans worked – the job was muddy, but otherwise smooth, and the resulting garden is a thing of biophilic beauty.

I've changed my mind about modular green roofs – they work, and they're easier to move than a conventional green roof that would have to be shoveled bag-by-bag. There were 979 green paks total, and they held up remarkably well considering they were getting tossed through windows, stacked onto carts and piled in trucks. Aside from a little growing media spillage, they performed beautifully, as designed, and they continue to perform amazingly well in their new home on West 57th Street, where we spruced them up with some additional media and a heavy dose of native wildflower seed.

By June that year, the garden looked like a well-established meadow, as if it had been there forever. Who knows if it will remain there forever–maybe it will move again in ten years. We'll take the job again if we get the call, and hope that next time it's not in December.