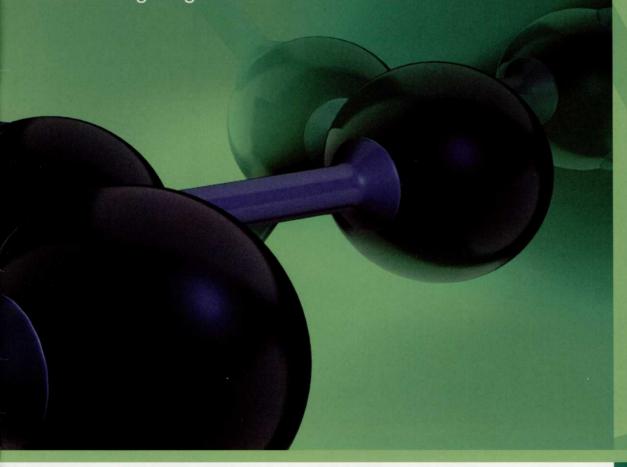


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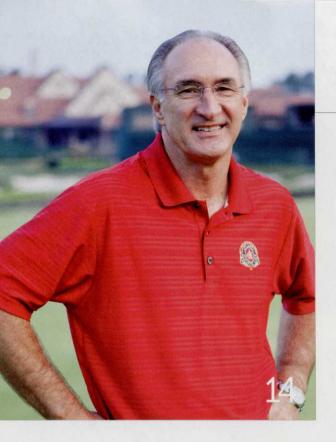


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MEET YOUR TEAM

Pat Jones Editorial director and publisher

n the movie Citizen Kane, the ambitious publisher played by Orson Welles cherry-picks the best writers from his rival newspapers to assemble what he triumphantly introduces as "The greatest staff in the world." I now have the pleasure of doing the same.

First, let me state our philosophy: We gather the best minds in the business to tell you exactly what's going on in your market. We inform, provoke and stimulate. We are passionate about this business and the people in it.

Unlike Mr. Kane, we didn't have to raid staffs to assemble our amazing team. In two notable cases, they have been part of this publication since it was called Golf Course News. More recently, in most cases, they approached us because they believed they could write can-

didly about their views and experiences.

I'll start with a couple of veterans. Terry Buchen is, quite simply, a marvel. Legendary super turned longtime turf/operations consultant to some of the world's best clubs. "Travels with Terry" has been a mainstay of this publication - and part of the golf course maintenance culture - for 20 years. He visits

scores of courses and shares the little things that make a big difference in great operations.

Jeff Brauer writes like he designs courses - with intensity and purpose. I'm always amazed that a guy who sometimes goes out of his way to be politically incorrect could have been president of the buttoned-down, tartancoated ASGCA. What matters most is Jeff is a real-life, working golf course designer with a vast understanding of how architecture and maintenance interact.

I tossed Monroe Miller into the columnist meat grinder a couple of years ago after he retired from storied careers as both forever super at Blackhawk CC and the longtime editor of the Wisconsin Grassroots chapter magazine. Monroe combines a fierce passion about the people in this business with disarming Cheesehead candor. He's not afraid to poke bears with sticks when he sees something wrong and he's warm and insightful when he points out the good stuff going on. Love this man.

I was on the phone with Tim Moraghan

about 10 minutes after he parted ways with the USGA begging him to write for us. The guy set up a zillion national championships, knows everybody and has a persistent habit of telling the truth...how could he not write for us? Even better, his spectacular spouse Karen is one of the PR moguls of the golf business who - I think - secretly edits Tim's columns.

Do not - I repeat - do not engage Brian Vinchesi about the advanced engineering side of irrigation design and operations. Your head will explode with his smartness. He's probably lost track of the number of Top 100 facilities where he's designed systems. Brian's probably one of the most knowledgeable and committed experts in water conservation, as well. He's another guy who has cloned himself because

> he's EVERYWHERE...and he still finds time to fly fish in New Zealand. Amazing.

> Bruce Williams is - quite simply - The Man. Totally connected, on top of the market, successful in every arena from managing a couple of the world's greatest courses to placing his peers in the best jobs in the world. And he finds time to write astoundingly in-depth and useful

articles for us. Now he's focusing his attentions on China. Watch out, China.

I still had a full head of hair the first time I met Dennis Lyon a quarter of a century ago. He never had hair, even then. But under that shiny dome lies the brain of a man with keen insights on how superintendents can be businesspeople, leaders and innovators within a successful public golf operation. He and Bruce are both GCSAA past presidents. He and Monroe are both DSA winners.

Finally, I'm pleased to introduce our newest addition: Henry Delozier. Coincidentally, I just got through telling several folks at the GCBAA meeting that Henry is the smartest guy in the industry and they should listen to whatever he says. Now he's saying it for us.

I've run out of space to adequately mention Bob Lohmann's online contributions, our Digital Turfhead, Jim Black, our young social media guru, Nick Klinkhammer, and 20 other regular contributors.

Our cup runneth over with talent. GCI



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That's what they thought the obvious answer was, anyway.

"This area is so devastated by drought, we wanted to think of something to get people and get their spirits up. That was our biggest concern here," says Jeb Smith, superintendent.

Between the concept to the event was only about 11 days, giving Smith a short time to work together an irrigation system that could provide plenty of cool, refreshing water without being a constant reminder to local residents of the course's usage in a citywide drought - especially for a non-golf event.

He got to work with a local irrigation company that had handled large water slides before, and went out for parts. He orchestrated a low-misting system, fed by a 1-inch pipe down to half-inch poly pipes to keep the pressure even throughout the

Even though the course's water came from a separate source than the city and wasn't being restricted, the resort didn't want to even give the impression that they were being irresponsible with water. Besides the low-misting system, they launched a social media and news campaign to not only drum up interest but to bring attention to the low-volume irrigation system.

"I told him about the event and said, "We need a lot of water for this, but we can't make it look like we're using any," says Kerry Bennett, general manager of the resort.

Smith was out at 4:30 a.m., finishing the preparations for

the slide around 10 a.m. on the 107 degree day, opening the floodgates for about 200 local kids and their families.

"I was really impressed with the turnout," says Bennett. "The system worked great. After they had gone on the slide, they would be leaving and say, 'Hey, where was all the water? I didn't even

The Cypress Screamer brought in new people and more importantly, business. There were rooms booked at the resort during the event, and the local community got a chance to see the golf course in a way that some hadn't before: just a fun place to be.

"The kids absolutely loved it," says Smith. "Most of the people I saw out here were people that don't normally come out to the course. You never know, you're liable to get a member out of something like this."

All the action didn't even damage the turf, as the crew pulled up the slide as soon as the day was done, and the low-volume mist kept water from pooling, as well.

Even so, they're planning on changing the location next year. Not for the turf's sake, but because a much steeper slope along the driving range is calling, and it's not called the Cypress Screamer for nothing.

Need to cool off?

Check out the Cypress Screamer in action, including a helmet-cam view at http://bit.ly/n4Pkg3.

ROLL CALL

Hampton Golf named Anthony Baur superintendent at Selva Marina Country Club, Atlantic Beach, Fla.

Wayne Kappauf, golf course superintendent at the Island Country Club in Marco Island, Fla., has been recognized by the Everglades Golf Course Superintendents Association (EGCSA) with its Presidents Award for Lifetime Service.

William Spence, the longtime grounds superintendent at The Country Club in Brookline, Mass., will be honored in October at Eighth Annual Joseph Troll Turf Classic.

Darren J. Davis, superintendent at Olde Florida Golf Club in Naples, Fla., was elected president of the Everglades Golf Course Superintendents Association (EGCSA).

Marc Dufour has been named president and CEO of Club Car. In addition, Randy Marquardt has been named vice president of global marketing.

Lind Hunemuller joined the Standard Golf corporate marketing group as account executive.

Golf Maintenance Solutions hired Steve Schendel as their Midwest VP/agronomist.

Natural Forces added Guy Russell as its national vp of sales.



Rued roos' rude ruse

It's no joke: some hungry hoppers have left Meadow Springs Golf and Country Club in Perth, Australia, without much spring in its step. According to superintendent Greg Simmonds, the local kangaroos eat away at the course's turf, picking on the new growth of the understory and leaving behind acres full of weeds and plenty of their own natural waste.

The course is meant to preserve the natural look of the bushland before development, according to Simmonds, but the kangaroos seem to be more excited about a preserved area full of turf and native grass for snacking. He says the roos' noshing will change the ecosystem of the area, with more than 50 acres of the course already cleared this season. And with a recent count at more than 200 local kangaroos, maybe he'd be better off opening a boxing gym.

A COMMUNITY EFFORT

eavy winds tore through Meadow Lake Golf Course in Saskatchwan one evening in the middle of July. Superintendent Daryl Wood inspected the course the next morning, prepared to find debris and for a day of cleanup. But what he found looked more like a war zone, he says.

The storm had demolished the trees of the front nine holes of the course. Every single hole either had damaged trees or completely toppled across the course. "The front nine were pretty much covered. A lot of our main trees were just down

along the course," he says.

After gathering his five-man crew, they started work on the damaged course, just trying to move and clear away what they could. But then, someone on his team got in contact with a local logging company, whose crews were unable to get to their regular work because of the storm. They came out to help, and word spread that the course had been devastated. Course members, local residents and even businesses started turning up to help.

Some sawed through trunks and cleared away brush, while others provided equipment and even others provided food from town to keep the volunteers going.

All in all, the volunteers gave about 750 hours of labor to clear the debris and created a giant wood pile, something Wood's crew never could've accomplished on their own

"This is a place where everybody knows everybody, and we help each other out," he says. "Without that volunteer effort, we would've had no chance at dealing with that."





Jeffrey D. Brauer is a licensed golf course architect and president of GolfScapes, a golf course design firm in Arlington, Texas. Brauer, a past president of the American Society of Golf Course Architects, can be reached at jeff@jeffreydbrauer.com.

PHIL: "MODERN ARCHITECTURE IS KILLING GOLF"

ome big questions arise from the recent PGA Championship, for those not paying attention. If Rees Jones is the Open Doctor, is Mickelson – who also dabbles in architecture – on tap as "Dr. Phil?" Is Phil Mickelson a regular reader of my column? For those of you who didn't follow the PGA Championship this year, Phil had these comments about modern architecture:

"I also think if you look at the four par 3s here, it's a perfect example of how modern architecture is killing the game, because these holes are unplayable for the member. You have water in front and you have a bunker behind, and you give the player no avenue to run a shot up. And the 7th hole, where there is not any water, there's a big bunker in front and right of the green; instead of helping the player get it on to the green, it goes down into the lower area, as does the left side."

Now, for us out here, it doesn't make a bit of difference, because we are going to fly the ball to the green either way. And that's why I say it's great for the championship. But it's a good reason why the number of rounds are down on this golf course amongst the membership. And it's a good reason why – in my opinion, this is a great example again of how modern architecture is killing the participation of the sport because the average guy just can't play it.

Standard disclaimers: No one confirmed Phil's comments about reduced play among members, nor can we attribute to design alone, since many clubs have declining membership in this economy. And, he ignores the forward tees, which make the course more playable for others and may have teed off on the Rees Jones re-design because he disliked Rees's remodel of Torrey Pines, where Phil played as a youth.

Despite those quibbles, for once, a tour pro seems to be "right on" in his comments about architecture. Play is down, and certainly, architecture can be a reason.

As I wrote in my May column, modern design had been driven by "one-upmanship," which was defined as harder, more photogenic – ie, more bunkers – longer, award-winning and highly-rated. And all were probably difficult for average players.

However, after the initial publicity of awards and rankings, there is anecdotal evidence that eventually, golfers play where they have the most fun, lose the fewest balls and shoot near their average score. Rankings, awards and course ratings be damned!

In two states, I have the two top-ranked public courses. In both cases, the higher ranked – and more difficult – course initially had higher play. Over time, though, the second-ranked courses – both easier – surpassed them in rounds played.

...there is anecdotal evidence that eventually, golfers play where they have the most fun, lose the fewest balls, and shoot near their average score. Rankings, awards and course ratings be damned!

There might be other reasons, such as proximity to urban areas and availability of other activities, but the intimidation, cost and frustration of high scores and lost balls may contribute.

After all, golf is supposed to be fun! Most play for the camaraderie. Others play with business associates and don't take them to the golf course for a miserable time.

Courses that offer its players reasonable challenge rather than epic struggles are emerging as the most popular in all but the "destination resort" category.

Yet, in renovation after renovation, the discussion inevitably turns to "tournament play" as if a PGA Tour stop will ever come to Tiddly Links Golf Club. While it's perfectly fine for Atlanta Athletic Club to host, and Rees Jones to design for a PGA Championship, it's *not* all right for the other 4,000 courses built in the last decade to do so.

Next month, I will reiterate some of the basic design steps we can take to remove unnecessary difficulty from our "every-day play" courses.

Hopefully, Phil will be happy! Tune in. GCI

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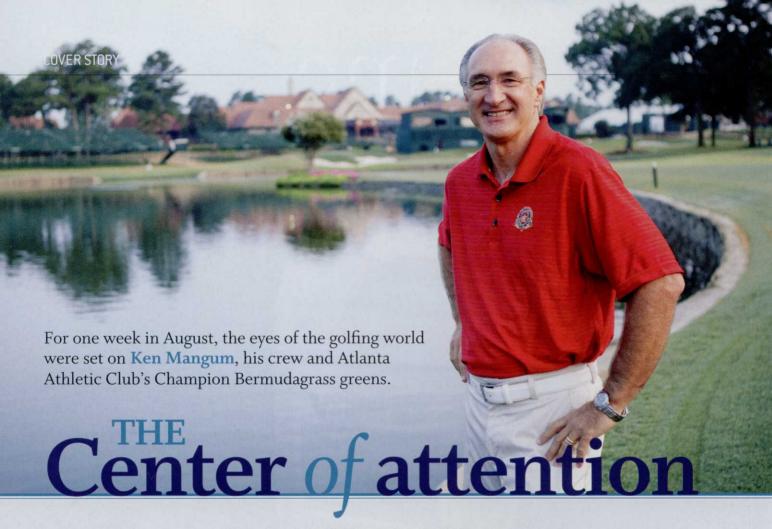


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BY BRUCE WILLIAMS, CGCS

Interviewing Ken Mangum, especially coming off his great success with Atlanta Athletic Club following the 2011 PGA Championship, has been one of the highlights of my journalistic career.

I was fortunate enough to work with Ken on a variety of GCSAA committees in the 1980s and eventually as fellow board members in the 1990s.

Over that time my appreciation for Ken has grown significantly. He is a soft-spoken giant in the industry who is armed with an infectious smile. Ken is a quiet and gentle fellow, but when he speaks everyone listens.

He is as loyal and dependable as they come in the world of golf. He

learned from his mentors and mentors the next generation not only in agronomics, but leadership, as well.

I've been fortunate to have known Ken all these years and honored to interview him after his great success at this year's PGA Championship.

I believe I mirror the views of many of my contemporaries when I say that when I think of professionalism in our business, I think of Ken Mangum.

Now with the big event over, I had an opportunity to sit down with Ken to discuss the days leading up to the championship, the lessons learned both on and off the course and how this experience has impacted him as a turf professional.

How many years has it taken to prepare the course for the tournament?

The preparation started with our first rebuild of the greens and bunkers in 1994-95. The greens we played this week were built and contoured then. The highly successful renovation of the Riverside Course forced us to start planning for Highlands in 2005 and do the work in 2006. All the fairways were laid out then because of the inside-outside irrigation layout. Rees Jones, Kerry

Haigh and I worked hard to make sure we had the right widths five years out. Nothing was changed, so I guess we did a good job. The final and most important change was in 2009 when we changed to Champion Ultra Dwarf greens.

What was your staffing during the tournament and leading up to it as compared to previous years?

Our staffing levels peaked from 2001-07 to as many as 77 people. Those numbers were reduced

to 68 since 2008 as a result of lower revenues and the loss of members. We get by with fewer people because we mow less with the new grasses.

Many superintendents who have hosted majors have told me that a major is 90 percent preparation and about 10 percent execution. Would you agree with that?

I have not thought about it that way. We had the golf course where we wanted it two weeks out. After that, we just looked for little things to do. Dead branches were removed, limbs trimmed for views, weeds pulled and we also stepped up the mowing frequency. There was plenty of irrigation and utility locating to do for signage and scoreboards. I would say more 50/50 because we still had plenty of execution to do during our front nine/back nine routine that we use all week.

No matter how well we prepare there are always a

few things that are surprises. So what were yours during this event?

The first surprise is that we watered every night - greens, tees and fairways - to keep the course from becoming unplayable. We could have gone over the top very easily. I did not expect to put down that much water. Kerry Haigh wanted the course to play firm, not hard and fair. The other surprise was just how well the Champion held up and how little we had to do to get the speeds. We single cut greens Monday and Tuesday mornings, Wednesday evening, Thursday and Friday mornings. We did double cut on Saturday and Sunday, but only rolled once on Tuesday night to smooth out spike marks from so much practice-round play. Our biggest challenge was keeping them slowed down. Again, Kerry wanted good speed, but not off the charts because of the loss of hole locations.

How many phones, beepers, radios, etc., do you carry the week of the event?

Too many, but only two radios and a phone. I had to stay on the PGA Rules channel with Kerry to monitor play, rulings and any course issues. Let's just say the first two days... there were many issues with the pace of play. I carried our radio so I could relay information from Kerry to Kasey and Tyler. The iPhone was always there, as well. Fortunately, my younger brother, Randy, spent the week with me to assist with radios and appointments. Randy went back to turf school as a second career and worked with me here from 1990-95. He is in sales now with Howard Fertilizer. He was such a help with monitoring and making calls while I did all the media requests that kept on coming. I am not sure I could have made it through the week without him to drive me to and from work and just keep an eye on me. He was a great sounding board for the press conference and generally encouraged me throughout the week.

I know how close your family is. Hopefully you have had a chance to enjoy a few minutes with them as you smell the roses of such an important event.

We did have a dozen roses for that, but not sure I really got to smell them enough with all the pressure from the predictions for this Championship. Pam came out everyday and spent some time with me, along with my daughter, Miranda, son-in-law, Scott, and their kids, Katie and Evan. My son worked with CBS so I saw him quite a bit. It is always good to have the grand kids around. Katie is 7 months old and I held her a couple of days while doing announcements. Now I get to go back to being "Papa" again.

Will there be any letdown after several years of planning and a week of a tournament in which the whole world of golf is focused on the property you manage?

Yes, there will be some. I experienced that a little in 2001. It is something I talked to my staff about, as well. It is a very high pinnacle to reach so you have no-

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where to go but down. I will work on through August for restoration and then take a good bit of time off for traveling and fishing with my good friends in September. Fly fishing is the best way for me to unwind and the company of friends like you, Mike Crawford, Gary Grigg, Cal Roth and Darren Davis make it even better. Where are you, Ed Walsh?

What were your greatest challenges during the event?

The high expectations that were the result of Ron Whitten's article, "The South's Gonna Rise Again." It is a great article. I just had to make sure he was right. Pat O'Brien has been telling me for two years that this event would change golf in the south, as well. I felt a great deal of pressure having the first Major on the new grasses. I knew they would perform, but needed to see them do it. Now, I believe we exceeded the expectations and we have set a new standard.

Now that the event is in the history books, were there any particular lessons learned during or prior to the event and would you have done anything differently?

Dealing with the media has become a very big part of championship golf. It is an option that can be a huge benefit if you are prepared to handle all of the requests that come your way. I am so glad I had the media training offered by GCSAA while I was on the GCSAA board. I have continued to work with Mike Jousan of Clear Communications over the years. This training helped me get through all the interviews and the press conference on the Golf Channel. I have received as many compliments on my interviews as I have on the condition of the course. It was great to have Jeff Bollig, GCSAA's director of communications, on hand to help with media contacts and issues. I also had Robin Applebaum, of CSE, on hand all week to assist with and set up interviews with local media.

Were you ready and waiting for the playoff?

Yes, we had people in position to go back and check Nos. 16, 17, 18 and 10 if needed. It only took a few minutes and three people. We had a great ending with a champion who I predict will continue to win and go on to have a great career.

How much excitement was there from your team during the event and what did

you do to motivate them daily?

It didn't take much to get them going, but I think that is one area I excelled in. I started a couple of weeks out with talks about making history. I challenged them to exceed what was written in the article. I started off Thursday by holding up a copy of the "South's Gonna Rise Again." I got a few rebel yells out of that one! The guest that we had each day also played a big part in the motivation. I tried to include as many people as possible in the videos and interviews. Kasey Kauff, Highlands superintendent, and his assistant Tyler Anderson were both very good on camera. Every volunteer — with the exception of a couple of people - had a connection to the club as a former superintendent, assistant, intern or long-time sales and service provider. Newcomers quickly noticed the family atmosphere.

Which golf course superintendents or events did you learn the most from prior to the PGA Championship?

The experience of 2001 was invaluable for routing work and getting around the players. The requirements and chain of commands are very different with each organization. I love the structure of the PGA of America. I have one person to deal with - Kerry Haigh. Since we worked together in 2001, we both knew what to expect. The two of us work on a system of trust and respect. On the flip side, he has one person to work with from the club, as well. We discuss things and make decisions based on how the course is playing and what the forecast is. I know he is ultimately responsible for the outcome of the event, so I try to meet or exceed any request he has for course conditioning - nothing like teamwork. I have always picked up a few gems from friends in the business that have had or been involved in championships. Cal Roth, Collier Miller, Mike Crawford, Mark Kuhns, Jim Nichol, Michael Lee, Steve Cook, Tom Lively, Mark Wilson, Jon Maddern, Mark Woodward, Pat Finlen, Bob Farren, Tim Moraghan, Patrick O'Brien, Chris Hartwiger, Craig Courier, Marsh Benson, Brad Owen, Jim Zimmer, Paul Latshaw Jr. & Sr., Russ Meyers, Matt Schafer, Dave Ward, Gordon Moir, Kenny McKay, Tom Alex and Mark Michaud are some of the people that come to mind. This is quite a list! Now I have to worry who I left off.

What site visits did you make to prepare for this event?

I have been to the Masters every year since 1976. I have attended the PGA since 1995.

I don't think I have missed but a couple of US Opens since 1998. You can pick up things every place you go, even though they are all very different venues and grasses.

Tell me a little about your Twitter feeds and blogging for the event.

I find Twitter to be very easy and quick. I would normally tweet on the way in while Randy drove. It is very easy to take a quick picture and send it out with a few words. The blog can be longer and more detailed. It is very quick also. I send the contact information to members so they can follow if they choose to do so. Facebook helps, as well. Kasey and Tyler have set up an AAC Golf Course Management Page. Communication will slow now that the championship is over.

The Champion Bermudagrass greens at AAC have been the buzz of the turf industry. Did they live up to your expectations and do you expect to see a trend for Southeastern courses to switch to improved varieties in the future?

The only reason to change to Champion is if you want great greens to play on all summer.

I could not be happier with the performance during the Championship. It provides us more good months of golf for less money. I don't think the members really care what kind of grass it is as long as it provides a firm, fast surface. As the economy continues to struggle we need to find ways to keep golf sustainable. The money saved on greens alone could be the difference in facilities staying open. More courses will now be advertising "Ultra Dwarf greens" instead of the old ads that used "bentgrass greens" to draw players.

Another key point is that all of the golf course peaks at one time, which gives us more months that we can hold events. The collars also come out of the winter much better because they have been covered and have had much less traffic on them. Many bentgrass courses suffer from "ring around the bent" in the spring. Using the covers allows us to play more golf in the winter since the greens seldom freeze under the cover. We can usually remove the covers in the 9-10 a.m. range for play and the bentgrass greens will still be frozen. Our golfers play more rounds in the winter on the Champion than the bentgrass! GCI

Bruce Williams, CGCS, is the principal in Bruce Williams Golf Consulting and Executive Golf Search. He is an author and speaker in the golf industry, a GCSAA past president and a regular contributor to GCI. Reach him at brucewms1@ hotmail.com.

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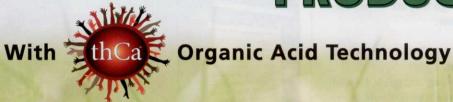
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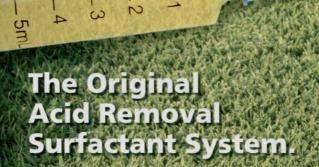
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Monroe Miller is a retired golf course superintendent. He spent 36 years as superintendent at Blackhawk Country Club in Madison, Wis. Miller can be reached at groots@charter.net.

DEDICATED TO HARRIET

is name is arguably the most recognizable among turfgrass academics: Dr. James B. Beard. Not just in this country, but wherever turf meetings and conferences have been held, Dr. Beard has been a favored lecturer. He has served as major professor for grad students at Michigan State and Texas A & M universities who have done great things for turf in their own right. His leadership has been powerful, his teaching well respected and his research has stood the test of time.

And then there are the books. Never satisfied with limiting himself to some narrow aspect of turf, his books have been thorough and complete and comprehensive.

The thought occurred to me that Jim Beard had dedicated all of his books to Harriet, his wife. She even co-authored one of those books -"Beard's Turfgrass Encyclopedia." It piqued an interest in this woman who clearly was a positive force in Dr. Beard's career.

More inspiration about Harriet Beard came at a late 1990s Wisconsin Green Industry Expo. Dr. Beard was scheduled for a couple of lectures, but he was sicker than a dog. Harriet was there, too, and I am sure she is the reason he was able to travel and present two excellent lectures to us. I had the chance to meet her, see what she looked like and chat a bit. But I still wanted to know more.

So, this summer, before leaving for Traverse City, Mich., to visit relatives, I called them at their summer home on Lake Leelanau and asked if I could visit. They graciously agreed. That short visit turned into most of the day. I couldn't have had a more enjoyable time, and I really learned who Harriet Beard is.

Jim and Harriet Beard grew up on adjacent farms in west central Ohio,

and despite that proximity they attended different schools. They recall cultivating cornfields next to one another and waving back and forth. They also attended the same church and Sunday school class.

Harriet is two years older than Jim. After graduation she worked at the bank in town. She told me that she knew for a long time that he was a bright young man. He finally asked her for a date - to go fishing!

Few know that Jim Beard was an excellent high school athlete and recruited by 10 colleges to play football. He made an academic decision instead and enrolled at Ohio State. They continued to date, were engaged in 1954 and married on spring break 1955. They've been married 56 years.

Michigan State hired the new PhD in 1961, the same year Harriet

He took a break for dinner at the student union, and completed his writing for the day when doors to the library closed at 11:00 p.m. He left that day's work on Harriet's desk, and when he left for campus in the morning, the manuscript had been typed perfectly for him. That was teamwork.

His writing continued on at Texas A&M in much the same way. Nowadays, when they are working in the MSU library, she is also busy with tracking down references, abstracting and other duties that give Jim more time to do the actual writing. I have heard that when they go to campus to work they arrive early and stay late. They are still working hard after all these years.

Harriet told me her life with Jim Beard has been wonderful. They have lived carefully and shared their

"I had the chance to meet her, see what she looked like and chat a bit. But I still wanted to know more."

was pregnant with their son Jim. It was a difficult time for her, one that required bed rest at home. But it was the beginning of 14 happy years (1961-75) for the Beards. A second son John was born there.

When Jim decided he was going to write a book, Harriet played an even more active role in his career. There were secretarial tasks she was always happy to take care of, and she did a lot of the parenting of their young sons while Jim worked. He didn't even have to mow the lawn or shovel snow! But the book added an entirely new dimension to her role in his life.

The MSU library is where he spent most of his free time during the eight years of writing. He went to the library at the end of each day to write.

prosperity, through the James B. and Harriet Beard Endowed Graduate Fellowship at MSU, and their \$1.4 million gift to the Beard Collection at TIC.

Dr. Beard will tell anyone how proud he is of Harriet and how fortunate he has been to have her as his wife and best friend. "She has allowed me, over 56 years of marriage, to double my productivity because of her help and support." In just the few hours I spent with them this summer I could see how deeply they feel about one another.

Those two new history books Dr. Beard is closing in on - I am betting they'll be dedicated to "Harriet." Just like she has been dedicated to him for so long. GCI

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SUPERINTENDENT'S GUIDE TO SURVIVING A COURSE RENOVATION, PART 2

In August, Tim Moraghan provided Part 1 of his guidelines to making the best of a course renovation. This month, Tim's column (Part 2) picks up where he left off. To read Part 1, enter http://bit.ly/pAyuBu into your browser.

K now the architect. If you do get lucky and the managers allow you to have some say in the architect selection, be aware of the special concerns of your course in your research. Here's what the smart superintendent should look for in an architect.

- · Ability. It sounds obvious but isn't always, and won't be to the committee, either. Besides checking with the American Society of Golf Course Architects (ASGCA), learn as much as you can about the designer's other work, both new courses and re-dos. Check his references.
- · Visit his work. Get a feeling for what he did with the land and features. It's very important that you talk to other superintendents and get a feel for the working relationship between them and the architect.
- · Talk to course builders the architect has worked with. Ask if the designer has a good sense of the game and cares about those who will be affected by the results.
- · Ask the other supers and builders if the designer actually gets on a piece of equipment and does some work, some shaping, himself. How good is he at transferring a thought from paper to ground? Is he willing to be flexible and admit when something doesn't work?

ASK QUESTIONS TO PREPARE AND EASE THE PROCESS.

Watch out for design plans that

are overly technical and engineered; not transferring well from paper to dirt. Will the end result be a course that is both playable and easy to maintain? Review each hole with the architect, watching in particular for difficult agronomic scenarios, so problems can't come back to bite you.

· Other items to watch for: High-faced bunkers in areas subject to heavy rain; too many catch basins in lieu of surface drainage; greens in heavily shaded areas and adjacent to creeks. I'm sure you can think of others on your course.

important that you can work together for the greater good of the course.

- · Become the go-to person for your club members, particularly the committees and the board. Educate them on what they have now (good and bad) and what they can expect. Keep them informed, talk to them as often as you can and if you say you're going to do something, do it.
- · In talking to the committees, establish one consensus opinion. Make sure everyone buys into it. If not, you'll be the one who loses out.
 - · If you've done historical research,

With the new plans in hand, walk the course with a critical eye. Where has it lost its zest? If it were up to you, what would you do to make it exciting again?

- · Is there someone around who witnessed the original building of the course? If so, talk to him. Who knows what you'll learn?
- · With the new plans in hand, walk the course with a critical eye. Where has it lost its zest? If it were up to you, what would you do to make it exciting again? What does the architect suggest? If you are restoring lost features, use your soil probe and dig for treasure in finding those lost shapes and edges.

BE A PART OF THE SOLUTION. Once you're good with the project and have let everyone know that you'll do all you can to make it work, here's how to

· Forge a good relationship with the designer. Reach out, talk, show that you are knowledgeable, caring and want to help. It would be nice if you become friends, but it's more use it. Show the architect and members the old photos, architectural drawings and renderings you found.

- · You're on-site more than the designer, so bring committee members onto the course and show them how the work is progressing. Don't wait for the architect's site visit. Take the initiative!
- · Remember to keep your staff up to speed, as well. You'll need them more than ever. And you probably want to tell them how much they can and cannot say to members about the work going on.
- · No matter how much work you do, remember that it's not your course or your club. You're still an employee and you do not have final say in what happens. If you have a strong opinion about something, only you can judge your relationship with the members and committees and then determine if you want to speak up. GCI



A word from the GCBAA

The Golf Course Builders Association of America is proud to participate in the annual Golf Course Industry Builder Excellence Awards program. As the premier association representing the interests of golf course builders and their allied professions, the GCBAA is dedicated to not only serving the interests of our members, but also advancing and improving the profession of golf course construction. Our members, through their dedication to the highest industry standards, are involved in the construction of quality golf courses in the United States and around the world. These annual awards reflect their hard work and serve as testament to the important role they play in the game of golf.

On behalf of the GCBAA, we congratulate our winning builders for 2011 and pay tribute to their accomplishments and the accomplishments of all within our industry. We eagerly look forward to next year's program.

Justin Apel, executive director



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Legacy Award Winner.....45 Frontier Golf sculpted Donald Ross's original vision to recreate the characteristics of Army Navy Country Club when it was first laid out in 1924.

Golf Course Industry and the GCBAA would like to thank the following 2011 judges for their time and assistance in choosing this year's winners: Tommy Sasser, Recreational Community Consultants; Chris Schiavone, RDC Golf Group; Bill Prest, Sweet Briar Golf Course; Todd Voss, Double Eagle Golf Course; Gary Grigg, Grigg Brothers and Chris Wilczynski, C.W. Golf Architecture.

The Wadsworth Foundation wishes to recognize its Golf Industry Partners for their dedication and contributions to the Links Across America short course initiative for affordable golf, especially for youth.



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The following is our growing list of Links Company Partners that have committed to join our team in this endeavor. This means that when they become involved in a Links project, the team partners will contribute profit, goods or services to assist in achieving the development of the Links short courses (three, six or nine-hole) at a significantly lower cost.

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/ Wittek Golf



Golf Course Builders Association of America

Builders group will continue

its four-decade mission, as well as seek new ways to support its members.





BY JEFF SALEM

he Golf Course Builders Association of America (GCBAA) is celebrating its 40th anniversary in 2011. It is also starting a new chapter under newly-appointed executive director Justin Apel.

Only in his 30s, Apel may be younger than someone you'd expect to see heading up one of the industry's largest associations. But Apel plans to use his youthful perspective to help members weather the economic doldrums and prepare for better days.

NOT AN INDUSTRY INSIDER. Apel has played the new-kid role before. Prior to his time with the

GCBAA, Apel was one of the youngest legislative aides when he worked for Nebraska State Sen. Merton "Cap" Dierks from 2000 to 2002. After leaving the senator, Apel went into lobbying, where he was the state's youngest registered lobbyist, too.

"Age has always been a challenge for me, so this is nothing new," Apel says. "It can be intimidating being the youngest in the room, but I have found being truthful, prepared and fair levels that playing field."

Apel wasn't brought up through the traditional golf industry ranks, either. His background and degree is in agricultural science, not golf. When Apel worked for Sen. Dierks, the senator chaired the state's Agriculture Committee. Apel then spent four years as the information and education director for the Nebraska Association of Resources Districts – the trade association for Nebraska Natural Resources Districts – before heading to the GCBAA, located in Lincoln, Neb., in 2006. Before being promoted to GCBAA executive director in February of this year, Apel served the association as executive assistant and assistant executive director.

Apel says his unconventional background for a golf industry association leader works to his benefit.

"Most would think my little experience in the golf industry would be my biggest disadvantage," Apel says. "However, I think it is my edge. I have a fresh look at both new and old ideas."

Missing out on the days when golf course building was booming was actually a good thing, according to Apel.

"I obviously don't like to see what the economy has done to many fine individuals and companies. But for me to start working in this industry during the worst of times gives me a different mind-set of what's normal," Apel says. "Because of that, I have a tremendous motivation to help our members climb out. I really don't think I would have the same level of knowledge, key experiences or way of thinking if my first five years in the industry were during the glory days."

EDUCATION IS THE KEY. Education is Apel's top priority for the association and its members.

It's the only way to perfect your craft, he says.

It's about sharing knowledge from the association's 375 members with one another. Any situation or problem a builder may encounter on a project has probably been tackled or overcome before by another builder, Apel says.

"Education is the key. Being proactive with our members' collective knowledge and experience base and making it available for others will be important," Apel says. "Construction methods and techniques – including best management practices from real case studies and experiences – to state of the art technologies that can solve nearly any problem in landscape construction are at our finger tips. We want to share that knowledge."

LOOKING FAR TO THE EAST FOR OPPORTUNITY.

As the GCBAA provides education to keep members at the leading edge of their profession, Apel says he will be looking for new opportunities to help builders climb out of a dark period for the industry.

While the GCBAA has had international members since the early '80s, Apel has started a series of initiatives since he was named executive director in February earlier this year aimed at positioning the association on a global scale.

Apel intends to build on the association's base of 50 international members in 15 countries.

In March, the GCBAA Board of Directors announced it would form two steering committees designed to explore what role the GCBAA should play in specifically-identified regional markets.

The International Members Enhancement Committee will evaluate and promote current membership benefits. It will also focus on developing new value-added programs as part of the effort to attract additional members to the GCBAA international membership category.

The Regional Market Committee will be more strategic in nature, Apel says, and has the responsibility of identifying various international initiatives. That committee is divided into three sub-committees in order to address the diversity of the three most active international markets: Asia, South/Central America and Europe.

"We want to fully evaluate the strengths and weaknesses of those regional markets, understand the challenges and opportunities of each, and independently develop ideas for GCBAA's potential role in those areas," Apel says.

Even more recently, the GCBAA an-

GCBAA at a glance

The GCBAA has accomplished a lot in its first 40 years as an association dedicated to advancing and improving the profession of golf course construction. Here are a few of the highlights of the association's first four decades:

- The GCBAA was founded in 1970 by nine individuals in Washington D.C. under its original name, the Golf Course Builders of America (GCBA).
 - . The GCBAA adds an executive director for the first time in 1984, Don Rossi.
- \bullet In 1991, the group officially changed its name to Golf Course Builders Association of America.
- The creation of the Don A. Rossi Humanitarian Award in 1991 for the president of the National Golf Foundation from 1970 to 1983. The award is given annually by the GCBAA to honor individuals who have made significant contributions to the game of golf and its growth.
 - The association began publishing its Earth Shaping Newsletter in 1991.
- Established in 1992, the GCBAA's Builder Certification Program quickly became known in the industry for its recognition of high-quality golf course builders.
- The association's first Certified Builders were announced in 1993. Both recipients, Golf Development Construction and Wadsworth Golf Construction, still hold that title today.
- In 1994, a year when the National Golf Foundation reported 484 new courses were under construction, the first GCBAA Guide for Estimating Golf Course Construction was released.
- Sticks for Kids, a GCBAA Foundation program that seeks to teach the game of golf to children, was created in 1996. In 2010, Sticks for Kids taught golf to more than 100,000 children at more than 500 sites worldwide.



The Golf Course Builders Association of America celebrates 40 years of assisting and improving golf course construction, having started with just nine members in 1970.

nounced a new partnership with the Asia Golf Show, held in October in Guangzhou, China. Under the agreement with the show's organizer, Reed Guanghe, GCBAA members will participate in educational panels aimed at examining core industry issues.

The GCBAA Foundation, the association's charitable arm, has been expanding globally as well. The foundation's best-known initiative, Sticks for Kids, has programs in place teaching the game of golf to underprivileged children at 550 facilities around the globe, including 130 programs in 32 cities throughout China.

MEASURING SUCCESS. Still young in his tenure at the helm of the GCBAA, Apel says he will

be evaluating his performance often.

That evaluation will be directly tied to the level of participation of the association's members, Apel says. He'll have a measuring stick of sorts each year when the association holds its general election of officers.

"The first year that we have to recruit or possibly appoint someone to an open seat on the Board will tell me that I have failed," he says. "I want to have a waiting list of members wanting to join the team of their peers to work with me on driving this association into the future." **6CI**

Jeff Salem is a public relations associate for Swanson Russell, based in Lincoln, Neb.



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Administaff Small Business Classic Woodlands Country Club Houston, Texas October 7th-9th CHAMPION greens planted 1996

AT&T Championship TPC San Antonio San Antonio, Texas October 14th-16th CHAMPION greens planted 2009

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A Tale of Two Courses

Landscapes Unlimited built two distinct 18-hole courses in five months, overcoming sandy soils, high winds and a remote location to create a destination for golf purists.

BY JASON STAHL

o begins the tale of two courses: so different, in fact, that the builder, Landscapes Unlimited, treated them as two different projects, even though they were being built simultaneously in the same area. As different as they were, perhaps the most amazing feat was that they were built in five months.

"Ideally, to build a course in most parts of the U.S., it would take us six to 12 months, so given that we were on a five-month schedule, the architects, contractors, developers and everyone else had to be focused to stay on schedule," says Bill Kubly, CEO and founder of Landscapes Unlimited.

The land each course was built on was vastly distinct. The Dunes Course, designed by Tom Lehman and Chris Brands, had a lot of natural features that didn't require much shaping other than bunker work. It was simply routed through the existing sand dunes and left to be a natural, links-style course.

The Pines Course, designed by Graham Marsh, had some sand dunes as well but also featured plenty of pine trees and dramatic bluffs, which is unique to the sand hills area of Nebraska.

"Both courses are very dramatic," says Kubly. "They're different, but they blend well together and make for a great golfing experience."

One of the major challenges of the site was its remoteness. Kubly says they were literally in the "middle of nowhere," and that presented many problems, one of which was the acquisition of labor.

"When you get into these remote parts of the U.S., the ranchland, there is no labor available, even with the high unemployment rate," he says.





Though full of dramatic views, the Pines Course also provided plenty of challenges for building, thanks to its remoteness in the sand hills of Nebraska.



Creative Award Breakdown

BUILDER: Landscapes Unlimited

PROJECT: The Prairie Club, Valentine, Neb.

COST: \$5.8 million

TERM: May 12, 2008 to May 31, 2010

ARCHITECT: Graham Marsh (The Pines Course), Tom Lehman and Chris Brands

(The Dunes Course)

SUPERINTENDENT: Ross Buckendahl

NOTABLE NOTES: Overcame location, staffing and timetable challenges to produce two world-class courses.



Lucky for him, however, his company was familiar with the H2B temporary worker program, where companies can secure workers from Mexico who are then allowed to work in the U.S. for eight months, then must go home for the remaining four months. Landscapes Unlimited has had as many as 450 H2B workers at one time, and for its Sutton Bay project in South Dakota used 40 workers for construction and 18 for existing maintenance.

"It has been a godsend to have these workers from Mexico that we're so dependent on for the projects that we can get certified for H2B," Kubly says. "It's not doable for a lot of projects because the unemployment rate is so high, the government won't allow us to bring these workers in and makes us use local labor instead."

Club management was educated in all aspects of the H2B program including labor certification, employee recruitment and program compliance requirements. H2B employees interested in accepting employment as maintenance staff were assigned to project construction crews. This resulted in a "built-in" recruitment pool from which the superintendent would select and hire maintenance staff.

"The continuity created by transferring construction

Landscapes Unlimited used the natural resources of the Dunes Course to create a links-style course in comparison to the Pines Course.

creative award winner 2011 Builder Excellence Awards

staff to maintenance staff allowed for a seamless transition of the course from contractor to owner," says Kubly.

Due to the remoteness of the site, off-site lodging for these employees was unavailable, so most of an entire hotel was rented out for

"Both courses are very dramatic. They're different, but they blend well together and make for a great golfing experience."

- Bill Kubly, Landscapes Unlimited

the duration of the project.

"We met with the proprietors early in the project to discuss our needs, and they were terrific to work with, even going as far as to provide our crews with special bilingual needs," says Kubly.

The remoteness of the site also provided some challenges as far as getting power to the site. Three-phase power was not available for the wells and pump station to meet the grassing timeframe, so generators were used during the maturation and grow-in of the courses until the town of Valentine was able to bring in three-phase power.

"This required daily maintenance and operation of this critical component," Kubly says.

High winds also didn't make for a picnic on this extensive and fast-paced project.

"When you're building things out of pure sand, the wind can come up and destroy what you've done that day, but mainly when it comes to grassing the course, there are a lot of days when it's so windy, if you try to seed it just blows all over the place," says Kubly. "If you're trying to plant different types of grasses on greens, for instance, you may have to wait two to three to four days before you can actually plant that seed. There's a lot of wind erosion."

Kubly says they didn't use much hydroseeding or erosion blankets to combat the problem. As far as the blankets are concerned, he says the site was so vast they wouldn't have known where to start and stop them.

"The key was keeping the ground wet once you had the seed down, and then you probably had a six- to 10-day window to get the seed sprouted to hold the sand itself," he says. "On most courses, you would have only had the potential for that problem on the greens, but in this case, the whole course was built the same way. The same sand material that was in the greens and bunkers was also in the fairways and rough."

The wind also created problems with the irrigation system, says Rob Christie, who worked as construction superintendent on the site.

"The wind blew a lot of sand in the irrigation pond, and it was so fine that it got into the irrigation system and caused some heads to stick on," says Christie.



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699 Westchester, Saginaw, MI 48603 or Call: (989) 797-0677 www.egsinc.net Christie says the number-one problem in his opinion was clearing the prairie grass on the Dunes Course.

"Usually when you're shaping in you're destroying everything and coming back with clean dirt, but we weren't doing a lot of shaping," he says. "We were originally going to seed right into it but it just wasn't seedable. The root system was pretty intense, and when we went in there to till it up, it just brought up the roots so it turned into quite an ordeal."

Weather can often be a nemesis of a golf course construction project, causing massive delays. But that was at least one challenge those involved with The Prairie Club project were able to avoid. It's for that reason that Christie would not classify the project as one of the hardest he has worked on.

"Every project seems to have its own unique challenges," says Christie, "but on this one we didn't have a lot of rain days or weather challenges. We had a couple thunderstorms but that was it. On our end, everything went pretty smoothly."

As far as difficulty, Kubly ranks Prairie Club in the top 10 percent of the 400 to 500 courses Landscapes Unlimited has built. But he says there were aspects of it that were easy, too.

"As difficult as parts of the job were, a lot of it was simpler," he says. "For example, we had none of the bureaucracy that you would encounter in some major U.S. cities in regard to wetland and erosion control. Since we were in the middle of nowhere, there were not nearly as many regulations."

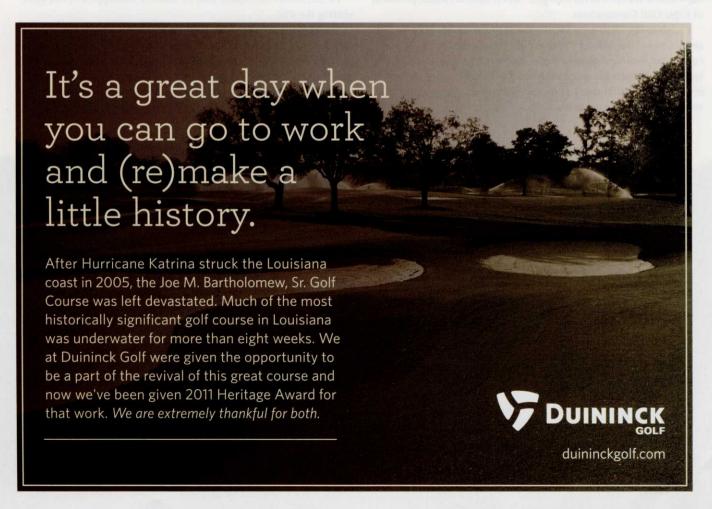
One of the unique aspects of the project in Kubly's mind was the fact that it proved people are still spending money to develop remote golf courses even in tough economic times.

"At a time like this, people wonder how could a course work economically," he says. "But this developer had the guts to do it and proved, by picking two top architects, that he has a project out there that is very successful. It puts little old Nebraska on the map as a great place for golf, and when you look at the three world-class courses there now in Sand Hills, Dismal River and now Prairie Club, who would ever have thought it would become one of the top golf meccas in the world?"

Accolades the course has already gotten include "Best New Course" in the world and "Overnight Destination of the Year" by Golf Digest, "Best New Courses of 2010" for the Dunes Course (#2) and "Best New Courses of 2010) for the Pines Course (#8) by Golf Magazine, and "Top 10 New Golf Destinations in the World" by Links magazine.

If those honors didn't get golfers' attention, then certainly the publicity campaign that owner Paul Schock spearheaded did.

In addition to creating a Facebook page and a posting a viral video on YouTube, the campaign netted more than 85 articles which generated more than 25.6 million impressions among serious golfers worldwide. **GCI**



affinity award winner 2011 Builder Excellence Awards

From Wasteland to Wonderland

BOTTOM: The Brownfield Site faced garbage and industrial waste before becoming The Golf Club at Harbor Shores. RIGHT: Washouts were covered with sod grown in nurseries on the driving range tees.



Eagle Golf Construction turned a former dumping ground into the gem of a community and a golf course worthy of professional tournament play. BY JASON STAHL

arbage. Slag. Industrial waste.

These are generally not the kinds of things you find on a golf course. Nor do you find drug dealers and prostitutes roaming about. But they were all present at the site of The Golf Club at Harbor Shores before it became a golf course so impressive it was named to host the 2012 and 2014 U.S. Senior PGA Championship.

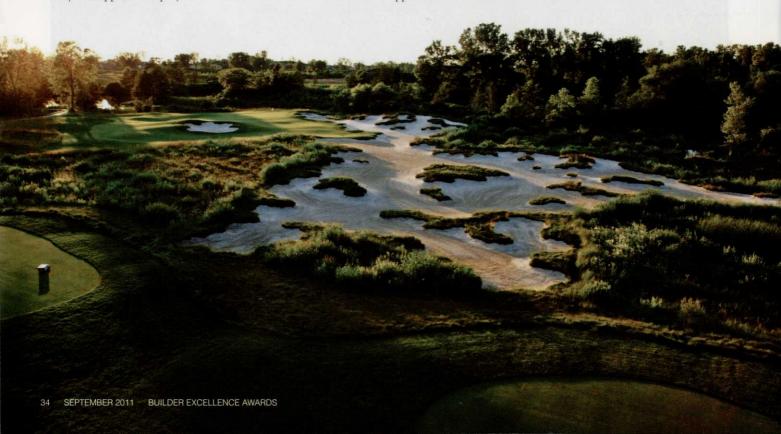
"I would say that this was one of the greatest achievements of my life – next to the birth of my little girl," says E. Randal Pichan, president of Eagle Golf Construction.

Consider the challenges Pichan and his team faced: clean-up and restoration of the 540-acre "Brownfield Site," remediating poor soil conditions, dealing with permit and approval delays, working around endangered dunes plants, constructing a 13-mile piping system to collect the site's drainage run-off and fighting off a park preservation society that opposed the project.

Even though a park on the site had become a haven for pushers, some folks felt that it had historical significance given that it had been donated by an important local family in the early 1900s. Ultimately, golf won out and the parking lot became one of the course's holes. But Bob McFeeter of Evergreen Development Company restored the old park to an exact replica of what it used to be, and people started coming back to it.

Pichan recalls one elderly man he talked to who appeared lost while visiting the site.

"He said that he had been hearing about the project and that he and his wife had frequented the park back in the 1950s and had enjoyed the beach and the waterfront but had not been back since," says Pichan. "But he said to see what we had done reminded him of old times once again. So it was really good to hear from someone who appreciated our efforts."





Local businesspeople also appreciated the radical makeover. One family that had owned the North Shore Inn restaurant – which Pichan says has the best burger in town – since the 1960s and kept the business open even through the bad times was thoroughly elated at seeing the area brought back to its former glory.

"In the early '60s, factories lined the area, and they had beautifully manicured flower beds and lawns," says Pichan. "The family said what we did with the course reminded them of that time when things were gorgeously landscaped."

The public will now be able to take advantage of walking trails throughout the course and canoe or kayak down a river they never could before. The ultimate goal was to create a first-class resort course that would help revitalize a depressed and downtrodden community that had been in economic and social decline for more than 40 years.

Judging by the number of homes being built in the new development, which Pichan says are going up "left and right," the project achieved that goal. But perhaps more important than the homes and the pure aesthetic beauty of their creation is the hard dollars they'll give to three non-profit organizations: Cornerstone Alliance, an economic development entity; the Whirlpool Foundation, whose namesake company owned the property and a consortium of church and community welfare groups called The Alliance. They will receive \$30,000 annually, plus \$5,000 or 20 percent of annual net operating income – whichever is greater. The remaining 80 percent will go toward Community Benefits programming.

To get an idea of the amount of waste that existed on the site at the onset of the project, consider that 110,000 cubic yards of garbage and more than 5,000 tires were removed and properly disposed of at the local dump. Foundry waste was used beneath large fills in the mounding along 10 of the 18 holes. Most important was the eight to 12 inches of capping sand -130,000 cubic yards - that was used over the entire course to seal off all the contaminants and protect golfers, a requirement of the EPA.

Pichan could not praise superintendent Brad Fry more for his finish work and grassing, calling him "one of the finest grow-in superintendents in the country."

"I've never seen someone go after a course so aggressively, and it really made us shine," says Pichan. "He didn't wait – he jumped and attacked the washouts. He approached the job like a linebacker going after a running back. He just had a 'get the job done,' no-holds barred attitude."

The washouts were replaced with sod from other parts of the course Fry knew he could grow back in. Two tees on the west end of the driving range were used and a tee on the east end was used as a nursery. It was replanted three to four times, with Fry stripping it off to use on fairways or tees or other areas that were deficient.

The construction process was so long that Fry had to maintain new turfgrasses through two winters. A blend of A1 and A4 bentgrasses were chosen for the greens, Dominant Plus bentgrass for tees and fairways, Kentucky bluegrass/fine fescue blend for playable roughs and a straight fine fescue mix for unplayable roughs. Entering the winter season, Fry's crews mowed the greens, then covered some of them. He was able to mow 90 percent of the tees and fairways before winter, while the rest were treated with snow-mold applications.

Fry said the wind was extremely challenging when seeding.

"To combat the wind, we hydroseeded and used soil erosion blankets," he says. "Working on the holes that were right next to Lake Michigan was extremely difficult."

Working with the Jack Nicklaus Design team and associate Chris Rule was not intimidating, Fry says, but rather rewarding.

"I've worked with them before, so there was no intimidation factor there," he says. "If anything, it was exciting."

Pichan lauded Nicklaus Design as well.

"Having Nicklaus attached to the project drove it and made things happen," he says. "He's the best, until he gets dethroned. He's just a superb man, and he made things happen where other people cannot or have a hard time doing it."

Nicklaus Design's Chris Rule returned praise to Eagle Construction, "There were an extreme amount of construction challenges, and Eagle Golf stayed the course and was an integral part of creating a special golf course," he says.

Irrigation of the course was one of the challenges, particularly finding a suitable water source. According to Mike Kuhn, the irrigation consultant who worked on the project, southeastern and southwestern Michigan have issues with high salt content in the groundwater. Creating irrigation ponds was out of the question because there wasn't enough acreage. The ponds they did excavate were unsuitable due to the soil quality and not knowing how it might affect the water. So

Affinity Award Breakdown

BUILDER: Eagle Golf Construction

PROJECT: The Golf Club at Harbor Shores, Benton Harbor, Mich.

COST: \$12.1 million

TERM: September 2007 to June 2010

ARCHITECT: Jack Nicklaus, Jack Nicklaus Design

SUPERINTENDENT: Brad Fry

NOTABLE NOTES: Transformed a neglected, contaminated, environmentally-sensitive and challenging property into a first-class golf course.

affinity award winner 2011 Builder Excellence Awards



The team embraced the environmental challenges of the native plants, naming the holes after them and posting helpful information for players in the golf carts.

"Having Nicklaus attached to the project drove it and made things happen. He's the best, until he gets dethroned. He's just a superb man, and he made things happen where other people cannot or have a hard time doing it."

> — E. Randal Pichan, Eagle Golf Construction

they ended up pumping water directly from the Paw Paw River.

"It was one of the hardest tasks we had," says Kuhn. "Getting the necessary permits took the better part of a year, and we also had issues with zebra mussels, which forced us to take preventative measures to keep them out."

The irrigation pump station is a vertical

turbine variable speed prefabricated system capable of pumping 1,800 gallons per minute at 120 lbs. per square inch of pressure. The submerged intake is screened and positioned in order to prevent fish, including young sturgeon, vegetation and sediment from entering the intake line. The design process for the intake pipe, says Kuhn, took a long time and lots of engineering.

"Typical velocities in our intake are one to three feet per second," Kuhn explains. "For this one, we used a 26-inch high density polyethylene intake pipe that we had to drill a series of holes in, and the holes had to be a certain size and spaced out a certain distance to keep our velocities under .25 feet per second so as to not to draw in any fish, even young fish."

The state-of-the-art, fully-automated irrigation system consists of 1,606 sprinklers, electrically-activated control valves and a controller and central control system that minimizes overwatering. Eighty acres of turfgrass are irrigated, while 130 acres of fine

fescue unmaintained areas are not.

Each hole was named after a native plant growing on it: For example, No. 1 hole is named Aster and the hole at No. 2 is named Rose Pink. Rose-pink, in addition to wild sweet potato and swamp rose mallow, were species that the State of Michigan was particularly concerned about.

Certain areas on each hole were highlighted with selective clearing, additional plantings and continued maintenance to draw more attention from golfers to the native plant species. Literature is posted in every golf cart to notify golfers of environmentally-sensitive areas. Plus, as part of his greeting, the starter explains where these areas are to golfers as well.

And what better way to officially open the course than with a skins game between legends Nicklaus, Arnold Palmer, Tom Watson and Johnny Miller – with the highlight being \$3 million donated by the golfers and the Whirlpool Foundation to the Boys and Girls Clubs of America. **GCI**

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The not-so Big Easy

Duininck Golf overcame a litany of logistical challenges to resurrect a historic golf course destroyed by Hurricane Katrina.

BY ROB THOMAS

other Nature can be very unforgiving. Forget about winter coming early or a wet spring that delays the start of a season. When Hurricane Katrina roared through the Gulf of Mexico and devastated much of New Orleans, the weather became a matter of life and death, not just rounds lost.

When the Big Easy's levee system failed the morning of Aug. 29, 2005, Joseph M. Bartholomew Sr. Golf Course was one of the casualties. With more than 1,800 people losing their lives in the hurricane and subsequent flooding, golf was just an afterthought. But once the city and citizens began picking up the pieces of their lives and returning to normalcy, recreation came back into view.

Bartholomew Golf Course had a storied past before Katrina, dating back to the 1950s. At a time of segregation in the United States, the course – originally nine holes and a part of Pontchartrain Park – was developed by the city and opened for use by African Americans in 1956. In 1979, the course was named after Joe Bartholomew, who designed and built the course, and was its first golf professional.

While Duininck Golf is being recognized with Golf Course Industry's Heritage Award for its work starting in July 2009, in restoring this part of New Orleans history, the builder was originally onsite in 2005.

Duininck was first contracted to cap three fairways with plating sand, rebuild tees, repair irrigation and grass the work. This was completed and turned over to the city that summer. New Orleans was set to reopen the course, along with a renovated clubhouse and various improvements, when Hurricane Katrina struck.

The course sat underwater



for weeks while the city was being pumped out and an initial cleanup was done by FEMA. Bartholomew laid vacant for nearly four years. On July 7, 2009, with architect Garrett Gill's designs in hand, Duininck Golf broke ground on the reconstruction of Joseph M. Bartholomew Sr. Municipal Golf Course.

The Pontchartrain neighborhood still bears the signs of destruction. Gill and Duininck's objective was to reconstruct the entire golf course to a similar routing plan and have it completed for a spring 2011 opening, which would help revitalize the economy.

"Joseph Bartholomew was a combination of renovation and rebuild," says Judd Duininck. "Garrett Gill did an incredible job of salvaging as much of the original design as he could. The basic routing was reused and features in the same locations. With the numerous aged live oaks and cypress that lined the course, there wasn't much room for change."

Gill, who worked closely with Kelly Gibson, a lifetime member of the PGA Tour and native of New Orleans, focused on and reused some of the unique features that were on site such as "Bird Island," according to Duininck. New green complexes and bunker features were developed, and a few tee locations changed to accommodate today's technology.

"The intent was to preserve the strategy and characteristics of the Bartholomew routing," Gill says. "We were fortunate that characteristics of the course were preserved."

Following Katrina, Gibson began a passionate pursuit to involve himself in the "rebirth" of his hometown.

"It's important for me that I give back to the community that served me throughout my career," he says. "New Orleans has an opportunity to become a golf destination post-Katrina."

Gibson also was instrumental in the design of an elaborate First Tee facility at Bartholomew.

As the news repeated in the days and weeks following Katrina, New Orleans sits below sea level. Drainage and irrigation mainline excavations were

Heritage Award Breakdown

BUILDER: Duininck Golf

PROJECT: Joseph M. Bartholomew, Sr. Municipal Golf Course Reconstruction, New Orleans, La.

COST: \$7.7 million

TERM: July 7, 2009 to Oct. 27, 2010

ARCHITECT: Garrett Gill, Gill Design Inc.

SUPERINTENDENT: Pete Carew

NOTABLE NOTES: Reconstructed a devastated course to its original design, with improvements, all while keeping to Joseph Bartholomew's original vision. A true Katrina success story for New Orleans.

into the water table and had to be dewatered continually. Lake level connector pipes needed to be raised, which saved the owner on the lengths of pipe needed. An additional laborer was adds to the crew to aid in the production, which enabled the crew to install and get backfilled quicker.

Because soil conditions were unacceptable for building a golf course, the dirt was laid out in lifts. Long-reach excavators were needed to dredge existing ponds and Marukas - a track-type dump truck - was used to haul dirt to features. A good, sandy soil was found in a few areas on the course, which were graded first, allowing the drainage, greens construction and irrigation crews to continue work and get these



The Joseph M. Bartholomew Sr. Municipal Golf Course was devastated by Hurricane Katrina, but Duininck Golf rebuilt the course, helping the local community and economy to heal.

heritage award winner 2011 Builder Excellence Awards

holes nearly completed while the dirt was drying on the other areas.

"Soils in New Orleans are definitely the toughest soils we have encountered," Duninck says. "Harris Duininck, one of the senior partners in our company was on a project we had in New Orleans with me one day and says: 'Judd, if we come out of this project making any money you can say that you have accomplished something, as I haven't seen conditions this tough as long as I have been around the business, and that is over 50 years.'

"Having built courses in New Orleans in the past there is one thing you need, and that is patience," Judd Duininck adds. "The dirt a deal that provided the correct amount of material for to the project at a price that met the expected budget.

The original start date of April 1, 2009, was moved back a month, then to July 7. Much of the prime earthmoving months were lost and a spring 2011 opening faced the team. Despite subcontracting issues and an average annual rainfall of 86 inches, the course needed to be shaped in time for the ideal sprigging period of March and April. Duininck adds personnel during the winter months while colderclimate projects were shut down.

"Despite the late award, our construction superintendent, Ahren Habicht, and his Though the project started July 7, the first month's work was not paid in full until around Thanksgiving. A local construction attorney was used to consult with for advice on how to get payment out of the city, which resulted in action being taken by MWH Management and the City of New Orleans. Money was ultimately paid.

Because of the poor soil conditions, haul roads were constructed out of plating sand to allow trucks to maneuver through the site. In addition to sand for each hole, which was calculated in advance, these haul roads were used to bring in concrete for cart paths and greensmix for tees and greens. In areas that were too difficult to maneuver trucks, dump carts were utilized to add the needed materials.

"Getting materials into the features and concrete to the cart paths is always a challenge in New Orleans. Joe Bartholomew was no exception," Duininck says. "Dump carts and Marukas got quite a bit of use.

"As far as easier, it was great to have PGA pro Kelly Gibson on the Gill design team," he adds. "With Kelly living in New Orleans, we were able to get design decisions made quickly."

A prolonged dispute between the city and power company forced Duininck to go without power for more than five months at the beginning of the project. While Duininck was able to complete work not requiring power (much of the irrigation system was completed and only needed to be flushed and programmed when power was established), grassing the course was in serious jeopardy. Once power was provided and a pump station installed and operational, grassing was fast tracked from a schedule of 104 days to just 61.

"In the history of golf courses, this little construction window is just a small blip," Gill says. "We're extremely proud of the project and proud of the City of New Orleans for caring about it. It was a remarkable effort and I think golfers will find it a remarkable course to play."

Duininck concurs.

"We as a company are so proud of how the Joseph Bartholomew course finished out," Duininck says. "Garrett Gill, Jon Schmenk, and Kelly Gibson did a fabulous job of tailoring this course to fit the property and the needs of the community. The course is going to be a real anchor, and hopefully rejuvenate the historic Gentilly community of New Orleans." GCI

"Having built courses in New Orleans in the past there is one thing you need, and that is patience."

- Judd Duininck, Duininck Golf



moves slow and dries slow. In other parts of the world a golf course contractor can use large excavators, scrapers and haul trucks. In New Orleans you get to use Marukas with a half load on them. Like they say, 'patience is a virtue.'"

Finding qualified contractors to meet the Disadvantage Business Enterprise requirements was difficult for Duininck. An earthmoving subcontractor had to be replaced and their work was completed by Duininck to keep on schedule. The additional costs were not anticipated, but had to be assumed.

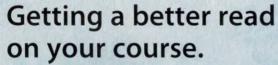
The first cap sand contractor had to be replaced, as well. Spot checks on truckloads of sand were coming up short of what was billed. Considering more than 50,000 cubic yards of sand was used, losing more than a cubic yard of sand with each truck would have led to a shortage of more than \$75,000 worth of material. Duininck tapped a prior relationship with a contractor and negotiated

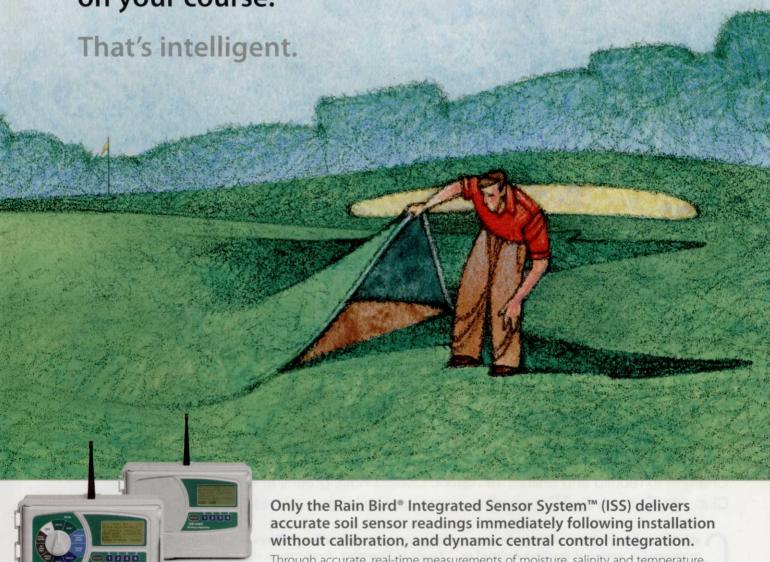
team did an outstanding job of fast-tracking the schedule. We were still able to successfully plant the course over the summer and grow it in for a fall turnover to the City of New Orleans," Duininck says. "With the city having a construction management firm to manage all of the reconstruction projects in New Orleans, and funds coming from three different sources – FEMA, City Block Grant Funds and Capital Projects – getting any requested changes through the system took longer than anticipated."

Throughout the process, Duininck Golf was to report to one individual – the construction manager for the City of New Orleans. From the pre-bid to final acceptance, five different project managers were assigned to the project. Gill and Habicht were diligent in keeping accurate communications and Habicht would spend hours getting each new construction manager up to speed, which kept the project moving forward.

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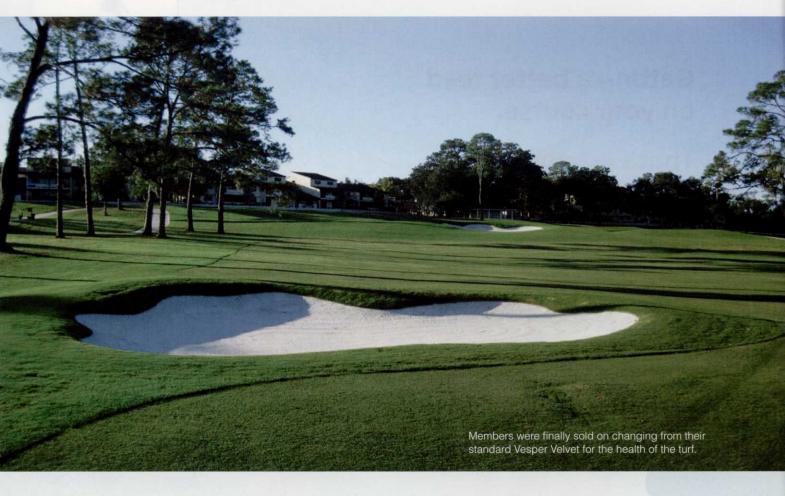




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No small task

Charged to rebuild and restore 19 historic Donald Ross greens at Vesper Country Club, MacCurrach Golf Construction meets the challenges. BY TRENT BOUTS

able TV is rife with shows subjecting the cast or contestants to tyrannical deadlines designed to incite drama, conflict and, most gratifyingly for those of us watching, failure. To further fuel the potential fires, some throw in wildcard elements along the way. By those measures, you could excuse Alan MacCurrach for wondering if his work at Vesper Country Club was secretly filmed for an episode of Extreme Makeover: Golf Course Edition.

MacCurrach's charge was to rebuild to USGA specs and restore to the original Donald Ross contours 19 greens as well as rebuild 60 bunkers, some tees and a practice area – in 62 days. That's like asking for an archeologist's touch at NASCAR speed and in fading light.

Vesper Country Club sits in the heart of the Merrimack Valley in Tyngsboro, Mass., where the time between sunup and sundown effectively halves from August to November. Temperatures also slip back and any rainfall sticks around longer too, all contributing to what MacCurrach describes as a "disintegrating window of opportunity."

The site is bound on two sides by the Merrimack River, demanding an acute degree of environmental care. Silt fences in swales and run-off areas were installed and drain lines terminated in underground chambers instead of aboveground, which limited any surface drainage into the river.

A bridge serving half the course – on an island – could only shoulder light loads slowing what could be hauled to and from. Those "knowns" were so imposing that four of seven contractors that the club met with were "very concerned" and one declared point blank that the timeline

"couldn't be done" as written. In fact, even Brian Silva, the golf course architect on the project, felt the same way.

Then there were the wildcards, including the fact that no fewer than four of the significant players in the day-to-day operations all shared the same first name. Getting your Chris's crossed can cause serious issues when they include the construction superintendent, the golf course superintendent and two assistant superintendents. Sometimes there was even a fifth Chris, a tree man, on site.

The real shocker came when, without warning, the sod supplier disappeared and went out of business mid-way through grassing the new greens. After a day of no one picking up the phone, golf course superintendent, Chris Morris, drove through the night to New Jersey to find Vesper's designated acreage bare and not a soul around. "Eventually the mechanic turned up and said the boss was gone and that he wasn't coming back," Morris recalls.

But MacCurrach is fond of saying that any construction job is "won or lost in the first 10 percent of the timeline." So, true to his word, by the time the sod farm went belly-up and daylight shrank by half, the victory at Vesper Country Club had effectively been secured. "It was a huge issue at the time," MacCurrach says of the sod debacle. "But no one went into a big panic mode. We were able to respond properly because we weren't already strung out with four or fingers plugging other holes in the boat."

Despite the hurdles, known and unknown, and a wafer-thin margin for error, the greens were completed ahead of schedule. Everything else was on time and the \$1.4-million final bill for the entire project came in more than \$80,000 under budget.

It may have been a race to meet the deadline but it was never a rush. "They were fast but extremely efficient," Silva says. "And the work was performed spectacularly well. When they were done, you couldn't tell whether it took the 43 days it did or four months." Vesper's superintendent was face-to-face with the MacCurrach team every hour of every day. "I've got to say that, to me, it didn't look like they were cracking a sweat at any point."

"There was almost a surgical expertise," says Dr. Paul Kaplan, club president at the time. In fact, more than meeting deadlines and saving money, Kaplan says that "most impressive" to members was the fact of "such minimal damage" to the rest of the course. He points out that MacCurrach also took care to blend renovated areas with existing turf by running sod lines to fixed edges such as cart paths or fairway lines.

Altogether, that is why Mac-Currach Golf Construction is a winner in the legacy category of this year's Builder Excellence Awards. "In our eyes they deserve any and all the accolades they receive. They were extremely talented, professional and delivered everything they promised BUILDER: MacCurrach Golf Construction

PROJECT: Vesper Country Club, Tyngsboro, Mass.

COST: \$1.4 million

TERM: August 24, 2009 to November 6, 2009

ARCHITECT: Brian Silva

SUPERINTENDENT: Chris Morris

NOTABLE NOTES: Upgraded greens for the first time in the club's 134-year history, yet met the challenge of rebuilding the greens precisely to Donald Ross' original contours.

and more," Kaplan says. "They needed to complete a green every three or four days. I mean, that's a pretty aggressive schedule. And they were done early, which is crazy."

Vesper Country Club has roots back as far as 1875 and was a charter member when the Massachusetts Golf Association organized in 1903. The club hosted the first Massachusetts Open Golf Championship two years later and it is a high point of pride for the club that the inaugural



Facing a deadline of 62 days, preparation was the most important step of the renovation.

legacy award winner 2011 Builder Excellence Awards

"We were contracted something like four or five months ahead of the project start. With that sort of notice you can truly allocate your resources."

Alan MacCurrach, MacCurrach Golf Construction

winner was Donald Ross. He would be back 14 years later to design nine new holes and redesign the existing nine on Tyngs Island.

With a history like that, it's hardly surprising that the idea of a full-scale greens renovation worried more than a few of the members, some of whom were also very attached to the grass itself. The Vesper Velvet bentgrass, developed at the club more than a half-century ago by longtime superintendent Manny Francis, who reportedly chewed grass blades to gauge acidity levels, commanded quite a reputation in the northeast in its day.

But times change and not even the old superintendent's elixir of topdressing with sawdust could help the Vesper Velvet keep pace with newer varieties. Poor drainage and compacted soils didn't help either. "When they were good they were great," Kaplan says. "But we only had great greens three or four weeks of the season and the rest of time they were marginal at best."

Even so, convincing members, particularly the older set, to make a switch was a project in and of itself. The prospect of a renovation was talked about for several years but always met with resistance. The turning point came, Kaplan says, when members were shown roots from their greens and from a chipping green converted to A1/A4 bentgrass several years earlier. The A1/A4 had roots four to five inches long while the Vesper Velvet was wheezing by on lifelines less than an inch deep. "After that it was easy sell," Kaplan says.

At least until the economy collapsed just weeks later. Then the "easy sell" almost gave way to a potentially-crippling case of buyer's remorse. But key players at the club thought hard and decided that recessionary times could in fact help them, as Kaplan says, "get the most bang for the buck." The thinking being that competition for work would attract more qualified contenders while pushing pricing in the opposite direction. That view and long-term aspirations prevailed and on August, 24, 2009 construction began.

Truth be known, MacCurrach stretched

the 62-day window. A construction superintendent had been on site daily for two weeks before anything was disturbed. Because of that aforementioned bridge's weight limitations, a lot of materials like greens mix, rock, bunker sand and sod were delivered in halfladen trucks ahead of time. In fact, most of the materials required for the entire project were on site and quality-tested before day one arrived. Equipment, too, was in place, checked over and ready to roll.

But perhaps nothing ensured the success of the project more than the collaboration between the club and the contractor.

"We were contracted something like four or five months ahead of the project start," MacCurrach says. "With that sort of notice you can truly allocate your resources. The beautiful thing about that sort of notice is that there's no reacting. You can plan and make all your management decisions proactively."

MacCurrach also pays tribute to Kaplan, who served in a bridging role between the contractors and the members. According to MacCurrach, there was no half-load on that bridge.

"It's a tough, tough job but he did it awfully well. Not good, not decent. He was fantastic," MacCurrach says. "Having someone who does a good job in that role is a common denominator in all really successful projects. Don't get me wrong, [Kaplan] was no pushover. He held our feet to the fire. I didn't like him every day, I promise you."

From Kaplan's point of view, his job was made easier because the MacCurrach team was so direct and upfront all along. "I remember them coming up to me and making it really clear that for the first two weeks it would look like a war-zone," he says. "Their superintendent, Chris Kleinsmith, said, "For the first two weeks you can't say anything to us. You'll just have to trust us.""

One of the factors strengthening that trust was the tanking economy that had threatened to kill the project before it started. By the time work began, MacCurrach's workforce, which

topped 300 during the boom years, had been whittled to less than 100. But those who were left were all what MacCurrach describes as "sergeants, lieutenants and colonels."

"We don't have as many soldiers now but everyone in the entire company is absolutely willing to play that role when it's needed," he says, and Vesper Country Club was the beneficiary.

As much as the giving up the Vesper Velvet was an issue for members, their biggest concern was retaining the integrity of the contouring on the Ross greens. The club paid for the greens to be scanned with digital terrain modeling which uses a variant of laser technology to capture contours in data form. Armed with that data, MacCurrach was able to reproduce the green surfaces to within the order of 1/16th of an inch.

A similar miniscule margin for error was applied to the project budget and accounting. MacCurrach employed a GPS device on site every day to provide almost real-time tracking of progress. As items were built the master as-built was updated and quantities recorded so the club and the architect could make adjustments, effectively on the fly. Through weekly construction meetings, they knew how much was being achieved for what was being spent all along, and because some of the work turned out to less expensive than projected those funds were able to go towards tweaks elsewhere.

There's a long-standing theory in business that the best way to attract new customers is to invest in marketing or improving your product when everyone else is sitting on their hands, something that tends to happen in a recession. Vesper Country Club's experience since the renovation bears that out.

Kaplan says membership, which had dropped below 300, was now on the edge of capacity at 350.

"When the golf course is bad it seems like everything else is bad," Kaplan says. "You get more complaints about the dining room, the pro shop, you name it. But now everything is great. The golf course is spectacular."

For the record, Silva steadfastly maintains that he was correct in his original declaration that a project of this scale just couldn't be done in the 62 days allowed.

"They got it done in far fewer than that so, you see, I was right," Silva says. "They couldn't do it in 62!" GCI



Not only was Frontier Golf restricted to nine holes each season, the holes were grouped by proximity rather than by sequence.

Precision and strategy

Frontier Golf sculpted Donald Ross's original vision to recreate the characteristics of Army Navy Country Club when it was first laid out in 1924.

BY TRENT BOUTS

iven a site so steeped in history as Army Navy Country Club in Arlington, Va., a desire to restore the golf course to a showpiece of the game's golden era makes perfect sense. Presidents have played here. Some, like Eisenhower, Nixon and Kennedy, were members along with icons of the nation's military — think LeJeune, Nimitz and Bradley.

The same soil also bore the footfall of Union soldiers bringing wounded to a hospital from the Battle of Bull Run. Convinced of a long campaign ahead, which we know as the Civil War, Lincoln ordered the land, boasting some of the highest ground outside the capital, be fortified. Today, only sparse remnants of Fort Richardson's parapets and ditches remain.

The broad sweep of that past surely resonates with the veterans and members of the armed forces who enjoy the Arlington facility's 27 holes. But while it factored little into how Frontier Golf went about renovating the golf course, it is fair to say that the complex nature of the project very much demanded military precision and a general's command of strategy.

From 2007 to 2009, Frontier would have – from mobilization

to grassing – just two months each summer to complete nine holes. That left 18 holes open each season which was doubtless welcomed by members but a major constraint on how and when Frontier moved about the property. The nine holes they could work on each year were not sequential, either. Rather, they were in clumps chosen more for their proximity to each other.

That meant Frontier worked like a Hollywood director shooting scenes by location instead of the narrative. The trick then is making sure that the jumble that's been created fits and flows seamlessly once order is imposed. Nuance and tone matter as a story unfolds just as they do on a golf course, particularly one

legacy award winner 2011 Builder Excellence Awards



With a heavily varied history, the golf course hid underground mazes of old irrigation lines, power cables and terra-cotta piping, complicating infrastructure renovation.

designed by Donald Ross.

At Army Navy, the goal was to recreate the characteristics of the course when it was first laid out in 1924 in the midst of what is often referred to as the Golden Age of golf course design. The club retained Pinehurst, N.C.-based architect Richard Mandell for the project, which suited Frontier just fine given that they had worked extensively and successfully together in the past.

"The logistics were a real challenge for them," he says of the hurdles Frontier had to overcome this time around. "The budget was tight but the real challenge was being so limited in where you could move and how little disturbance was allowed." Mandell likened the myriad constraints to "working in a straightjacket."

"And you're working on pieces of different nines at the same time," he says. "But then to float everything together so well, like they did, they just did a wonderful job."

Some of the straps on that straightjacket included the fact that golfers were always playing nearby and the rest of the club continued to function as normal. That limited what traffic could move where, when and at what speed. Residential neighbors also meant the golf course was subject to restrictions on noise and working hours.

But perhaps the most visible restraints came in the form of erosion fences. The Arlington facility - Army Navy also has 27 holes in nearby Fairfax - sits astride a stream that runs through the base of a valley. Pretty much every hole drains towards the stream. Some points are as much as 140 feet higher, which meant Frontier had to work with earthmoving's version of kid gloves and devote considerable resources to maintaining that fencing. "It had the makings of an erosion control nightmare," says Frontier's president and CEO, Nick Scigliano.

Nowhere near as obvious but just as constricting was the fact that the irrigation system had to remain operational throughout, even while it was completely replaced. Scigliano believes his company's ability to piece together that jigsaw itself was critical. Indeed, he says, their ability to handle every aspect of the work in-house was a major reason for finishing on time and in line with the \$5 million budget.

Legacy Award Breakdown

BUILDER: Frontier Golf

PROJECT: Army Navy Country Club,

TERM: Summer 2007 to June 2010

ARCHITECT: Richard Mandell,

ASGCA

SUPERINTENDENT: Bob Wilbur

NOTABLE NOTES: Faced with a number of restrictions and challenges, the builder split the project into three phases, kept the course open throughout the duration of the project and finished according to the original timetable.

"We had tremendous autonomy all along because we didn't have to rely on contractors," he says. "It was a total renovation, most everything was touched but we did everything, from grading to sodding, to asphalt paving and drainage up to storm drains as big as 48 inches. But the biggest one, I think, was being able to do our own irrigation. We could be very flexible where we focused our resources. If we had a wet day, and that last year we had a lot of rain, we could move onto something else."

In such tight windows of operation each year there was minimal room for lost productivity, although there was plenty of opportunity for it. Built so long ago and tinkered

REVOLUTIONARY CHOCKES



legacy award winner 2011 Builder Excellence Awards



Scigliano: "In my experience, every project that doesn't go well is the project when the clients are met with surprises. In this work I think too much information is a good thing."

with ever since, the golf course also served as a kind of graveyard for old irrigation lines, power cables and terra-cotta piping, none of which were ever recorded on any as-built map. That was where the tenure of golf course superintendent, Bob Wilbur, and frequent site visits by Mandell proved invaluable.

Wilbur has been at Army Navy for 32 years, the last 22 as superintendent. With that experience he was able to help Frontier's crew make sense of infrastructure they "discovered" as they went. With Mandell on site weekly, Scigliano says, "We were able to quickly make decisions and get approval to move forward and remedy situations without delays. Richard would make decisions right then, there was no, 'Oh, let me think about it.' He knew what he wanted and he'd make the call."

Scigliano also credits Frontier's project construction superintendent, Doug Show, who was also the main man on the Olympic and Bedford Springs projects. "He's our top guy," Scigliano says of Show. "We've done a lot of work with (Mandell) before, so Doug's very familiar with his processes and that helped us make up some ground on the greens where we probably underestimated the amount of work involved with the erosion control."

Another reason why no hiccups ever became full-blown indigestion was that, as is his habit, Scigliano talked up grim along with the glowing before a speck of dirt was even moved. "I always get the 'what ifs' out there on the table so no one is surprised," he says. "We talked at great length before we put a shovel in the ground and I painted a more

difficult picture than we were probably going to encounter. People always tend to look at me after those meetings and think of me as really pessimistic and negative. In my experience, every project that doesn't go well is the project when the clients are met with surprises. In this work I think too much information is a good thing."

There was a lot to talk about. On top everything cited above, the project also called for Frontier to:

- Install new drainage for all 27 holes;
- Reroute and redo cart paths;
- Replace turfgrass in out-of-play areas with native; vegetation in no-mow zones;
 - ·Demolish and rebuild existing bridges;
 - •Replace the old pump station;
 - ·Remove a number of hardwood trees;
 - ·Regrass the entire course and
 - •Rebuild every bunker.

That last element was a big one. The scalloped or jagged edging Mandell called for to elicit that feel of an older time required "a lot of pick and shovel" work, Scigliano says. "It was simply too intricate to use any kind of machine and Richard was very particular about how he wanted those bunkers to look."

Another aspect of the project that could have caused some frayed edges of its own was the personnel rotation on Frontier's end. With the volatile nature of the industry over the past few years, Frontier used three different crews in each year of the renovation. Smaller crews in 2007 and 2008 were replaced by a much larger crew of about 50 people under Show's command in 2009. That workforce enabled

Show to complete the final stage and also attend to the kind of detail necessary to blend everything that had been done previously.

Army Navy was able to provide valuable constants in superintendent Wilbur and director of golf, Greg Scott. Mandell says Scott's work communicating with members over the course of the renovation was "fantastic."

"Greg did some value engineering on his side too, and if not for him working so well with the members to explain the rebuild, the project might never have gotten off the ground," he says.

Scigliano says there were times when it felt as Wilbur was on Frontier's staff. "He was so tremendously helpful," Scigliano says. "Sometimes you run up against a situation when something comes up and the attitude from the club side is, 'Hey, this is your job, it's your contract, it's your problem.' If you start with that kind of approach, where both sides start guarding their territory and their dollars, then you can become isolated very quickly. Not in this case. Bob was great to work with. He was a real problem solver. He seemed like he was having fun and our guys enjoyed working with him."

After so long tending the property, it would have been reasonable to expect Wilbur to almost resent these outsiders coming in to tear up what he regarded as a "really nice old course" - especially when they were going to be moving in and out over three years. Today, Wilbur admits to having some "apprehension" at the time. He just as readily admits his fears were ill-founded. "It was a great experience and it seemed like their people got better and better each year," he says. "We just worked great together. There were no hidden agendas, no head-butting, no egos involved. If we had concerns we just worked it out. Nick (Scigliano) and Doug (Show) were very open and willing to resolve and issue and there was never any nickel and diming."

The end product has delighted the Army Navy membership numbering about 2,400 across the Arlington and Fairfax facilities. Although with families included, the number of golfers is closer to the 4,000 bag tags the club distributes. By Wilbur's measure, the Arlington golf course is every bit the facility to do justice to a new \$50 million clubhouse currently under construction.

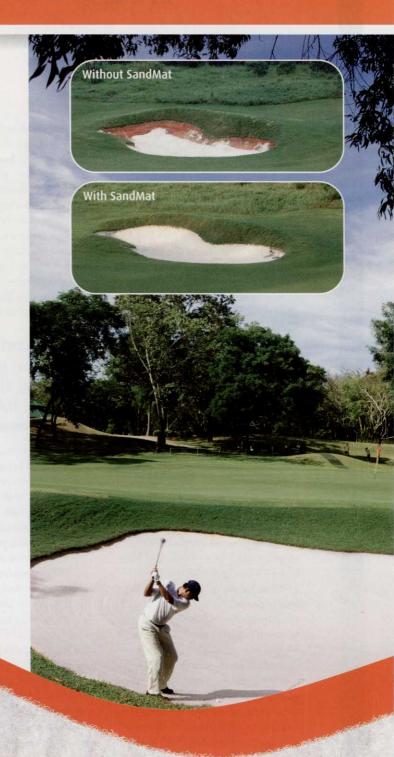
"The golfers love it. They absolutely love it," he says. "I never thought I could feel any better about this golf course than I did before but, wow, it is really something special now." GCI

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IRRIGATION ISSUES



Brian Vinchesi, the 2009 EPA WaterSense Irrigation Partner of the Year, is president of Irrigation Consulting Inc., a golf course irrigation design and consulting firm headquartered in Pepperell, Mass., that designs irrigation systems throughout the world. He can be reached at bvinchesi@irrigationconsulting.com or 978/433-8972.

HOW MANY ROWS?

hen you think about irrigating a golf course, the type of irrigation system is many times characterized by fairway row spacing – single row, double row, triple row and multiple row. It is assumed that the more rows, the more coverage, the higher the cost and the more sophisticated the irrigation system.

Although some of these generalizations may still apply, characterizing the irrigation system by the number of fairway rows is no longer an accurate description of the total system.

For many years single-row systems were the norm, but due to poor efficiency and uniformity they are pretty much obsolete.

After single row, there was double row which made the fairway watering more consistent, and then triple row which covered more of the rough.

As the number of rows increased, the sprinklers spacing generally became smaller, the flow per sprinkler less and, in some cases, the sprinkler operating pressure dropped. For example, a single-row system may have had a 90-foot sprinkler spacing with a 91-foot throw at 100 psi using 56 gallons per minute. Changing to double row, the spacing drops to 75 feet, pressure to 80 psi and flow to around 33 gpm per sprinkler. Triple rows commonly have spacings of 65 feet, operating pressure as low as 60-65 psi and 22-gpm flows. Costs increase as there are more sprinklers, pipe, swing joints wire and controllers. There is also increased coverage both in terms

of total irrigation coverage and effective irrigation coverage.

Referring to Table 1 you can see that as the rows go up so does the overall and effective coverage even though the spacing is getting smaller. The table assumes the sprinkler throw is the same as the spacing and effective coverage is 60 percent of the sprinklers. Any sprinkler has 60 percent effective coverage, which you may remember from being taught in irrigation class or a seminar.

There are five sprinklers in a row, but they are not spaced the same distance apart. The other interesting fact is that a five-row system typically has less total and effective coverage area than a three-row system even though there are more sprinklers. Intuitively, it doesn't make a lot of sense.

These days you are also see more customized sprinkler layout. Systems may be fairways-only which is sort of a triple row, but might be a double row or more a combination of both. On a

"As a superintendent, manager or owner it is important to understand the traditional ways of talking about the scope of irrigation systems coverage has changed."

The above is easy to understand, but quickly is becoming history. Today's irrigation systems are characterized more as "wall-to-wall," five-row or something else. The traditional descriptions are not applicable.

Wall-to-wall is pretty simple. The irrigation system is covering everything from property line to property line. If it's planted, it's irrigated. I guess "property line to property line" is too much of a mouth full. Five-row would lead you to believe there are five rows of sprinklers as opposed to one, two or three, but in reality there are only three. A five-row system is actually used to describe a system that has separate ins and outs at or close to the fairway cut so the fairway and rough can be irrigated separately.

links-style course, you might have a system that is natural or fescue areas and the rows can be two, three, four or more. Additionally, with these systems, the layout may vary from hole to hole. One hole could be several rows of sprinklers, while another only two rows or a hole will have different numbers of sprinklers across it as it plays tee to green depending on width.

As a superintendent, manager or owner it is important to understand the traditional ways of talking about the scope of irrigation systems coverage has changed. More definition and understanding of exactly what you want is needed.

Make sure your irrigation designer is listening and understands and comprehends what type of coverage you want for your golf course. Rarely anymore does one size fit all, and with today's sprinkler and control equipment there is really no limit to how you can have your irrigation system laid out, both for the whole course and for each individual hole. GCI

TABLE 1

Sprinkler Spacing	Irrigated Width	Effective Width	
Single Row – 90 Feet	180 Feet	108 Feet	
Double Row – 75 Feet x 75 Feet	225 Feet	159 Feet	
Triple Row – 65 Feet x 65 Feet	260 Feet	208 Feet	

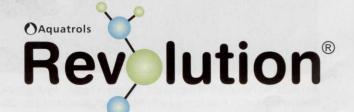
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never quite get it right.









BE WATER WISE

As costs rise, it pays to be smart about using water on your course. Turf pros share how they keep their course budget strong while maintaining healthy, well-watered turf.

by Kyle Brown

FARMINGTON COUNTRY CLUB. One of the biggest parts of disturbing the turf to improve its health is also disturbing it as little as possible for play, especially when it comes to deep-tine aerification.

Brad Graves, golf course equipment manager at Farmington Country Club in Charlottesville, Va., knows the pressure from members all too well. But he doesn't lose sleep over his 27 healing A4 greens. He uses a Wiedenmann GXi 8 HD throughout the course and says he sees playable greens faster than his members can really complain.

"You always want to make sure you impact the golf as little as you have to," says Graves. "I don't think we've heard any complaints. We'll run the 5/16 tines and then roll behind it. You can see the holes right then, but after three or four days, they've filled in already."

Graves runs the 5/16 tines a few times during the season and really opened up the turf in the first part of the year with half-inch tines. He'll run another round of the half-inch tines in September to finish out the season. The machine's turfguards kept Farmington Country Club's greens from getting torn up any more than necessary.

"One of our biggest concerns initially was with the turfguards," Graves says. "But we've had no issues whatsoever. Coming into a contoured green now, we don't have to be as nervous. The biggest problem we've really ended up

dealing with were just the tire

The only other issue Graves has comes from a lack of operator visibility to the tines themselves.

"If you have greens that have a lot of rock on them, that would be something that you'd have to notice," he says. "If you're running a deeper tine on this machine, you have to pay attention to it and raise it a little higher to make sure it clears."

Besides the visibility, training has come fairly easily for the crew, he says. Graves runs the machine at about a five degree offset to help the tines clear the edges better, which he sets through one of the crank screws.

"That's probably the biggest training issue we've got - making sure that when they stop and start they're at the right height," he says. "With the tractor we have you have to raise the machine just that little bit higher than what I might say a mechanic might be comfortable with to start. Otherwise, you just have to be at the right height to make sure you're not dragging the tines across the front part of the collar. It's almost like a soothing, smooth ride."

As the equipment manager, what really stands out to Graves is how easily the machine is repaired and adjusted.

"Tine replacements are easy," he says. "You're going to hit a rock and you're going to bend a tine. That's something we have to look for as mechanics and operators. You open that big hatch up and there's all this nice room in there you can move your hands around in nice and easily. Everything on the Wiedenmann is on the outside of the machine, which is extremely nice."



At Utrect de Pan in the Netherlands, the soil is heavily hydrophobic. To test their wetting agents, they treated one half of their fairway with Revolution, maintained as usual and then photographed the results.



Though it holds up play, deep tine aeration is important to help water move freely through the soil profile.

But for he and his crew, it keeps coming back to how quickly the turf heals from aerification, getting back to regular, stronger growth.

"Even with the half-inch tines, there was minimal disturbing of the turf," he says. "With the 5/16, you could still see the holes, but they

were already covered in three days."

NASHAWTUC COUNTRY CLUB. It's dry at Nashawtuc Country Club, in Concord, Mass. The weather's been oppressive to the turf of the 18-hole, 50-year-old private course throughout the summer.

But Greg Cormier, superintendent, can stand the heat. He likes to keep his bent *Poa* tees, greens and fairways a little drier, keeping his distance from summer stress on the turf while avoiding damp greens and surface puddles from overeager watering on saturated soil. A wetting agent program is a part of what lets him ride comfortably between those extremes.

"It basically allowed me to keep my greens a little firmer," says Cormier. "You can really see the effects on the green. It just sucks the water down into the profile. You can't make a puddle on the greens at all. It really makes the best of our hand watering of the greens, which we do pretty exclusively."

Cormier uses Cascade as the biggest part

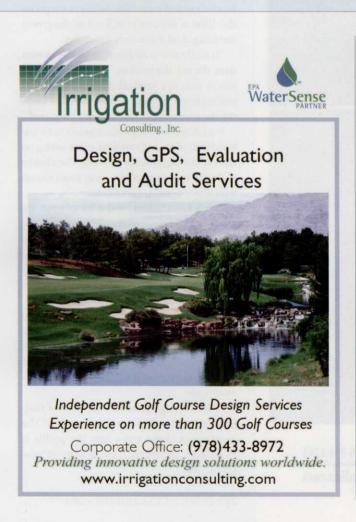
of his program, though he does also work in Duplex, Magnus and Revolution.

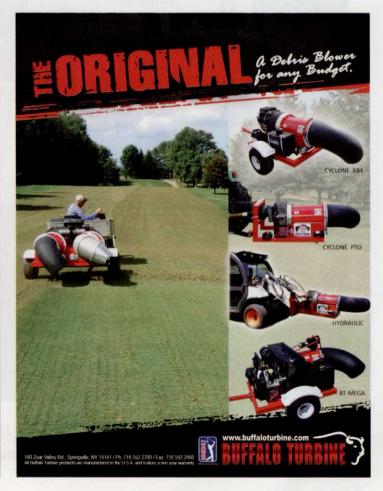
"It doesn't take as much water to wet the soil down," says Cormier. "It makes your greens drier all over, but it doesn't take much water to rewet. It gets the soil to where it looks dry – if you took the soil and looked at the profile, it'd look really dry and firm. But if you'd squeeze it, you'd see how firm it was and realize there's a lot of moisture in there."

With the weather already doing a lot of the work for him, Cormier wouldn't have to let the turf go far to reach dry play – but the difference is being able to get the benefits of drier greens while still maintaining the health of his stand.

"You just don't get the deep ball marks where they hit. You get little tiny bruises sometimes," he says. "After a rainstorm, the greens are noticeably firmer because the water just sucks down into the profile rather than saturating that top inch."

Cormier works the wetting agent into the turf every four weeks during the season, but











Left: Dyed water shows wetting agents pulling water into these soil samples. Center: Deep tine aeration disturbs the turf, but it doesn't have to keep it out of play for long. Right: Wetting agents keep the water moving through the green, keeping the turf firm.

he's planning on shifting it back to every three weeks to give himself a little more control over the moisture in the profile.

"We've kept on it even through the dry weather. A lot of guys wouldn't do that when the weather is already so dry," says Cormier. "But I like it. I'd rather be dry than wet. You just don't know when you're going to get two inches of rain in the summer so you have to be ready to make use of it. As dry as we get on the driest of days, we're still out on the greens watering. And it can only get so dry.

"It really shows its benefits on the wettest days during the season," he adds. "When you're wet, the product definitely helps by pulling water straight into the soil and keeping the green firm. You can't dry a wet turf."

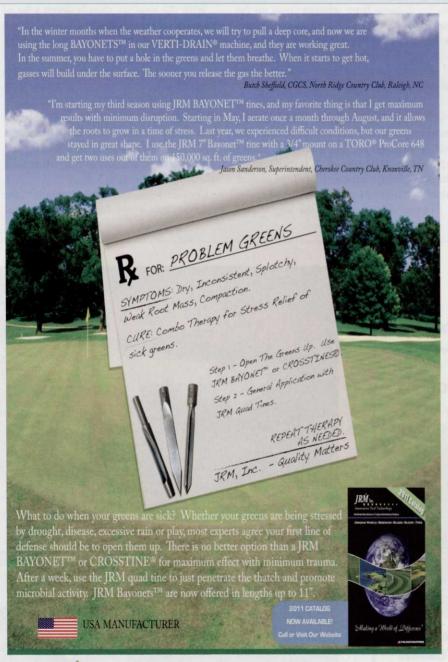
With Cascade, the product needs to be watered in as soon as it's applied, since sitting on the surface can damage the turf. The chance of danger to the turf scares away some supers who might benefit, says Cormier.

"It's a hot product, and a lot of guys are scared of it because of that," he says. "If you can't water it in right away, that stuff is going to burn the turf. You need to know that you're going to be able to water it in immediately. As long as you read the label, you shouldn't have a problem."

Though the members don't notice too much of a difference when the weather is as dry as the turf, once it rains, they comment to Cormier about the firmness of the greens after a storm, thanks to his water management style.

"The wetting agent is a big part of that. Just after a rain, they stay firm," he says. "The penetration of the water into the profile is great. You can just see it going right into the green." GCI

Kyle Brown is GCI's associate editor.





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Travels With **Terry**

Globetrotting consulting agronomist Terry Buchen visits many golf courses annually with his digital camera in hand. He will share helpful ideas relating to maintenance equipment from the golf course superintendents he visits — as well as a few ideas of his own — with timely photos and captions that explore the changing world of golf course management.

THE CORSETTI

This Gandy Model #36H13 36-inch-wide drop spreader/seeder is outfitted with two Fox Valley Easy Marker spray guns. The operator sprays either side of the seeder with marking paint to identify the winter overseeding delineation around the greens, bunkers, etc., with ease. Half-inch diameter electric conduit was flattened 1.5 inches long from both ends on angle with a hammer, 1/4-inch bolt holes were drilled on both ends of the conduit and on the back end of the seed hopper. The holes were already drilled on the bottom of the paint guns and a %-inch hole was drilled in the gun handle being careful of the paint trigger mechanism. The gun handles were bolted to a %-inch-by-20-inch-long threaded rod that was held in place on the seeder handle with a threaded 3/8-inch "U" bolt. All of the materials were in inventory and it took about one hour to build. This idea was conceived by former superintendent Scott Grumman and it was designed and built by Joe Corsetti, equipment manager, at The Members Club at Grande Dunes in Myrtle Beach, S.C.





PAINT/PIGMENT TURF APPLICATIONS

Rob Vaughan, superintendent at the Brunswick Plantation and Golf Resort in Calabash, N.C., has perfected the art of applying paint to the greens, tees and fairways instead of winter overseeding the Bermudagrass turf, for the overall health of the plant. This application technique has earned Vaughan a reputation among his peers as "Mr. Paint." Vaughan has tested every paint/ pigment on the market for the past three years and his favorite one does not turn the turf blue. The \$300 OEM ceramic/carbon seal on the 175-gallon Cushman Spraytec sprayer pump was removed and replaced with a \$4.30 NAPA oil seal so the paint would not damage the pump. Paint applications first occur in mid December while the fairway turf is semi-dormant and again in January. Three to five lighter applications are applied to the Tifeagle greens. Tee Jet Nozzle model No. 8008 sprays the fairway base coat immediately followed with a No. 8004 nozzle that applies the finish coat. These are mounted together on a Quick Connect "Y" connector using 40 gallons of water per acre at 40 psi at 4 mph. Delavin No. 6 single nozzles are used on the greens at 50 gallons of water per acre at 50 psi at 4 mph. The green and fairway nozzles and "Y" connectors were less than \$150 and required less than 30 minutes of labor time to install. GCI





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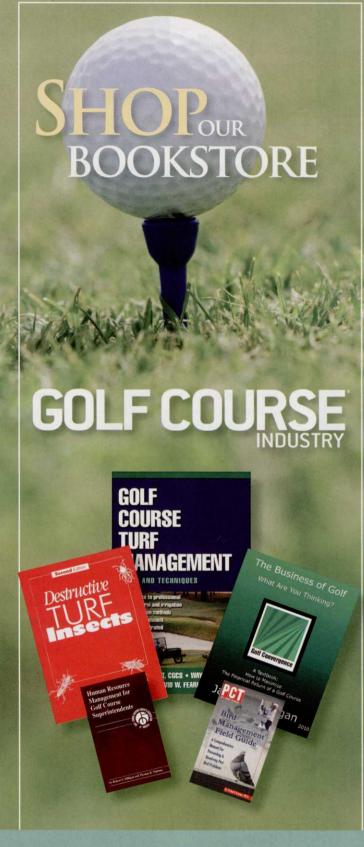
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X30M GA

SH*T JONESY SAYS

just shipped my oldest son off to college. I was tapped out when it came to getting him any kind of a fancy special gift to commemorate this important transition in his life. So, I got creative and decided to give him a little of "me" instead.

I sat down and wrote out a list of sayings and advice on a single sheet of paper and titled it, "Sh*t My Dad Says..." I thought of all the things I'd say to him as he faces challenges every day and has to begin to live independently. I put it in a cheap frame and gave it to him to put in his tiny dorm room. Mike eyed the thing but hung it over his desk and promised he would glance at it occasionally.

Here are a few of the tidbits I offered my son as he begins his college career — and takes his first steps toward the real world:

- Make good choices. You know what's right.
- Eat the elephant one bite at a time.
- Make a to-do list every morning.
 Update it every night.
- Stand by your beliefs and support them with facts.
- · Don't procrastinate! Do it now!
- Always be honest. The truth will set you free.
- Don't hide bad news...it just gets worse.

I realized later there was another piece of advice I should have included: Make networking a priority every day.

At 18, networking is largely about Facebook friends and reconnecting with high school buddies for a beer. By your mid-20s, networking is often the difference between a stagnant career and a dynamic one. In middle age, networking is quite simply critical to survival — particularly in economic times like those we live in today.

Here's how it should work for you:

GEARING UP. Establishing yourself on the first rung of the ladder is tough these days. Good assistant's positions do not grow on trees anymore. So, you need a network of folks who can offer advice and keep their ear to the ground for you. Try this approach:

• Fearsome Foursome. Pick four leading supers you met during school or who are studs in your area. Set up a 45-minute meeting with each of them to pick their brains and tell them how much you admire them. Butter them up like an Eggo waffle before asking them to be one of your mentors. They LOVE being mentors.

Keep in touch with an e-mail every six weeks or so or forward them an

"I'm an innovator and a top professional and you should recommend me for available positions." You can be candid and share insights about what you're doing at your facility and you can also be far more technical than you'd ever be on your "public blog."

ESTABLISHED PRO. At this stage, you've reached near to the top of the ladder but you're wondering about your job security due to financial woes at the club, a new boss or some other wildcard.

The key is to be in touch with the top people in the industry who are likely to be in the loop when those six-figure jobs open up anywhere in the country.

• Rolodex Roulette. Build a "tickler" list in whatever calendar software you use to have a planned, strategic

Networking is quite simply critical to survival — particularly in the economic times like those we live in today.

interesting article or blog post. Make sure to communicate in the English language instead of "txt spk." All it takes is a little "touch" every once in a while to keep yourself top of mind with these busy but connected leaders.

RISING STAR. You're halfway up the ladder but perhaps stalled in an assistant's position in the toughest job market in decades. Try this:

• The Secret Blog. A maintenance blog is nearly required these days for those who want to be seen as effective communicators with members/golfers, but a growing number have secondary blogs to communicate about their practices and professionalism to colleagues and potential employers. The theme of your "secret blog" should be,

approach to keep in touch with potential allies if you need to make a job change. These might be superintendents, consultants, industry people... even media clowns like me. All you're doing is getting in touch on a regular basis and keeping the lines of communication open with these folks.

Spin the wheel on a regular basis and you're only making a few calls every month, but the impact will be huge when one of them keeps you in mind for a great new job.

So, perhaps you too will decide to frame this advice and hang it in front of your desk to remind you of the value of networking.

Better yet, pick a few tidbits and use them now. It's never too early or too late to work on your network. GCI



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