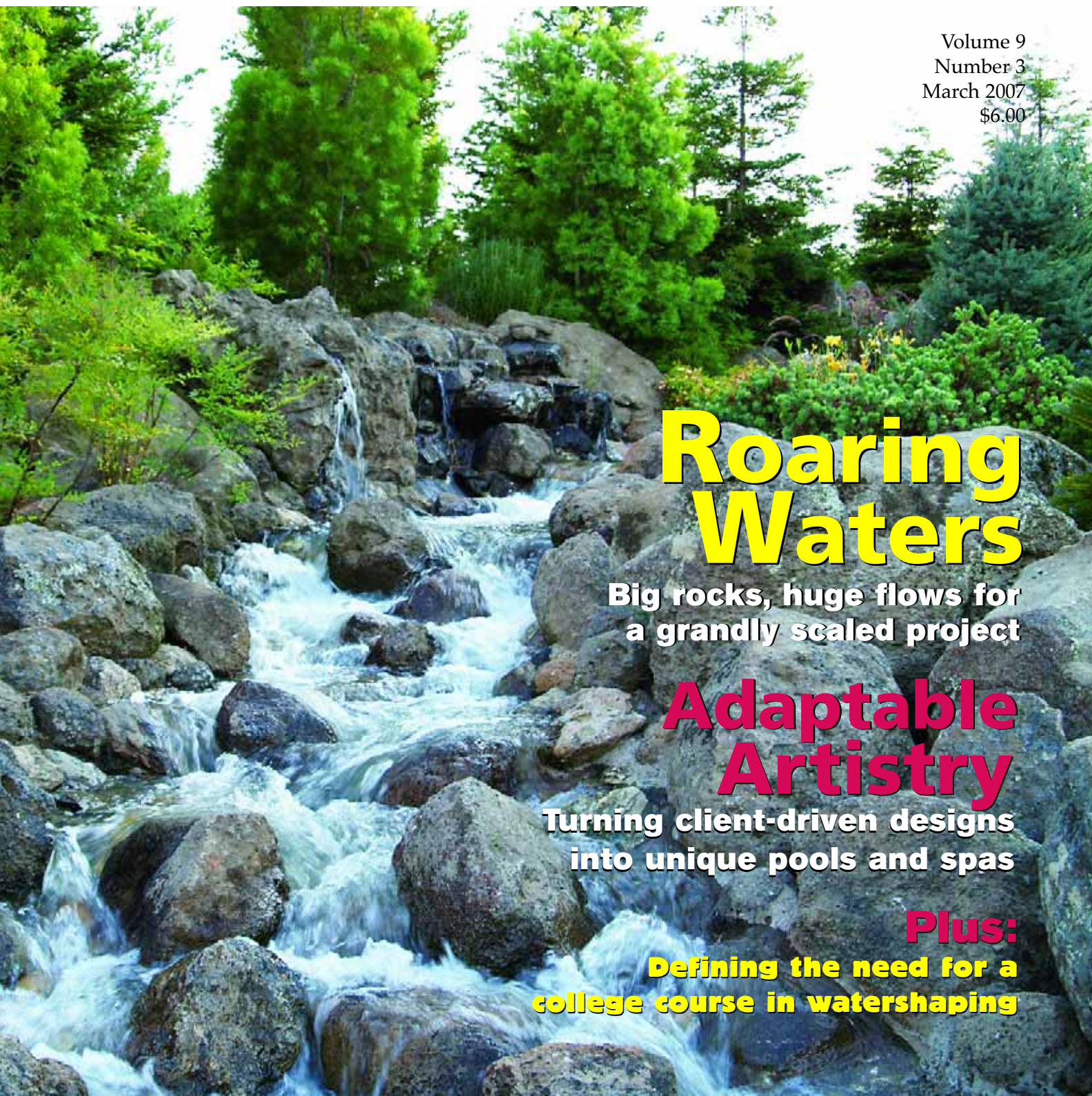
Inside: Stephanie Rose on Citrus

WaterShapes

Design • Engineering • Construction

Volume 9
Number 3
March 2007
$6.00



Roaring Waters

Big rocks, huge flows for a grandly scaled project

Adaptable Artistry

Turning client-driven designs into unique pools and spas

Plus:

Defining the need for a college course in watershaping

It's about performance

No one puts the total performance package together for commercial pools like Pentair. We offer complete, integrated system packages for pools in the 60,000 gallon and larger class. That means a single source for system designs that install fast and work right.

Filters

THS Series® Horizontal Sand Filters – NSF approved 50 psi rated tank with flow rates up to 535 GPM in a single tank. Smooth, attractive Paracote® exterior finish; exclusive interior coating protects wet surfaces.

Stark™ Filters – For all commercial applications including aquariums, zoos, waterparks, swimming pools, aquaculture and water treatment. 100% corrosion resistant fiberglass construction for dependable performance and ease of operation. Self stacking modular design for fast installation and lower construction costs.

Pumps

EQ Series® High Performance Pumps – The only non-corrosive, all plastic pump designed exclusively for commercial pool and water applications. Extraordinary electrical and hydraulic efficiency.

Berkeley® Pumps – A top name in water systems for decades, these Type B End Suction pumps are ideal for most applications requiring high performance, easy maintenance and moderate initial cost.

Aurora® Pumps – For flooded suction applications in commercial pools, water features, and waterparks. Quiet and smooth running with modern, clean design for maximum application flexibility.

Heaters

PowerMax™ and MegaTherm™ – Peak efficiency, simple maintenance in both indoor and outdoor applications. Over 82% heat transfer efficiency, the highest available from a non-condensing burner. Dual thermostats prevent overheating; exclusive flow valve senses water pressure for optimum flow.

Chemical Controllers

Acu-Trol® Programmable Controllers – Automatically monitor and control temperature, pH, and sanitizer levels to reduce chemical and maintenance costs and extend pool life. Microprocessor-based technology, with models that can control up to 8 bodies of water with one master control.

Deck Equipment

Paragon Aquatics™ – An extensive line of competitive and recreational swimming pool deck and under-water equipment. Total system solutions including starting platforms, lifeguard chairs, diving stands and towers, grab rails and ladders, custom railings, underwater windows, lights and speakers.

Whether your project involves a single large community pool or a multi-pool resort complex, Pentair experts are here to help and Pentair products can deliver the performance. Call 800.374.4300 for more information.

pumps / filters / heaters / heat pumps / automation
lighting / cleaners / sanitizers / maintenance products
www.pentairpool.com

Pentair Water
Commercial Pool and Spa™
800.374.4300

Circle **49** *on Postage Free Card*

AQUAMATIC COVER SYSTEMS

Exclusive Manufacturer of the HydraMatic Hydraulic Swimming Pool Safety Cover

ADVANTAGES AND BENEFITS

WATERPROOF

Drive mechanism is fully submersible, no longer are drains a problem nor does recess flooding mean an expensive electric motor replacement.

SAFETY

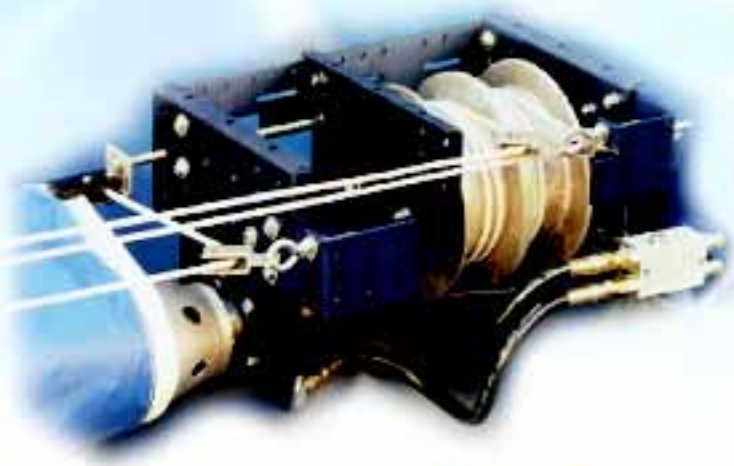
No electrics near the pool for greater safety. All electric power and switches are remote at the equipment pad, also means fewer problems with inspections.

POWER

Hydraulics deliver more power, yet dials in only as much as needed to operate the cover. Virtually all pool configurations can now be covered; what before was a limitation is now the norm.

FAILSAFE

Pressure relief valves gently stop the cover if it meets an obstruction, instead of breaking a mechanical shear pin linkage that needs to be replaced before the operation.



DURABILITY

Hydraulics are widely used in heavy equipment. The unique patented duo-motor HydraMatic System eliminates mechanical linkage and clutches to change cover direction and motion of the cover. It has the least number of parts of any other automatic pool cover system, yet has the full range of safety and convenience features. Originally designed for Commercial Application.

LIMIT SWITCHES

Elegant in its simplicity, the end of travel of the cover at each end of the pool is controlled by pressure relief valves.

WARRANTY

The HydraMatic cover system comes with a twenty year limited warranty on the mechanism and a seven-year limited warranty on the fabric. For additional warranty information, call your Aquamatic representative.

HydraMatic and EZCover™ assess ASTM F1346-91 standards.
HydraLux™ is not a safety cover.

200 Mayock Road, Gilroy, CA 95020
800.262.4044 • Fax: 800.600.7087
408.848.9274 • Fax: 408.848.1060
www.aquamatic.com

NATIONAL SPA & POOL INSTITUTE

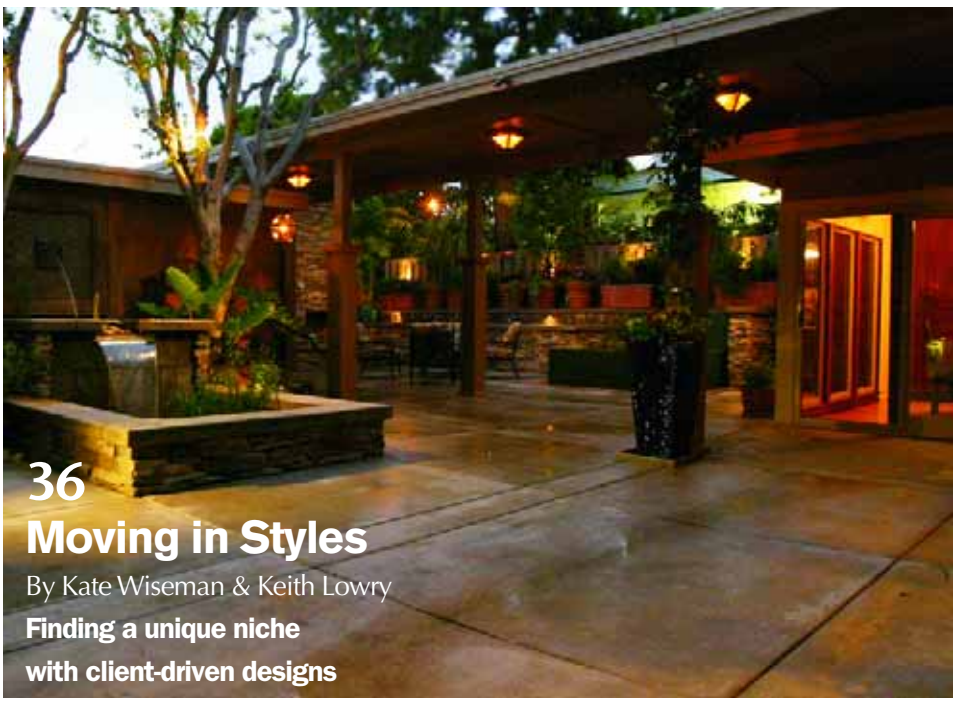
LISTED ASTM CE

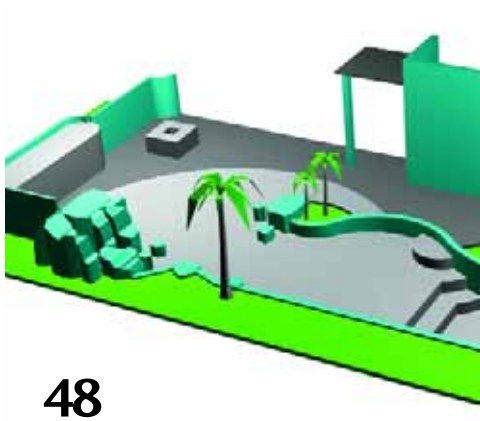
Circle 3 on Postage Free Card

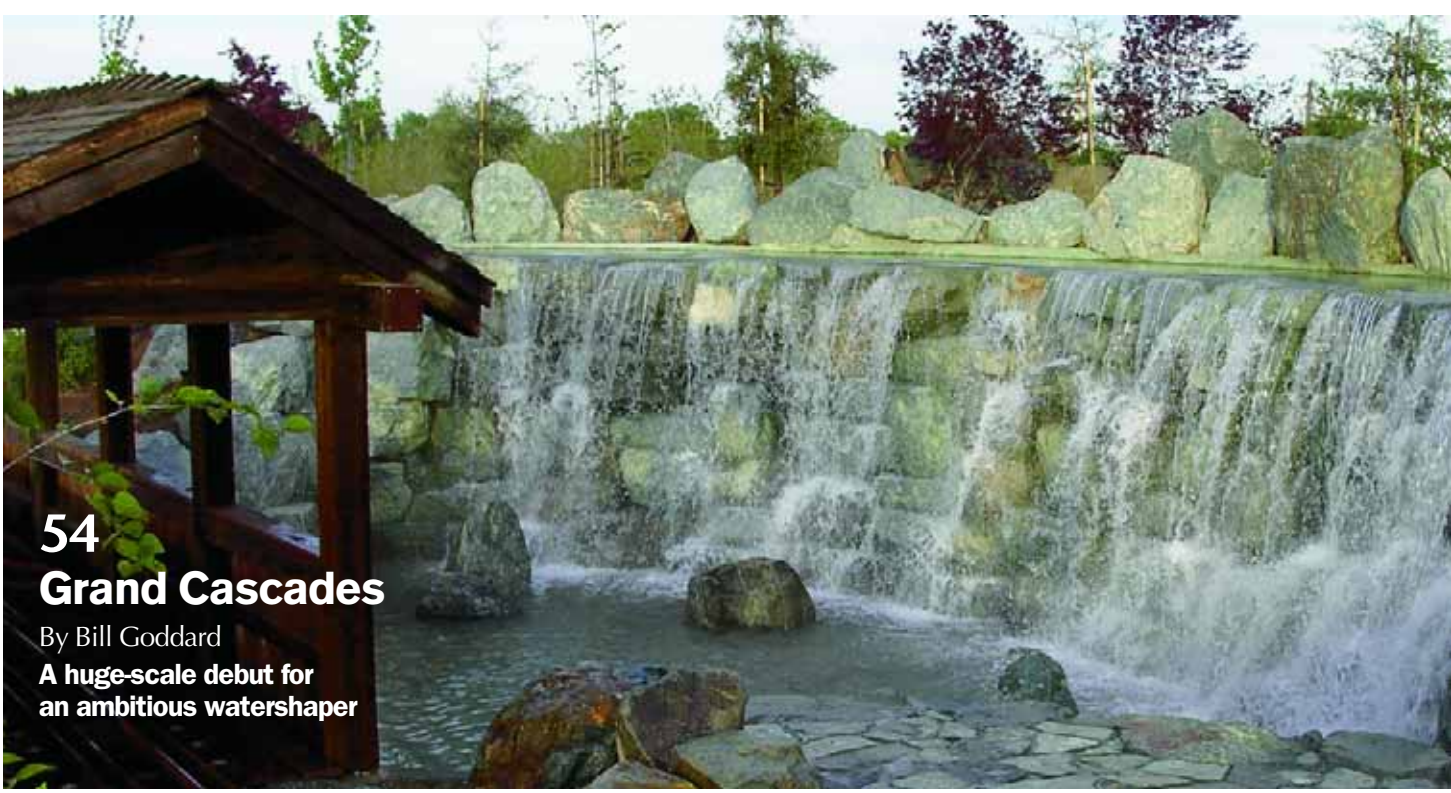
contents

March

features

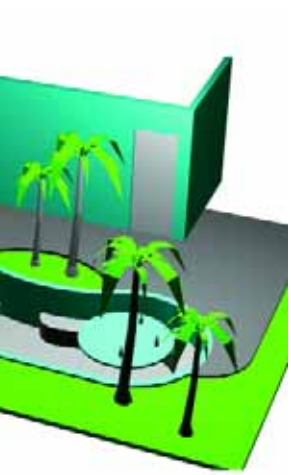




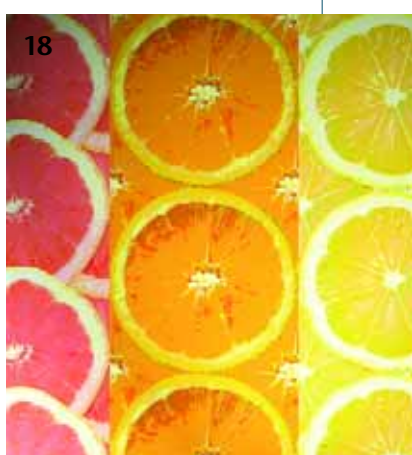


WATERSHAPES

Volume 9 • Number 3 • March 2007



columns



departments

On the cover:
Photo courtesy GCS, Woodbridge, Calif.

WATERSHAPES (ISSN 1522-6581) is published monthly by McCloskey Communications, Inc. 6119 Lockhurst Dr., Woodland Hills, CA 91367. A controlled circulation publication, *WaterShapes* is distributed without charge to qualified subscribers. Non-qualified subscription rates in the U.S., $30 per year; Canada and Mexico $48 per year; all other countries $64 per year, payable in U.S. funds. Single copies $10 per issue in the U.S. and Canada. All other countries $15 per issue. Subscription requests must include name, job title, business location, address information and a signature and date.

POSTMASTER: Send address changes to *WaterShapes*, P.O. Box 1216, Lowell, MA 01853-9930.
Periodicals postage rates paid at Woodland Hills, CA 91365 and additional mailing offices.

By Eric Herman

From the Ground Up

Through all my years of working on *WaterShapes*, one of the most persistent frustrations I've encountered has had to do with the ongoing lack of access would-be watershapers have to college-level education on the subject. And it's a frustration shared by landscape architects, many of whom have told me how rankled they are by the fact that all of their "education" in watershaping has had to come well beyond the confines of their college classrooms.

This lack of attention to water-related topics seems to be systemic in the halls of academe: As an example, there's almost a complete blank when it comes to water in the seminar halls of the American Society of Landscape Architects, a professional organization devoted to continuing education of its membership. Indeed, ASLA seems to wear institutional blinders when it comes to the subject of water when it's not about irrigation, wastewater management or waterway restoration.

Yes, there are a few junior colleges that offer courses in aquatics, and California Polytechnic State University at San Luis Obispo has devoted a much-heralded research facility to the study of plaster problems and pool-water chemistry. Those exceptions aside and to my knowledge, however, there has never been a bona fide college course on watershaping (or what some are calling "water architecture") that has been part of a structured, multi-year undergraduate or graduate degree program.

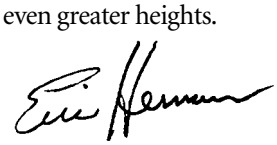
This is why I am so happy to report that in one case at least, the situation is finally changing: At California State Polytechnic University in Pomona, the landscape architecture department is now offering undergraduates a semester class that focuses on watershaping and, specifically, on what landscape architects need to know to work effectively with water in the course of their careers. And I am pleased to note that the class is being prepared and taught by my friend Mark Holden, a long-time contributor to *WaterShapes*.

For several years now, Mark has been a regular guest lecturer in classes taught by others at Cal Poly Pomona, his alma mater. Based on the response to those lectures and probably more so on his dogged advocacy of the issue with the landscape architecture department, he has now seized the opportunity to build a full-fledged college course for the semester that began in January 2007.

Mark has long been a huge advocate of the approach *WaterShapes* has taken in attempting to help fill this informational and educational void, and he's also been an instructor since the start of Genesis 3's educational endeavors. But now he's taken his campaign to a higher level – and I'm pleased to report he will be sharing course specifics with all of us in these pages in the months to come.

In this issue, we start the discussion on page 48 with a brief article in which Mark offers his rationale for the course and some basic information about the path he will follow. For the next year and beyond, he will write articles on specific topics he'll cover in the classroom, his hope (and ours) being that this groundbreaking work will serve as a model for similar programs at other colleges and universities.

It still remains to be seen, of course, whether his approach will catch wind in its sails and spread to other institutions. For now, we'll do our level best to promote this sort of water-focused, university-level education for landscape architects with the idealistic thought that, in the process, a whole generation of superbly prepared professionals might emerge and lead our industry to even greater heights.



WATERSHAPES

Editor
Eric Herman — 949.494-4533

Associate Editor
Melissa Anderson Burress — 818.715-9776

Contributing Editors
Brian Van Bower David Tisherman
Stephanie Rose Mike Farley

Art Director
Rick Leddy

Production Manager
Robin Wilzbach — 818.783-3821

Circulation Manager
Simone Sanoian — 818.715-9776

National Sales Manager
Camma Barsily — 310.979-0335

Publisher
James McCloskey — 818.715-9776

Publishing Office
McCloskey Communications, Inc.
P.O. Box 306
Woodland Hills, CA 91365
Tel: 818.715-9776 • Fax: 818.715-9059
e-mail: main@watershapes.com
website: www.watershapes.com

Printed in the U.S.A.

Scoop up more income

Pebble surfaces are the hottest trend in pool finishes today. If you're not installing it, you're missing out on big profits! NPT Pool Finishes are a unique, scientifically formulated surface system that's the ideal choice for interior aggregate finishes. Our exclusive, proprietary process ensures consistent color and results. And installation is so easy, a typical plaster rig is all you need to get started. We carry any additional equipment you may need, and can help set you up. **Ask about our training options for your crew!**

NPT Pool Finishes – versatile, consistent, durable and easy to install and a great profit source for you!

Call (888) 411-TILE for information and brochures!

NPT Pool Finishes

NPT Pool Tile, Stone and Decking

NPT BBQ Islands

888-411-TILE

POOL TILE & STONE®
POOL FINISHES
BBQ ISLANDS

www.nptgonline.com

Pentair Water Pool and Spa

• Anaheim, CA • Cathedral City, CA • El Cajon, CA • Sacramento, CA • Livermore, CA • Tempe, AZ • Tucson, AZ • Las Vegas, NV
• Dallas, TX • Houston, TX • Longwood, FL • Naples, FL • Pompano Beach, FL • Sarasota, FL • Norcross, GA • Montgomeryville, PA

Circle 4 on Postage Free Card

March's Writers

Keith Lowry is the founder and president of Verdant Custom Outdoors, a landscape and watershape design/build firm based in San Diego, Calif. While still in high school, he established the Lowry Co., a small landscape-maintenance service specializing in residential properties. Through the past 20-plus years, he has transformed (and ultimately renamed) the company, which now focuses strictly on landscape and watershape design and construction. Lowry is a licensed swimming pool, landscape and general contractor, and his company's portfolio now includes a wide range of high-end residential projects. **Kate Wiseman** is the vice president and director of design for Verdant Custom Outdoors. She earned a bachelor's degree in botany from the University of California at Berkeley as well as a master's in landscape architecture from the School of Environmental Design at California State Polytechnic University at Pomona. She joined Verdant Custom Outdoors in 2001, lending her vast knowledge of plant species to the company's repertoire and focusing on seamlessly integrating its gardens and watershapes. Both can both be reached via the company's web site: *www.verdantcustomoutdoors.com.*

Mark Holden is a landscape architect, contractor, writer and educator specializing in watershapes and their environments. He has

been designing and building watershapes for more than 15 years and currently owns several companies, including Fullerton, Calif.-based Holdenwater, which focuses on his passion for water. His own businesses combine his interests in architecture and construction, and he believes firmly that it is important to restore the age of Master Builders and thereby elevate the standards in both trades. One way he furthers that goal is as an instructor for Genesis 3 Design Schools and also as an instructor in landscape architecture at California State Polytechnic University in Pomona and for Cal Poly's Italy Program. He can be reached at *mark@waterarchitecture.com.*

Bill Goddard is owner and founder of GCS, a design/build firm based in Woodbridge, Calif. Founded in 2000, the small, full-service company tackles just one or two residential landscaping/watershaping projects at a time, always for ultra-high-end clients. Before starting his company, Goddard spent 25 years as a sales and marketing executive in the printing-technology industry. He had earned his general contractor's license in 1983, always anticipating a move into the construction industry; he concedes that he did not figure it would take him nearly 18 years to make the transition. Before pursuing his disparate careers, he studied business administration at California State University at Humboldt.

By Brian Van Bower

Making the List

When I teach seminars on watershape design, I always emphasize the importance of having a list of questions to ask prospective clients during initial conversations. It's a point that always seems to ignite discussion – and it usually ends up with someone in the audience asking me to provide such a document for general use.

I always refuse to do so, not because I consider my approach a trade secret, but rather because everyone's business and approach to clients is a little different and the questions I ask might not be exactly the questions everyone else would (or should) ask.

The issue has come up frequently enough through the years, however, that I've finally assembled a list not so much of specific questions, but instead of areas of inquiry that I think should be pursued in early conversations with clients. These topic areas aim at gathering information both about the clients themselves and what they're looking for in a watershape and their overall exterior environment.

What I offer here is no more than a foundation for developing a questionnaire of your own – something that reflects your personal style and need for information. In my own operation, we've refined these categories of inquiry into a single document that helps us keep track of key bits of information in a format that keeps us from needing to retrace our steps or ask clients the same questions about things we already should know.

The quest for information is less about talking than it is about listening. In fact, I find that having a list of questions on hand helps me focus on keeping my mouth shut and my ears open.

We've found it to be an invaluable tool: Not only does it help us delve into key details in a way that informs our design work, but it also helps us educate our clients about design possibilities and begins the important process of shaping expectations.

more and more

The list of information categories breaks into three specific areas: We're after details on the clients themselves, on what they're looking for in a watershape and on the nature of the site. Some can be addressed on the phone in the first contact call, but the majority is elicited during our first face-to-face meeting.

Flexibility is the key: Every client and every situation are a little bit different, so pursuing information isn't about asking questions in an exact order or giving equal emphasis to each bit of data. The key, when all is said and done, is to make sure that we've covered all the bases adequately before we sit down to generate a design.

It also helps to remember that this quest for information is less about talking than it is about listening – something about which I can always use a reminder. In fact, I find that having a list of questions on hand helps me focus on keeping my mouth shut and my ears open.

My list is helpful for a more practical reason as well: There are so many options for watershapes and surrounding areas that having a registry of possibilities on hand helps even one who is intimately familiar with all of them remember to bring them into consideration.

So, let's get into questionnaire topics, mindful that each of the following items can be broken down in an infinite number of ways to suit

imagine your water...

"Murano Smalto" Collection by SICIS®
54 colors of glass mosaic
Shown: custom medallion in an all glass tile pool

CACTUS
STONE & TILE

401 S. 50th St. Phoenix AZ, 85034 ♦ 602-275-6400 ♦ 800-528-9445 ♦ www.cactustile.com

Circle **60** *on Postage Free Card*

your style and needs and that these are points of departure, not a prescription you should pick up and use.

◗ **Motivations:** This is always among our first areas of inquiry: What's your motivation in wanting to own a watershape? The answers here will speak volumes about both the client and the potential design. You might hear, "I have arthritis and need hydrotherapy," or "We've always loved being around water," or "Our kids are getting older and we want them to be able to swim and play at home."

Whatever it is – a longtime dream of having a pool, a wish to beautify the backyard, a desire to replicate an experience had elsewhere – you need to know what has set the entire process in motion. And remember: The first answer you hear isn't necessarily the root motivation. You may need to spend some time on this one!

◗ **Decision-making:** When you're dealing with a couple, it's extremely helpful to know which one drives the decision-making process. Sometimes it's a shared interest, but more often than not, one or the other leads the way – and there's great peril in making an assumption that it's the husband and not the wife or vice versa.

(As an aside: I work as a design consultant and not as a contractor, so I'm not obsessed about meeting with both members of a couple as long as I know I'm working with the person who has taken the lead. It never hurts to have input from both, but in my work, it hasn't proved to be essential.)

◗ **Family and usage:** I am always keenly interested to know who lives in the household and who among them will likely be using the watershape on a regular basis. I want to know ages, genders and likely uses – swimming, play, exercise, games, lounging or visual appreciation? I also want to know about friends, visitors and parties – how often, how many people, age ranges? – and whether the guests will likely be business associates or family and friends.

I've found that knowing who will be using the pool, for what purposes and with what frequencies are among the most important bits of information I can have. If the watershape is there mainly for aesthetic purposes, for example, it opens the discussion up to a very different set of priorities and possibilities than would be the case if a sole user is after a pool for lap swimming.

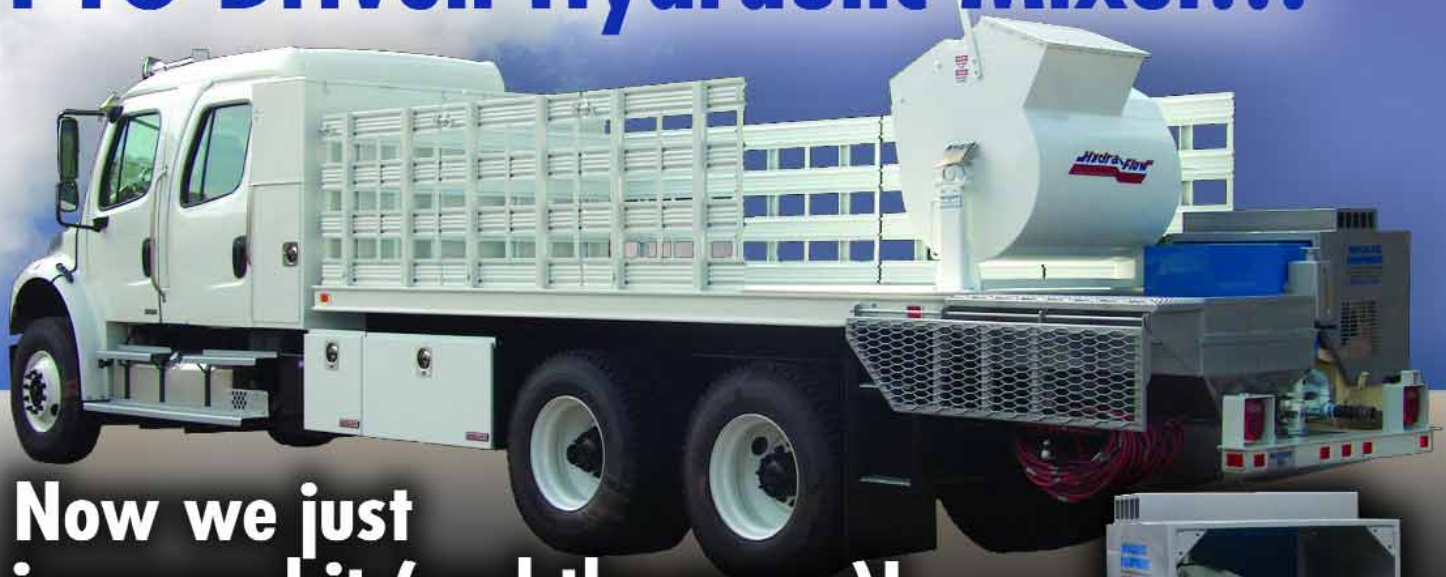
to the water

The areas of inquiry listed above are about clients and intended uses. The next sequence leads us to the specifics of configuration and design and may incline us to emphasize certain details more than others.

◗ **Watershape type:** This may seem brutally obvious, but you really do need to be extremely clear about the types of system or systems you're discussing. There's a common assumption these days, for example,

We Introduced the First PTO Driven Hydraulic Mixer...

DISCOUNT TO NPC MEMBERS!



Now we just improved it (and the pump)!

- Both pump and mixer run off truck's PTO
- Pump and mixer both have REVERSE
- All mixer and pump controls clustered for fingertip operation
- 16 cu. ft. mixer mixes batches faster and better
- Wear parts easy to get at and work on
- Optional wireless remote

PTO driven hydraulic plaster pump

WE ALSO SELL TOOLS!

Hoses, Nozzles, Fittings, Trowels, Step Tools, Spike Plates, Brushes, Spray Wands, Booster Pumps, Boots, Gloves and more!

For more than 50 years we've been leading the industry with innovations starting with the first pool plastering truck. Maybe that's why some of the biggest pool plasterers in America standardize on our equipment. Maybe that's why we've been Putzmeister's 2004 and 2005 Dealer of the Year.

We sell complete packages: pumps and mixers on trailers or trucks. We service all pumps and mixers, sell parts for most pumps and mixers and a variety of tools.

MACALITE EQUIPMENT, INC.

www.macaliteequipment.com

1-877-MACALITE

4510 East Kerby Avenue • Phoenix, AZ 85040

(480) 967-0770 • FAX: (480) 967-7050

National Plasterer's NPC COUNCIL We have supported NPC members for over a decade!

Circle 63 on Postage Free Card

that everyone who wants a pool also wants a spa. That may be true in the majority of cases, but there are certainly those who really want just one or the other.

If a spa falls within a project's scope, it leads to a whole set of additional inquiries I'll highlight a bit later on. If it's all about aesthetics, they might be interested in a body of water – a fountain, say, or a reflecting pool – that doesn't accommodate swimming at all. Not to beat on the obvious, but these are things you need to know!

◗ **Size, style, location:** Most clients start with some notion of what they want their watershape to look like and where they want it to go on their property. Some will want a lagoon-style pool right near an entertainment area, while others may want an architectural design with a vanishing edge that maximizes a view.

As designers, we often find ourselves needing to influence those preconceptions, either because their sense of what they want is inappropriate to the site and the style of the architecture or there are practical or aesthetic issues involved in their sense of what belongs where in the available space. You need to know all about these suppositions on your clients' parts – that is, you need to start with their ideas so you can either align your design with their thoughts or begin the process of persuading them otherwise.

◗ **Colors and materials:** As I've mentioned in several past columns, the materials we have at our disposal these days definitely eclipse the options we had in the past. Indeed, this is one of the areas in which clients may have the fewest preconceptions about what they want. All-tile pools, for example, were once an extravagance but are now increasingly common as more and more designers present this option.

The same is true of various stone materials for decking, bond beams, benches, steps, planters and other structures and of the full range of interior finishes, from exposed aggregates and pebbles to polished aggregates and colored plaster. In all of these discussions, we gradually zero in on the color palette that will be expressed through the chosen materials – often by interfacing our selections with colors associated with the home's exterior, interior or surrounding landscape.

◗ **Moving water:** This is another area where clients may or may not have a very good idea of the possibilities. We bring up all sorts of concepts here – vanishing edges, perimeter overflows, waterfalls, vertical jets, rock waterfalls, leaping or laminar jets, runnels, spillways, sheeting water effects (and, it bears mentioning, the beauty of systems with perfectly still, highly reflective water) – and it's rare to run into clients who are fully aware of what all those terms mean.

These discussions of motion also lead us into the related area of *sound*: As appealing as water is visually, the sounds it makes when it moves can be used to inspire moods from exciting to tranquil. Some will crave variety and control over available ef-

fects, while others are satisfied with a trickle as background noise in an intimate space. There's also a process of elimination: In some cases, they may say they want big waterfalls, but change their minds when we define just how loud they can be!

useful features

As mentioned at the outset, the way clients respond to questions about motivation and intended use will govern the emphasis you place on certain other fields of inquiry. That's particularly true when you get to the following topics:

◗ **Physical structures:** Among the areas in which pools in particular have evolved in recent years are those having to do with interior contours and edge treatments. Once again, there's much to cover, including step configurations, benches, shallow lounging areas, swim-up bars, barstools inside the pool and other areas where things can be set up in ways that ease and encourage interaction between people in the water and those in dry surrounding spaces.

We also bring up beach entries and bridges as well as raised bond beams (for both aesthetics and extra seating) and stepping pads (to bring people into close proximity with the water). These discussions invariably fold back on our initial discussions about intended use and open any design to a variety of conceptual refinements.

◗ **Depth:** This is another consideration that gets right back to intended use: How a swimming pool is to be used greatly influences the water depth and how you configure shallow and deep areas. If, for example, there is no interest in a diving well, there may be no need for a "deep end." This opens the discussion to all sorts of possibilities, including traditional deep-end/shallow-end arrangements, middle-deep or middle-shallow configurations, various play-pool options and the simple beauty of all-shallow water.

Again, these discussions can lead to considerable design refinement. I always like finding ways to double back and press my clients to revisit their assumptions and think seriously about the implications of their stated desires. What I usually find is that they either stick to their guns – or want to start over again design-wise in light of new information they've received through our conversations.

◗ **Hot water:** As mentioned above, you need to know if the clients want a spa and what sort of features it should include. When some people think of "hydrotherapy jets," all they're considering is a small number of jets that do little more than churn the water, while others may be envisioning full-body massages.

There are also those who want to entertain several people in a spa, while others will want complete privacy for just one or two bathers. In addition, some may want to stand up in their spas or crave highly contoured seating and lounging configurations, while others prefer their pleasure in recumbent

mode with simple steps and benches. Some want complete spa-side control of every element of the experience, while others will be happy with straight on/off options.

There's also the possibility of heating the water in a swimming pool – another key area of discussion. In this case, the conversation is usually about technology, energy usage and ongoing expense – but there's one area that needs discussing that I often overlook, and that has to do with the heating source: natural gas or LPG? This is also an opportunity to mention technologies including solar heating and heat pumps.

◗ **Exercise:** If a pool is intended for exercise, this leads to discussion of exactly what's to be pursued – lap swimming, diving, swimming in place, aquatic therapy, volleyball, water polo? As is the case with spas, this is an area where you need to get down to some fairly refined details (probably a column for me all on its own).

◗ **Remote controls:** This is a hot area and has seen incredible advancements in recent years. Most homeowners these days want some level of electronic control, and without going into great detail here, suffice it to say there are many different options to consider, from basic on/off functions to remote access by phone or computer.

◗ **The surrounding environment:** In weighing the possibilities *around* their watershapes, you need to get a sense of whether clients want associated dining or cooking areas, sound systems, fire elements and/or landscape lighting. In this phase of our discussions, we raise those possibilities and also solicit information on their interest in shade structures, umbrellas, pool houses, cabanas or thatched huts.

◗ **Chemical treatment:** We always ask clients about any allergies to or perceived problems with chlorine and often run into a strong bias against using any form of chlorine. These days, however, *our* bias is toward using saltwater chlorine generators, which often leads us to a need to dispel certain myths about chlorine treatment. No matter: We're both sensible and flexible enough to explore other options, including ozone treatment in particular.

◗ **Safety:** This is a tricky issue for many watershapers, and I have my own strong opinions on the subject, but I suppress them in speaking with clients and ask them openly about any safety concerns they might have. If there are small non-swimmers in the household or if entertaining young grandchildren is a big desire, we may suggest safety covers or alarm systems and, in some cases, various types of enclosures.

These are all huge topics with far-reaching design implications, and there may be many more issues you want to raise depending upon the nature of your business, patterns in your local market and the economic level of your client base. If you find yourself exploring oth-

er areas with any sort of frequency, add suitable topics to your questionnaire to make certain you always get the information you need.

site analysis

All of the information you gather from your clients is basically without form or meaning unless and until you carry it all to the site and weigh it all against the opportunities the space opens for you.

As a designer, I need to know about the size, shape and topography of the property and the dimensions and style of the home. There's also a need for information on soils and geology, so I make certain the clients know that these reports are a prerequisite to the contracting process.

For projects on which we'll be providing oversight, we will get directly involved in obtaining this crucial information, but from our perspective as designers, topography and views are the main issues. With sloping lots, for example, vanishing edges come into play, as do step and wall configurations and various other possibilities. That call should be made based on the view and whether it's something to which we want to call attention – or something we want to mask. The clients' desire for privacy may be another determining factor.

The clients' interest in proximity to water is another key issue (and was the subject in great detail of last month's column). Will the watershape be next to, within view of or even part of the home itself? Or is it to be set at a more remote destination within the landscape? Will it be seen from main viewing areas, or will it be revealed only when the clients move away from the home and into the landscape?

As can be seen, the number of topics to cover and the amount of information that needs to be solicited can involve you in conversations that can last countless hours. The best and only shortcut I've found involves the use of a questionnaire, even if it is only for my personal reference: It keeps me focused, prevents doubling back over too much old ground and, perhaps most important of all, completely engages my clients in the process of designing their watershapes. And all it takes is a systematic approach and a willingness to write down their answers!

Bottom line: You can't make any assumptions about what people want or don't want and won't know a thing until you ask. Drawing out all of this information is the only way I know to make sure I have all I need to give clients exactly what they want. WS

Brian Van Bower runs Aquatic Consultants, a design firm based in Miami, Fla., and is a co- founder of the Genesis 3 Design Group; dedicated to top-of-the-line performance in aquatic design and construction, this organization conducts schools for like-minded pool designers and builders. He can be reached at bvanbower@aol.com.

By Stephanie Rose

Citrus Sense

Finding trees that don't drop their leaves or too much other debris is a big deal for landscape designers, especially when planting around watershapes.

For years, I refused to eat tangerines and oranges because I hated the seeds. It was too much work to peel off the rind and then sift through the sections and pull out the seeds before finally getting to the juicy, delicious part of the fruit. I opted instead to get my Vitamin C from other sources.

One winter several years ago, my attitude changed after I was handed a Satsuma tangerine. Surprised at how easy it was to peel and even more stunned by the absence of seeds, I savored the fruit's sweetness and enjoyed a more natural form of vitamin intake. In fact, I found myself devouring more than a dozen of the delectable jewels in one sitting!

That experience resulted in an awakening for me with respect to my own garden and, in turn, to my design practice. On a personal level, instead of continuing to buy cases of these tangerines, I decided to try my hand at growing my own crop. On a professional level, I found myself wanting to insert them into some of my designs.

Not knowing how successful I'd be in my own yard and not wanting to commit my clients to this course without some practical experience, I set out to determine how easy or difficult these fruits might be to grow – and if there were other citrus varieties with which I might experiment.

design wise

Here in southern California and throughout much of the Sunbelt, we are truly blessed in our ability to grow citrus. In this wide swath, these fruit trees grow abundantly – with slight (but realistic) concern about freezing temperatures that can claim both tender perennials and the crops of winter fruit trees.

We've all heard about Florida's orange juice, of course – but we've also heard about the occasional frosts that wipe it out from time to time. Such frosts are infrequent, thank goodness, and incidences of tree death are even less common, but these were the sorts of issues I needed to research and resolve on my way to deciding to include citrus in my backyard.

Before long, I recognized that I could generate bumper crops on my own and could basically cross citrus off my shopping lists (and those of lucky friends) for much of the year if I selected a well-balanced palette of trees to grow. Not only do they offer great fruit, but I've also found in my design business that citrus trees also serve a great purpose as evergreens that come in many different sizes.

Finding trees that don't drop their leaves or too much other debris is a big deal for landscape designers, especially when planting around watershapes: In these spaces, it's always critical to be aware of the potential for things falling into the water and clogging pumps and plumbing lines – an issue I've discussed in this column many times through the years.

Fruit trees are generally poor choices in these environments, but my experience with citrus has shown the opposite to be true: Most often, in fact, citrus fruits do not drop off the tree unless they are significantly overripe or have been pillaged by pesky critters – signs of neglect and poor maintenance. Around their watershapes, by contrast, I've always found clients to be diligent in maintaining overall appearances and as a result have never hesitated to suggest one or

Pool Finishes Preferred by Industry Professionals

At CL Industries, we offer a selection of pool finishes from nine textured series, with a total of ninety-six lush colors, producing cool to vivid water hues. And it doesn't stop there! We are adding new colors all the time, and will go the extra mile with custom blending.

Call today for brochures or to find a pool finisher near you. Discover not only the finish of your dreams, but a company that offers superior service and support.

CL Industries™
The Leader in Pool Finishes

Office: 407.851.2660 • Toll Free: 800.333.2660 • www.clindustries.com

8188 South Orange Avenue • Orlando, FL 32809

For Spectacular Night and Daytime Effects....

Harness natural and artificial light sources with these exciting, new photoluminescent products for your pool or any water project.

AquaGlow™ and AquaAccents™ are two, new exciting product lines producing an effect that is distinctive and an experience that is infinite for your re-finished or new pool/water project. Your only limitation is your imagination. Call for more information.

AquaGlow™

AquaGlow™ & AquaAccents™ Patent Pending

AquaAccents™

Colored Aggregate Systems, Inc.

Phone: 407/851.6501 • Fax: 407/851.4038 • www.coloredagg.com

P.O. Box 490180 • Leesburg, FL 34749-0180

Circle **91** *on Postage Free Card*

more of these trees when the opportunity arises.

Typically, citrus trees take on a rounded shape and therefore need some room to spread out and achieve their mature height and width. They come in all sizes, including some types that reach 30 feet in height as well as dwarf varieties that stay below eight feet, and just about the only drawback I can think of – and then only in a few cases – is that some varieties have thorns or spikes on the branches and should be kept away from high-traffic areas.

As far as maintenance is concerned, regular feeding of the sort commonly administered by maintenance crews will go a long way toward preserving the health of these trees and their fruit production. I've also been advised by a number of tree experts that the soil inside the driplines of these trees should not be cultivated or disturbed, as their feeder roots are very near the surface and may suffer damage – counsel I always heed for the benefit of the trees' health and fruit production.

juicy choices

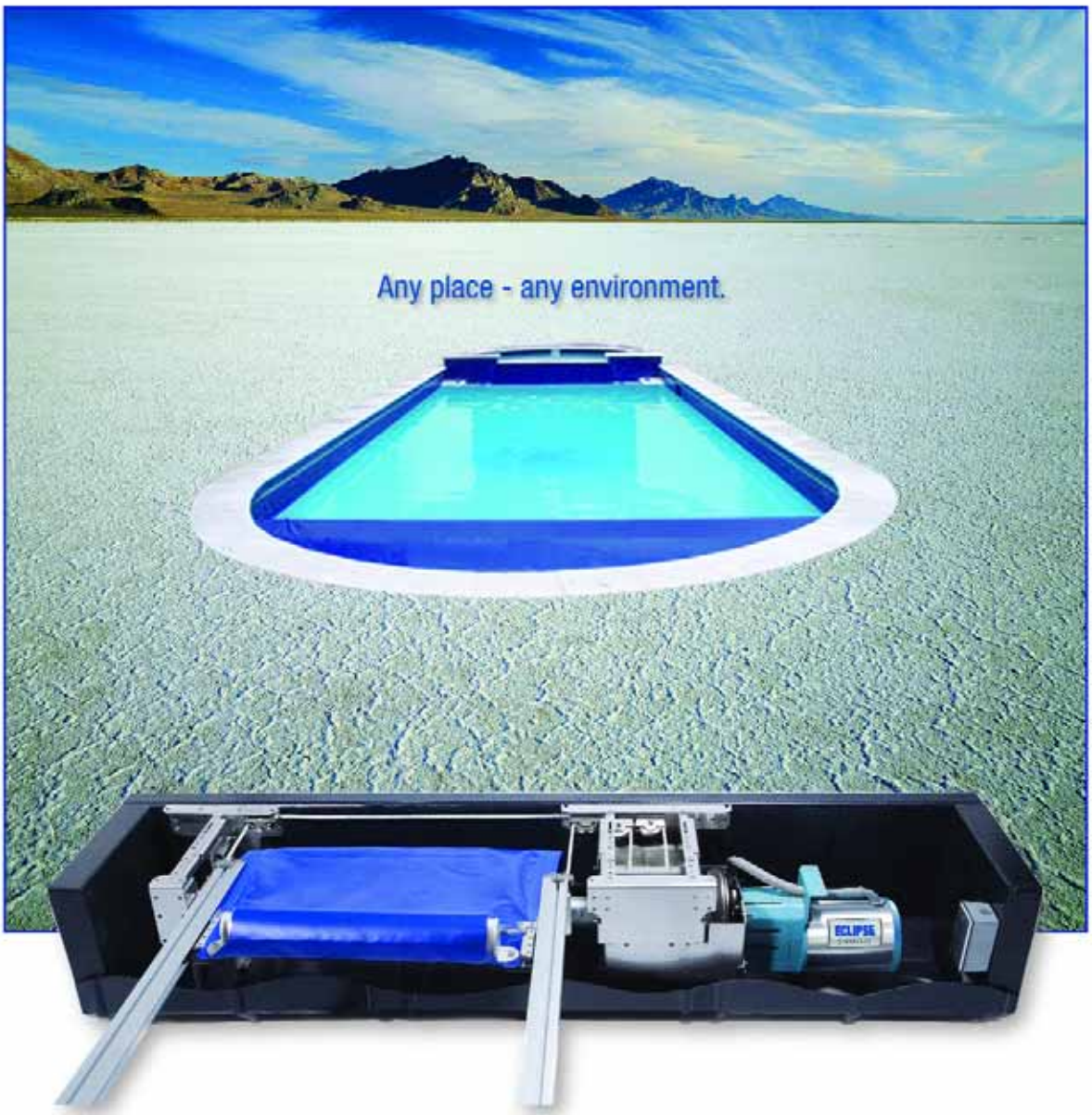
Obviously, watershapers and landscape professionals working in colder climates will have difficulty planting these trees and having them thrive, but it's not beyond the realm of possibility with an extra bit of effort: When I visited the Palace at Versailles, for example, I marveled at the way the French gardeners grew their citrus trees in containers and simply moved them to shelter when the winter months set in.

In all cases and in any climate, of course, it's a good idea to check with your local nurseries to see which varieties and sizes are available in your area, including both standard and dwarf varieties. Specifying a tree that doesn't typically grow in your area may only set you and your client up for failure. (Although I always support experimentation, these trees can be a bit expensive for that type of exercise.)

For those of you who don't face real obstacles and are persuasive enough to talk your clients into trying citrus in their gardens, here are a few selections with which I've a good bit of luck:

- **Eureka Lemon:** My lemon tree typically produces more fruit than my friends and I can handle. These trees are tough, too: Mine is currently suffering with Oak

Engineered Reliable.



The Coverstar Eclipse™ stainless steel automatic safety cover system

Because of the harsh environments in which pool covers operate, the engineers at Coverstar have developed an automatic safety cover made to withstand the elements. With parts engineered of stainless steel, the Coverstar Eclipse is designed to stand up against the harshness of any pool environment. With larger stainless steel pulleys, a stainless steel bracket system and mechanical torque converter as well as 4,000 lb. ropes, the heavy-duty stainless steel components of the Eclipse are immune to the environmental factors and most of the problems that cause service calls with other automatic cover systems. You and your customers will appreciate the reliability, durability, safety, and savings that only the Coverstar Eclipse provides.

To arrange a demonstration of the Eclipse, call **1.800.617.SAVE (7283)** for you're nearest Coverstar distributor.

COVERSTAR™
The Highest Standard

Circle* 11 *on Postage Free Card

Root Fungus, but it shows every sign of pulling through and has consistently provided me with abundant crops of big, juicy lemons good for all types of food preparation despite its ailment. Eureka is the larger of the two common varieties of lemon tree; for those who have more limited space, I suggest planting a Meyer Lemon – a dwarf variety that also produces abundant crops.

◗ **Kumquat:** I've never been a big fan of kumquats, but when I planted a garden for my parents some years back, my mother specifically requested trees that bore these tiny, tart gems. Its brilliantly orange fruit adds great color to any landscape, even if you don't like the flavor the way my mother did. And because I used it at her request, it will always hold a special place in my heart!

◗ **Mexican Lime:** The warning above about thorns and spikes primarily refers to this tree, which has some nasty ones. For all that, my Mexican Lime yields bumper crops every year – so large, in fact,

that I end up letting much of it fall to the ground or begging my gardeners to strip the fruit and take it with them. These limes are amazingly juicy (considering their relatively small size) and have assisted me more than once in making incredible key lime pies. (For a slightly larger fruit, you can try the Bearss Lime.)

◗ **Ruby Red Grapefruit:** I have found that this tree thrives even in shady locations but that planting it in full sun results in maximum sweetness. I love the way grapefruits taste, but I end up giving most of them away because I see them as the most labor intensive of the citrus fruits: You need to cut the juicy flesh away

from the rind before eating it and go through a good bit of effort in the process.

◗ **Satsuma Tangerine:** As I'm writing this column, I've enjoyed five Satsumas I just picked off my two trees. One stands in a shady spot, and the other is in full sun at the top of my hill. I harvest huge crops of these thin-skinned, seedless fruits every fall and winter, with the full-sun tree producing sweeter fruit earlier in the season, while the shaded one supplies me through

the winter months. On my trips to the east coast, I've learned that the Clementine variety of tangerines is quite similar in character and flavor, but an enduring advantage for Satsumas in my design work is that they are weeping dwarfs, making them versatile additions in many settings. After about 12 years in the ground, the taller of my two trees is still only about eight feet in height and not quite that wide.

◗ **Valencia Orange:** This counterpart to the Washington Navel is the most common juicing orange and is used extensively for store-bought juices. If you have a client who's an avid juicer, I highly recommend one of these trees.

◗ **Washington Navel Orange:** I must admit that I've never liked peeling and eating these oranges – too much work – but this variety is perhaps the most common of the available eating oranges. Unfortunately in my case, my tree succumbed to Oak Root Fungus a few years back (along with many other trees in my yard). While it was alive, however, it produced abundant fruit that I happily gave away to friends. Blood Oranges

are another favorite "eating" variety and are commonly used in salads and cooking. Their flavor is a bit sweeter than typical Navel oranges, but it's the red flesh that makes them an interesting visual choice. Orange trees are available in a wide variety of sizes, including standard trees that grow to 25 feet tall as well as dwarf varieties.

final notes

No matter which mix of trees or individuals you select, I recommend looking for those that bear fruit year 'round simply to spread your clients' pleasure out through a longer period. I also recommend advising them to keep their citrus trees pruned to a reasonable, manageable height: The more difficult it is to reach the fruit, the less likely they will be to pick it and the more likely it is that the tree will make a mess when overripe fruit splats on the ground far below. As a rule, I advise keeping them to no more than 15 feet tall.

It's also smart to buy your clients fruit pickers: They make nice end-of-project gifts, but they're also a great way to encourage clients to take advantage of their new at-home fruit stands. Many nice fruit pickers are available at garden centers, and you can purchase them from catalog services such as Smith & Hawken – tools designed to satisfy even the most discerning of clients.

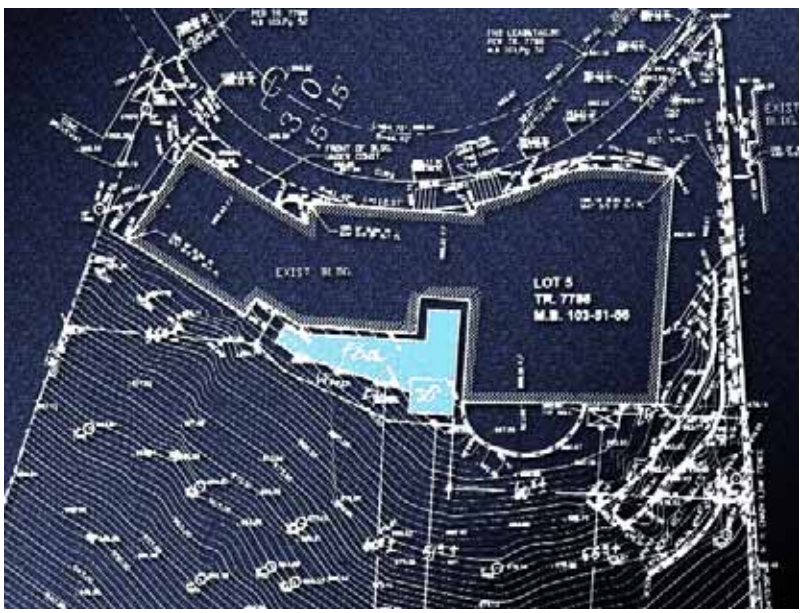
Yes, the fruit is wonderful and can save your clients some cash at the grocery store, but as a designer I keep coming back to the fact that citrus trees stay a beautiful green all year long. And now that I'm finished writing this column and have eaten all five of the tangerines I had sitting in front of me, I think I'll head outside to pick a few more! WS

Stephanie Rose runs Stephanie Rose Landscape Design in Encino, Calif. A specialist in residential garden design, her projects often include collaboration with custom pool builders. Stephanie is also Editor of LandShapes magazine and an instructor on landscape design for the Genesis 3 Design Group. If you have a specific question about landscaping (or simply want to exchange ideas), e-mail her at sroseld@earthlink.net.

By David Tisherman

Design Time

I compose each project from scratch, inventing a solution tailored to the site and clients' particualr needs. It's about invention and innovation, not selecting among a stock set of goodies.



When I sit down with clients for our first face-to-face meeting, we discuss a range of issues that will guide me when I return to my studio and get down to designing a watershape and surrounding areas for them. We'll talk about colors, materials, the location of the pool, their preferences in art, the way they entertain and, perhaps most important of all, how they plan to use their backyard and swimming pool.

Let's focus on that last point: When we talk about how a pool is going to be used, what I *really* want to know is how it will be used on a daily or weekly basis (for swimming, exercise, play or simply as a visual), *not* how it's going to be used once or twice each year when they throw a big pool party. My thought is that these clients will live with their watershape constantly, so the design needs to work for them every single day.

If I don't pursue this point, I know my clients will in some way be disappointed. As a result, I do all I can to consider the everyday aspect of the program, begin offering some carefully qualified ballpark figures on cost and know from experience that these discussions will affect all aspects of the design, from the materials we select and the configuration of the steps and benches to the placement of the pool and the provision of shade structures, cooking areas and myriad other details.

It *all* comes into play, which is why I need to have so much information in my possession by the time the initial meeting ends and I head back to my studio. Using an analogy suggested by my good friend and fellow watershaper Paul Benedetti, it's time to stop dating and get engaged.

critical structures

By the time the initial meeting ends, I have established the need for the clients to obtain soils and geology reports, referred them to two or three experts who perform such studies and left them to follow up. Once they've shown their commitment by making arrangements to have the studies done (not to mention having received, reviewed, approved and signed a contract as well as submitting a deposit), I begin preparing architectural drawings for their review and acceptance.

Satisfied with their commitment, I start talking with my structural engineer. At this point, the design is far enough along that surface elements can all be developed with some precision – the shell, the decking, shade structures and the like. What can't be known at this point is what sort of subgrade support any or all of these design elements will require: For that, we need the soils reports.

The reason I jump into the structural engineering tasks before the soils and geology reports are ready is simply a practical matter of timing: There's usually a three to four week waiting period in my structural engineer's office, so hanging on until everything falls into place would prolong the project unnecessarily. It's a shortcut, but it's not a risky one.

Once the soils and geology reports come in, my first task is to submit them to the governing municipality for a letter of approval – a process that can take anywhere from three to seven weeks, for example, when I work in Los Angeles. Once that process is under way, I take the reports to the structural engineer as well: Now the final structural documents can be prepared using all available information about the soil conditions and what sort of support the various structures will require.

Continued on page 26

These early stages of the process take weeks and involve lots of give and take and cross-talk: The municipality, for instance, can request clarifications at any time as it asserts its control over such issues as setbacks, daylighting of slopes and OSHA requirements; the structural engineer needs increasingly detailed guidance on exactly what we're after; and I need to communicate effectively on at least those two fronts while keeping the clients apprised of any basic changes that need to be made or any revelations that will influence the sort of ballpark figures we've been discussing.

Once the dust settles, the structural documentation goes back to the geologist for review and approval, then the whole signed package goes back to the municipality for plan check and permitting. At this point, I am in complete charge in the event any additional information or clarifications need to be exchanged. I do not use plan runners for this purpose: I need to know exactly what's happening in these crucial last phases.

While all of this is going on, I continue to pursue the formal design process by putting ideas down on paper in ways that will help my clients visualize their project's potential. In most cases, this means that I'll prepare two to four pages of illustrative information – basically, architectural details for the project's main, permanent structures.

These are *not* structural details, and that's an important distinction. Many of my projects include overhangs or shade structures, for example – elements that can be designed in any number of ways with crowns, perlins, plant-ons, spacers and any number of other visual elements. As the designer, I will make those *architectural* decisions and know what the spans are, but it will be a structural engineer (not me) who will determine the size of the required timbers (or, if reduced timber size is desired, of the wood-encased steel) as well as the dimensions of the bases or support structures.

I shepherd all of this information through the process by way of preparing for actual construction. When the municipality finally signs off, we're all ready to go.

no guesswork

Although I've defined the process so far as a sequence of separate steps, there's a fluidity to design work that comes through most clearly when it's time to put pencil to paper.

In other words, somewhere in the back of my mind (and often right up in front), I've spent a good bit of time rolling through possibilities, refining and visualizing details and generally preparing myself to perform for my clients. I've known for quite a while how the pool and backyard are going to be used, who's living in the home and where the watershape will be located on the site. I also have a strong sense about materials selections, overall aesthetics and the specific details the clients have said they want or don't want.

What I do now is let all that informa-

tion guide me – and I have to say that I'm so well prepared that the drawings usually emerge freely and quickly when the time comes.

This directness is made possible by all of the pre-design work I've been describing in recent "Details." If you don't have that stock of information at your disposal when the time comes, you're going to end up guessing about what your clients desire, and chances are you'll generate something that won't work to their satisfaction.

My own work in this scheme of things is greatly enhanced by the fact that I can draw – a point I've raised many times through the years. In meetings, for example, I'll often start sketching out rough ideas in perspective to help clients visualize the details we're discussing. As I see it, this is a great way to push ourselves past any obstacles on the path of clear communications.

On a recent trip to Mexico, for example, a developer and I were discussing his need for pools and outdoor kitchens for a large condominium complex, but it was clear he wasn't visualizing or understanding a key detail I was trying to describe for him. I used an hour-long break in the meeting to retreat to my room, where I used a pad of paper, a pencil and an envelope that served as my straightedge to draw up a rooftop pool that was to be duplicated on each of five buildings as well as some other elements we'd covered.

When the meeting reconvened, I used the drawings to help the client envision the possibilities. No torrent of words would ever have been able to do the job: He just didn't "get" it until the drawing clarified things for him – and now he started getting excited.

This is *not* the same as creating a design in clients' living rooms – the sort of "sketch" volume builders will turn into a proposal that must be signed that evening. Instead, these in-the-moment sketches are strictly for discussion purposes, and when clients respond favorably to an idea they've seen me rough out on paper in front of them, I know that's an element I'm probably going to include in my formal design work.

synthesizing details

Drawing is a big deal to me, which is one of the reasons I'm not a big fan of computer-assisted design (CAD) systems.

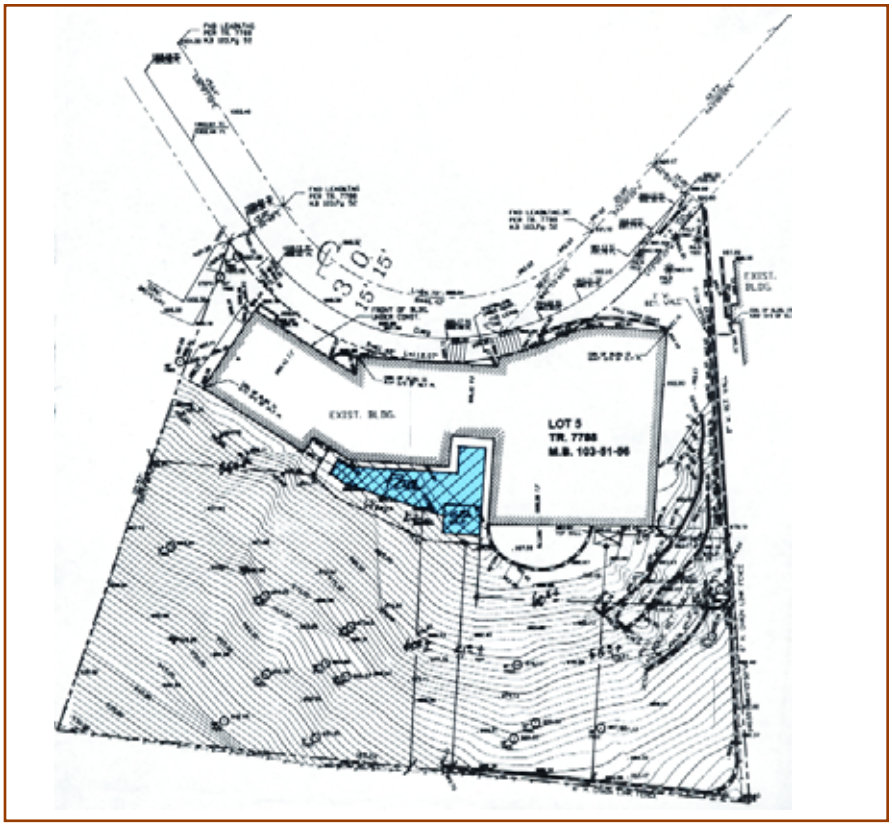
If you really can't draw and you're doing the right things and have been asking the right questions, CAD might be an effective way to work around your lack of skill with pencil and paper. In my experience, however, almost anyone who applies himself or herself to it can learn to draw to some degree or other – maybe not to the highest standard, but at least well enough to get by in a client meeting. It's worth the effort, I think, and you'll be surprised how much this ability can help you work through key issues with clients in a speedy way no CAD system ever will match.

However those issues are resolved, once all of this information falls into place I move into my studio and compile all of

my sketches and notes – anywhere from two to five pages of detailed observations – and start refining preliminary ideas into an actual design at the same time the geologist is evaluating soil conditions.

This is when I start thinking seriously about scale, proportion, line density, texture, key focal points, materials, color palettes and architectural details such as coping and edge treatments. But it's not at all like shopping at a "design supermarket": I don't walk down an aisle of possibilities and decide I want to use a cover and a vanishing edge and a fountain and tile and a pebble finish and 16-jet spa and a list of other elements I'll eventually weave into a design. Rather, I compose each project from scratch, inventing a solution tailored to the site and the clients' particular needs. It's about invention and innovation, not selecting among a stock set of goodies.

So far in this discussion, I have focused mainly on clients and have not mentioned site issues – but now's the time in the process when the site itself becomes a major (if not *the* major) factor. Let me illustrate how important the physical setting can be by considering whether a pool should have a vanishing edge or not.



Among the many things I make clear to clients is the need for basic site information. This includes full soils and geology reports as well as detailed topographic surveys such as the one depicted here. This information is always important to me – but it's absolutely critical when it comes to proposed hillside construction.

borrowed expertise

As anyone who reads my "Details" columns knows, I'm an opinionated guy. One of the areas in which my opinions are strongest has to do with structural engineering, which I consider to be of the greatest possible significance in successful watershape design and construction.

I have seen plans designers or builders have given clients in which there has obviously been no input from a structural engineer. Instead, what these builders offer is sheet after sheet pulled from books of standard details – maybe a dozen or even two dozen impressive-looking sheets that bear no direct relationship to the project or the soil conditions at hand. Instead, what the clients get is guesswork and supposition that rarely have anything at all to do with the site itself.

To me, this is criminal behavior: Only a licensed structural engineer has any business acting as one, and the willingness of some builders to cut corners and avoid the expense of consulting with an expert almost certainly explains the alarming failure rate of concrete watershape structures. To have any value at all, structural plans *must* be site specific.

I say for this reason that one of the most important aspects of my design work is something I *don't* do. My strength is creating designs that inspire my clients and occasionally rise to the level of art, but for all of my experience and background in design and construction, I am not, nor will I ever be, an engineer.

If I offer clients three or four details for key features such as steel in steps to manage shrinkage or for a widened dam wall to handle spa jets, that's a lot. But I back up the basic plan I offer my clients by working closely with the structural engineer to make certain we're on the right path and that the construction documents that are being developed clearly reflect the design's intentions and the clients' desires.

When I'm in California, I work with the staff at Mark Smith, AIA (Tarzana, Calif.), including Mark Smith, Jay Shniderman, Ron Soderstrom and Bill Bragg. When I'm on the East Coast, my choice is Rich Mullins of Damiano & Long (Camden, N.J.). I once had a client who insisted I use *his* structural engineer. Although a fully qualified professional, the man lacked any expertise in pool construction and working with him was an absolute nightmare. I will *never* put myself through such an experience again.

If you take nothing else from this discussion, I implore those of you who develop your own structural details without an engineer to change your practices right away. Padding your presentations with standard structural details won't cut it: You are hurting our industry, deceiving your clients and should be ashamed of yourselves.

– D.T

Let me start by observing that, as wonderful as these effects can be, they are often misused, basically because designers have failed to consider a site's constraints. In fact, vanishing edges may be the greatest phone-it-in, knee-jerk design solution of the past decade: If a pool is on any sort of slope at all, the temptation to use a vanishing-edge detail seems irresistible, even where it's *not* the right move.

In aesthetic terms, vanishing edges work best when they lead the eye to a vista of water or a view or reflection of a great landscape, either in the distance or near at hand. All too often, however, what they end up accenting are views of nearby rooftops, and that's just wrong. (It leads me to suspect the industry is addicted to these treatments mostly because they drive up the cost of a project.)

My point is, a designer needs to think these site issues through with great care: If the view to which a vanishing edge calls attention isn't the greatest, restrain yourself and do your clients a favor by pulling the focus back into the yard itself.

Basically, you need to be honest with yourself about what's right for the setting. When you are, oftentimes you will find that vanishing edges (or perimeter overflows or large waterfalls) are not the best option. As elaborate as some of my projects can be, the fact is that great design often calls for great restraint and a sense of propriety in selecting which elements I'll use – and which I'll leave off the page.

in the studio

At this point, everything starts coming together. My first task at the drafting table is developing a site plan – that is, an overview of the entire project. This rendering is an extremely straightforward page of information that shows my clients where the elements of the composition are located, their sizes and relationships to existing structures and lot lines, their elevations, the materials to be used and various material transitions. (See much more on these presentation materials in my next "Details.")

It's always helpful in getting started if architectural plans of the house are on hand. Many of my clients live in custom homes, so this information is commonly available and is a big help. Nonetheless, I always make it a practice to confirm

Mosaic Swimming Pool

Detail of Spa Water Line

Detail of Bond Beam to Spa Wall

measurements, just in case. I also shoot the site with a manual building level relative to fixed point to make sure I have the topography right.

Throughout the process – when I'm talking to the clients, suggesting details, looking and measuring the site and sitting at my drawing desk – I'm *constantly* visualizing the work in my mind's eye.

There's a tendency to think of visualization as a vague, intuitive exercise, as though there's some sort of mystery to it, but I don't see it that way. Visualizing a design is a deliberate process that's based on education and experience, and it takes *practice*: You need a firm understanding of how everything in a design works together, how materials will intersect, how things will look from key points of view, how things will balance visually, the role light will play with the materials and the water, how plants fit in – and literally dozens of other details and elements.

This stands in sharp contrast to builders who will come in and build a shell, then

In my initial client meetings, I pay considerable attention to the architecture of the home and the way it is furnished as well as the views (if any) that the site offers. In this case, the home's modern style inside and out was a design-guiding factor – as was the million-dollar view from a prime slice of hilltop real estate.

abandon the homeowner to take care of the rest with assorted subcontractors. The shell may be competently done, but it has been completed with no thought to how it will be finished, what the coping will be, how the decks will be arranged or about specific dimensions as they relate to materials. This is completely backwards and grossly inadequate: All such details must be known before a shell is built!

In other words, these firms present "plans" but assume no role in or responsibility for making them work. I can understand this impulse to dodge the hard stuff: After all, it takes a lot of mental energy to develop a comprehensive project vision. But like drawing, visualization is really a skill – and another one that can (and should) be learned and improved with time and experience.

For myself, I am most fully engaged when I sign on to build one of my designs. I know what information my clients will need to see and will generate perspective drawings of key details. These might in-

clude step details, material joinery and edge treatments – basically everything it takes to help a layperson visualize the space in real detail. And depending on the clients, this can get intense, right down to the appearance of the grout joints so they'll know just what they're buying.

As needed, I also provide sample boards of materials. We'll talk about the various possibilities and, in general terms, their relative price points – nothing too specific, however, because at this point I haven't contacted suppliers and don't have adequate information about quantities, dimensions or applications. In other words, firm pricing is still a fair step down the line.

design and build

To this point, we've talked about projects that I've designed and also will build. That's almost always my preference, because I hate the idea of my efforts being distorted or downgraded by builders who don't know what they're doing.

When I build my own designs, I know

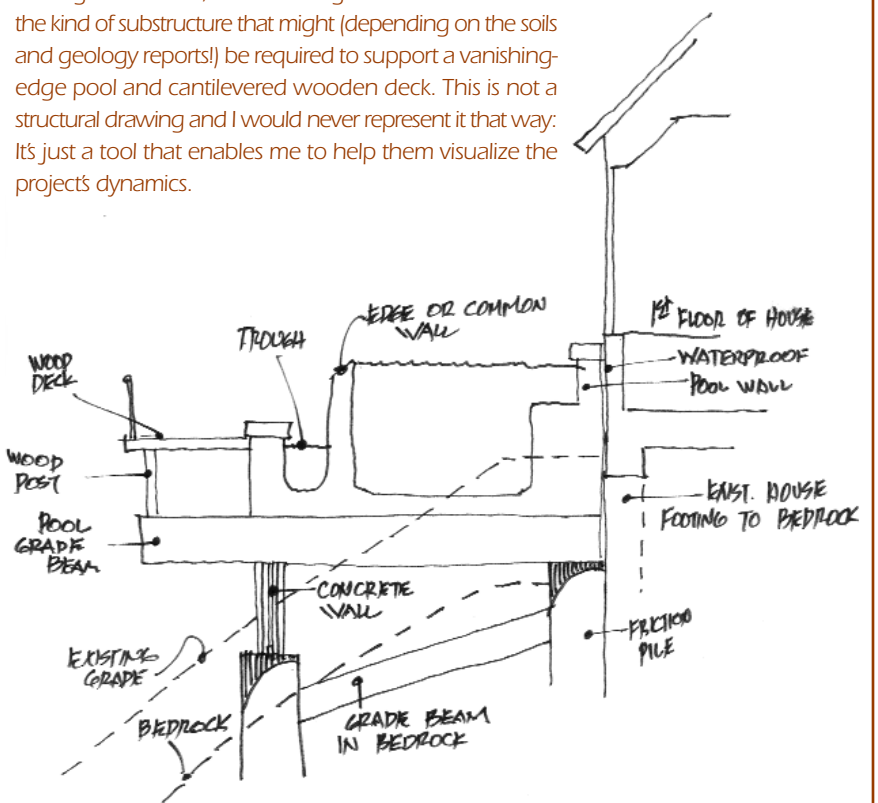
Once on site, I evaluate all sorts of practical issues related to the construction process. In this case, I noted that access was obviously going to be an issue: The narrow strip along the side of the house would see lots of traffic as the project moved forward and we installed the massive structure that would be needed to support the pool, spa and decks we were to build.

I'll be using the best subcontractors and that the work will be done right. By contrast, when another contractor comes in and takes over the construction end of the job, I have no way of knowing what may or may not happen to the project, although my general suspicion is that the results will not be great.

On those occasions where I'm doing only a design, I provide the details described above along with a plumbing schematic, electrical schematics and equipment lists. If that's all they want, we shake hands and I'm done. If they want more – structural details, for example – I will take care of providing those as well and whatever else they require by way of documentation, but I do not hang around or offer to supervise the installation by someone else: Odds are I'm going to be frustrated endlessly by scores of little things that are likely going wrong, and I won't put myself through that ordeal.

In this context, I don't ever represent myself as a "design consultant": I'll either

In developing design ideas and explaining concepts to clients, the fact that I can draw in clear and communicative ways is a huge asset: It lets me work right through any roadblocks to their understanding of what we're discussing. In this case, I needed to give them some idea of the kind of substructure that might (depending on the soils and geology reports!) be required to support a vanishing-edge pool and cantilevered wooden deck. This is not a structural drawing and I would never represent it that way: It's just a tool that enables me to help them visualize the project's dynamics.



design the entire project and walk away or, preferably, design the project and see it through to fruition. The subcontractors I work with are incredibly accomplished, so I have complete confidence that when I design something, it can be built (and built *well*) if my people are involved. By contrast, I just can't have that same level confidence with people I don't know.

As an example, my friends John and Luis Marquez at Tony Marquez Pool Plastering (Sun Valley, Calif.) have been with me for nearly 30 years. I know that when I specify a custom plaster color, whether it's red or green or plum or yellow, they will create samples for my clients and then come through on site with a completely accurate final color. As a designer, knowing their capabilities and reliability gives me a confidence and freedom I've never, ever been able to find elsewhere.

This is why I will fly my subcontractors all over the country or even across the globe when the need arises: If that's what it takes to make certain a design is executed per plan and to everyone's satisfaction, then that is what I do without a moment's hesitation.

going pro

As I've mentioned many times in these pages, there's no shortcut in becoming a designer: It takes education, self-discipline and practice – and simply calling yourself one does not mean you *are* one.

My putting this thought in such blunt terms has upset people through the years, but I've never believed that being paid for design work is something that qualifies anyone to assume the title. If that were the case, the hacks who pull templates out of their briefcases would on some level qualify to call themselves designers, and nothing could be farther from the truth.

I have long been amazed at what some self-styled designers try to pass along to homeowners as "professional" design work: Shabby hand or CAD drawings that simply do not deliver what any client who's ever worked with an architect (as a great many of my clients have) would expect. And padding thin design work with sheet after sheet of standard details doesn't fill the gap.

Anyone who has studied art history, industrial design, landscape design or the fundamentals of architecture is generally self-aware enough to recognize gaps in what he or she knows, but the real advantage these people have is that they are also aware of what they need to do to address those gaps and where to go to get knowledge or advice or instruction. In that sense, designers are constantly aspiring to reach new levels and figure out innovative ways to use design as a means of creating works of art.

The key to all of this is not being afraid of what you don't know: The moment you embrace your own shortcomings and start working to advance your knowledge, you are on a straighter path to becoming a true designer. And if you supplement practical experience with a good dose of formal design education, I firmly believe you'll be surprised by what you can achieve. WS

Next: The formal presentation of the design to clients.

David Tisherman is the principal in two design/construction firms: David Tisherman's Visuals of Manhattan Beach, Calif., and Liquid Design of Cherry Hill, N.J. He is also co-founder and principal instructor for Genesis 3, A Design Group, which offers education aimed at top-of-the-line performance in aquatic design and construction. He can be reached at tisherman@verizon.net

In the Ballpark

I've often said that you cannot determine the exact price of a project without first knowing what the foundation structure will be based on soils reports and structural engineering. But that is not to say I won't offer clients general ballpark estimates of what we're talking about for a given project.

Those estimates are always qualified, and I stress the fact that the engineering work might significantly change the numbers. At the same time, I don't want to be spinning my wheels when I know a project might ultimately cost $500,000 when the client is looking for something for $100,000 or so.

Yes, what I offer is guesswork, but these are well-informed generalizations based on nearly 30 years of experience. If I'm working on the New Jersey shore, for example, I know we'll be building in sand and that everything will most likely have to be set on pilings. If I'm on a hillside in southern California, I know that we're likely talking about major support structures, typically grade beams and piles.

With this extensive background, I'm confident that my ballpark musings won't be too far off the mark. But there are always surprises – weird soil formations including expansive bedrock and other conditions that can make anyone crazy – so I do all I can to let my clients see and understand the potential for greater costs.

As I see it, these general discussions of price are part of the qualification process and a means of avoiding the wrong path. When it comes to anything approaching a firm price, however, I need all the information I can get – soils and geology reports, structural engineering plans, a complete materials list with all quantities indicated and complete construction documents – and even more as the situation warrants.

– D.T.

Moving in Styles

Watershape and landscape artists Kate Wiseman and Keith Lowry have staked out a unique niche for themselves by emphasizing a 'client-driven' approach to design in which their firm takes its cues entirely from homeowners' needs and desires. The result has been a remarkably diverse portfolio of high-caliber residential projects – work that defies easy categorization, as demonstrated by the collection of beautiful photographs they share here.

By Kate Wiseman & Keith Lowry

If there's a constant in watershape and landscape design and construction, it's that clients are almost invariably different from one another.

Through years of watching how others approach these singularities, we've seen some designers (and builders) who are so set in their ways that they limit what they're willing to provide. Indeed, there even seems to be a bias in the industry at large toward elevating those designers who have a "trademark style."

In our company's case, however, repetition of styles and features is not something we're looking to do: Rather, we find it much more challenging and interesting to approach each project with a fresh outlook and genuine curiosity about our clients' dreams.

To that end, our approach at Verdant Custom Outdoors (San Diego, Calif.) is all about understanding our clients and avoiding any preconceptions about what we think they might want. We deliberately approach all clients and projects with a desire to meet individualized needs – a practice that has required us to become totally adaptable when it comes to both design and construction.

Yes, this approach adds a layer of complexity to what we do in that we start from scratch with every project. Our process requires a great deal of research, but as we see it, it's always been an investment of time and resources that constantly expands our repertoire and enhances our capacity to find design solutions that flow freely from our clients' personalities and experiences.

STRUCTURED INFORMATION

Through the years, we've learned that the only way to accommodate the broad range of needs expressed by our clients is to start off with deep wells of information that enable us to structure our approaches individually.

Along the way, we've encountered the full range of architectural styles and variations on those styles – Contemporary, Craftsman, Mediterranean, Cape Cod, Spanish Colonial and Modern, among others – along with the tropical themes that have been popular in southern California for so many years.

Although we stick to these styles where it's appropriate, we don't lean on the lexicon of design in describing the work we're proposing. We *will* try to educate clients about the architecture of their homes, but we do so knowing there's a great deal of vagueness in terms such as "Spanish Colonial" when it comes to defining landscapes that will complement their homes.

In other words, we focus less on worrying about verbal hooks that might categorize what we're doing, instead working to make our finished projects express the personal style of our clients.

For us, this deliberate approach results in a highly structured design process that moves through a sequence of steps that take us from initial concept to construc-

Eclectically Tropical

This tropically themed project arose after a storm felled a huge eucalyptus tree, effectively destroying a vinyl-liner pool and its surrounding backyard. The canvas wasn't as blank as it might have been, given the client's desire to install a new concrete pool within the original pool's footprint, but for the most part we were asked to start fresh and tailor the yard to the homeowner's tastes.

As it turned out, the client loved all things Hawaiian, so we developed a plant-centered design and a lush, tropical setting that originally included 50 plant species. In our visits to nurseries, however, we saw her interest in rare

and unusual plants and knew we had an opportunity to enhance that part of the project: Before we were done, in fact, the scheme included more than 200 plant varieties and the dynamic had changed from a typical client/designer relationship into a collaboration.

The client was, in fact, tireless throughout the construction process, coming back to us with new ideas and wildly creative suggestions – some of which we implemented, some of which we didn't. On this project especially, the structure of our design/build operation made it possible to work with her ideas in effective, time sensitive and sensible ways.

The property covers three-quarters of an acre and now includes various zones – a palm forest, a fern hill, a drought-tolerant slope and assorted areas of extremely lush foliage. A *South Pacific* theme is woven throughout, with Tiki totems hand-carved by a well-known local artist and various details in the garden tied to Hawaiian legends and traditions.

On a more functional level, there's a covered dining and entertainment area (with an outdoor pool table and television) along with a tree fort that overlooks much of the garden. In both of these areas, the client's personality is expressed in details including miniature tiki masks carved into posts and handrails. (One of the freestanding tikis is intended to satisfy her sense of poetic justice: There's a "storm tiki" that guards the garden against further catastrophes!)

We also added colorful stonework as a unifying motif throughout, and there's a water-feature in the front yard that increases the sense of seclusion and privacy. The result is a garden that is playful and relaxed but extremely private – a mirror image of our client's personality.

tion. It begins with brief, qualifying phone interviews in which we decide whether prospects are committed to high-caliber projects. In these conversations, we're not looking for every project to have a huge budget, but we *are* seeking clients who will accept nothing less than exceptional craftsmanship and materials arrayed in unique and creative designs.

Once we determine that these clients are serious, we send along extensive questionnaires that solicit information on materials preferences, budgets and much more. We ask them to tell us about their likes and dislikes related to plants, colors and textures, for example, and also attempt to find indications of which features they may or may not want in their landscapes.

Nothing, of course, can replace actually listening to what clients have to say, but the information they provide us through these questionnaires prepares us for initial meetings and enables us to begin developing basic concepts. In addition, our aim is to draw clients into our approach in ways that will speed communication once we're all fully engaged.

PERSONAL NUANCES

These exchanges also result in a sort of mutual prequalification that's useful on both sides of the relationship, and in that respect we see it as a distinct advantage that al-

French Holiday

The project pictured here has a distinct French Provincial style – just the ticket for clients who spend their annual vacations in the south of France and through the years have brought home a mélange of artwork, textiles, tiles and other treasures to remind them of their travels.

Just knowing that the whole family spends a full month every summer in Provence was enough to tell us that, to them, home is where the family is and that the French notion of "the good life" was very appealing to them. This made for easy targeting of the design concept, but we were always aware that they wanted to avoid clichés and stick with the truly authentic.

Material and color selections were critical, so we ended up going through a variety of tile, stone and paint samples to find those that most fully expressed the clients' desires. (The robin's-egg blue that we settled on was one of more than a dozen sample patches we prepared.) The plants were chosen with similar care and feature both flowering species and aromatic herbs that capture France's colors and fragrances.

The area in which we worked was tucked against a steep hillside – small and offering intimate views from the home's interior. But the compactness meant we focused on an open-patio scheme with an outdoor fireplace and kitchen.

One of the more unique elements of the outdoor kitchen is a ranch-style crank grill we designed and built specifically to match a grill the clients have on their lemon-grove/ranch in California's San Joaquin Valley. The kitchen island's cabinet doors were faced with the ends of wooden wine crates with labels from our clients' favorite vineyards – also collected in their travels. These details, while they work well enough in the design vernacular of the south of France, are much more tailored to the clients' history and tastes than they are to pages of a design textbook.

WHAT IS THIS?

That's the National Pool Industry Research Center and YOUR INVITATION to JOIN members of your industry in UNITING to solve problems and help YOUR INDUSTRY!

POOL SURFACE APPLICATORS
POOL BUILDERS • POOL SERVICE COMPANIES
MANUFACTURERS, DISTRIBUTORS AND SUPPLIERS

JOIN THE

NATIONAL PLASTERERS COUNCIL

WWW.NPCONLINE.ORG

FOR MORE INFORMATION CONTACT US AT:
PH: (941) 766-0634 OR TOLL FREE AT (866) 483-4672

Circle **109** *on Postage Free Card*

most all of our initial contacts come through referrals from past projects and clients. While this "familiarity" doesn't always translate to an initial sense of trust, at the very least it implies a willingness on the part of the clients to engage in our process – an openness that makes the early communication stages flow more easily.

While the questionnaire is an important tool in establishing that flow, things really start to move when we meet face to face with clients and see their homes. We devour every detail we can, looking at décor, their preferences in art and furniture, the colors they use, the clothes they wear and the cars they drive – all while listening intently to everything they have to say about their projects.

This layered exercise in listening requires concentration and, at times, an ability to discern the thoughts and motivations behind the words. Although there's a bit of psychology involved, we tread lightly here because most people dislike any clear sense that they're being analyzed. Although we lightly call our efforts "mind reading," it's really just a matter of intently listening to what clients are and are not saying. Body language is extremely important here, too.

To clients, the results can seem a bit magical: Generally they have the sense they've told us far too little for us to come so close to understanding what they want – a truly positive way to kick off a project.

Back in the office, we discuss our observations and start assimilating everything

Intimate Forms

Occasionally there are projects we do that defy any sort of specific categorization, including this one.

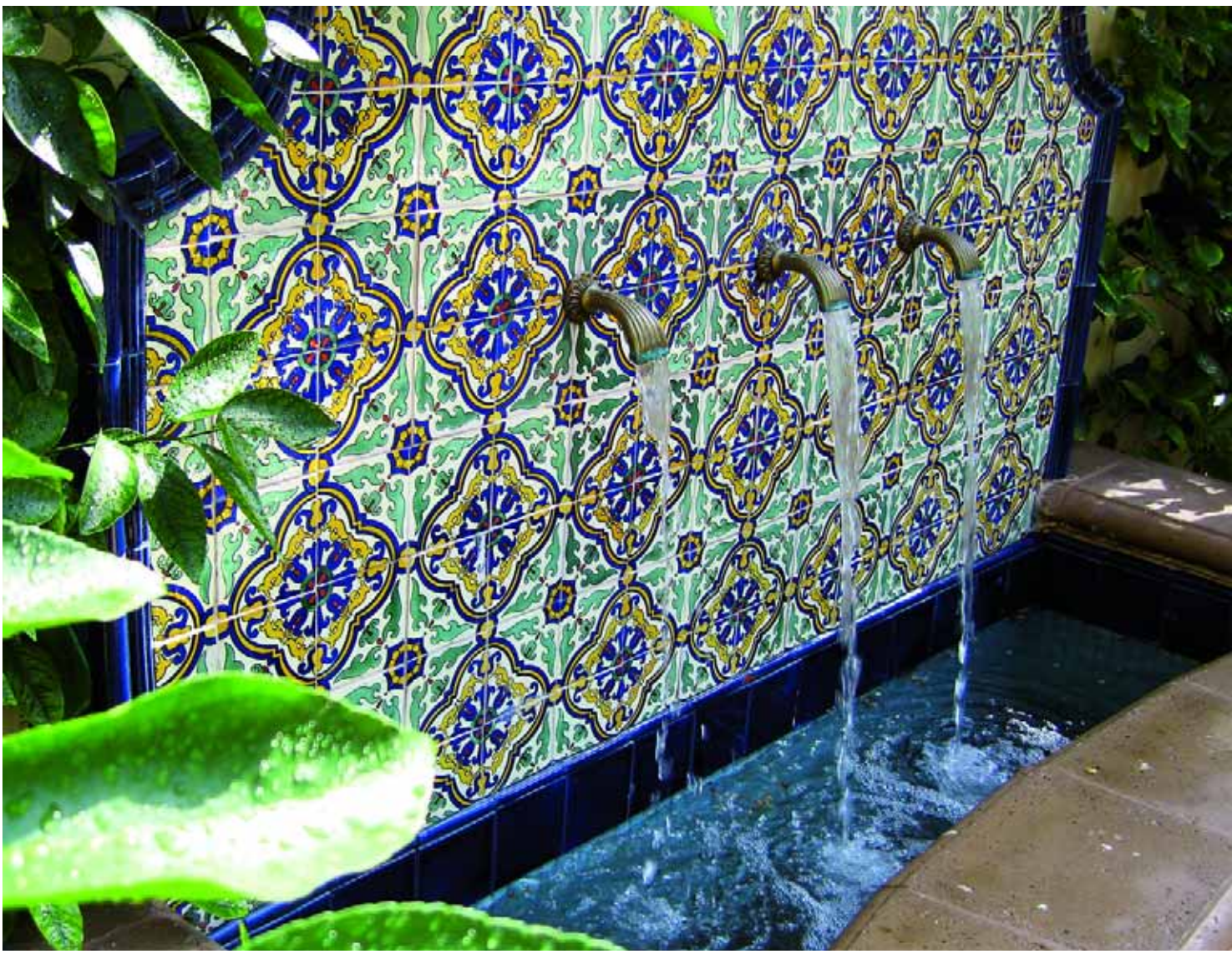
Here, the owners had lived in the house for many years and had continually updated the interior while leaving the exterior essentially the same. The inside of the house clearly reflected their personalities and tastes – elegant, clean-lined and comfortable – and it was now time to focus on the outdoors. The challenge was to reunite exterior and interior without making any major changes to the architecture.

The steep backyard was basically unusable, so our efforts were confined to a front courtyard in which the clients wanted rich stone materials and tasteful plantings while preserving space for intimate entertaining.

The choice of a warm-gray palette ultimately drove all other material choices. We knew that darker, cooler colors would instill the sense of elegance we were looking for (and that going too dark would sacrifice both warmth and comfort), so we headed for warm grays (midway between tan and gray) to walk this fine line. This single choice was the key to setting the stage for seamlessly integrating outdoor improvements with the home's interior.

As for the plant selections, the clients had experienced problems in the past with invasive roots, so they didn't want to put anything directly in the ground. Our response was to use a wide variety of pottery (each unit drip-irrigated) to isolate any root-related problems and provide a beautiful tapestry of pottery styles and colors. Then there are the built elements that form the backbone of this garden room, including the pizza oven, a vanishing-edge fountain, a kitchen island and a koi pond.

The clients knew they wanted to entertain outdoors, but they had no idea how attractive their new courtyard would be. Since we completed the project, they're finding that neighbors will drop by for impromptu wine parties, that their grandchildren love to make their own pizzas and that there's enough space that they were able to have 120 guests for their 20th-anniversary party – a perfect fit for their lifestyle.



we've learned into (at least) three distinct design schemes. Then we assemble a digital presentation that lays out each scheme, right down to materials and color selections. Then, to expand on each scheme, we compile photographs from books or magazines, work up some quick sketches and select images from our own portfolio – enough to give the clients a clear view of what we are proposing.

So far, we haven't run into any clients who've rejected our approach after these presentations. They'll either select a single design and simply give us the go ahead, or they'll choose elements drawn from all of the presented schemes and ask us to meld them into a single plan.

This works as well as it does, we think, because the schemes are based so closely on their tastes that our clients see something of themselves in the results and can work easily within the range of options, materials and details we've presented. In other words, we've helped them visualize their own ideas with complete clarity while also giving them choices.

WORKING THE PLAN

As much as we enjoy working with clients for whom cost is no object, an open checkbook is rare even with the most affluent among them. That doesn't mean that we hold back: In fact, we often overshoot declared budgets in the interest of sharing their "dreams"

Spanish Casual

This was our third project for these fantastic clients, one of whom is an artist by profession. In this case, they wanted to ensure that their new gardens fit in with the home's Spanish Colonial style, but it was even more important that the yard would serve as a backdrop for the owners' artistic inclinations – and their desire to be involved in the project to the extent that they wanted to participate in the construction process itself.

In this context, every space and surface became an outlet for creativity. The pool, for example, gave them the opportunity to seek out (and find) a truly unique fountain spout in the form of a Mexican dragon deity, while the front courtyard let them try their hand at creating a glass-mosaic medallion.

All of this transpired in an historic San Diego neighborhood known for small lots and "zero lot line" regulations (meaning that houses could be built directly on property lines) – meaning the backyard was a challenging space. And in it, the owners wanted not only a pool and spa, but also enough room for entertaining and children at play.

They'd planned out the location of the pool before calling us – but that was nowhere near the spot in which it eventually landed. That's a key point, because client-oriented design doesn't mean that we detach ourselves from responsibility for a design or that we allow clients to dictate outcomes. In this case, we came up with a layout that maximized space in the backyard to a far greater degree than did the scheme they'd started with – and had stronger aesthetics as well.

Once our drawings showed the clients what we were thinking, they knew we were offering them what they really wanted. The result is a rectilinear pool with a raised bond beam/back wall that uses the freestanding garage as an anchor. In this way, the stone wall becomes a focal point – and a really fantastic waterfeature.

with them.

Many times, when our clients see what they can implement if they are willing to make the investment to achieve it, they'll stretch their budgets because they're inspired by our vision for the project.

The key to making them comfortable with the prospect of an expanded budget is that, as a design/build firm, we enter the construction phase with a full awareness of how the project should proceed. We build everything we design (and vice versa), so there are no disconnects in the process – something that can rarely be said when a design-only firm hands a set of plans over to a construction-only firm.

As we see it, this integration of concept and execution is a huge advantage for us. That's especially true when it comes to changes that crop up during the construction of watershapes, where alterations can significantly affect either the design vision or the bottom line. We rarely encounter problems here – nor do our clients.

This sort of communication and operational control is the best of all possible worlds: Both sides of the design/build equation are always aware of each other, so the designs actually get built as intended. As we see it, this is a surefire way to produce complete client satisfaction – the real magic behind what we do.

Modern Classic

This project began with a fascinating piece of residential architecture. While our client was the home's second owner and hadn't been involved with its original design in any way, he was intent upon preserving the architect's design concept and a set of clean, geometric, fully modern lines that somehow evoked the feeling of an Italian villa.

The home itself successfully walks that difficult tightrope – both contemporary and Old World, but never confused or conflicted.

Mind-reading this client was easy, because the primary goal was always quality. From his beautiful, meticulously maintained home to his flawlessly run business and even his perfectly tailored Italian suits, everything about his lifestyle was carefully chosen and maintained. And he was *fully* engaged in the design process, bringing an unusual level of focus and intensity to material selections, layout and detailing.

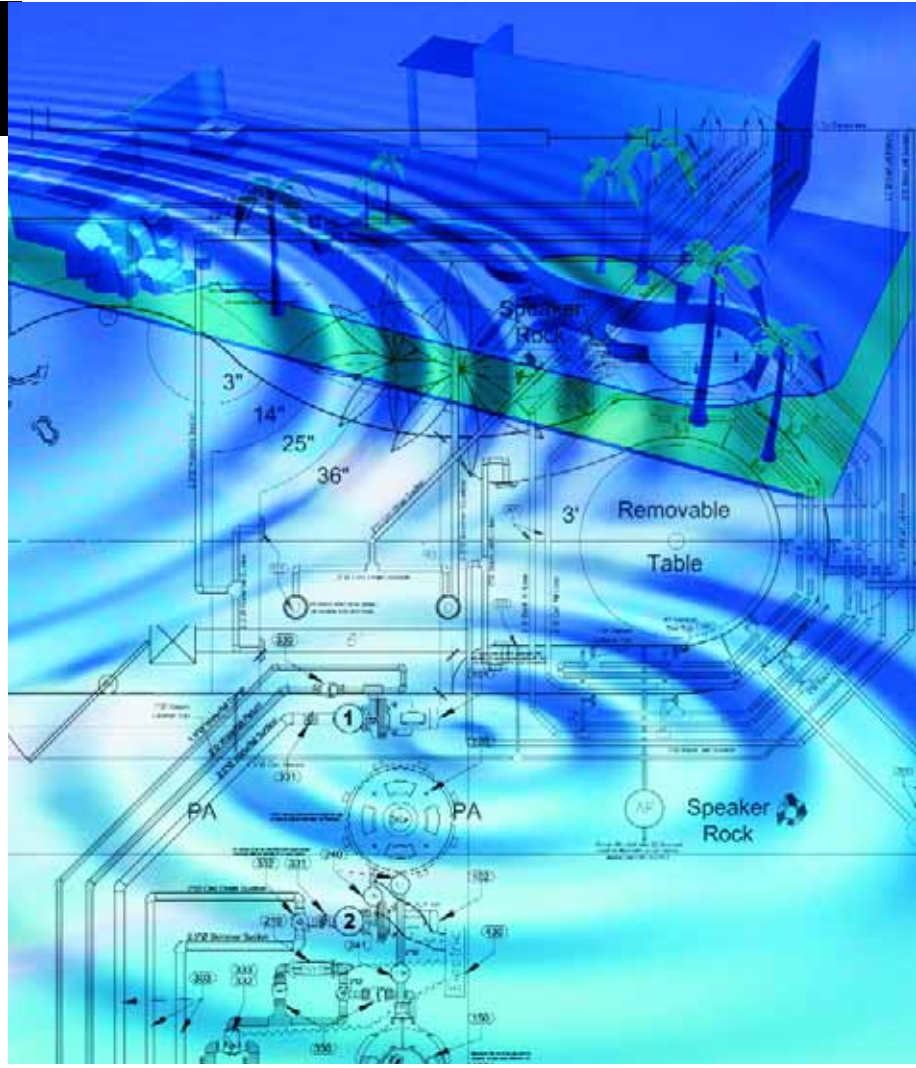
He approached us, for example, with a tile selection he'd already made. It was an iridescent, amber-colored glass tile that was distinctive enough that it could have driven the entire project palette. We included a mock-up with his tile, but we had different ideas and offered several other choices that aligned with his desire for a clean meeting of contemporary and Old World looks. He selected one of our suggestions: a mosaic of soft blues and browns that led us to change almost all of the materials we'd been considering based on his initial choice.

Once this was done, we focused on the technical side of the project, including the low-flow, perimeter-overflow spa, the vanishing-edge pool and a natural-stone waterwall. These involved a range of neatly executed details – every one of them designed and installed in service to a wonderful piece of architecture and its owner.

From the Beginning

By Mark Holden

Starting with this issue, watershaper/landscape architect/educator Mark Holden is launching a new series of articles that capsulize the approach he's applying to a brand-new course on water-related construction he's offering to landscape architecture students. Here's an introduction to this pioneering curriculum.



Why isn't the appropriate use of water a defining, central component in the education of landscape architects?

That question has rattled around in my head for a long, long time, basically because it has no adequate or satisfactory answer. I'm a trained landscape architect and, as luck would have it, for nearly 20 years I've had one foot in the pool industry and the other in landscape architecture – and I've always felt like a rare beast moving back and forth between two entirely separate worlds.

As I see it, this lack of affinity between these water-related industries has been a limiting factor in the advancement of the watershaping trades. For me, the lack of connection has always seemed nonsensical when it hasn't seemed tragic.

As a watershaper, a big part of my work in recent years has been seeking ways to combine the best of both worlds and share what I know with university-level students in landscape architecture departments – students whose chairs I occupied some years ago and who *still* stand a good chance of graduating without ever having been taught anything at all about how water can best be used in the environments they will be designing.

It's a gap I feel compelled to fill by every means at my disposal.

FACING THE VOID

A longstanding frustration has been that only a few information sources have ever sought to pull these two related disciplines together – *WaterShapes* being one of the few. The reality is, absent undergraduate studies that serve to bridge the gap, the magazine fairly well stands as a lone voice in a field otherwise defined by silence.

As a first-year student in a landscape architecture program, I often asked my instructors when we would learn about pools and fountains. It made sense to me that we would, because I was working for a pool contractor at the time and saw the immediate, visceral connection between what I was doing professionally and what I thought I should be learning as a student.

Every time, however, the response came back that there was no formal water instruction for landscape architecture students. That response made me dizzy, and I recognized quickly that as a new student I knew more about water and its uses than most of my professors did or ever would.

The odd thing is that landscape architects are expected, both by the industry and general public, to be the stewards of ornamental water. The sad truth is, with very few exceptions, that these well-educated, well-qualified professionals lack any formal education in the arts of watershaping.

Indeed, in the context of landscape architecture, watershapes are typically designed, engineered and built by contractors and/or ushered into existence by one of a handful of knowledgeable consultants who have been asked to interpret concepts outlined by these landscape ar-

chitects. This leads to a wide range of challenges, not the least of which have to do with the language and vocabulary that reside at the very heart of watershaping.

The result is that developing an understanding of what it means to work with water has, for landscape architects, come slowly to most – and only as a result of experience rather than education. In an attempt to close this chasm between design and construction, my own firm, Holdenwater (Fullerton, Calif.), works for both landscape architects and builders and has established a set of standards we work by – rules of design that cover everything from hydraulics to standards of graphic presentation.

Again through experience rather than education, I've come to believe that these standards are very close in nature and scope to what any landscape architect should apply in his or her water-related design work.

THE STATUS QUO

The educational currents in landscape architecture have always tended to lag behind actual industry practice, sometimes quite significantly so. At this point, for example, the dominant portion of study time is spent learning quite a bit too much about civil engineering and such issues as road alignment, surveying and regional watershed calculations in seeming defiance of the real world into which these student/designers will someday be thrust.

It's not that they need complete expertise – indeed, despite their training, landscape architects have been hiring civil engineers as subcontractors for decades. What they really need is familiarity with the basic practical vocabulary of these trades along with some direct, practical exposure to structural and geo-technical engineering, cost estimation, environmental psychology and, most important in this context, the design of ornamental watershapes.

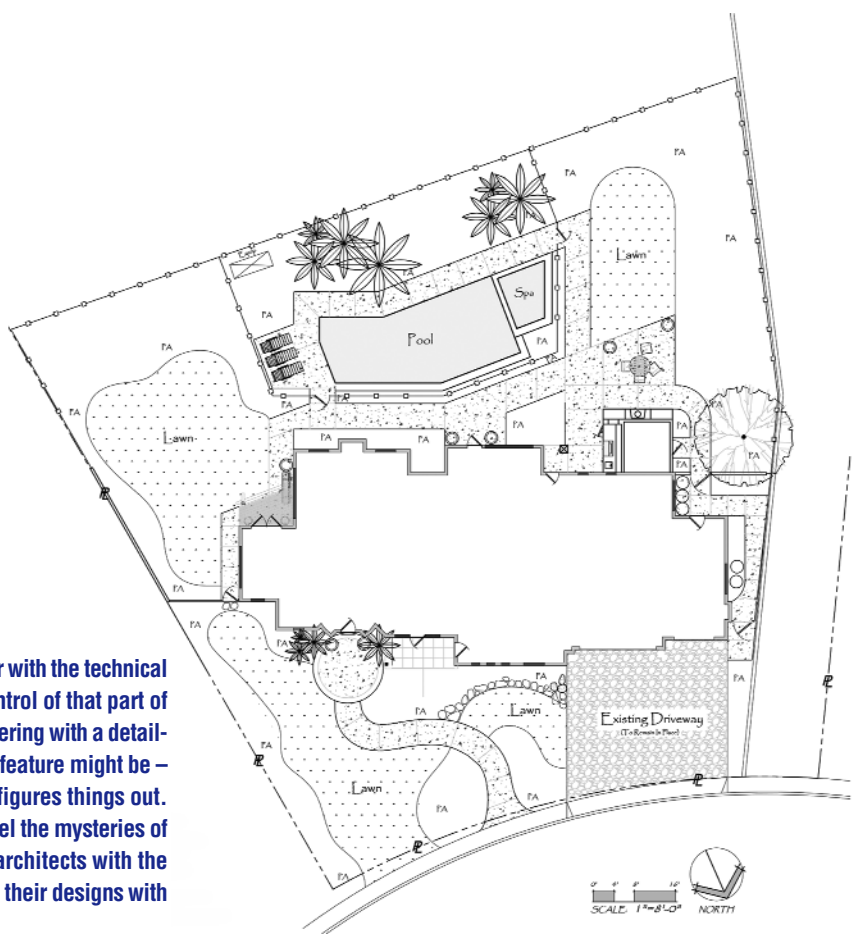
Despite the obvious need, educators designing courses have reflexively ignored issues and areas of focus that those of us working in the water world know are so clearly needed.

It's my conviction that when water studies become mandatory for landscape architecture students, the watershaping industry will start to be taken more seriously in the broader universe of design professions. Moreover, landscape architects will stop asking builders and consultants to design their watershapes – a win-win situation if ever I've seen one, as builders will finally be allowed simply to build and landscape architects will be equipped to give them the documents they need to get the job done.

Consider how often pool contractors receive sets of plans from landscape architects that have no more than a ghost-like shape with the word "pool" attached to it and, at some distance away, another mistakenly sized box labeled "equipment." To builders, this is a realm in which the divide between design intent and execution is at its widest. This is where variations in pricing and bids are rampant, because so much is left to interpretation and guesswork.

In my book, every landscape architect *should* be able to detail every fitting of a circulation system (including sanitizing components) down to every fitting and valve in the system. At this point, however, there is nothing in their pool or fountain designs that comes anywhere close to addressing these sorts of practical requirements. Lights, steps, tile specifications and a great many other specific details are left up to contractors who most likely will, in the absence of more specific guidance, install what is most readily available.

This is where consumers' faith in the entire watershaping industry is most seriously compromised: The result is apples-to-oranges bids and client questions about why



All too often, landscape architects unfamiliar with the technical detailing of watershapes will relinquish control of that part of a project, gracing an otherwise elegant rendering with a detail-free suggestion of what a pool, spa or waterfeature might be – if, that is, someone else takes charge and figures things out. One of the goals of my new course is to dispel the mysteries of watershaping and equip future landscape architects with the tools and information they need to complete their designs with watershapes that can actually be built.

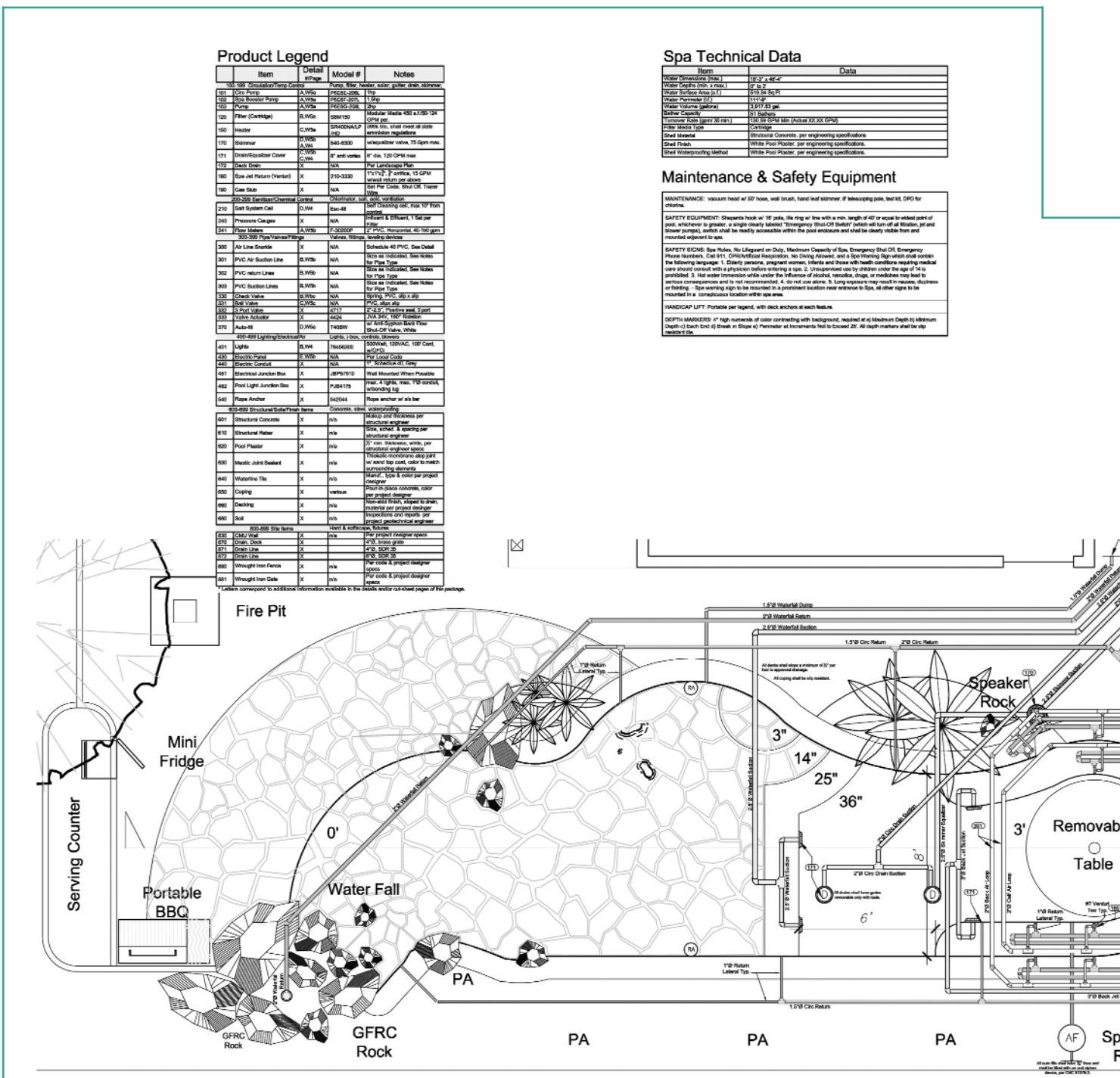
the costs vary so widely. The overriding problem is that there are no specifications to bid, therefore no common ground or vocabulary. This can and *must* change.

MAKING HEADWAY

At this writing, no four-year university program offers any formal, long-term curriculum in watershaping, but a number of concerned professionals have endeavored through the years to introduce designers to the technical specifics and artistic nuances of watershaping through classes and workshops.

Perhaps most prominent are the schools and classes offered by Genesis 3, but there have also been occasional courses I've offered at universities including California State Polytechnic University at Pomona, where I went to school many years ago. These are wonderful programs that have advanced the industry, but they are not sufficient, I think, to advance a dedicated, thorough watershaping agenda.

Even in these limited settings, however, several of us have started initiating designers to their need (in fact, their responsibility) to specify products and truly design the guts of their watershapes. Along the



way, a need for a more formal set of standards has emerged – principles that will tie the whole watershaping industry into a standard, repeatable approach to the design and construction of watershapes.

At Holdenwater, we follow a set of what we call "commandments" as we prepare construction documents for a designer's watershapes – a simple list of guidelines we apply to every watershape we develop and that can be used by any design professional working with water. These guidelines include basic steps that assure landscape architects and all other watershape designers that they are providing their clients with a valuable, reliable service. They include:

◗ **Design Research:** We embrace historical precedent and the work of past designers and apply an understanding of how humankind has manipulated water throughout history.

◗ **Site Analysis:** We research, document and analyze all pertinent site criteria as a means of guiding the design to appropriate solutions.

◗ **Water Dynamics:** We design and fully communicate all expectations having to do with how water flows and behaves in any waterfeature.

◗ **Feature Classification:** We indicate if a project is public or private and then consciously decide whether or not the watershape will be for bathing, and if not, whether it will be a biological or sanitized system.

◗ **Materials:** We fully specify all materials and are completely aware of their reactions to and performance in water environments.

◗ **Budgets:** We have a basic understanding of the limits of available funds for any given element relative to project scope and expectations.

◗ **Safety:** We establish a concern for human life, safety and well being as a prime directive that rises above every other factor in designing a watershape.

◗ **Engineering:** We solicit, are aware of and heed all recommendations offered by geo-technical, structural, mechanical and electrical professionals.

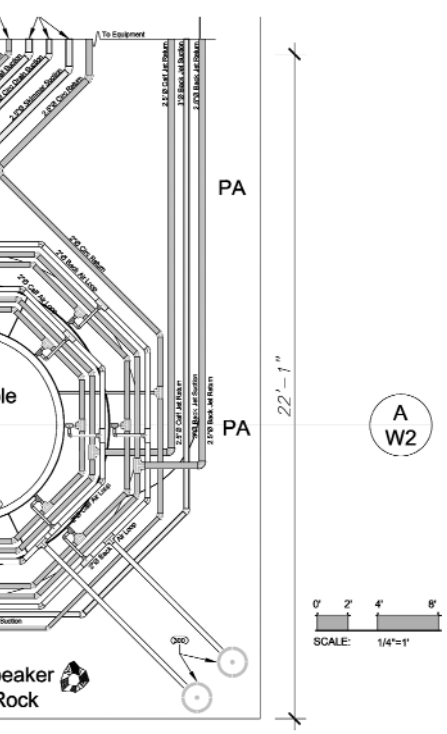
◗ **Longevity:** We make a significant effort to design features and specify products and services that will ensure our watershapes will have longer life spans than their designers.

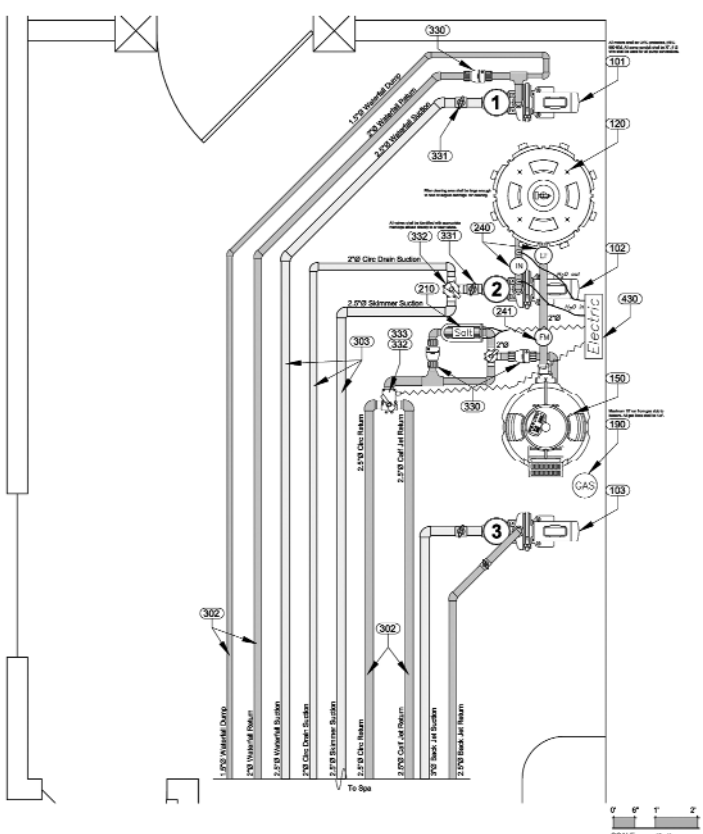
◗ **Construction:** We never allow a contractor to build or value-engineer any design without providing them with full construction documentation ahead of time.

◗ **Design Consultants:** We retain licensed design professionals capable of handling any and all aspects of watershaping that we cannot handle ourselves.

Each of these points is important in its own way, but all are needed collectively to complete watershape designs with any significant assurance of competency.

There's no reason at all why landscape architects should be allowed to graduate from their programs without knowing the ins and outs of watershaping right down to understanding (and even mastering) details of plumbing and equipment specification. These project components are just too important to be left to chance.





The default for every professional is the last item: When you don't know what you are doing or sense that a project needs something you lack, call on someone who knows better. As a landscape architect, I frequently rely on surveyors and geo-technical and structural engineers. Hiring a watershaping professional should be no different – Holdenwater's sole mission is to be just that sort of resource – and this is where the education of landscape architects comes fully into play.

BY EXAMPLE

In our firm, we consult and teach with every project we pursue. This way, the designers we work with start to feel comfortable with water and will use it more often because they've learned which questions to ask and, more important, know more and more about what constitutes "quality design."

As I see it, the education of landscape architects and their increased proficiency in watershaping is beneficial to every associated trade and industry: There is nothing harmful about making landscape architects better and more thorough designers – unless, perhaps, your current business model involves taking advantage of their professional inadequacies.

As I write this first installment in what will be a lengthy sequence of articles, I am also preparing to teach a new class at Cal Poly Pomona that will be part of my old school's four-year program for undergraduates earning their degrees in landscape architecture. So far as I know – and please let me know if I'm in error – this is the first such course offering of its kind anywhere in the United States.

In this setting, we will be taking landscape architectural students through the guidelines listed above while shedding additional light on the dynamics of the watershaping industry. The goal here is to prepare a substantial group of designers to move into the real world armed with the tools and resources they need to create intelligent designs with water.

My hope has always been for specific water-related education to become a component of every environmental design department in the country, and my intention in preparing these articles is to create enough momentum that a dream can become reality. Students want this information, and the industry wants and needs them to have it. The time is now for our educational institutions to step up and join in watershaping's growth and development.

This series will, I trust, help all of these processes on their way.

Open Ears

For many years now, *WaterShapes* has offered me the ideal environment for presenting my beliefs and reaching out to both the design and construction trades.

I've also come to see this magazine as a vehicle capable of driving the next step in the evolution of landscape architecture, but it's my sense that I should not be pursuing this mission alone: As we compile and publish this series of articles, I invite any professional to contact me or the magazine with their thoughts and ideas on how landscape architects can become better watershapers.

It will all happen faster if we do this together.

– M.H.

My belief is that this need for practical watershaping skills among landscape architects reaches out in all directions – not only when it comes to communicating on site with contractors who will execute the work according to plan, but also in understanding elevations and materials and rendering them in ways that facilitate communication with clients and crews alike.

FLYGT

FLYGT PUMPS KEEP THE WATER RIDE ADVENTURE FLOWING

Pump dependability is the most crucial element for successful water rides, attractions and wastewater systems. And the most dependable pump you can get is a heavy-duty Flygt submersible pump. That is what the management at parks such as; Kennywood, Six-Flags, Wave House, Busch Gardens, Disney, Sea World, Universal Studios and many others has found out. With over 30 different models, capacities up to 100,000 GPM and motors to 1,000-hp, there is a Flygt submersible pump that's just right for your water ride or wastewater system. What's more, Flygt's nationwide network of authorized service centers can provide 24-hour emergency service to keep your ride on line. Flygt has been manufacturing rugged and dependable submersible pumps for nearly 60 years. With a world of pump system engineering experience for both new and retrofit applications, we'll keep the water flowing for you. Give us a call (203) 380-4700. Ask for Bob Domkowski, ITT Flygt Corporation, Trumbull, CT 06611

ITT

Engineered for life

Circle* 114 *on Postage Free Card

Grand Cascades

When Bill Goddard decided to change careers and move into watershaping and landscaping as a full-time pursuit, he dove right into the thick of things with a first project of immense scale and extraordinary visual drama. He discusses his bold introduction to the business here, profiling a project that encompasses a pair of huge waterfalls, extensive landscaping and lighting, hundreds of tons of stone and even a miniature town.

By Bill Goddard

I've always believed that if you're going to do something, you should do it so well that the results are beyond compare.

That basic philosophy has guided our company, GCS of Woodbridge, Calif., from the very start. It has led us to apply the highest standards to every one of our projects, all of which have been executed on large estates for ambitious, affluent, selective clients who invariably want something no one else has.

We've been selective from the start as well, seeking clients who are in the process of creating the homes of their dreams and who want to have fun with (and in) their exterior spaces. In most cases, what they want are true oases – resort-like settings that give them a taste of the exotic just beyond their own doorways.

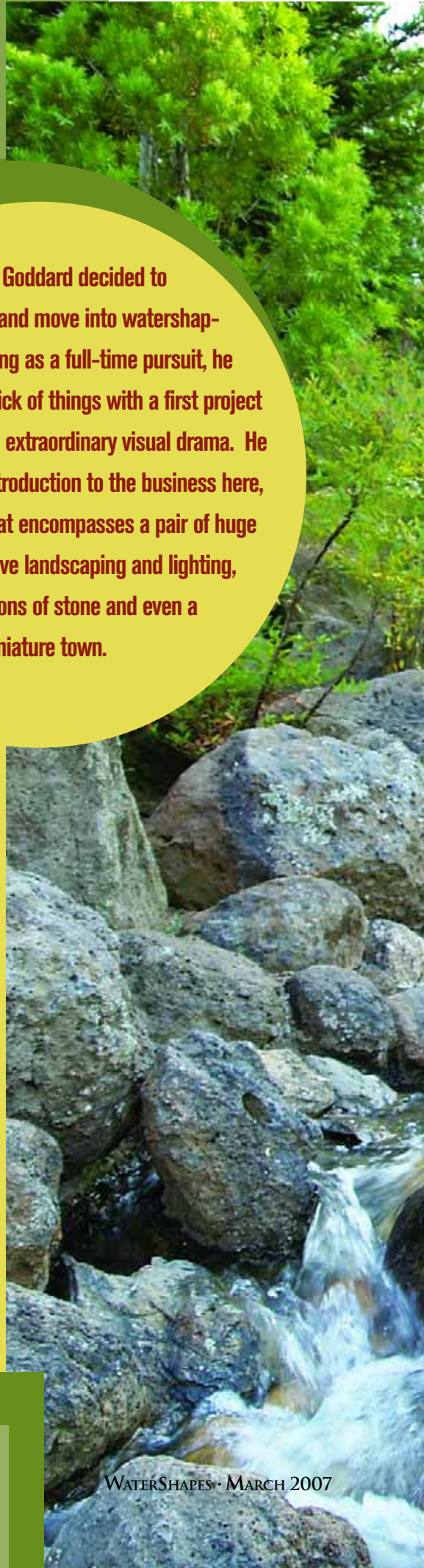
The upshot: Everything we do is unique and is executed on a massive scale. The project featured in these pages fits that approach in all respects, with its two enormous waterfalls, acres of highly detailed landscaping, extensive natural rockwork, an expansive landscape-lighting system and a miniature town.

This also happens to have been our very *first* project, and I concede that we learned a great deal about the process and the nature of working at this level in a hurry. And it's no small point of pride that our achievements here are not only befitting a spectacular home and its rustic atmosphere, but also satisfied the homeowners, then and now.

Carte Blanche

My involvement with these clients developed quite by chance: I was writing a magazine article about my client's company at about the same time I was launching my landscape business. As luck would have it, my subject and his family were in the process of building their dream home and upgrading the surrounding property. When I told him what I was up to, he asked me to visit the site.

What I encountered was an 80-acre property south of Sacramento, Calif., near the foothills of the Sierra Nevada Mountains. There were already two man-made lakes, one covering seven acres in an area of the backyard that had been beautifully landscaped and would need little work, the other covering five acres



The scale of this project was so grand that we opened our own batch-processing operation to prepare aggregate for use on site. We also brought in something of an armada of earth- and rock-moving equipment, keeping it on hand for the duration of our three-year engagement.

at the front of the property, where something had to be done to make the sort of dramatic statement the homeowners wanted to make with waterfalls and extensive plantings.

The property also featured a quarter-scale train that ran around the estate on a mile and a half of track. (This circuit came complete with a train yard and a roundhouse with a six-bay turntable.) At the time of my visit, construction was just beginning on a 17,000-square-foot home that now graces the property and overlooks the lakes and waterfalls.

As we rode around the site on the train and he explained his vision, any thought I had that he was simply humoring me gave way to the thought that we were an extremely good fit. This was *exactly* the type of project that I had envisioned as our company's focus, and I was ready to dig in.

Absolutely, it was a leap of faith on his part, but although I was new to the water-shaping/landscaping business at that point, I have a technical background and have also had my general contractor's license for 24 years. In our discussions, I apparently said the right things in sufficient quantity that he was confident from the start that we were

the right firm for the project.

I immediately appreciated his belief in us, but even I was unprepared when he gave us absolutely free rein to design and build the watershapes as we saw fit – a trust and confidence that remained in place for the full three-year duration of the project.

We did a great deal of research and planning before our work began on site and we were mentally prepared for the tasks at hand, but working at this level and with this much independence right out of the gate threw us onto an incredibly steep learning curve. Remarkably, the work unfolded without a hitch, and I credit that success to four key factors: an ample budget, a fantastically inspiring site , a great crew and, most important, a client who was steadfastly supportive from start to finish.

Living Large

Our work was largely confined to a 15-acre space around the five-acre lake at the front of the property.

In addition to two large waterfall systems that feed into the lake, we also installed extensive landscaping, two large arbors, a stone deck, all of the irrigation, drainage and lighting systems and the aforementioned miniature town, which includes an appropriately scaled waterfall/stream system of its own (for details, see the sidebar on page 63).

The majority of our work focused on the two main waterfalls – both huge and featuring flow rates of 3,000 gallons per minute. Indeed, we started with that target flow rate (which extended from the client's desire for drama) and designed the systems back from that point based on the aesthetics of streams and waterfalls commonly seen in the Sierras.

As is true of most serious, quality-oriented stream, pond, lake and waterfall builders, I've spent a great deal of time walking in natural settings and making detailed observations on the way nature does things – insights we definitely applied in our work here and elsewhere.

In this case, however, the waterfalls were to have completely different characters: The first, known as the Greenstone Waterfall, is a dramatic semicircular structure 12 feet high and 60 feet wide – a rough reproduction of the famous Horseshoe Falls on the Niagara River. Train tracks run across a bridge that passes over a section of smaller cascades about 40 feet in front of the straight-dropping falls.

We used more than 400 tons of greenstone material quarried in the local foothills in this composition. The largest individual stone weighs approximately

An existing five-acre lake dominated the space in which we worked. We fanned out from its shoreline in all directions, adding two huge waterfall systems and completing the 15-acre space with hardscape features and greenery from trees both large and small to shrubs and flowering plants.

Forest Views

The planting plan for this project was intended to give everyone entering the space a sense of being set loose in the Sierras – although we were a bit more inclusive in species selections than would be the case in the wild.

The trees include Aptos Blue Redwoods, Japanese Maples, Spruce, Flowering Plums and Live Oaks, while smaller plants include various lilies, Asparagus Ferns, Verbena and Boxwoods.

The plants were supplied by Norman's Nursery (Farmington, Calif.), which did a wonderful job of working with us to provide the large numbers of plants needed to landscape substantial acreage surrounding the five-acre lake.

– B.G.

30,000 pounds, while the average is closer to 5,000 pounds. This system is so vigorous when it's running that it actually creates its own breezes.

The other large system has been dubbed the Moss Rock Waterfall and features 550 tons of moss- and lichen-covered fieldstones (the largest weighing in at 25,000 pounds) harvested from the highway leading to Yosemite National Park. The basic concept with this waterfall was to simulate the cascading falls and streams common in the nearby mountains.

In all, the second system encompasses 125 feet of cascades that flow into the lake through two large pools and two stream sections. It also includes 14 separate "springs" that emerge from core-drilled rocks at various spots, enhancing the flow over a streambed filled with large, smooth river rocks and three different sizes of cobble. A 32-foot wood-and-metal footbridge spans the lower portion of the falls – right at the point where it enters the lake – and leads to a stone deck offering great views of the falls.

Lasting Effects

Our ambition in selecting materials and installing these waterfalls was to create systems that would last for upwards of 300 years – a goal that required us to work to the highest construction standards.

Our motivation to do so emerged from our research into the pond/stream industry, where a great many operators who get into the business often end up getting out of it relatively quickly because the systems they've installed aren't durable and are inclined to fail. As we saw it, these business-killing problems extended either from the installers' lack of familiarity with heavy-duty construction principles (especially related to concrete) or from a desire to cut corners.

Wanting to avoid these difficulties and working even in our first project with a budget that allowed us to build bullet-proof structures, we developed our own method of liner-and-concrete construction and applied it for the first time with these two waterfalls.

We started out with an insurance policy, laying down sheets of stainless steel mesh to protect the deepest layers of the structure from gophers, squirrels and other critters that might be inclined to nibble on the underside of the liners. Atop that, we added a layer of sand, then a layer of felt sheeting material and then another layer of sand over which we installed the liner.

Patterned on the Horseshoe Falls on the Niagara River, this large waterfall system sends 3,000 gallons per minute over its weir. The estate's quarter-scale railway passes by with a prime view of the composition, which is dramatically lit to enhance the setting's appeal when the train rolls through after the sun has gone down.

Product Information Card

For more information on advertisers and/or products featured in this issue's Of Interest *section, circle the corresponding Product Information Number on the postage-free card opposite this page.*

Advertiser Index:

Let your suppliers know where you found out about them: Mention code WS0307 to identify this issue when contacting them by phone or the Internet

Reader Service Number

44	A & B Aluminum and Brass Foundry (pg. 30) (800) 733-4995	www.abfoundryonline.com
	Advanced Aquaculture Systems (pg. 14) (800) 994-7599	www.perma-bead.com
2	Air-O-Lator (pg. 66) (800) 821-3177	www.airolator.com
80	Aqua Control (pg. 69) (800) 377-0019	www.aquacontrol.com
3	Aquamatic Cover Systems (pg. 3) (800) 262-4044	www.aquamatic.com
	Aquatic Access (pg. 20) (800) 325-5438	www.aquaticaccess.com
118	Automated Fire & Water Effects (pg. 67) (702) 655-4074	www.automatedfireandwater.com
60	Cactus Stone & Tile (pg. 11) (800) 528-9445	www.cactustile.com
91	C. L. Industries (pg. 19) (800) 333-2660	www.clindustries.com
68	Coral Stone USA (pg. 17) (866) 462-6725	www.coralstoneusa.com
8	Cover-Pools (pg. 71) (800) 447-2838	www.coverpools.com
11	Coverstar (pg. 21) (800) 617-7283	www.coverstar.com
12	Craig Bragdy Design (pg. 68) 011 44 1745 815656 (United Kingdom)	www.cbdpools.co.uk
29	Diamond Spas (pg. 12) (800) 951-7727	www.diamondspas.com
99	ECOmatic by Balboa Direct (pg. 15) (888) 434-1940	www.balboadirect.com
46	Emperor Aquatics (pg. 31) (610) 970-0440	www.emperoraquatics.com
64	Fountains Unique (pg. 67) (949) 305-7372	www.fountainsunique.com
16	Genesis 3 Schools (pg. 61) (877) 513-5800	www.genesis3.com
	Gilderfluke & Co. (pg. 68) (800) 776-5972	www.gilderfluke.com
67	Grand Effects (pg. 8) (949) 697-5270	www.grandeffectsinc.com
74	Great American Waterfall Co. (pg. 14) (888) 683-0042	www.gawcinc.com
41	Harmsco (pg. 16) (800) 327-3248	www.harmsco.com
111	Hydro Dramatics (pg. 32) (877) 988-7867	www.hydrodramatics.com
130	IlluminFx (pg. 30) (877) 958-1200	www.illuminfx.com
114	ITT Flygt (pg. 53) (203) 380-4700	www.flygtus.com
96	Jandy Pool Products (pg. 72) (707) 776-8200	www.jandy.com
54	Lux Entertainment (pg. 69) (866) 684-3036	www.luxoutdoor.com
63	Macalite Equipment (pg. 13) (877) 622-2548	www.macaliteequipment.com
69	Malibu Stone & Masonry (pg. 33) (310) 456-9444	www.malibustonemasonry.com
109	National Plasterers Council (pg. 41) (866) 483-4672	www.npconline.org
4	National Pool Tile (pg. 7) (888) 411-8453	www.nptgonline.com
49	Pentair Water Pool & Spa (pg. 2) (800) 374-4300	www.pentairpool.com
45	PoolFog (pg. 22) (866) 766-5364	www.poolfog.com
66	Praher Valves (pg. 35) (800) 461-4915	www.prahervalves.com
78	Quaker Plastic (pg. 20) (717) 285-4571	www.quakerplastic.com
76	RenoSys (pg. 33) (800) 783-7005	www.renosys.com
129	RJE Technologies (pg. 27) (877) 467-6627	www.aquaguardpoolalarm.com
72	Rock & Water Creations (pg. 23) (866) 466-7625	www.rock-n-water.com
35	Spray Force Mfg. (pg. 25) (800) 824-8490	www.sprayforce.com
42	Standard Bronze (pg. 66) (201) 339-1351	www.standardbronzeco.com
52	Stegmeier (pg. 26) (800) 382-5430	www.stegmeier.com
7	Stone Ventures (pg. 9) (866) 319-5650	www.stoneventuresonline.com
131	TXI Riverside Cement (pg. 14) (909) 635-1800	www.txi.com
65	United Elchem (pg. 32) (888) 671-7886	www.elchem.com
39	Vita Nova Enterprises (pg. 29) (818) 785-4484	www.vita-nova.com
	Wall Whale-GABco Products (pg. 68) (866) 888-8778	www.wallwhale.com

Of Interest Index:

135 Hirsch Glass Corp. (pg. 66)
136 Deck-O-Seal (pg. 66)
137 Cardinal Pool Systems (pg. 66)
138 Jandy (pg. 66)
139 Misty Mountain (pg. 67)
140 Craig Bragdy Design (pg. 67)
141 CS Unitech (pg. 67)
142 Concrete Chemicals (pg. 67)
143 Structure Studios (pg. 68)
144 Eliane (pg. 68)
145 Modern Pool Systems (pg. 68)
146 Jakob (pg. 68)
147 Sacramento Koi (pg. 69)
148 Stone Architectural Design.Com (pg. 69)
149 Tile Artisans (pg. 69)
150 Natural Structures (pg. 69)

GENESIS 3 DESIGN GROUP

How Good Do You Want to Be?

Intensive 20-Hour Design Courses

Elements of Design
April 10-12, 2007
Manhattan Beach, California

Design Communication – Measured Perspective
April 12-14, 2007
Manhattan Beach, California

The Vocabulary of Style: A History of Architecture, Art & Water
April 24-26, 2007
Orlando, Florida

Color Theory & Design Application
April 26-28, 2007
Orlando, Florida

Landscape Lighting Institute
Sept. 30-Oct. 4, 2007
Troy, New York

Come spend five days and nights with world-renowned lighting designer Janet Lennox Moyer and associates to learn all about the art of lighting exterior spaces.

Structured to familiarize participants with what's needed to develop and achieve a number of lighting effects in their own projects, the intensive program will include technical information and an introduction to lighting-design concepts as well as design workshops and five nights of hands-on exploration of lighting techniques.

The school will be held at Janet Lennox Moyer's all-new studio in Troy — with convenient access via the airport in Albany, New York. For information on program cost (which will include accommodations, meals and course materials), see our web site: www.genesis3.com.

NEW & EXPANDED!

Pool & Watershape Construction School
October 17-20, 2007
Boston, Massachusetts

In keeping with our mission of advancing education on a global level, we are pleased to offer our newly expanded, three-day Genesis 3 Pool & Watershape Construction School as the latest component in our design-certification program.

The school's curriculum covers plan review, excavation, layout, soil and drainage, steel placement, plumbing, utilities, gunite, tile and coping, decks and drainage, remote controls, automation, plaster and start-up and includes the Genesis 3 Edge Program as well as a key roundtable discussion. All sessions are taught by top-flight tradespeople, designers and engineers from the watershaping industry and beyond.

For information on program cost (including for four nights at the Hyatt Harborside in Boston, meals and course materials), visit our web site: www.genesis3.com. (Spouses will be welcome for an additional fee.)

Visit our web site: www.genesis3.com

Founded by: David Tisherman, Skip Phillips and Brian Van Bower

(615) 907-1274 / Toll Free: (877) 513-5800 / FAX: (615) 907-7338 / www.genesis3.com / lisa@genesis3.com

Genesis 3 is proudly sponsored by Jandy, Pentair, Aquamatic, Pebbletec, Sta-Rite, SonarGuard, Aqua Magazine, AutoPilot/AquaCal, Cactus Stone & Tile and WaterShapes.

GENESIS 3 - THE INTERNATIONAL FORUM FOR CONTINUING EDUCATION FOR WATERSHAPE DESIGNERS

Circle **16** *on Postage Free Card*

All of the waterfall/stream systems on site (including this small-scale system associated with the miniature town) are made with the same bulletproof construction approach. The multiple layers of mesh, sand, felt underlayment, 65-mil liner material and reinforced concrete are meant to support large boulders and vigorous flows of water for the long haul.

The liner we used is a proprietary material 65-mils thick and ribbed for extra strength. Now we added another layer of sand, more felt, then another layer of sand. Next came a cage of rebar installed 12 inches on center along with a 6:6:10 steel mesh, with stucco mesh along the edges. This we covered with six inches of waterproof concrete textured with rock stamps and then carefully stained with six different acid colors. On this sturdy sub-base, we placed our boulders and smaller rock materials.

We went to such great lengths to ensure that the liner would be protected even where it was supporting the heaviest of the boulders we might use. We won't be around in 300 years to see if this system actually lasts, but our sense is that it stands a good chance of being around at least that long.

In preparation for this work, we had to do extensive grading and, for both waterfalls, built up the slopes to create the required vertical transitions. In the case of the Moss Rock Waterfall, we built things up over an existing train tunnel.

Bold Movement

As one might expect, the circulation systems for these two waterfalls involve large pumps and plumbing of the sort you'd find with big commercial installations. In this case, we started with subgrade concrete vaults measuring ten feet wide, ten feet long and nine feet deep – one for each waterfall.

Each system is powered by a pair of ten-horsepower submersible pumps. Supplied

'Working at this level and with this much independence right out of the gate threw us onto an incredibly steep learning curve.'

A Little Village

The miniature town mentioned in the accompanying text is a work in progress. The idea was to create a surprising space that would appeal immediately to children – and to the childlike natures of any adults who might pay a visit.

The train tracks cut right through the center of town, entering through a large, arching arbor that signals your arrival in a distinctly separate environment. The buildings are quarter-scale and include a variety of houses, public buildings, a water tower and various playground features that enable children to move through the area like giants.

The waterfall here is small by comparison to others on the property with its modest flow of 250 gallons per minute, but the composition features the same sort of heavy-duty liner/concrete construction and the same greenstone used in one of the two main waterfalls on the lake.

In this case, because the collecting pond is only about a foot deep (and doesn't contain fish), we installed a cartridge filter and a chlorinating system to ensure water quality.

– B.G.

Still under construction at this writing, the miniature town associated with the quarter-scale railroad that runs through the property is a child's delight – a place to play while picking up a lesson or two about local history.

by ITT Flygt (Trumbull, Conn.), these monsters run on a 480-volt, three-phase power service we installed in a utility loop that encircles the area (with junction boxes every hundred feet).

These pumps are gravity-fed by 20-inch lines that lead from the lake and feed 15-inch lines that branch into 12-inch lines that supply the welling ponds at the headwaters of the waterfalls. The 15-inch lines include check valves that prevent backflow and maintain the water levels in the welling ponds at the right operating levels – so accurate, in fact, that the waterfalls begin flowing almost instantly when the system is initiated.

The headwaters are concealed within rock structures, giving both systems the impression that the water flowing into the falls comes from some remote, unseen source.

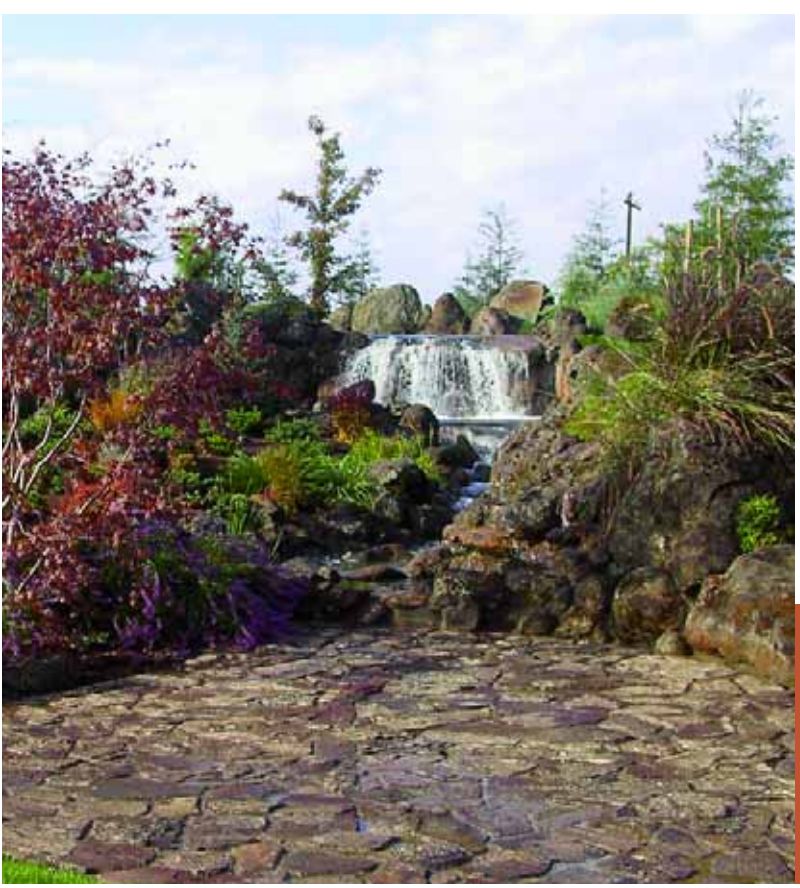
There are no filters on these systems: Water quality is maintained by the action of the waterfalls and supplemented by four aerators placed in the lake's bottom. The lake itself is stocked with bass, so regular chemical treatment was out of the question. (We have had to treat the water on a couple of occasions, however, to take care of minor summertime algae blooms.)

The lighting system is also extensive. We worked exclusively with low-voltage fixtures and control systems provided by Nightscaping (Redlands, Calif.) and deployed an array of uplighting, downlighting and moonlighting effects. The overall design includes literally hundreds of lighted features, and we're grateful for the technical support we received from the manufacturer's systems-design staff.

When everything's all lit up, the waterfalls and surrounding landscaping take on a dramatic character – a wonderful spectacle seen from key viewing areas around the property.

Ultimately, great landscape and watershape projects are the result of carefully integrated sets of technical and aesthetic details. On that level, success is all about clearing both bars in ways that make all elements work together in harmony and create a dramatic composition that fits a site, a home and the clients' dreams.

In the case of this particular success, all I can say is, *what a place to start!*



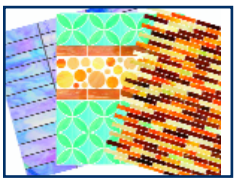
The second waterfall features 550 tons of boulders – including one weighing 25,000 pounds – and replicates the sort of native streams found in canyons of the nearby Sierra Nevada Mountains. It starts with a wild flow but calms gradually as it moves through a system of streams and pools, passing under a bridge and by prime viewing areas before dropping into the lake.

Of Interest

The following information has been provided to WaterShapes by product suppliers. To find out how to contact these companies, look for the Product Information Card located on page 60.

Pool Mosaics

Circle 135 on Reader Service Card



HIRSCH GLASS CORP. has introduced a line of mosaics designed for applications with swimming pools and spas. The non-porous surfaces of the tiles make them resistant to liquids, gases, chemicals and stains. Metal oxides are used as coloring agents, so the colors won't fade when exposed to harsh environments, ultraviolet light or heat. They are also frost-proof and easy to clean. **Hirsch Glass Corp.**, Secaucus, NJ.

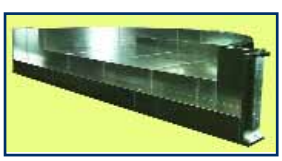
Deck Sealer

Circle 136 on Reader Service Card

DECK-O-SEAL offers Deck-O-Shield, a water-based sealer/water repellent that protects natural stone and concrete from environmental challenges – including those offered by salt-chlorinated watershapes. The material helps prevent the ingress of salt and the unsightly white stains caused when splashes from a salt-water pool, spa or waterfall reach onto a deck or surrounding rockwork. **Deck-O-Seal**, Hampshire, IL.

Sun Shelf

Circle 137 on Reader Service Card



CARDINAL POOL SYSTEMS offers a steel-panel sun shelf for inground vinyl-liner pools. The system sets up a large, flat area where sunbathers can place lounge chairs or simply wade in shallow water within the pool itself. Designed to meet increasing consumer demand, the shelves can be customized to any shape or size and work with any architectural design or pool configuration. **Cardinal Pool Systems**, Schuylkill Haven, PA.

Product Catalog

Circle 138 on Reader Service Card

JANDY has published a catalog on its full line of products for pools, spas and other waterfeatures. The 284-page, soft-cover book is divided into tabbed sections covering pumps and filters; heaters and heat pumps; controls; water-purification systems and colored lights; valves and valve actuators; waterfeatures; and cleaners. Product descriptions, specifications and a price list are included. **Jandy**, Petaluma, CA.

Artificial Koi

Circle 139 on Reader Service Card

MISTY MOUNTAIN now offers Pond Pals, artificial koi for pond owners who want the look of real koi without their care or feeding. The koi come in two colors – red and white or yellow – and are available in 6- and 10-inch sizes. They float and can be anchored at different levels in the pond, where they move in currents created by waterfalls or circulation systems for a realistic appearance. **Misty Mountain**, Young Harris, GA.

Sculpted Tiles

Circle 140 on Reader Service Card

CRAIG BRAGDY DESIGN specializes in hand-made ceramic murals and decorative tile details for watershapes. The fully custom work is tailored to individual needs and desires of clients and designers. The glossy or matte-finish tiles are distinctly sculptural, with textured surfaces marked by luminous, translucent colors in forms and patterns limited only by the imagination. **Craig Bragdy Design**, Denbigh, Wales.

Wet/Dry Vacuum

Circle 141 on Reader Service Card

CS UNITECH offers the CS 1500 wet/dry vacuum. Designed for the tough jobs of collecting concrete dust, concrete slurry, job-site debris and more, the device is the first to use plastic polyfilter bags that hold up to 10 gallons – more than 20 times the concrete-dust capacity of paper filter bags – and allows for simple, safe waste disposal. It has a 25-foot cord for easy movement around a job site. **CS Unitech**, Norwalk, CT.

Concrete Colorants

Circle 142 on Reader Service Card

CONCRETE CHEMICALS has added Liquid Black Oxide LC0501 and Liquid Tahoe Oxide LC0601 (a blue-gray blend) to its line of concrete-coloring products. These integral, permanent colorants come in convenient-to-use quarts, half gallons and totes and can be used to add long-lasting color to stamped concrete, paving stones, ready-mix concrete, cement patios and more. **Concrete Chemicals**, Redwood City, CA.

SOFTWARE UPDATE

Circle 143 on Reader Service Card

STRUCTURE STUDIOS has upgraded its Pool Studio to version 1.318. The software's system of design tools has a new Template Library that allows objects from multiple stages to be inserted and saved as single templates for greater flexibility, simplicity and control of complex projects. There's also an enhanced Construction Stage with differentiating line colors and fill patterns. **Structure Studios**, Las Vegas, NV.

DECKING TILE

Circle 144 on Reader Service Card

ELIANE has introduced Versatile, a series of deck-suitable porcelain tiles that combine style and functionality with a range of finishes to complement varied environments. Available with satin, polished or no-slip surfaces, the tiles come in four base colors (Bianco, Beige, Grigio and Noce) and three standard sizes (11 by 23, 11 by 11 and 17 by 17 inches) complemented by decorative detail pieces. **Eliane**, Santa Catarina, Brazil.

RADIUS STEPS

Circle 145 on Reader Service Card

MODERN POOL SYSTEMS offers radius steps for its aluminum pool-forming system. Designed for use with concrete pools as well as concrete-wall vinyl-liner pools, the modular system allows builders to pour geometric and freeform shapes without hassling with wood forms. The easy-to-clean units can be reused 2,500 or more times and fit just about any inside-radius corner. **Modern Pool Systems**, Columbus, MS.

GREEN FAÇADE SYSTEM

Circle 146 on Reader Service Card

JAKOB offers the Inox Line, a complete system of wire ropes and fittings designed to support and facilitate the growth of green façades. All components are made with high-grade stainless steel for long service and can be arrayed in innumerable ways in front of or around structures to promote coverage by climbing plants of all sorts. Spacing away from surfaces provides adequate ventilation for the greenery. **Jakob**, Delray Beach, FL.

Circle **12** *on Postage Free Card*

Koi-Pond Seminar

Circle 147 on Reader Service Card

SACRAMENTO KOI offers the Advantage Koi Pond System, a complete one-day course offering instruction in the design and construction of quality environments for koi. The class covers issues including shapes and contours, filtration and circulation systems, plumbing, drainage approaches and much more, and there's also a tour of successful ponds ranging from 1,500 to 10,000 gallons. **Sacramento Koi**, Rocklin, CA.

Cut-Stone Features

Circle 148 on Reader Service Card

STONE ARCHITECTURAL DESIGN.COM supplies cut-stone features from suppliers around the world. Available products include columns, pilasters, pool copings, fountains, pedestals, finials, wall caps, statuary, garden features, furnishings, flooring, fireplace surrounds and much more in limestone, marble, granite, Cantera stone, travertine and sandstone. **Stone Architectural Design.Com**, Newbury Park, CA.

Photographic Tiles

Circle 149 on Reader Service Card

TILE ARTISANS uses a new image-transfer process to create photographic tiles that will last indefinitely in or around pools and spas. The images are fired at up to 1,800 degrees, resulting in tiles that are frost-proof, resistant to UV radiation and stains; require no special maintenance; and can readily be replaced if damaged. The tiles also comply with ISO and ANSI specifications for pool tile. **Tile Artisans**, Oroville, CA.

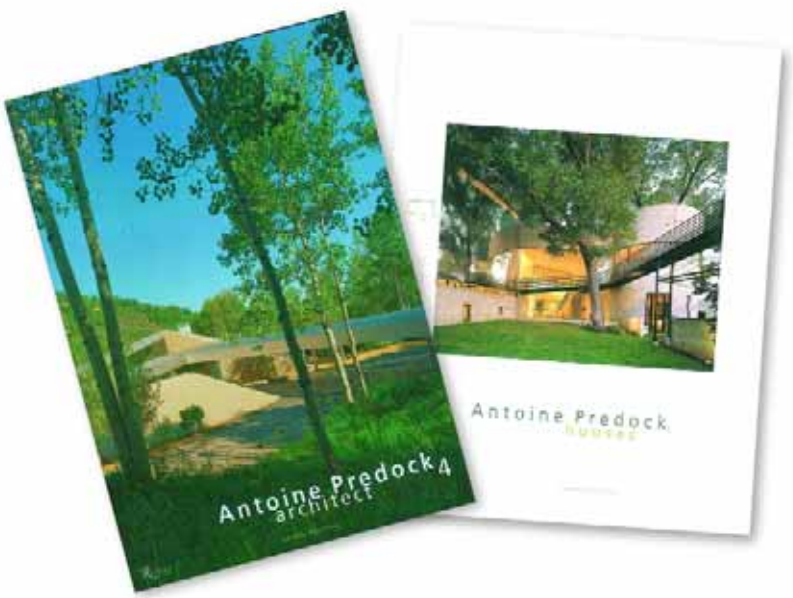
Frog Slide

Circle 150 on Reader Service Card

NATURAL STRUCTURES offers the Model 1800-10 Frog Slide, an all-fiberglass structure designed for children at play. The slide has a 4-foot run and can be used either wet or dry. It has rounded edges, non-slip steps, grounded stainless steel handrails, easy water hook-ups and bottom flanges for easy installation. Available in several colors, the units have footprints of 10 by 5-1/2 feet. **Natural Structures,** Baker City, OR.

By Mike Farley

Line of 'Site'



For years now, we've all heard that consideration of a site and its surrounding environment is one of the things that separates the average from the truly great projects. For my part, as I've grown as a watershape designer, I've found this simple concept carrying more and more weight in my work.

With that site-driven value system somewhere in mind, I recently came across two books that provide some of the most compelling examples of this approach I've ever seen.

It all started when I read a newspaper article about architect Antoine Predock, the 2006 recipient of the American Institute of Architects' Gold Medal – the highest award AIA bestows on any practitioner. (Past recipients include Frank Lloyd Wright, LeCorbusier, I.M. Pei, Louis Sullivan and a registry of additional legends.)

Inspired, I headed to the bookstore and was happy to find two (among several) books by Predock, determined to discover what had elevated him to such vaunted company. The first, *Houses 3* (Rizzoli, 2000), covers a dozen of his early commissions – all residences found mostly in the American southwest.

Although the 208-page, beautifully illustrated text is predominately project profiles, it's clear by simply looking at the photographs that Predock is a master when it comes to using all aspects of a site. The result is modern, organic architecture that's as creative and stunning as any I've ever seen, filled with echoes of Wright, Ricardo Legorreta and John Lautner but revealing Predock's own unique flair in using windows, stairs, courtyards, walkways and wildly creative geometries to link built spaces with their surroundings.

He's based in Albuquerque, N.M., so it comes as no surprise that he demonstrates a profound affinity for desert environs and uses views, sun exposures and even the wind as key design factors. It also bears mentioning that he uses water in one form or another in almost every project – often to stunning effect.

In that sense, the book is a welcome source of ideas, with its highly sculptural fountains, artful reflecting ponds and highly crafted swimming pools – many of which link interior with exterior spaces. For the most part, he deploys water in a distinctly sculptural way, using basic shapes, materials and reflections to make striking yet subtle statements. From a watershaping perspective, it's truly the stuff of genius.

The second book, *Architects 4* (Rizzoli, 2006), explores Predock's philosophy as well as more recent projects – most of which are commercial and institutional. I could go on for pages describing his mind-bending designs, but there are some things best left to your initiative. Instead, I'd like to conclude with a quote from the book that I found to be particularly insightful and inspiring: "When a building is only program driven, it's merely a functional diagram. Without the admixture of spirit, it becomes a body without a soul."

To my eyes, it seems clear that the soul of his work most often resides in the beauty of the space that surrounds it. WS

Mike Farley is a landscape architect with more than 20 years of experience and is currently a designer/project manager for Claffey Pools in Southlake, Texas. A graduate of Genesis 3's Level I Design School, he holds a degree in landscape architecture from Texas Tech University and has worked as a watershaper in both California and Texas.

For any pool style, shape, or design you create, Cover-Pools® covers the best.

The Professional Choice for Year-Round Pool Protection

For professionals who demand the highest quality automatic safety covers for their pools, Cover-Pools offers the most advanced technology and labor-saving installations in the industry.

The Save-T® 3 cover protects against unwanted entry into the pool, reduces drowning risk and saves up to 70% on water, heat and operating costs at the turn of a key or press of a button.

Freeform? Water feature? Rectangular? Vanishing edge? You'll find an option to complement whatever design you create.

Visit our website or call for details about customized pool cover options for concrete, vinyl and fiberglass pools.

THE **ORIGINAL** AUTOMATIC SAFETY POOL COVER

COVER POOLS®

Save-T® Pool Covers

1-800-447-2838 | www.coverpools.com

Circle* 8 *on Postage Free Card

Jandy

Total Control in the Palm of Your Hand

- Pumps
- Filters
- Heaters
- Air Energy Heat Pumps
- **Control Systems**
- Lights
- Water Purification Systems
- Valves
- Water Features
- Cleaners
- Accessories

Add-on Wireless Remote

Designed as the perfect add-on to any AquaLink® RS control system, the AquaPalm extends remote control to every corner of the backyard. When partnered with an AquaLink RS All Button or OneTouch system, the AquaPalm can control up to 32 auxiliaries.

Jandy's NEW AquaPalm brings the power of AquaLink RS to the palm of your hand

The Power of AquaLink RS in Your Palm

The Jandy AquaPalm offers the power and flexibility of a wireless remote in a rugged and water resistant housing, made for "real life" conditions pool and spa side. The large backlit screen clearly displays pool and spa status with finger tip control of temperature settings, water features and even chlorine generation or pool and spa lighting with optional Jandy equipment.

Put pool and spa control in the palm of your hand with the wireless Jandy AquaPalm Add-on Remote.

ALL JANDY PRODUCTS WORK SEAMLESSLY TOGETHER

The Jandy AquaLink® RS Control System manages our complete line of technologically advanced products. The Jandy system is designed to create a carefree backyard paradise — enhancing the overall pool and spa experience by delivering performance and reliability through technology.

Performance
Reliability
Technology

707.776.8200

www.jandy.com • info@jandy.com •

Circle **96** *on Postage Free Card*