

| By Norm Ainslie

Homebuilder Finds New Solution in Paradise

Half-completed gravity system threatened environment and bank account.

Michael Mendelsohn builds homes in Paradise. Actually, he works in the town of Paradise Valley, near Scottsdale, Arizona, where multimillion-dollar homes are nestled against the sides of Sonoran Desert hills or hidden behind oleander-covered walls.

With a median house value of over \$1 million, Paradise Valley may be characterized as the Arizona equivalent of Beverly Hills. However, from a builder's perspective, construction challenges proved to be something other than money in the bank.

The town of Paradise Valley has stringent architectural guidelines for building in the area, where many lots are cut out of the mountainside using backhoe rams and jackhammers. So when Mendelsohn took over a project that had recently run out of money, he knew right away where the previous builder had gone wrong.

"The previous builder needed to connect to the town sewer line, which was located 500 feet uphill from the house," said Mendelsohn. "They chose to dig a very large and expensive hole in solid rock for a sump pump to send the sewage to a lift station and then through a gravity sewer pipe to the town line. It was not surprising to me that they ran out of money before completing the project."

The previous builder had taken months to dig a 15-foot by 40-foot hole near the house for a sump pump and lift station at an estimated cost of \$50,000. A projected retaining wall was estimated to cost \$20,000, while the lift station was estimated to cost another \$30,000. The projected total cost to the gravity sewer system for the house was over \$100,000.

The town of Paradise Valley was very upset about the amount of damage done to the hillside by the proposed sewer system. The town requires that all such disturbances be restored to their original condition, including revegetation. This can be very expensive for large area damage such as the sump pump hole.

Going in a New Direction

Mendelsohn knew exactly how to solve the problem at much lower cost and at greatly reduced environmental impact. He was familiar with Environment One Corporation, which pioneered grinder pumps and a revolutionary low-pressure sewer (LPS) system in the early 1970s. Mendelsohn believed the Environment One (E/One) LPS system was perfect for the rocky conditions and terrain of the Paradise Valley project.

An LPS system begins with a closed grinder pump, smaller than a washing machine, that accepts waste-

water, grinds its contents into fine slurry, and transports it through small-diameter pipes. Unlike conventional gravity central sewers, which use 24-inch pipe and require deep excavation, an LPS system is not destructive to the landscape's natural or built features and requires less maintenance. Since gravity is replaced by the power of the pump, sewer systems need not run downhill nor require large-diameter pipes, deep trenches, lift stations — or their associated costs.

"The first thing I proposed for this project was to fill in the large sump pump hole and install dual E/One grinder pumps," said Mendelsohn. "Instead of a large excavation and an unsightly access area, each self-contained E/One Model 2014 pump could be installed in a small pit near the house with only a small [18-inch] cover showing. We located the pumps next to the AC units behind a 4-foot high screen wall as required by the town to minimize the impact on the view."

The E/One LPS system only required a 1¹/₄-inch line to be run uphill to the main sewer line. A 2-foot deep trench was easily dug and the soil restored to original condition. The total cost for the installation of the E/One LPS system was \$14,000, as opposed to the estimated cost of over \$100,000 for the gravity line.

“Not only is the E/One LPS system dramatically more cost effective than a gravity system, it does a lot less damage to the terrain, and that was one of the big factors out here — keeping the beauty of the place without tearing up everything,” Mendelsohn said.

In addition to cost and environmental impact, system reliability was a concern.

“I was really comfortable with the Environment One grinder pumps for the project because I knew they were very reliable,” said Mendelsohn. “When you are building a multimillion-dollar home, you want to make sure the sewer system is not going to fail. I chose a dual pump system from E/One — if one pump shuts down, an alarm sounds and the other pump keeps working. Sump pumps, on the

other hand, are notoriously unreliable, so I would have been very nervous about the failure rate for that solution.”

Equipped with a reliable solution that some have yet to discover, Mendelsohn continues on his quest to fill the needs of his clients.

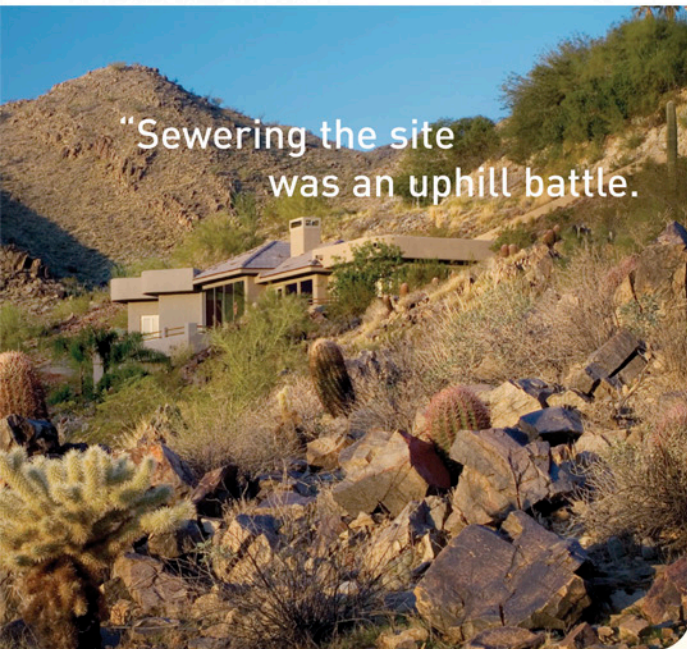
“My clients deliberately seek me out because of the construction techniques and the materials that I use,” Mendelsohn says. “My typical client is very well informed and is already aware of the benefits that this type of construction offers. They are not doing it to save money. They make the choice because they want a better quality product.”

Mendelsohn has made a conscious choice to distinguish himself from other builders through his use of al-

ternative materials such as all-metal framing for the construction of his million-dollar custom residential projects.

“I continue to look for property in Paradise Valley which other builders consider unbuildable or too expensive to build due to the sewer requirements,” said Mendelsohn. “The E/One LPS system provides the most cost-effective alternative to expensive hard excavations or costly alternative [aerobic wastewater treatment] septic systems.”

Mendelsohn and E/One have provided the perfect solution to keep Paradise Valley as close to its namesake as possible, while allowing unique custom home construction in the area. **LDI**



“Sewering the site was an uphill battle.”

With E/One I found gold in these hills”

—Michael Mendelsohn



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Arizona’s Paradise Valley is no picnic for builders. These exclusive home lots present daunting challenges with steep grade, rocky terrain and restrictive land use covenants. The lot pictured, for example, needed to access the municipal sewer that was situated some five hundred feet above the site, with a hundred foot rise. No wonder other builders walked away from this challenging infill lot—**except one.**

Michael Mendelsohn turned adversity into profit with E/One’s proven low pressure sewage system. Instead of the expensive and disruptive lift station system proposed, Mendelsohn saved \$100,000—and got an elegantly simple, cost-effective solution. **He preserved the environment as well as his budget,** with an E/One station installed at grade and low impact, small diameter piping installed just below the surface.

The bottom line: E/One defied both gravity and conventional wisdom and rescued an “unbuildable” lot—for a lot less

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FREE OFFER: Send us the topo map of your difficult or “unbuildable” site, and we’ll show you how to save money and increase the viability with an E/One system.