

LANDSCAPE LIGHTING:

Low-Impact Illumination

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By Matthew Trulio

The retired, well-to-do couple lived for their backyard landscape, an elegant combination of paths winding through carefully spaced trees and planting beds, a waterfall, swimming pool and spa. They had coffee there in the mornings, lunch in the afternoons. It took a landscape designer, pool designer, and water feature specialist to design the setting, and a team of contractors working for months to construct it.

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The completed scene had been in place for two years before the couple decided to have lighting installed so they could enjoy it in the evening. They only had one mandate, recalls Constantine Pergantis, owner of Nite Lites, a

lighting design, installation, and sales firm in North Potomac, MD.

"We were the last people on the project, and on our first day on the job the clients told us, 'Don't you dare mess up our flowers and plants,' and they were dead serious,"

Pergantis recalls, then laughs. "Honestly, this beautiful backyard was their whole life."

To minimize disturbance to the property, Pergantis chose low-voltage lighting, which generally requires less surface disturbance than line-voltage lighting installation. "We lit individual trees, which had been perfectly spaced so that you had a lighted tree, then darkness, lighted tree, darkness, and so on," he explains. "We shot light onto the waterfall where it made contact with the rocks at the base, *continued on page 16*



Low-voltage fixtures represent little danger to installers.
Photo courtesy: W.F. Harris Lighting.



Low-voltage lighting transforms this backyard pool and spa area into a nighttime wonderland. By using low voltage, the designer was able to bring light close to the water's edge.

so that the water sparkled as it exploded into the pool. We lit pathways for night access to the garden — but what we really did, all in all, was extend its overall use.”

Low Or Line

In both low (12-volt) and high (110-volt) landscape lighting, options are nearly unlimited. Prior to the development of low-voltage landscape lighting, however, line voltage was the only option. Line-voltage lighting installation was, and still is, the sole domain of the licensed electrical contractor, which contributed to the expense of line-voltage lighting installations. Cost and the site disruption required to install line-voltage lighting made it fairly unattractive for the residential landscape market. Yet line-voltage lighting is not without its advantages, particularly in commercial applications where it is the more common choice.

“Line voltage allows you to use a wider variety of higher wattage lamps that have longer lives, for the most part,” says Pergantis. “That’s particularly important for large commercial projects, where maintenance is a greater concern. Plus, with these higher wattage lamps, you can light up larger areas with fewer fixtures.”

“The primary disadvantages to using line voltage is cost — both the lamps and fixtures tend to cost more than low-voltage — and the

The last thing in the world you or your client want is to disrupt that with trenches and have to deal with roots and irrigation lines. That’s not an issue with low-voltage lighting.

“In a backyard area with a pool, one of the primary advantages is that you can run low voltage right up to the water’s edge,” he continues. “You can use low-voltage fixtures that are designed specifically for decks and stairs around pools, as opposed to using line-voltage flood lights off the house or obtrusive post lights.”

While Pergantis sees low-voltage lighting as the option of choice for most residential projects, he concedes that it does have certain limitations.

“If you’ve got a 10-acre estate landscape, you’re obviously not going to light it with low voltage,” he states. “In uplighting tall trees surrounding a property, or downlighting from them, line voltage would be the best choice.”

“With low voltage, the biggest disadvantage is the distance you can run the lights from the transformer at the outlet,” he continues. “For the most part, the maximum length is about 250 feet, so on something like a 500-foot driveway, you’d be better off using line voltage for the lighting, rather than bringing in line voltage halfway down the driveway just so you can plug in another low-voltage system.”

On Quality

Being strictly regulated and limited to licensed professionals for installation, line-voltage landscape lighting and fixture quality

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need for an electrician to do the job, which boosts installation expense. Line-voltage fixtures also aren’t very flexible in terms of being able to move them once they’re installed. They require serious site disturbance to install, which can be a major problem for existing landscapes. Also, although the distance varies from state to state, you can’t run them too close to bodies of water.”

The two most immediate advantages to low-voltage lighting, according to Pergantis, are flexibility, meaning they can be easily moved to accommodate maturing landscapes, and ease of installation. Electrical contractors are generally not required to install low-voltage lighting, and the wires do not need to

be buried as deeply as those of their line-voltage counterparts. Low-voltage bulbs, he adds, are more precise because the lamp does “the work,” as opposed to line-voltage fixtures where the reflector in the fixture tends to control or aim the light.

In addition, low-voltage fixtures tend to be much smaller and less obtrusive, as are the lamps themselves. Once only the realm of line-voltage products, high-quality cast aluminum, copper, and bronze low-voltage fixtures are available.

“Low disturbance to the landscape is a huge advantage with low-voltage,” Pergantis enthuses. “Let’s say you’re talking about a front yard with nice ornamental trees and planting beds.

issues have been fairly beyond the grasp of most homeowners. If an inferior line-voltage product managed to make its way to the market and into a client’s landscape, the client would likely be unaware of it until the fixture or lamp failed. But low-voltage landscape lighting kits of varying quality opened the world of landscape lighting to the do-it-yourself homeowner. These kits, however, are a far cry from the professional quality low-voltage products available. And Pergantis asserts that, most of the time, they present little or no competition to professional low-voltage lighting design and installation services.

“If someone has nice house where they might spend \$25,000 on the landscape, it’s a safe bet that they’re not cutting their own lawn, or installing their own lighting,” he says. “You’ll never convince the do-it-yourself person that what you’re offering is worth what you ask — one low-voltage fixture we select can cost much more than an entire kit at a mass merchandising center — but then the market for professional landscape lighting tends not to consist of do-it-yourselfers. Not that low-voltage lighting is difficult to install, but anyone who hires a landscape or lighting designer probably isn’t going to be digging holes for light fixtures.”

With almost 40 low-voltage landscape lighting manufacturers in the market, quality can vary widely. Pergantis suggests taking a close look at fixture construction, as well as manufacturers’ warranties.

“Look for something that is cast, rather than spun,” he advises. “Cast fixtures tend to be thicker, heavier, and will stand up to years of weather and abuse. Spun fixtures dent easily and are much more fragile. Look at the fixture, inside and out. Sockets should be made of brass or stainless steel. Look for external parts that won’t rust. As for warranties, it’s not a bad idea to look at the warranty on the fixture’s finish, since it will be out there in the open and is the first line of defense.”

While most light sources available for line voltage lighting are also available for low-voltage, including fluorescent, Pergantis selects halogen 75 percent of the time for lighting landscapes. “Halogen gives you true colors in plant materials because it’s an extremely ‘white’ light,” he says. “And halogen lights tend to last a long time, which reduces maintenance.”

Line or low voltage, the goal is to give clients what they want in landscape lighting. Staying flexible and listening are crucial. Renderings may not be effective in communicating your ideas to a client, so be prepared to set up demonstrations if possible. Showing a client a specific effect is much more effective than telling him or her about it.

“There’s so many options today,” Pergantis concludes. “There’s almost no excuse for not being able to please a client with landscape lighting. With lighting, you can open up a whole new outdoor world.” □