



Engineering a Garden

Thirty-two years ago, when we bought our house just outside Atlanta, the back half of our acre and a third lot was blanketed in English ivy and wisteria—a southern jungle missing only a stand of kudzu to make it truly impenetrable. Early on we established a loop trail through this forest, then removed a good deal of the underbrush. As time went on and the kids grew up we were able to devote more time to this piece of landscape. For years we had gone on garden tours and looked at the garden plans in *Southern Living*. Finally, in 1991, we decided to end our research phase and begin the design phase for the garden. We hired a landscape designer to draft a plan that we could work on for the next five years. And five years later, like someone who sets up a breadboard in the back room and wanders into it from time to time to tinker with the project, we had put in a few small pocket gardens close to the house, but little else in our design was completed.

To start the development phase for our garden, we hired a contractor to take the 1991 design and execute it. However, as with most designs, things had changed since the last version. Construction up the hill from our house had caused the drainage across our property to increase substantially. So in 1996 a dry creek bed was added to the design along with a series of pocket gardens along the loop trail. Also, to maintain the plants during years of drought, a drip hose irrigation system was installed.

Most engineering projects come with defined objectives and a deliverable product. But they take time—and time introduces changes. We were blindsided...by squirrels. In the first three years the little critters figured out that during a drought there was water to be had at the drippers spaced periodically along the black plastic tubing. Then they figured they didn't have to wait for the system to irrigate every other day and began to gnaw into the tubing. At the end of the fourth spring I turned on the systems and instead of the nice steady drip I expected, I got the Fountains of Rome. I scabbled around executing backyard reanastomosis (tubal repair, according to my wife, the nurse) and testing it to discover another set of sprays. This continued for the season, but it was clear, I

was beaten. During the fifth year the plants survived on their own. Clearly, the design was not working.

It was the English ivy that sent us back to the drawing board for Revision A. For years we girdled the trees, cutting the ivy to prevent it from climbing and destroying them. In retirement, Helen had it in her mind that she would pull up every last living piece of ivy and plant a benign ground cover. But as the months drew on, the ivy advanced as she contended with a load of post-retirement teaching. And despite the dry creek bed, the drainage problem didn't get much better. Revision A had to be executed.

Last January they came in with a small Bobcat and pulled up all the ivy and gave the surviving tendrils a dose of Roundup, a serious weed killer. Beyond laying waste to the ivy, we devised a series of stacked stone walls and new gardens to break the slope of the garden, to disperse the water flow, and to lead the eye. We also put stepping-stones on the path in the forest and replaced the drip irrigation with pop-up sprayers. Over the past year, Revision A has shown itself to be a marked improvement over our earlier efforts. But as with most engineering projects, it still needs tweaking.

This year we put in a "white garden" (all the blooms are white) and some fancy Japanese painted ferns. Still, problems remain. A series of late winter rainstorms produced some strong erosion indicating that I have work to do. So, I am performing some experiments to combat it by installing a French drain (a small, sloped ditch filled with volcanic rock) and rearranging some other rocks. But it looks like I will have to resort to diversion tactics like Helen's departed mother used to employ to keep the steep road to her farmhouse from washing away in the spring floods. So, in addition to constructing the Susie Spustek Memorial Ditch, I will be making observations to determine the lay of the land and devise a strategy to disperse the water across a hundred-foot-wide channel. Mapping the yard has been more difficult than I had imagined. I've tried to remove distortion from a series of pictures using Photoshop so I can construct a photomosaic of the channel. I am trying to measure flow to get an idea of where the greatest problem is. In all, it's an interesting engineering problem.

But while these concerns may bedevil us, few engi-

neering projects provide the immediate satisfaction that comes from views of the banks of azaleas and rhododendrons. If you'd like to see the compensation for all our work, take a look at <http://homepage.mac.com/donoshea/Gardens/>.

I have often thought that if heaven had given me a choice of my position and calling, it should have been on a rich spot of earth, well watered, and near a good market for the productions of the garden. No

occupation is so delightful to me as the culture of the earth, and no culture comparable to that of the garden... I am still devoted to the garden. Though an old man, I am but a young gardener.

THOS. JEFFERSON TO CHAS. PEALE, 1811

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