

Issue 12 | Fall 2012

# BY DESIGN



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# New perspectives

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alternative ways to play its course

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**Count on it.**

For those of us who have played golf most of our lives, it isn't easy to remember just how hard learning the game can be, especially for those who didn't come to it in childhood. On the flipside, though, when you sit down and think about what is involved in the golf swing—the distance traveled by the clubhead, the speed at which it moves, and the precision with which it has to strike the ball in order to make a good shot—it's hard to understand how we ever hit a fairway, let alone a green!

After a day on the course when good shots have been few and far between, we sometimes forget this, but golf is primarily a recreation, and as such a means of having fun. Plenty of people who'll never shoot a round in the seventies (unless it's a nine-hole round!) love golf, but there's no doubt that a basic level of competence is pretty much essential to getting enjoyment out of the game. The challenge of golf is a key part of its appeal. Nothing truly worthwhile ever comes easy, and that's certainly true of golf, but it is also true that many potential players give the game up before reaching a level at which they can have fun. Solving this paradox is vital for golf's future. Many, perhaps even most of those reading this will have learned golf as a child, with a parent, but in both old and new golf markets, attracting adults to the game is essential too. Our cover story on the Island Hills Golf Club in Michigan is an inspiring tale of how one course is making golf appealing to new players; the game needs more of these.



Yours sincerely,

Rick Robbins  
Vice President  
American Society of Golf Course Architects

## BY DESIGN

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## COVER



Island Hills GC, Michigan

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## Sustainability

## Sustainability drive for 2014 Ryder Cup

Organisers of the 2014 Ryder Cup, to be held at Gleneagles in Scotland, have launched a major effort to ensure the event is as green as possible.

The 2014 Ryder Cup Green Drive, will set out to integrate sustainability into all aspects of event planning, staging and legacy.

Ryder Cup match director Edward Kitson said: "We are currently putting in place the building blocks that will enable us to minimize and mitigate the event's unavoidable impacts, and also look at many new ways to maximize positive opportunities to outreach, advocate and engage for a lasting legacy."

Gleneagles golf courses manager Scott Fenwick added: "This initiative fits very well



Gleneagles will host the matches in 2014

with our proven track record of environmental management and community engagement. Having employed professional sustainability and environmental managers for over a decade we feel well placed to contribute. We look forward to identifying

new opportunities across the resort's operations, and raising our own performance further in line with the Green Drive."

Meanwhile, Gleneagles has recently renewed its five-year exclusivity deal with turf maintenance machinery manufacturer Toro and its distributor Lely UK.

## Old Tom Morris Award

## Hurdzan to receive GCSAA award

ASGCA Past President Dr Michael Hurdzan, has been selected to receive the 2013 Old Tom Morris Award by the Golf Course Superintendents Association of America. The award will be presented during the GCSAA conference in San Diego next February.

Hurdzan points to Devil's Paintbrush in Canada, and Erin Hills in Wisconsin, which will play host to the 2017 US Open as his favorite projects. He began his career in golf as a course superintendent.

"Mike is most deserving of this honor," said GCSAA president Sandy Queen. "His contributions to the game have had a significant and lasting impact. He has given so much of his time for the greater good."

Born in 1943 in West Virginia, Hurdzan moved to Columbus, Ohio, as a young child. His exposure to golf began at an early age as his father, Michael, a golf professional, taught him the game in the early 1950s. There he was taken under the wing of Jack Kidwell, a golf professional, superintendent, architect and owner. Kidwell would eventually name Hurdzan assistant superintendent and then superintendent of Beacon Light. The two would ultimately form a partnership in a golf course design firm.

"I loved being on the golf course, and that is why this award means so much to me. It is given by an organization for which I have the ultimate respect and by a group of individuals I consider to be my peers," said Hurdzan.

### Boom in English golf numbers

The number of people in England playing golf at least once a week is up by over 69,000 compared with six months ago. The surge in popularity is shown by the latest figures from Sport England's Active People Survey. Golf is among 21 sports which have shown a positive trend over the past six months and the results indicate the long-term, downward trend in golf participation may be reversing.

### '125 years of US golf' gala planned

America's oldest golf club, the Saint Andrew's club, in Hastings-on-Hudson, New York, has announced plans to commemorate 125 years of golf in America with a gala evening on 8 June 2013 in New York City. All net proceeds from the event will benefit the First Tee of Metropolitan New York, a youth development organization that teaches important life skills and core values to youngsters through the game of golf.

### Women members for Augusta

Augusta National has made global headlines by electing its first women members, former US Secretary of State Condoleezza Rice, and South Carolina-based financier Darla Moore. "These accomplished women share our passion for the game of golf and both are well known and respected by our membership," said club chairman Billy Payne.




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## Golf's Grand Design

## New book profiles America's finest designs

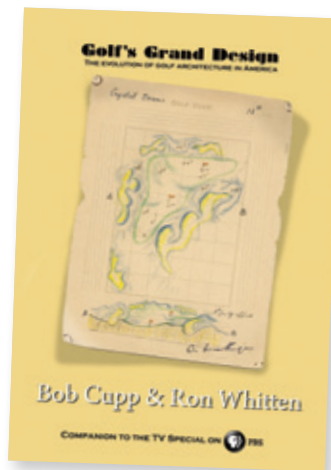
**G**olf's *Grand Design*, a companion volume to the recent PBS documentary of the same name, is now available. Co-authored by ASGCA President Bob Cupp and Ron Whitten, *Golf Digest's* longtime senior editor on golf architecture, the book features rare sketches and diagrams of golf holes—some never before published—by 34 past and present golf architects.

In each chapter, based upon one of the drawings, Cupp and Whitten explore a different facet of the course depicted and present unique perspectives into the craft and art of golf course architecture.

These sketches are the vehicles by which design

becomes grass. They are not AutoCAD plottings used to clear permits, but intimate, immediate and sometimes idiosyncratic streams of consciousness that are handed to a bulldozer operator. These drawings seldom survive; ending up as grocery lists, note pads or even shelf paper. But if one comes back to the designer after the fact—after the hole has been played and proclaimed fun, the drawings become treasures.

*Golf's Grand Design* takes readers behind the scenes in the creation of many of America's finest courses, from the modest-budget Bully Pulpit in North Dakota to the mega-budget Shadow Creek in Nevada. The authors retell the discovery



of the land that became Sand Hills Golf Club in Nebraska and relate the process required to complete the environmentally sensitive Liberty National in New Jersey.

*Golf's Grand Design* is intended for all who enjoy golf or who, by virtue of these stories, might consider the game. It provides a fresh approach to understanding and appreciating good golf architecture.

To order *Golf's Grand Design*, please visit [www.asgca.org](http://www.asgca.org)

### New Major for Asia?

The Asian Tour has hopes of setting up a new event that will rival the Major championships, possibly as early as 2015, according to its new chief executive, Mike Kerr. Kerr, who took control of the Tour in March, has said he hopes the circuit will be as big as the European Tour in ten years. "Yes, I think we can have an iconic event in Asia. There are some plans that we have we're already in the market talking about," he told AFP.

### Private operator for Highlands Links

Course owner Parks Canada is inviting proposals from private sector firms interested in operating the iconic Highlands Links course in Cape Breton. Parks Canada has invested significant funds in a restoration of the course, led by architect Ian Andrew, ASGCA Associate, over the last two years.

## Sticks for Kids

## GCBAA award for New York parks

**T**he Golf Course Builders Association of America has announced the New York City Parks Foundation as the 2012 winner of its Jim Kirchdorfer Sticks for Kids Excellence Award.

Along with Sticks for Kids partner the National Recreation and Park Association, GCBAA gives the award each year to honor a junior golf program. The award was renamed to honor the late Jim Kirchdorfer of ISCO Industries, who was instrumental in launching the program.

"It is important to Sticks for Kids partners to recognize the excellent

programs that are teaching golf to underserved youth across the United States," said GCBAA executive director Justin Apel. "City Parks Foundation exemplifies the way the founders intended the program to be used."

City Parks Foundation was first awarded a Sticks for Kids grant in 2010 and immediately implemented the program as part of its golf scheme available free to youngsters all year round at its Junior Golf Center and Junior Golf Annex in Queens. Additionally, it offers clinics at various locations across all five boroughs of New York City. Children, starting as young as six, learn driving, pitching

and putting in neighborhood parks. 3,872 kids participated in 2011.

Development officer Julie O'Shea said: "The program significantly expands free opportunities for kids. By offering thousands of children lessons on public park land, it helps to bring people together and revitalize communities. We provide follow-up instruction and competitive opportunities on local courses to encourage them to continue playing. Finally, the life skills component of each lesson helps develop internal assets of goal-setting and interpersonal communication, that will contribute to personal success throughout their lives."



# New Perspectives

Alternative golf | Adam Lawrence

Adam Lawrence reports on a course that is taking 'thinking outside the box' to a new level

Many authorities, from ASGCA's Jack Nicklaus down, have told us that the world needs more 'alternative' golf facilities, allowing shorter rounds and easier access to the game for new players.

Across the golf industry, there is agreement that speed, cost and difficulty of play must be addressed, and any number of initiatives—from Tee it Forward to PowerPlay Golf—aimed at doing so. But one of the key problems preventing more short and alternative courses being constructed is hard economics.

If it is tough to make an eighteen hole golf course pay, then it can be harder to do so at a smaller facility.

You can't buy half a mower, so it can be that the cost of maintaining the course will be higher, in relative terms when the facility is small. The obvious way around this is for the alternative facilities to embrace a simpler, less complex maintenance model, aimed at providing basic golfing to new players at a low cost. This is a great idea, and the world needs more such places. But golfers are greedy, and when there are highly maintained courses in the vicinity, anything offering a more basic game can struggle to look anything but second rate.

Which is why the work that has been done at the Island Hills Golf





Island Hills in Michigan offers multiple options for playing its eighteen holes

Club in the town of Centreville in southwest Michigan is so interesting.

Architect Ray Hearn, ASGCA, originally designed Island Hills, an upscale daily fee course on the shores of Lake Templene, back in 1996. However, the course got into financial difficulties, and was put up for sale by auction. Local businessman Bob Griffioen, owner of the local firm Precision Speed Equipment, and his wife JoJo, bought Island Hills, but, as part of the sale transaction, the land that previously housed the seventeenth hole was reserved for additional development by the previous course owner.

“This is my home course—I live

about eight miles away and have played here since it opened,” says Griffioen. “Because of the lost hole, we knew we needed a premium seventeenth to bring the course back to where we wanted it to be, so we got back in touch with Ray. We both realized that the opportunity existed to do something really special, to make the course a much more flexible and useful asset, and so from that start we moved on to a full remodeling.”

What Hearn created is a routing that, in effect, enables the single set of eighteen holes at Island Hills to be played as six different courses. Obviously, the full course is still the club’s gold standard, but, on top of this,

there are four other shorter routing options, plus an option for junior golfers to play a complete eighteen hole round from tees suited to their games, measuring around 4,000 yards.

As well as the main eighteen, then, Island Hills offers two seven hole loops, known as the east and west courses, a five hole short course option for beginners, and a twelve hole ‘Premier’ course that enables golfers to play a shorter round. All six layouts have six tee options and can be played as far back as golfers wish.

Griffioen says the project initially came about from a desire to help young golfers just making their way in the game. “Where I live in Sturgis, our

high school golf team has never had much talent, simply because we don't have any really good junior programs," he explains. "So we started offering free golf to under fourteens, and we looked closely at the obstacles that stop kids taking up golf—the expense of equipment, time, difficulty. And we realized we could solve the equipment problem by providing clubs to use for free, too. We then decided to offer free use of clubs to ALL golfers, regardless of age. What started out as a \$10,000 investment, has now gone to somewhere between \$15,000-\$20,000 of equipment in our free use club pool, for kids and adults of every age. The magic word is fun. I tried to interest my daughter in golf, but it was difficult, because she just didn't enjoy struggling all the time. Now we have the junior tees, with no forced carries—and she's liking the game."

"Obviously, on any project, it's helpful for the golf architect and the owner to be in sync," says Hearn. "But that was especially the case here. Bob and I had both heard the 'let's grow the game' battle cry from the golf industry around the world, but in many cases, people are really only paying lip service to the idea—the actual game plan is often weak. Bob said to me 'Ray, we really have an opportunity to do something new here', and I think we've achieved that, but without harming the golf course itself. From a golf architectural perspective, it was a combination of luck and skill—we didn't set out initially to create all these different options, the routing made it possible, but when we saw what we could do, we went for it!"

Now the course exists, of course, the key challenge is management. You can't expect to send a bunch of golfers out for full-length eighteen hole rounds, and simultaneously have a group of kids playing the starter course, and some other beginners trying to play seven holes—the groups would inevitably get in each others' way, making the paying customers less likely to come back. Griffioen openly admits that managing play is a work in progress for Island Hills, but stresses



Careful planning is required to accommodate the different options for play

that he and his team are very open to new ideas.

"We don't do these layouts on a Saturday morning, it would be impossible," he says. "Obviously, you have to be careful with your peak times, but there are plenty of other times, on any golf course, when there are gaps, and when you can get players out. We're continuing to experiment—at times, we've been offering free green fees to groups of golfers, telling them that it's possible they may run into other groups, and to give us some feedback. That way, over time we'll learn how best to use the facilities we have. With the beginner groups, Tim Cole, our director of golf, introduces them to the game on our practice facility. Then, after a few sessions, he might say 'There's some gaps on the course today, let's go and play a couple of holes'. After that, they might progress to the five hole beginner course, and so on. I learned

that introducing my son, who's now Eighteen, to the game when he was about six. I would take him out for two holes at a time, watching for gaps on the course. What we're doing now is just that on a larger scale."

Though the new-look Island Hills has only been open a few months, results are starting to come through from these experiments. The club is developing its expertise on how long particular routings take to play, from various sets of tees, and with different types of golfers in the groups. The five hole short course, for example, is rated at an hour and ten minutes, walking, from the white tees (forty minutes in a cart), fifty minutes from the shorter green tees. Of the two seven hole loops, the west, at ninety minutes, is expected to take five minutes less to walk than the east. And the twelve hole 'premier' course, from the whites, is anticipated to be a two hour and 58 minute walk.



“You have to be careful with peak times, but on any golf course there are gaps when you can get people out

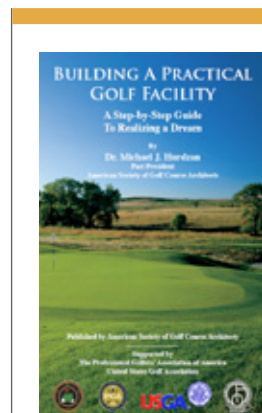
Bob Griffioen



“Bob is really a maverick in this area,” says Hearn. “The multiple courses idea has been done a lot, but I don’t think it has ever been done to this extent on one property. One prominent golf writer said to me ‘Ray, it’s too confusing, there’s too many options’. But I don’t think he is right—it’s actually very easy to understand. We left all the tees where they are and so when you play one of the shorter courses, you can play them from any tee. There’s plenty of signage on the course, so the only way you’re going to get confused is if you can’t read!”

There’s one other key aspect to the Island Hills experiment. Because all the different routings share the same holes, beginners are getting the same high quality experience that regular golfers have. “Sometimes, junior tees are an afterthought, even in very good programs,” says Griffioen. “Here, we have separate scorecards for each

course, all the tees are the same standard. Even when you go out for the first time in your life, you feel as though you’re playing proper golf. I think that’s a very powerful appeal.” ●



Learn more about alternative golf facilities from ASGCA’s “Building a Practical Golf Facility.” Download copies are available at [www.asgca.org/publications](http://www.asgca.org/publications)

### TIME MEASUREMENTS FOR THE SHORT COURSES



Listed below are the average times taken to play the various short courses at Island Hills, based on the experiences of adult golfers with differing skill levels.

#### 5 Hole

White tees: Walking 1hr. 10 mins  
Riding 40 mins  
Green tees: Walking 50 mins

#### 7 Hole (East)

White tees: Walking 1hr. 30 mins  
Riding 1hr. 10 mins  
Green tees: Walking 1hr. 20 mins

#### 7 Hole (West)

White tees: Walking 1hr. 30 mins  
Riding 1hr.  
Green tees: Walking 1hr. 15 mins

#### 12 Hole (Premier)

White tees: Walking 2hr. 58 mins  
Riding 2hr.  
Green tees: Walking 1hr. 50 mins



John Harbottle III, 1959-2012 | Bob Cupp, ASGCA President

# Too soon gone

The passing of anyone who has become notable always carries a certain sadness, though in many cases, generally expected. But to lose someone who has become notable but clearly not yet reached full stature, the story is much more poignant and painful; not unlike the tragic loss of a child, gone from us far too soon.

Such is the case with ASGCA's John Harbottle III, the 53-year old son of a noble golfing family and a blossoming brother of our trade.

At every turn, John's work was recognized and he was sought out, first in his northwest region and then nationally for new work and the restoration of a number of America's golf treasures.

We had not seen enough. The public wanted what he could do, but alas, he is gone. He was a young 53, trim and handsome, with a beautiful family and a brilliant future—evaporated with an unforeseen, unsuspected heart attack—gone in the blink of an eye.

John's steady rise to prominence was not the result of circumstance but hard work and solid education. He played on the golf team at Seattle University but moved to the University of Washington to study landscape architecture and follow his dream. John's mother, through her national amateur golf competitive life, was a friend of Alice Dye, ASGCA. Upon his graduation, Alice arranged an apprenticeship for John with the Dye family, and both she and Pete were

impressed with his drive and skill.

When all were convinced he was a prospect, he sought a permanent position with an established firm and landed with Desmond Muirhead. There are only two designers who have worked with both Pete and Des. The other is Jack Nicklaus.

John's profile grew, not only in the creation of tees and greens, but through the trials and tribulations of Desmond's infamous 'Classical Period.' John learned to deal with situations that were not part of any academic curriculum.

In due time, he hung his own shingle as a seasoned professional and the world began to understand he was quietly becoming a burgeoning phenomenon.

His persona was unassuming, unforced panache, a sort of comfort that everything would be ok and that he hoped everyone else would be too. He clearly loved his life and was living proof that the great artisan need not be a tortured, unmanageable renegade. He was more Socrates than Antisthenes, more Norman Rockwell than Van Gogh, more JS Bach than Mozart, more Byron Nelson than Tiger Woods.

John's style was the creation of courses that were a part of the landscape and he was adamant that they be allowed to function as a sustainable part of the ecosystem—the modern version of classic design.

In all, John completed 30 new projects from Wisconsin to California and one in Japan.

His new courses included the Stevinson Ranch Savannah Course in Stevinson, California, which was awarded the coveted Audubon International Signature Status, the fourth Audubon Signature course in the country and the Olympic Course at Gold Mountain, Bremerton, Washington, which attracted the elite college players every fall at the Washington Husky Invitational. Also notable are the Resort Course at Genoa Lakes, Genoa, Nevada, BanBury Golf Club, Eagle, Idaho, and the Izatys Golf & Yacht Club 'Sanctuary at Izatys', in Onamia, Minnesota.

John renovated some of America's finest venues, including Eugene Country Club in Oregon, Hillcrest Country Club in southern California and Brentwood in Los Angeles. John's courses seem palatable to everyone. He knew the game was fun and placed the elements so each segment of the golfing world could enjoy them.

Another area where John excelled was in the realm of long-range planning. Far before the recession impacted care and upkeep decisions made by course owners and managers, John had spent years and even decades working with clubs to ensure the timely upkeep of their courses was planned and maintained. Long-range planning today is a necessity for a course, and John showed that by staying true to his clients they would stay true to him.

Though our organization is diminished by the loss of John, we

“ Long-range planning today is a necessity for a course, and John showed that by staying true to his clients they would stay true to him

have grown through this adversity. At a time when work is an especially precious commodity, our number reacted in the most noble manner to his death. The shock sobered us all to the Great Reality of life and our first reaction was concern for Teresa, his wife, and their children, for his parents and all of his immediate family.

The upshot of all of this is that we have lost a brother, but his passing has proved beyond a shadow of a doubt the dignity of our organization. The outpouring of concern and assistance from our number has defined us. We performed in the best of ways in the worst of times. Perhaps we have grown as a group or maybe this is just who we are in this age. But either way, each and every member should take comfort in this travail—but not without a certain fierce pride that we are good humans, mourning the loss of a friend. ●



**Bob Cupp**

An ASGCA Fellow, Bob is the Society's, President for 2012-13.



John's style was the creation of courses that were part of the landscape

National School Program

# The next generation



Probably most golfers came to the game because of their parents. Learning golf as a child with your father or mother is a wonderful experience, and is surely the most likely route to becoming a lifelong golfer. But it is inevitably limiting; how are kids whose parents don't play golf to learn the game? And in countries or regions with little history in golf, the limitations of the parental route are obvious.

Other traditional routes into the game, across America and in other traditional golf markets, have included caddying. The stories of caddies from the wrong side of the tracks, such as Eddie Lowery, who went from carrying Francis Ouimet's bag at the 1913 US Open, to sitting on the USGA Executive Committee, remain inspiring.

Caddying remains an important route into golf for many young people. The great work of the Evans Scholars Foundation, run by the Western Golf Association, which awards college scholarships to caddies from families of modest means, shows that the traditional values of caddy golf still live. But—and it's a big but—caddying is, generally, in decline. Teenagers have too many other options for a mass of them to want to work summers in this way; plus the cost of putting together good caddy programs, both to the club and the golfers, means caddying is likely to remain where it is popular, in elite private clubs and at high end resorts.

“ Across the US, local First Tee chapters are working with schools to deliver the National School Program, and to help provide opportunities for youngsters who have caught the golf bug through the program to progress in the game

The grainy films of a tiny Tiger Woods demonstrating his already perfect swing shouldn't blind us to the fact that, for the overwhelming majority of kids, learning golf is hard. On the other hand, golf, unlike some other sports, can be a lifelong activity, giving opportunities for physical and mental development into old age. Which is why the methods developed by the First Tee organization's National School Program have been such a boon to golf in the US since its creation in 2004, when it was piloted in 130 elementary schools in eight areas.

Now established in every US state, and in more than 4,800 elementary schools across the country during the 2012-2013 school year, the National School Program serves to introduce both the skills and values of golf to young people.

Although, at high school level, there is competitive golf across much of the US, golf has not been traditionally a sport coached at a more junior level. Elsewhere in the world, in the UK, for example, schools have traditionally focused on team sports, and especially on those that don't require so much specialized equipment. The National School Program aims to bridge this gap.

For a one-time fee of \$3,420 per school—which covers equipment, curriculum manual and online training for physical education teachers—schools can join the program. The First Tee's sponsorship program means many schools can find ways

of accessing funds to offset the fee. Additionally, in many cases, local golf clubs and bodies have become involved with schools, so students have easy access to professional help in learning the game.

We mentioned that learning golf is hard. The SNAG (Starting New At Golf) equipment used by the National School Program, is designed to ease the process. Oversized clubs, tennis-style balls and a variety of targets mean that the average school gymnasium can be turned into a golf coaching academy. One set of SNAG equipment is sufficient for 48 participants at any one time. Given the potential damage that can be caused by flying golf balls and fast-moving clubheads, the SNAG emphasis on safety is another key benefit of the equipment.

The program's curriculum manual includes lesson plans and resource information created using the framework of the National Association for Sport and Physical Education's National Physical Education Standards. Before PE teachers can deliver the program, they complete a training course, either online or in-person.

The First Tee stresses nine core values of golf: honesty, integrity, sportsmanship, respect, confidence, responsibility, perseverance, courtesy and judgement. These values, of course, are as crucial in life as they are in golf. Along with the key motor skills needed for golf, program participants learn golf's values in the classes.

Maggie Jackson, who heads up the First Tee in Eagle County, Colorado, says that most six or seven year olds join the program at their parents' urging, but the goal is to have the kids tell their parents, by the end of the summer, that they want to go back. And, she explains, participants learn the values of honesty—because they keep their own score—and courtesy for other players, important lessons in golf and life alike.

Across the US, local First Tee chapters are working with schools to deliver the National School Program, and to help provide opportunities for youngsters who have caught the golf bug through the program to progress in the game. The metropolitan New York chapter, for example, has created a new Life Skills and Leadership Academy, run for the first time this year, in which 96 of the top participants from First Tee programs are brought together for a week's activities that promote character and leadership development by combining golf with life-skills activities and career exploration. Based at Hofstra University, participants played golf at Nassau County's Eisenhower courses, as well as taking a boat cruise around New York City, visiting various museums, and golf at the Village Club of Sands Point, located on the former Guggenheim Estate. ●

*For more on the National School Program, visit [www.thefirsttee.org](http://www.thefirsttee.org).*

Turf reduction | Pat Gross and Todd Eckenrode, ASGCA

# Less turf, less expense

**D**rought and economic issues coupled with the price of water have course owners and superintendents making difficult decisions about shrinking resources. One strategy is to reduce the amount of water and resources evenly over the entire golf course, but a different approach is to take the same amount of resources and apply them to a reduced amount of turf acreage. The question becomes: what to cut and what to keep?

A 2007 survey by the Environmental Institute for Golf indicated the average size of an 18-hole course in the United States is 150 acres, of which 100 acres is maintained turfgrass. Of that 100 acres, just over half (51 acres) is designated as rough and out-of-play areas. Reducing the amount of rough and eliminating turf in non-play areas create excellent opportunities to save money on irrigation, turf care products, mowing, and maintenance. Water districts throughout the southwestern US offer attractive rebates to golf courses that pursue turf removal.

Primary goals for every turf reduction project should include ensuring no loss of playability, maintaining—if not improving—pace of play, reduction of maintenance and resources needed in out-of-play areas and an improvement in the popularity of the course.

Begin with a detailed site assessment. This is best accomplished with the help of a golf course architect who can provide an impartial review of existing conditions along with an assessment of playing characteristics and unique qualities of each hole.

Next, various design concepts can be sketched and discussed. A map that includes an overlay of the irrigation system is important, so design concepts are coordinated with the existing system. Good opportunities for reducing turf without affecting playing quality include out-of-play areas in the rough, tee banks, the elimination of underutilized tees, green banks, densely shaded areas where it is difficult to maintain turf and perimeter areas.

Equally important is designating areas where turf should be preserved so as to not slow pace of play or unfairly penalize weaker players. Remember, golfers' average driving distance varies widely and is generally within a range of 160-250 yards. Rarely does a tee shot fly straight; therefore, the width of the intended landing zone should be generous, optimally in the range of 80-100 yards, including the fairway and rough from edge to edge.

Healthy turf around the putting greens is important for playability. However, rarely are shots hit more than 60 feet beyond greens. Given the fact that the coverage radius of most turf sprinklers is 60 feet, eliminating turf beyond the radius of the sprinklers is viable.

Planting and design in turf reduction areas is highly subjective. Sometimes, a specific plant palette and a recommended density are mandated by water agencies offering grants and rebates. In other cases, a committee determines what plants, if any, will replace turf. Replacement vegetation should complement and



enhance the golf course landscape.

If the main objective is to reduce water consumption, installing a three-four inch layer of mulch material that is playable is one of the best options. Mulching eliminates the need for installing supplemental drip irrigation, helps suppress weed growth, and will provide a clean and attractive appearance. The aesthetic value of large mulch areas with no added landscape should be carefully evaluated. A lack of trees and shrubs will often look stark and not integral to the golf design. Mulch areas tend to work best where a grove of existing trees of the same species can be encircled, with their normal leaf fall adding to the natural appearance.

Once areas have been proposed for turf reduction, the next step is making adjustments to the irrigation system. Where practical, adjust the design and position of turf removal areas based on the existing configuration of irrigation heads. Often architect and irrigation designer can work together to make minor modifications that save money. Attempting to make turf reduction decisions in the field without the help of an accurate GPS base map can be more expensive.

Redesigning the irrigation system in turf reduction areas should be included in the project budget. In





At Barona Creek (left) architect Todd Eckenrode and superintendent Sandy Clark oversaw the removal of ten acres of turf, without impacting on playability. Right: Pasatiempo, where superintendent Paul Chojnacky and architect Jim Urbina jointly returned the course to Alister MacKenzie's original design

general, the design and installation cost for non-turf spray irrigation heads ranges from \$12,000-\$14,000 per acre, and drip irrigation ranges from \$10,000-\$20,000 per acre.

Once a design has been agreed upon, removal of the turf involves four basic steps. Multiple applications of a nonselective herbicide eliminates existing vegetation. Then, locate and remove existing sprinklers and place caps on swing joints. If necessary, scarify or till the soil to prepare a planting bed, and grade or move soil as called for in the design and to promote good surface drainage.

One of the largest potential expenses associated with this part of the project is hauling and disposing of the debris. To avoid the need for debris removal, treated areas can be tilled to reincorporate the dead turf into the soil and then graded to create a planting bed for landscape materials.

Maintenance of new landscape zones may be high at first but should decline over time as plants gain greater surface coverage and the need for weed control is reduced. Incorporating native plants into the design provides an opportunity to reduce maintenance and eventually eliminate irrigation.

Maintenance expectations can vary widely. Some may envision a rustic and natural look, while others expect

a clean, manicured appearance at all times. Agree on maintenance expectations for non-turf areas during planning and include such provisions as part of the maintenance standards document.

Based on the experiences of golf facilities in the Southwest US, water savings have been the most beneficial aspect of turf reduction programs. In general, savings of \$1,700-\$7,000 per acre have been achieved as a result of lower water use. Other savings have come in the form of less fuel, fertilizer, seed and herbicides, along with the ability to reallocate labor. The ability to reallocate labor should not be taken lightly: if maintenance resources can be focused on greens, tees, and fairways, the condition of the course is likely to improve.

Golf is played on grass, but it is not necessary for turf to cover every square foot of the property. There are opportunities to reduce turf in out-of-play areas while preserving and enhancing the golf experience. Good planning is the key, so playing corridors can be preserved while identifying areas where turf can safely be eliminated.

Reducing water use has been the primary objective of turf removal projects, which has translated into significant cost savings to golf courses in the southwestern US, where water

prices are high. Even if water is plentiful, reducing turf is a viable option for redirecting maintenance inputs over a smaller and more sustainable area. In the end, less turf can result in a more attractive appearance because more resources are being directed to primary playing areas, leading to more enjoyment for golfers. ●

*The authors wish to thank Paul Chojnacky (Pasatiempo GC), Sandy Clark (Barona Creek GC), Doug Meadows (El Caballero CC), and Scott Sutton (Wildhorse GC) for their contributions. A longer version of this article appeared in the USGA Green Section Record, volume 50 (12), dated 8 June 2012.*

*To download the free ASGCA flyer "Golf Course Turfgrass Reduction: Environmentally and Strategically Sustainable" please visit [www.asgca.org/free-publications](http://www.asgca.org/free-publications)*

### Pat Gross & Todd Eckenrode

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Length of courses | Arthur D. Little

# The facts of swing speed and distance

There is increasing agreement that golf courses are too long. This is a major factor in the difficulty of attracting and retaining players. The industry must present golf courses that are significantly shorter and less intimidating to players whose driver swing speeds are in the range of 55-75mph. This group which represents a large part of the current and potential market includes most women, senior men, juniors and many beginners.

There is another very important, often overlooked factor in course design; the characteristics of ball flight at slower swing speeds.

We have done a great deal of research to identify the appropriate course lengths for all classes of players as defined by swing speed, not age or gender. It is clear that courses need to be shorter for these players in order for them to be able to reach greens in regulation thus increasing their enjoyment and speed of play. For the players in the swing speed range mentioned above the yardages should be approximately 3,400-3,500 (55mph), 4,000-4,200 (65mph) and 4,800-5,000 (75mph).

Tests done at Golf Laboratories confirmed the driving yardages that we attribute to various swing

speeds. However, the data on ball flight characteristics took us by surprise and significantly added to our thoughts about course design. The tests were performed from 55-125mph in 10mph increments.

The club head speed with which a ball is struck influences total yardage, maximum height (7.3 yards at 55mph, 44.9 yards at 125mph), the point in the ball's flight at which it reaches its maximum height (55 percent at 55mph, 69 percent at 125mph). It also determines the angle at which the ball strikes the ground (22 degrees at 55mph, 47 degrees at 125mph) and the amount of roll as a percentage of total distance (19 percent at 55mph, five percent at 125mph).

I use these extremes to emphasize the point, but when the data is closely analyzed, the pattern is not completely linear. There is a distinct difference between the 55-75mph group and the swing speeds above that. Architects and owners should be cognizant of these different characteristics in course design and set up if the industry hopes to attract and retain players who have a good level of skill but don't hit the ball a long distance. The data makes it clear that forced carries are a real issue for these players. In addition to the carry,



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their ball flight is so much lower the intimidation factor is greatly increased.

The design and course set up considerations derived from these data for tees played by slower swing speed players are clear:

- Eliminate as many forced carries from tees as possible. This includes rough that must be carried to reach the fairway. Given the large percentage of yardage that slower swing speed players get from roll, not being able to reach the fairway is punishing and unfair.
- Keep the fronts of greens open so that they have an unimpeded entry that accepts low rolling shots. Hazards fronting greens create a particular challenge for slower swing speed players. Their ball flight is much lower, lands at a sharper angle and has significantly less backspin. A shot clearing the hazard is likely to roll off the green.
- The toughest issue is cross hazards such as bunkers, streams, lakes and gullies as they are much more difficult for slower swing speed players to navigate and often require a forced layup. Carefully considered tee placement will position slower swing speed players with a fair chance to clear or play around them. ●



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# THE ASGCA FOUNDATION

SUPPORTING RESEARCH AND EDUCATION IN GOLF COURSE ARCHITECTURE

The ASGCA Foundation, established in 1974, has always had as its mission to advance the research of golf courses and their design, and to disseminate that information to individuals and communities interested in planning greenspace for recreational purposes. That mission resonates today and is pursued through three main activities:

## PUBLISHING

The ASGCA Foundation is dedicated to publishing books and pamphlets that educate about golf course architecture's positive effect on golf's playing fields. Examples include "Golf Has Never Failed Me," which included writings by ASGCA Founding Member and Honorary First President Donald Ross, and "An Environmental Approach to Golf Course Development," which has gone through three editions and informed thousands of permitting panels and green committees on sustainable golf development.

The Foundation considers publishing works by and about ASGCA members, on topics relevant to golf course development, golf course architecture history and the practice of golf course architecture. Books and brochures must have an educational emphasis which helps developers and those involved in renovations of golf courses plan layouts that are enjoyable, sustainable and accessible.

## INNOVATION RESEARCH

Each design of a golf course is different; though they typically consist of nine or 18 holes, the topography, environmental conditions, amount of land and target player all affect how the course will look and play.

What can be done during the design or redesign process to increase player enjoyment, help time-crunched players play more golf in less time or reduce the operating cost of a course? The ASGCA Foundation will consider research projects that study these questions. The goal is to share with the golf industry ideas backed by solid research that positively influence the health of the game and its playing field.

A grant proposal process is being developed to help researchers appeal to the ASGCA Foundation for research funding.

## FUNDING "GROW THE GAME" INITIATIVES

The golf industry is made up of entities that address different aspects of the game: player development, facility development, facility maintenance, golf course design and construction and more. Until recently, each entity worked on its own to influence the health of the game. But many of these entities realized that pooling resources increases funding power and influence.

The ASGCA Foundation is committed to working with its fellow Allied Associations of Golf to pool resources and positively impact policy and public opinion regarding the game of golf.

### HOW CAN YOU HELP?

The ASGCA Foundation solicits funding from ASGCA members, from interested individuals, from foundations that support the game of golf and from industry partners interested in furthering education and research in golf course architecture.

The ASGCA Foundation is a 501(c)(3) organization, and contributions are deductible to the extent allowed by law. Consult with your tax planner for more information.

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