A real-life greens test

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turning a gravel pit into a scenic golf course with views of the Atlantic Ocean. They are excited about bringing an abandoned dump back to life, about unique new areas of recycling such as recycled-asphalt cart paths and pelletized effluent from the Massachusetts Water Resource Authority for soil nutrients.

But for the golf world, Widow's Walk should provide some long-hoped-for real-life research results, contrasting differently constructed putting surfaces and showing the effects of a golf course on the environment.

Perhaps the most intriguing research involves the greens. "We're building nine different types of greens and duplicating each of those, so we can compare one side of the project area to another," said David Welchel, a designer for the Columbus, Ohio-based Hurdzan Design Group. "We may build one green in a high, exposed spot and another one just like it in a low area with little air movement. It's an experimental process and you want extremes for comparison's sake."

Specifically, the contractor will build three different drainage systems on each of three different types of greens. One drainage system is the typical U.S. Golf Association (USGA) herringbone-type pattern. Another is a flat drain tile (ADS Advantage) system that is laid on the subgrade rather than trenched. Third is no drainage except a "smile" drain at the low point where the water will leave the green.

"With each of those three types of drainage, we will build three types of green," Welchel said, including:

- a USGA-specified green with a 12-inch root-zone layer, intermediate layer, if required, and pea gravel layer;
- a California Method green, which is essentially 100-percent sand 12-inch profile on the subgrade and with a micronutrient package in the top 2 to 3 inches of the green; and
- a New England native sandy loam green, using the best available sand from the site as the greens matrix.

"This gives us the opportunity to really say, 'The green built to a specific type in a certain location works or doesn't work,' " Welchel said. "It gives us a barometer. We're trying to maximize our resources and minimize the superintendent's headache in maintaining a given green.

"When we can show this type requires less fertilizer, chemicals, etc., then we will accomplish our goal."

Taking this research a step further, the water applied to each green will be metered and a leachate collection pit will be installed at every green to sample the water for chemicals.

Initial results from the greens research should be available in a year after opening, according to Terry Bastian, a maintenance and landscaping expert and owner of Waterflowers in North Reading, who is overseeing the research

"Within a year, we'll have a sense of what grass is working and what's not," he said. "Hopefully, within the first few years, we'll have some good information on other research. But we won't have [conclusive results] for at least five years."

"First, it will allow us to really assess the impact of different construction and management techniques," said Hurdzan. "Second, it can save construction money. If we find topsoil greens perform just as well in that area as 'technical' greens, we can cut costs by hundreds of thousands of dollars.

"The third major benefit is that we're going to significantly improve the wildlife potential and value of that site. Right now, it's biologically impoverished. We will enrich that manifold."

Wetland areas will be preserved or reestablished. Fairways and tees will be seeded to fescue grasses. Many out-of-play areas will be revegetated with native vegetation, coordinated by Bill Burbank of Abbellire, Inc. in Worcester and East Sandwich.

A turfgrass maintenance program was submitted for Conservation Commission review, comment and approval. "This golf course will need the bare minimum in chemicals because of less acreage [130 acres] than usual and because we are using fescues everywhere," Welchel said. "Except on the greens, we will use half or less of what a normal golf course uses."

Was making Widow's Walk a guinea pig of sorts a hard sell to the community? "We held a town meeting to float a $4.7 million bond," Town Administrator Agnew said, "and the vote was 850 to 50 for it."

FIRMS HELP EFFORT

SCITUATE, Mass. — Several companies are donating products and services for the municipal Widow's Walk Golf Course being built here. The money value of the products they donate will be deposited into an ongoing research fund for the site, said course architect Dr. Michael Hurdzan.

Scotts, which is donating $50,000 in turfgrass seed as well as its new Coconut Coir "as a stable organic material for the greens," is the first environmental corporate sponsor of the course, he said.