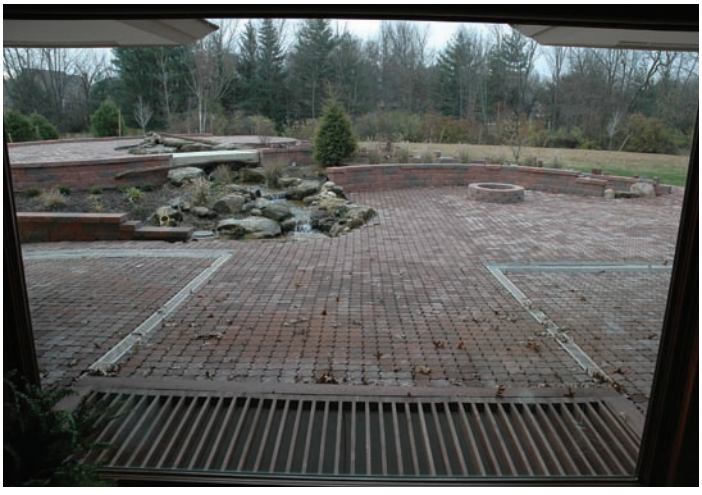
By **Rosemarie Rossetti, Ph. D.**

Students from the Delaware Area Career Center were taught how to install the Oberfield's retaining walls that shaped the pathway to the upper deck.

A Universal Design Approach

The Universal Design Living Laboratory was built as a national demonstration home and garden using universal design and green building principles. Here's the story of this unique space.



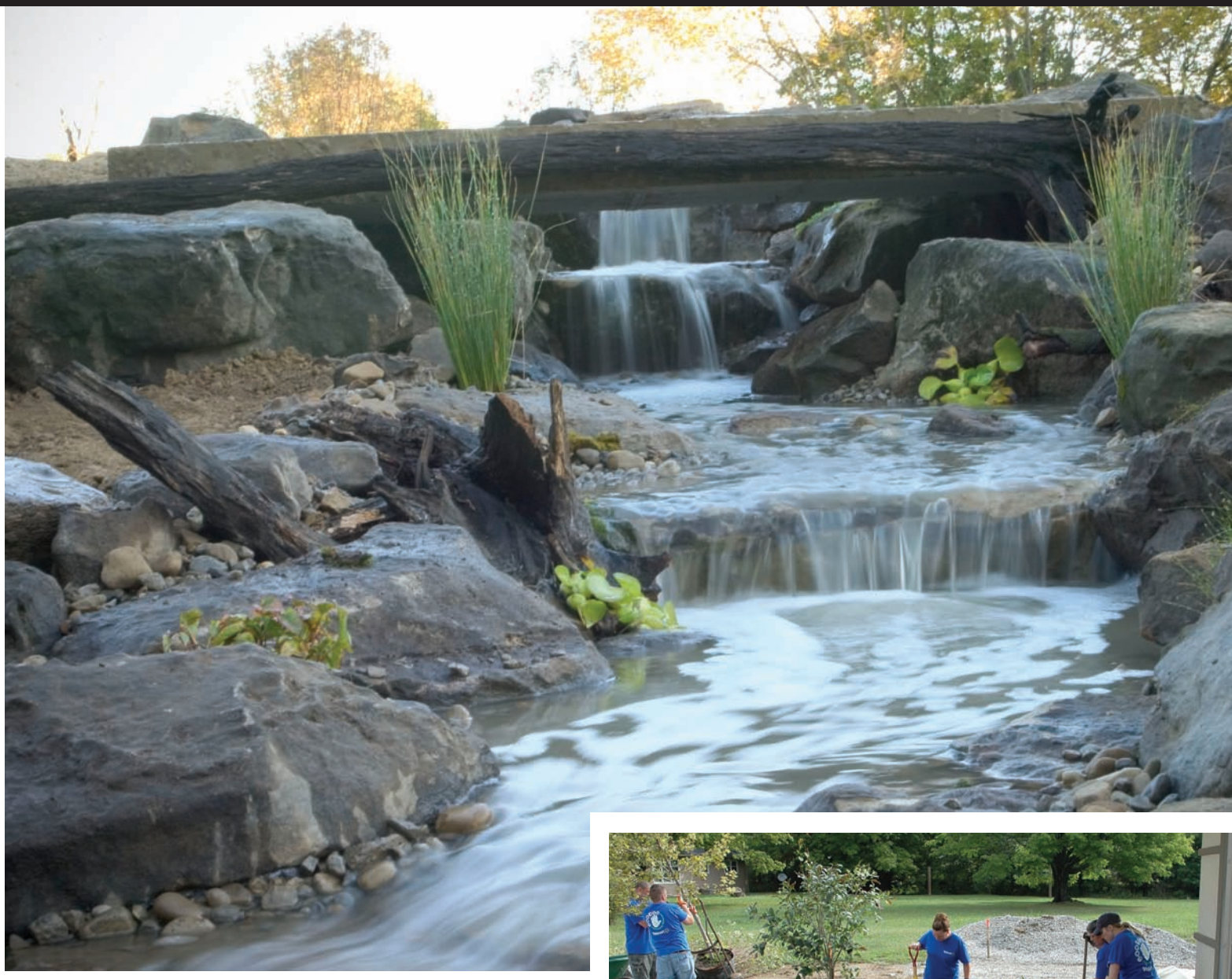
From the great room window, there is an expansive grand view of the paver patio, retaining walls, waterfall, fire pit, lawn and landscape plants. The paver upper deck is accessed by a gently sloping 4-foot-wide paver pathway.

I haven't been able to garden for the past 14 years. Things are about to change!

Horticulture has been my area of study, career and passion for much of my life. Starting in high school and continuing in college with a major in horticulture from Ohio State University, my first job was teaching horticulture at a career center.

On June 13, 1998, while riding my bicycle, I was crushed by 7,000 pound tree and paralyzed from the waist down. One of the heartbreaks after my spinal cord injury was the thought that I would never garden again.

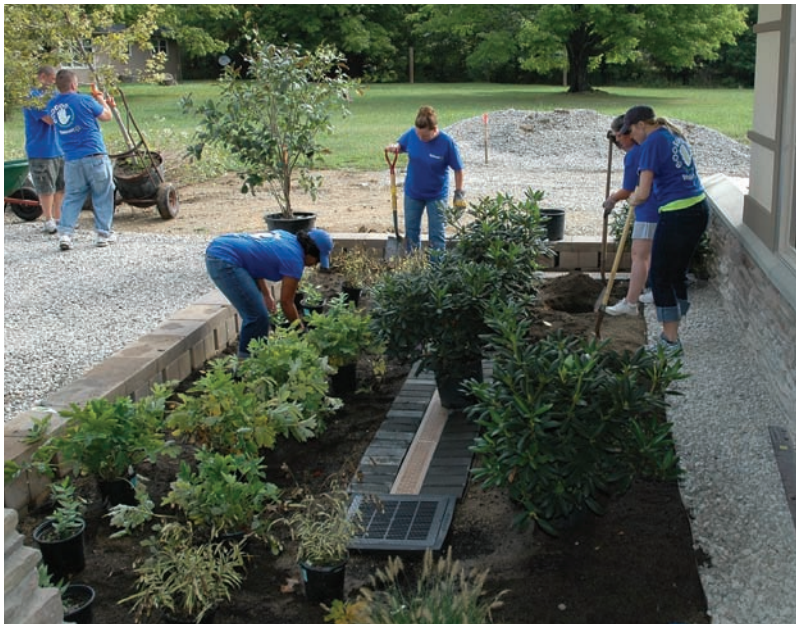
When I came home from the hospital, the realization set in that my existing home and landscape was not wheelchair-friendly. One day when I tried to plant flowers, I got out of my wheelchair, sat on the ground and picked up a hand shovel. As I scooted on the ground and crawled on my hands and knees, I thought of how a universal design garden would make all the difference at my next home. Universal design is a framework for creating places benefiting the widest possible range of people in the widest range of situations without special or separate design.



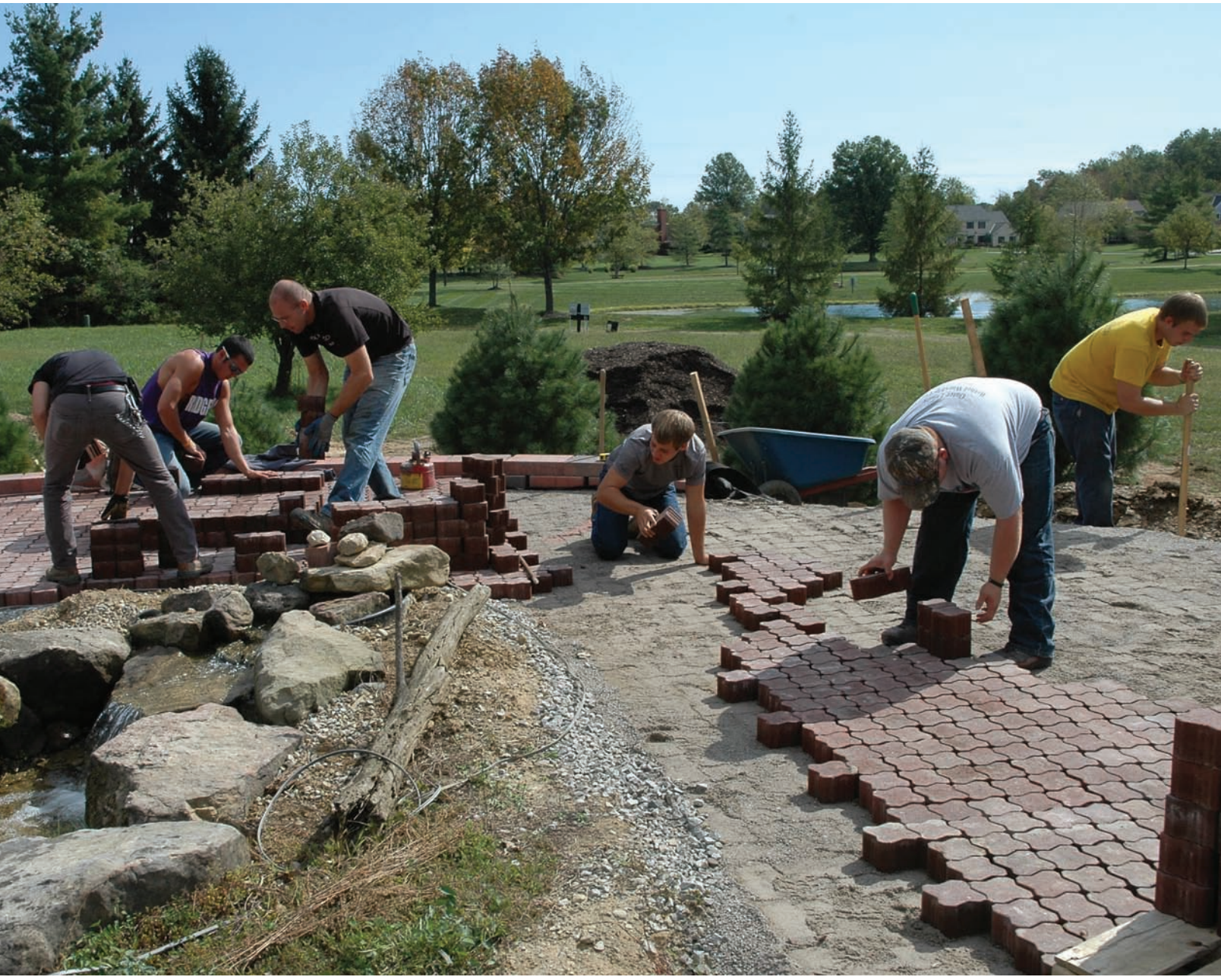
My husband, Mark Leder and I decided to build our new home using universal design and green building principles. In September 2004, we hired Patrick Manley to be the architect. In January 2005, we made the decision that it would be a national demonstration home and garden. Our home, the Universal Design Living Laboratory (www.udll.com) is on a 1.5 acre lot in Columbus.

In September 2005, Mark and I met with landscape architect, Bill Gerhardt of GreenScapes Landscape Company, to begin the design of the landscape for our new home. At the first meeting, we discussed a need to create outdoor living space in the back of the landscape by including a screened-in porch and a large patio. The patio needed to be large enough for outdoor furniture, include circulation space for me to maneuver, and accommodate large containerized plants. We also planned for raised beds, a waterfall able to be seen from all the south-facing windows and a potting table.

The construction groundbreaking was September 23, 2009. As the construction continued, Gerhardt did a site plan and



Above: Walmart employees volunteered to plant the trees and shrubs. This front landscape bed was filled with a premium soil mix prior to planting. Top: This captured rainwater will irrigate the landscape. The 20-foot stream assists in aerating and filtering the stored rainwater, while providing beauty and soothing sounds.



Hocking College students installed pavers on the upper deck. Students worked at the Universal Design Living Laboratory on several occasions.

drew the landscape plan. We brought in horticulturist Tracy DiSabato-Aust of Horticultural Classics and Consultations to design the front landscape beds.

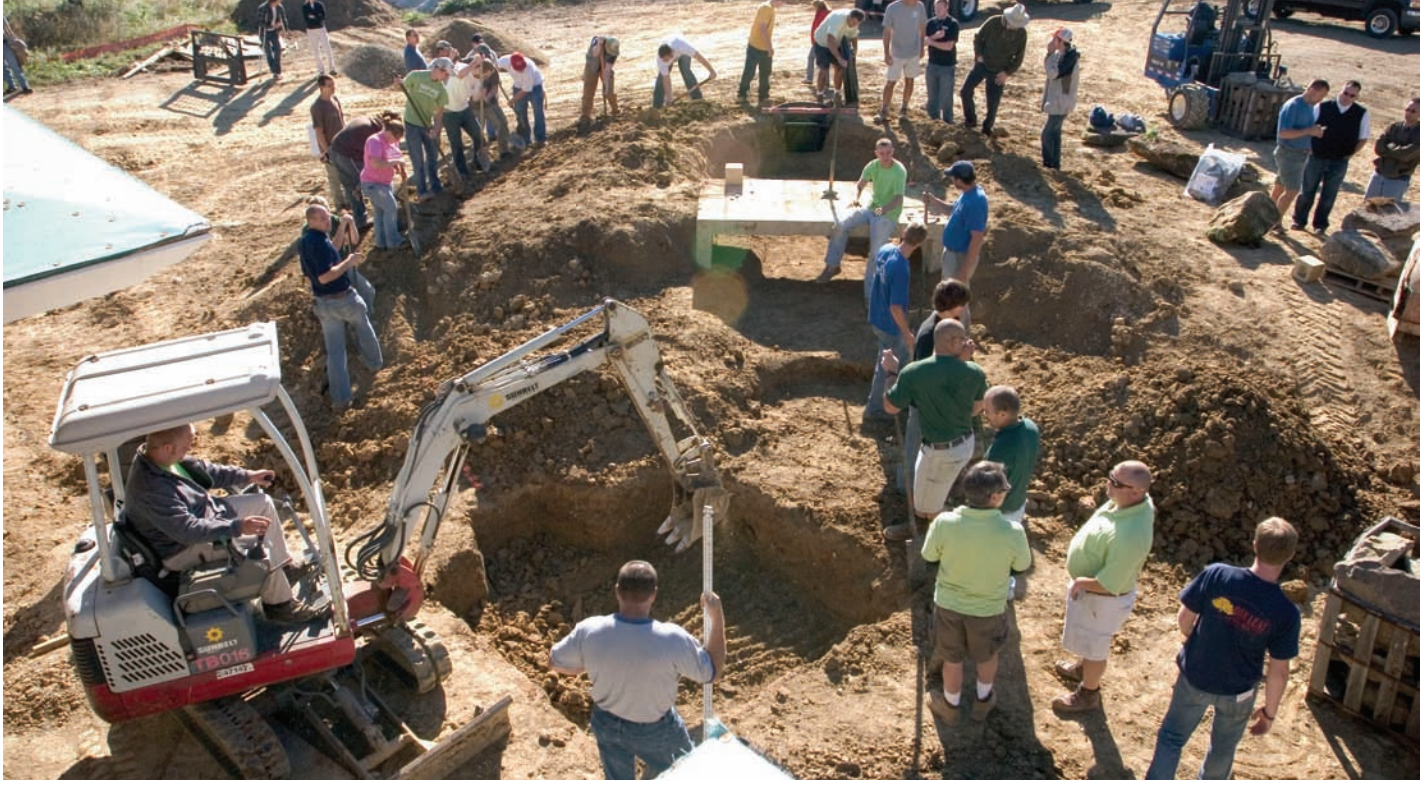
On October 8, 2010, a 500-gallon RainXchange® rainwater harvesting system with 20-foot stream and waterfall was contributed, designed and installed by Aquascape, Inc. staff. Fifty certified Aquascape contractors and students from Hocking College completed the installation in one day.

Reading Rock contributed 3,000 square feet of EcoFlo® permeable pavers. These pavers were selected because they are ADA compliant offering comfortable travel for people using wheelchairs and meet pedestrian slip-resistance standards. Horticulturist Tom Lehner of the Ivy Tree led the installation of the pavers, retaining walls and plants. He also designed many of the beds in the rear of the property and helped in the selection and placement of plant materials. Students, individuals and employees volunteered to assist my husband with the landscape installation.

The home and garden were built with the help of 185 corporate partners who contributed products and services. For example, six Ohio nurseries contributed the plants.

Mark and I moved into our 3,500-square-foot home on May 18, 2012. We are finishing the final construction items in the home and garden in preparation to open our home for tours by appointment.

Rosemarie Rossetti, Ph.D., is an internationally known speaker, trainer, consultant, writer and publisher. She is the president of Rossetti Enterprises Inc., founded in 1997, and Fortuna Press LLC, founded in 2003. She has been in the speaking and training arena for 27 years and is a member of the National Speakers Association.



Aquascape, Inc., led the design and installation of the rainwater harvesting system, complete with a 20-foot stream and a four-tiered waterfall. Hocking College students and certified Aquascape contractors completed the project in one day, courtesy of 50 dedicated volunteers.

LEED Landscaping Principles Followed at the Universal Design Living Laboratory

Site Selection: not built on land with prime soils, unique soils, or soils of state significance

Erosion Controls During Construction: stockpiled and protected topsoil; controlled the path and velocity of runoff with silt fencing

Basic Landscaping Design: any turf must be drought-tolerant; add mulch or soil amendments as appropriate; do not use turf in densely shaded areas or with a slope of 25 percent; all compacted soil must be tilled to at least 6 inches

Limit Conventional Turf: 50 percent of designed landscape softscape area that is turf

Surface Water Management: Permeable pavers; plant trees, shrubs or ground covers; lot designed by professional to manage runoff from home onsite

Water Efficiency, Water Reuse, Rainwater Harvesting System: 60 percent of roof area used for rainwater harvesting

Universal Design Living Laboratory Design Team:

Bill Gerhardt, landscape architect, GreenScapes Landscape Company — landscape design
Tom Lehner, horticulturist, Ivy Tree — landscape design and installation
Tracy DiSabato-Aust, horticulturist, Horticultural Classics and Consultations — landscape design

Product and Service Contributors:

Advanced Drainage Systems, Inc. — channel drain and French drain pipe and components
Agrium Advanced Technologies — fertilizer and lime for lawn
Aquascape, Inc. — 500-gallon RainXchange® rainwater harvesting system with 20-foot stream and waterfall design, products and installation
Baker's Acres Greenhouse — nursery plants and ceramic pots
Country Clipper — riding lawnmower
CLC Labs — soil tests and consulting services
Franklin Soil and Water Conservation District — rain garden plants, compost, mulch, design and installation
H & C Concrete — sealer for pavers and retaining walls
Invisible Structures, Inc. — gravel paver and grass paver
Landscape Forms — teak benches and side tables
Midwest Construction Products — geotextile fabric for pavers and retaining walls
Oakland Nursery — nursery plants
Oberfields LLC — Versa-Lok retaining wall blocks
Reading Rock — landscape pavers
Scioto Gardens — nursery plants
Shelly Company — limestone, gravel and sand
STIHL — KombiSystem blower and lawn trimmer
Studebakers Nurseries — nursery plants
Summit Seed, Inc. — grass seed
United Precast, Inc. — concrete bridge over the waterfall
Wade & Gatton Nurseries — nursery plants
Willoway Nurseries Inc. — nursery plants

Volunteers Who Installed the Landscape:

Individuals: Tom Lehner, Tom Davis, Jim Kusan, Michael Daulton, Scott Englehart, Jim Sisson, Janet Hofmann, Penny Thompson and Fran Kellington
Employees from Walmart
Students from Hocking College, Ohio State University, Delaware Area Career Center and Green Corps