

Issue 21 | Winter 2014

# BY DESIGN



Excellence in Golf Design from the American Society of Golf Course Architects

## Golf's solution. providers

Also: Pace of play • China and the environment • Bonita Bay Club • Practice facilities

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Chapter 1

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## Architects are solution providers

I've found myself really looking forward to the time of the year when the American Society of Golf Course Architects announces the honorees for its annual Design Excellence Recognition Program.

In working with clients throughout the world, each project presents a diverse set of challenges for architects to consider and address in the designs that we propose. I'm always fascinated to learn about the decisions that my colleagues have taken alongside their clients as they strive to meet the objectives of the project, while also overcoming the often unique challenges that are specific to the site and also expressing creativity and design flair to deliver an end product that is enjoyed by golfers.

By sharing these stories, as we do in our feature article that begins on page 8, ASGCA architects become much better equipped to provide practical and sustainable solutions to our clients, and fulfill an important role as problem solvers.

This year in particular, I am very encouraged to see many successful examples of short courses and innovative practice centers. Not only do existing golfers welcome the opportunity to hone their skills in a fun format that replicates elements of the full game, but these facilities are crucial for introducing new players to a sport that can be difficult to pick up. Read more about these projects in our feature article and Lester George, ASGCA also shares his thoughts on developing practice facilities in the article on page 24.



I hope you enjoy the issue.

Lee Schmidt  
President  
American Society of Golf Course Architects

## BY DESIGN

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p5 USGA/John O'Boyle; p7 Jim Mandeville; p10 Robin Moyer, p12 Aidan Bradley

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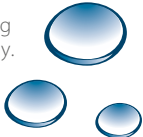
Lester George, ASGCA considers the keys to a successful practice facility.

## COVER



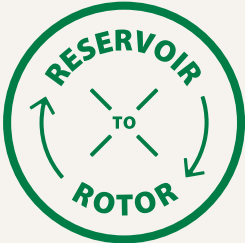
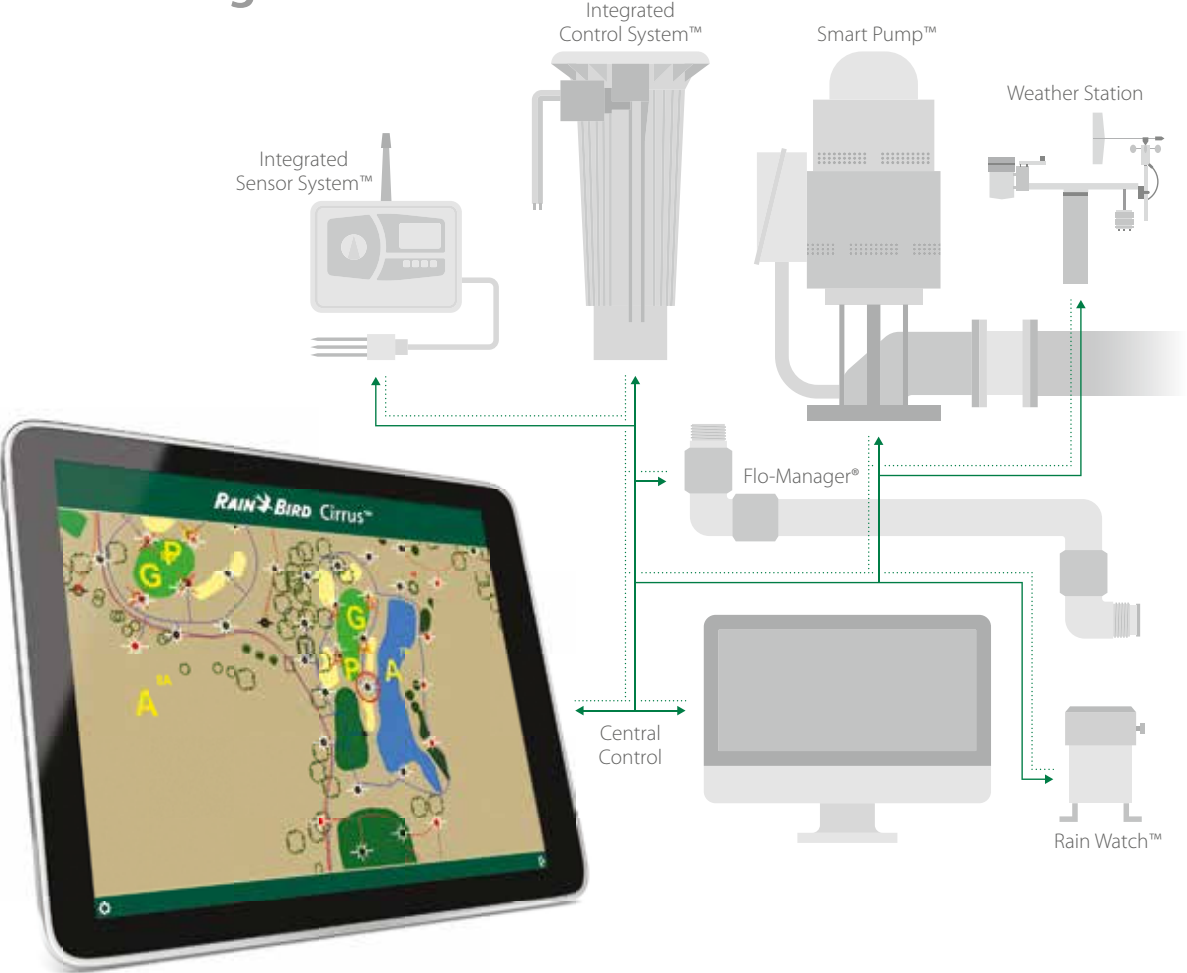
The Yinhong #6 course at Yintai Hongye GC near Beijing, China was designed by Rick Robbins, ASGCA and photographed by Dave Sansom.

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## Pace of play

# Architects contribute to new pace initiatives



Image: USGA/John O'Boyle

New initiatives to reduce the time required to play golf were discussed at the USGA Pace-of-Play Symposium

Progress continues to be made by golf's governing bodies on initiatives that are designed to reduce the time required to play golf.

ASGCA Past President Bruce Charlton and Lester George, ASGCA spoke on behalf of architects to 100 attendees of a two-day symposium on Pace of Play at the United States Golf Association headquarters in Far Hills, New Jersey in November 2014.

Charlton and George illustrated how recent projects had incorporated design elements to reduce lost balls and give higher handicap players more options to play recovery shots without slowing down play.

At Poppy Hills GC in Pebble Beach, California, Charlton and the team at Robert Trent Jones II recently completed a renovation where pace of play was an important part of the equation. Fairways were widened, rough eliminated, mounds removed, bunkers rebuilt and green complexes redesigned, and the entire course was sandcapped to provide firm and fast playing conditions. "Our mantra is now firm, fast and fun," says Charlton. "It gave us a lot of ability to speed up play."

George highlighted a project at Independence GC in Midlothian, Virginia, where rounds had been averaging over five hours. Among the changes made, his team reduced roughs, removed more than 500 trees, bushes and shrubs and rerouted cart paths. The net result was a one-hour reduction in average round time, increased revenues and reduced maintenance costs, resulting in

a \$52,800 annual improvement to the club's bottom line. "The popularity of the course is way up," said George. "And we don't get any complaints from lower-handicap golfers. It's still a very challenging course."

## Pro tours stepping up

The USGA continues to gather data on pace of play, with technical director Matt Pringle overseeing the study of thousands of rounds throughout the country using GPS devices that track how golfers make their way around the course. The data is helping them to identify the causes of slow play and propose measures for improvement.

This work has already been put to good use, with the LPGA Tour seeking advice to inform a new pace-of-play policy for its tournaments. A combination of increasing tee-time intervals to 11 minutes and giving a single clear message to golfers that they must keep up with the group in front have contributed to a 14-minute reduction in the average round time over the course of the 2014 season. "We've had a lot of great feedback," said Heather Daly-Donofrio, the LPGA's chief Tour operations officer. "The approval of the players has been huge."

The USGA has also developed a practical solution for faster play at clubs of any size: a simple flagstick monitoring tool that can help clubs identify groups with a longer than expected cycle time, enabling staff to get them back on track instead of letting the delay increase waiting time for following groups.



## Renovation makes Spring Run 'dynamic and fun'

The course at Spring Run GC in Bonita Springs, Florida has reopened following the completion of a renovation led by John Sanford, ASGCA of Sanford Golf Design. "Our goal was to provide the members with a new course that would be visually and strategically dynamic and most importantly, fun to play," said Sanford.

## Work resumes on new Compass Pointe course

An improving economy has led to work restarting on the Compass Pointe course near Wilmington, North Carolina, following six years on hold. Architects Rick Robbins, ASGCA and Brian Lussier, ASGCA drew up the original layout when work started in 2005 and have since refined the design to make routing adjustments to fit with the development and wetland delineation changes. Construction is expected to be completed by spring 2015.

## Dunwoody renovation leads to membership boost

A year after renovation work by Bill Bergin, ASGCA Associate, Dunwoody CC in Atlanta has a full membership and, for the first time in five years, a waiting list. Bergin's renovation saw the introduction of new greens complexes, modifications to bunkers, leveling of tees and significant tree work, including removal and pruning.



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## Donald Ross Award

## Bradley S. Klein to receive Donald Ross Award

The architecture editor of *Golfweek* magazine and former PGA Tour Caddie Bradley S. Klein is to become the 40th winner of the ASGCA Donald Ross Award.

Klein, who has written and lectured widely on golf design, will be presented with the award at the 69th ASGCA Annual Meeting in La Jolla, Calif. in March 2015.

“Brad has traveled the world studying and reporting on golf course architecture,” said ASGCA President Lee Schmidt. “His articles and books have informed golfers and non-golfers alike, telling the story of courses and those who design them.”

Klein joins an impressive list of journalists to have received the Donald Ross Award, which was first introduced in 1976, including Herbert Warren Wind, Charles Price and Ron Whitten.

“His critiques keep architecture in the public eye, and start conversations about how design contributes so much to the essence of the game,” added Schmidt.

“The ASGCA respects his knowledge and perspective. We appreciate his skill in describing what we do and all that golf courses bring to our communities.”



Image: Courtesy of Jim Mandeville

Bradley S. Klein ‘starts conversations about design’

## Environment

## Robbins writes on environmental sustainability in China

*China Golf Management* magazine has published an article written by ASGCA Past President Rick Robbins that is helping to inform the Chinese golf industry on environmental sustainability.

Robbins notes that there is a consensus among Chinese government leaders that golf courses are not an acceptable use of land, typically due to environmental concerns. He highlights areas where alternative practices may yield environmental improvements, including: sandcapping of fairways; installation of environmental control measures; development area grading methods and land planning; selection of turf grasses; preservation of natural areas/limitation of highly maintained area.

“My feeling is that China is becoming a very good golf market and one that has great potential to expand,” concludes Robbins. “Good environmentally-conscious design and construction must become standard practice throughout the golf industry if the game is to receive favorable treatment from the government in Beijing. Golf should be part of the solution to some of China’s environment issues rather than contributing to them.”

Visit the ASGCA website ([www.asgca.org](http://www.asgca.org)) to read Robbins’ article in full, and turn to pages 20 and 21 for examples of two projects at Chinese clubs where Robbins and his team have addressed environmental issues.

### Oaks Club project to improve playability and sustainability

Construction has begun on the renovation of the Heron course at the Oaks Club in Osprey, Florida. Architect Jason Straka, ASGCA says one of the key objectives is to make the course more playable for a diverse spectrum of members. Six sets of tees will see the total course length range from 4,027 to 6,705 yards, and green complexes will be rebunkered to allow the option for a run-up approach on more holes.

### New Nebraska layout on track to open in 2015

A new golf course in Niobrara, Nebraska has been seeded and is set to open in 2015. Tatanka GC lies on the property of the Ohiya Casino Resort of the Santee Sioux Nation. In researching the culture, area and natural landforms, architect Paul Albanese, ASGCA learned about the Sioux’s great respect for nature. “I knew then we had to blend the golf course into the natural surroundings,” he said.

### Renovation of Ross layout complete at Fort Myers

The course at Fort Myers CC on Florida’s west coast has reopened following a major upgrade project led by Steve Smyers, ASGCA. Originally designed by Donald Ross, the main goal of the project was to update the course in the way Ross would if he were alive and designing the course today. “Ross was a master of using landscape forms to create space and develop and define interesting targets and challenges,” said Smyers.

# Innovative solutions



Image: © 2014 Dave Sansom





# The ASGCA Design Excellence Recognition Program demonstrates how golf architects can solve the sometimes complex problems faced by owners and developers. *By Design* discovers more about this year's recognized projects.

**E**nvironmental, economic and social issues combine to form a unique set of challenges for any golf course owner or developer. With thoughtful consideration in consultation with an experienced golf course architect, innovative solutions can be formulated that help golf clubs not just overcome obstacles, but put the foundations in place for long-term success.

The annual ASGCA Design Excellence Recognition Program – now in its third year – shines a light on the innovations and problem-solving skills demonstrated by golf architects. The 2014 entries were reviewed by a panel of golf industry leaders, including representatives of the Club Managers Association of America, Golf Course Superintendents Association

of America, Golf Course Builders Association of America and National Golf Course Owners Association.

Projects from 12 golf clubs in the United States and Asia have been cited for their work with ASGCA members in addressing unique design challenges. These include the creation of short game facilities to attract new players and appeal to existing members, the redevelopment of existing golf courses to overcome water management issues, or the changing requirements of an owner, and even the construction of an entirely new course on a former landfill site.

In each of these projects, profiled on the following pages, golf architects drew on their experience and expertise to propose innovative and intelligent solutions that would position the club for future long-term success. ●



## THE ARCHITECTS



Neil Haworth, ASGCA renovated Bali National GC in Indonesia to meet the demands of new owners.

» Go to page 10



Ray Hearn, ASGCA improved aesthetics and enhanced strategy to help Mistwood GC stand out.

» Go to page 15



Dr. Michael Hurdzan, ASGCA Fellow helped develop a unique indoor facility at The Ohio State University.

» Go to page 14



Bob Lohmann, ASGCA converted an unused plot into a new short course and learning center at Peninsula State Park GC.

» Go to page 17



Brian Lussier, ASGCA solved new and complex challenges when redesigning existing courses at two clubs in China.

» Go to page 20 and 21



Greg Martin, ASGCA designed a series of short courses that are accessible and enjoyable to play.

» Go to page 11



Damian Pascuzzo, ASGCA has developed a 'Challenge Course' concept that appeals to both new and existing golfers.

» Go to page 12



Todd Quitno, ASGCA Associate addressed flooding and water management issues in the renovation of Reid GC.

» Go to page 18



Rick Robbins, ASGCA solved new and complex challenges when redesigning existing courses at two clubs in China.

» Go to page 20 and 21



John Sanford, ASGCA helped to convert a former landfill site to an Irish-style links in New York City.

» Go to page 19



Scot Sherman, ASGCA created a multi-purpose short game practice facility for Furman University.

» Go to page 13



Shawn Smith, ASGCA Associate improved playing conditions while addressing drainage issues at Oakland Hills CC.

» Go to page 16

# BALI NATIONAL GC



Images: Robin Meyer

**Location:**  
Bali, Indonesia

**Architect:**  
Neil Haworth, ASGCA  
Nelson & Haworth  
Golf Course Architects  
[www.nelsonhaworth.com](http://www.nelsonhaworth.com)

**Project summary:**  
New owners wanted to renovate the 22-year-old Bali course to revitalize it to world-class standards and ensure sustainability for the future, but imposed tight deadlines and budgets. Neil Haworth, ASGCA provided a design solution that met all objectives.

**Partners:**  
Narendra Interpacific  
The Toro Company  
Contractor: Perfect Golf Indonesia  
Lead Shaper: Greg Gunn Esq.  
Superintendent: Mark Isley, GCSAA

[www.balinationalgolf.com](http://www.balinationalgolf.com)

**“We wanted the course to be spectacular, yet fun to play, so golfers would get on an airplane to play the course, then want to come back again!”**

On taking ownership of the Bali Golf and Country Club in Indonesia, Narendra Interpacific wanted to improve sustainability of the course, provide a world-class playing experience and find a way to accommodate a new hotel and villas.

They commissioned Nelson & Haworth – led by partner Neil Haworth, ASGCA – to work on the course that had originally been designed by the late Robin Nelson, ASGCA in 1991.

The routing was changed at the newly-named Bali National Golf Club: “To accommodate the new Shangri-La Hotel and villas, the seventeenth was converted from a par four to a par three and the eighteenth was rebuilt so it lies further from the sea. The clubhouse location was also shifted inland, and holes one and ten were adjusted to accommodate the proposed villas”.

A key driver for the renovation was to use water efficiently. All lakes were

interconnected to ensure that all rainwater could be collected on site, with new lake liners were installed to minimize leakage. Additional deep wells were installed and the project saw a more than 20% reduction in the total grass area that needed to be irrigated.

The project team used existing sand found on site to rebuild all greens, tees, and fairways, to avoid the high cost associated with importing sand. Waste areas in the lower area of the site were added or enlarged and the sand cleaned and sieved to use for green construction.

“We wanted the course to be spectacular, yet fun to play, so golfers would get on an airplane to play the course, then want to come back again!” says Haworth. “Waste areas and bunker complexes were made more dramatic, green surface contours were softened to make putting fairer, and trees were removed to open up views of the South China Sea and Mount Agung.”



# CARILLON SHORT COURSES



**Location:**  
Chicagoland area, Illinois

**Architect:**  
Greg Martin, ASGCA  
Martin Design Partnership  
[www.martindesigngolf.com](http://www.martindesigngolf.com)

**Project summary:**  
Greg Martin, ASGCA designed a series of par-three courses that would be accessible and playable for residents of Active Adult communities, while addressing local environmental factors and requiring minimal maintenance.

**Partners:**  
Ryan Incorporated Central

The Carillon brand by housebuilder D.R. Horton comprises a number of Active Adult community developments within easy reach of Chicago. Each community includes a range of amenities, such as pools, gardens, walking trails, health facilities and golf.

Four short golf courses within these communities required improvements to address unique issues, while providing residents with the opportunity to play golf in a relaxed setting.

The developer turned to Greg Martin, ASGCA to provide a unique golf experience in each community – all walkable, accessible and enjoyable for residents – while requiring minimal maintenance. Aesthetics were also crucial, with sightlines from roads, buildings, residences and on the courses themselves taken into consideration.

Each project had its own specific challenges. Carillon North is a nine-hole par-three course, and subsequent projects have been designed as three-hole par-three courses. At Carillon Lakes, playability and aesthetics were key requirements: Carillon Club required substantial stormwater management, and at Cambridge Lakes, wetlands avoidance and mitigation was essential.

In addition to addressing these unique challenges, Martin was able to ensure that the final designs offered the enjoyable golfing experience that would keep residents coming back for more: “Each course provides large, softly undulating greens and multiple tees allowing for varied play and multiple rounds. Bunkers are sited to provide challenge from various tee locations without obstructing green access.”



# 'CHALLENGE COURSE' CONCEPT



## Location:

Nipomo, California,  
and Meridian, Idaho

## Architect:

Damian Pascuzzo, ASGCA  
Steve Pate, PGA  
Pascuzzo & Pate Golf Design  
[www.pascuzzopate.com](http://www.pascuzzopate.com)

## Project summary:

To attract new players, Damian Pascuzzo, ASGCA and Steve Pate, PGA developed the Challenge Course concept. With two facilities already open for play, these courses consist of nine or twelve par three holes with oversized greens and multiple large turf tees on each hole to provide options for length and attack angle for all skill levels.

## Partners:

Woodland Ventures LLC  
Sundance Development  
The Toro Company  
West Coast Turf  
Turf Seed  
United GLI  
Wadsworth Golf Construction

“Even experienced golfers are playing fewer rounds as time in our daily routines becomes harder to dedicate to golf,” says Damian Pascuzzo, ASGCA, the architect who, with partner and tour pro Steve Pate, is behind the Challenge Course concept.

The courses consist of between nine and twelve par three holes that can easily be played in 90 minutes. Each of the holes is distinctly different, with multiple large turf tees, providing options on hole length and angle of attack to fit all skill levels.

The oversized, undulating greens are one of the distinguishing features of Challenge Courses, carefully crafted to create several different hole locations. Two flags are used on each hole, with one easier location and the other more challenging.

“We needed to create something that will welcome and encourage new players while providing an enjoyable and satisfying golf experience for veteran players,” says Pascuzzo. “It must be an interesting alternative for players who don’t have time, or desire, to play a full sized course. The course can easily be incorporated into a residential

development and look every bit the part of a traditional golf course to maintain desirable views from the homes and increase lot premiums.”

The two Challenge Courses already built and operating – at Monarch Dunes in Nipomo, California, and The Club at Spurwing, in Meridian, Idaho – are “demonstrably versatile, fun and short, and appeal to everyone from those curious about trying out the game to seasoned players,” says Pascuzzo.

“One of our clients uses an eight inch cup at their easier flags to provide an interesting option for their players,” explains Pascuzzo. “Green surrounds are crafted and shaped to present different types of recovery shots. Lakes and bunkers are strategically placed to defend certain portions of the green while leaving open access to others. Turf selections vary depending on climate but superintendents are encouraged to lower green speeds to balance the contours of the putting surfaces. The result is a remarkably versatile golf course that appeals to a broad spectrum of players who find it a fun and challenging way to play golf.”

# FURMAN UNIVERSITY GC



In 2011, Furman University's golf teams began discussing construction of a short game practice area near its REK Team Clubhouse. Although the teams had a practice tee and putting green at the back end of the golf course's driving range, these facilities were not adequate to replicate all the shots they faced in competition. At the same time, the coaches recognized the need to grow the game, cater to junior golf camps, provide quality practice facilities for Furman's touring professionals, and create a place for donors to gather. The challenge became accomplishing all these goals in one place.

The teams consulted Furman alumnus Scot Sherman, ASGCA as it looked for a solution. North of the team's existing practice tee the university maintained several small buildings used by astronomers from the institution's physics department. Sherman suggested a win-win situation that would see the relocation of the astronomers' telescopes to less developed areas of campus, and allow the teams to use this adjacent five-acre plot.

Once all parties agreed, Sherman proposed a new multi-use facility. The design allows for teaching tee and driving range use in one direction, while

also providing shots of up to 200 yards to be played in the opposite direction onto greens maintained at competition level.

At certain times, the short game area is used for golfers to hit approach, chip and bunker shots 'from anywhere, to anywhere.' At other times, a seven hole, par-three loop can be used for competition or social purposes.

"The new facility has attracted all the folks we had hoped for," says Sherman. "The expert player will find every type of shot and putt needed to sharpen his game. On the other hand, there is no better way to attract new golfers than through building facilities that promote putting and short game development – we have done both here."



**Location:**  
Greenville, South Carolina

**Architect:**  
Scot Sherman, ASGCA

**Project summary:**  
Scot Sherman, ASGCA helps create a multi-purpose practice facility at a university campus in South Carolina that includes a par-three course, short game practice and driving range.

**Partners:**  
MacCurrach Golf Construction  
Tony Altum, Irrigation Design  
Smith Turf & Irrigation – Toro  
Golf Agronomics  
Corbin Turf & Ornamental Supply

[www.furmangolfclub.com](http://www.furmangolfclub.com)



# JANE AND WALT DENNIS GOLF PERFORMANCE CENTER



**Location:**  
Columbus, Ohio

**Architect:**  
Michael Hurdzan, Ph.D., ASGCA Fellow  
Hurdzan Golf Design  
[www.hurdzangolf.com](http://www.hurdzangolf.com)

**Project summary:**  
Hurdzan Golf Design helped develop a unique indoor practice centre, which includes artificial turf and real sand bunkers, at The Ohio State University close to the institution's famed Scarlet Course. The result is a facility with large tee areas, fairway, collar, green, rough and bunkers, elevation changes up to eight feet, slopes up to 2:1 and green speeds commonly found on bermuda and bentgrass.

[www.ohiostategolfclub.com](http://www.ohiostategolfclub.com)



An institution with a rich golfing history, The Ohio State University's men's and women's teams has won a number of national titles in the last 30 years. The university is also home to the Scarlet course, designed by Alister MacKenzie and regarded as one of the best collegiate courses in the U.S.

Wanting their players to stay sharp throughout the winter, the university's teams are now also benefiting from a new \$6.3 million, state-of-the-art indoor facility, which included design contributions by Dr. Michael Hurdzan, ASGCA Fellow, and his son and business partner Dr. Christopher Hurdzan.

The Jane and Walt Dennis Golf Performance Center is a unique facility that allows players to practice the entire range of short game skills from 60 yards and in. The center also features an undulating green and bunker complex, a putting surface divided into sections to accommodate different Stimpmeter speeds, and a hydraulic putting 'floor' which is equipped with computerized technology which allows players to analyze putting

techniques and practice sidehill lies.

Located to the north of the Scarlet Course clubhouse and beside the eighteenth fairway, the 20,000 sq ft facility is also features players' lounges, locker rooms, a weight training and conditioning area and a club-repair room.

A separate building built on the practice range includes five heated driving bays that are equipped with video and tracking technology, helping to provide golfers with immediate feedback on aspects of the play such as swing and ball flight.





**M**istwood Golf Club was suffering from stagnant rounds and revenues caused by outdated course features, course flooding, a poor practice range and excessive primary rough.

The course features were no longer strategically relevant due to advances in club and ball technology, and aesthetically featured little to differentiate it from any other course in their market.

An adjacent housing development was built after Mistwood GC opened, and during the spring months and when heavy rains struck, rapid storm water runoff led to flooding of the course.

“The primary rough was extensive and required significant irrigation, mowing, fertilizers and pesticides to maintain,” explains architect Ray Hearn, ASGCA, who was hired to help revitalize the course. “The driving range was also not particularly appealing to existing golfers and didn’t attract new golfers.”

Hearn remodeled the course to help enhance strategy while also improving the aesthetics. Pond storage capacity was increased, while the amount of high-maintenance rough was decreased, which combined to help attract golfers and boost fees.

“The renovation has made the course more strategic, with added shot value

**“We reduced the surface area of the primary rough, thus providing the owner a savings in irrigation, fertilizer, mowing and pesticide use, while providing a dramatic new look”**

and visual appeal for all golfers,” says Hearn. “We added unique course features such as Lannon Stone walls, revetted sod wall bunkers and fescue rough, giving Mistwood a unique look compared to other courses in the region.”

The driving range was also completely renovated and made more attractive and appealing to golfers, and the targets on the range now look like actual golf holes.

Hearn, whose renovation has attracted multiple accolades and design awards, also said, “We reduced the surface area of the primary rough, thus providing the owner a savings in irrigation, fertilizer, mowing and pesticide use while providing a dramatic new look. Golfers love the look.”

**Location:**  
Romeoville, Illinois

**Architect:**  
Ray Hearn, ASGCA  
Raymond Hearn Golf Course Designs  
[www.rhgd.com](http://www.rhgd.com)

**Project summary:**  
The award-winning renovation of Mistwood GC has brought enhanced strategy and improved aesthetics to the course as every hole was improved. The project – led by Ray Hearn, ASGCA – also saw removal of primary rough and the renovation of the practice facilities.

**Partners:**  
Ryan Central  
Rain Bird

[www.mistwoodgc.com](http://www.mistwoodgc.com)



**Location:**  
Bloomfield Hills, Michigan

**Architect:**  
Shawn Smith, ASGCA Associate  
Hills & Forrest International  
Golf Course Architects  
[www.hillsforrest.com](http://www.hillsforrest.com)

**Project summary:**  
To address drainage issues and improve playing conditions of the North course at Oakland Hills, Shawn Smith, ASGCA Associate capped heavy peat soils with sand and relocated and rebuilt a pond.

**Partners:**  
Oliphant Golf Construction  
The Toro Company  
Profile Products  
American Marine  
Michael Kuhn & Associates

[www.oaklandhillsc.com](http://www.oaklandhillsc.com)

**“The project enhanced the course by adding challenge for the best players while maintaining and enhancing the playability for the average member”**



**H**ills & Forrest implemented a Master Plan for Improvements for the North Course at historic Oakland Hills Country Club in Bloomfield Hills, Michigan.

In addition to rebuilding and squaring up all the tee complexes, over 300 yards were added to the North Course in preparation for the 2016 U.S. Amateur. Thirty bunkers were rebuilt and, in some instances, relocated in order to both fit more comfortably into the natural landforms and to provide a challenge to the longer hitters. In an effort to retain and enhance the playability of the course for the membership, many of the fairways were widened and selective tree removal was undertaken exposing the beautiful rolling terrain and accentuating the specimen trees.

One of the more dramatic improvements was on holes fourteen through sixteen. These holes were originally built across a valley covered with a 20-foot layer of peat, unlike the otherwise sandy soils characteristic of the site. The peat soils absorbed water when it rained, making the ground springy, unstable and very difficult to mow without getting machines stuck.

Playing conditions deteriorated as a result, and the worst-affected area –

located on the center line of the fifteenth hole – evolved into a small shallow pond. This created a lay-up tee shot and a forced carry on the second shot.

“Our plan to alleviate the effects of the peat began with the decision to relocate the existing pond on hole fifteen, converting it into an appropriate strategic feature,” explains architect Shawn Smith, ASGCA Associate. “We excavated and reshaped a sandy ridge in front of the tees, both to expose the landing area in the valley and to generate an 18-24-inch sand cap on top of the peaty soils. The fairway received an additional foot of greensmix above the sand cap to further promote dry conditions.”

Multiple drain inlets and extensive French drainage were also added throughout the valley to help collect storm water and direct it to the new pond. The banks of the pond were stabilized by installing a seawall around its perimeter. Part-circle irrigation heads were installed along the perimeter of the fairways to provide more irrigation control.

“The improvements enhanced each of the holes by creating firm and fast playing conditions, similar to the other holes built on sandy soils, while greatly improving their beauty, strategy and playability,” adds Smith.



# PENINSULA STATE PARK GC



**Location:**  
Ephraim, Wisconsin

**Architect:**  
Bob Lohmann, ASGCA  
Lohmann Golf Designs  
[www.lohmann.com](http://www.lohmann.com)

**Project summary:**  
Bob Lohmann, ASGCA helps convert unused six-acre plot into a new short course and learning centre that will accommodate 8,000 rounds a year.

**Partners:**  
Baudhuin Incorporated  
T.J. Emmerich Associates  
The Toro Company  
Wadsworth Golf Construction  
Wadsworth Golf Foundation –  
Links Across America  
Waupaca Sand & Solutions

[www.peninsulagolf.org](http://www.peninsulagolf.org)



Peninsula State Park GC, a popular 18-hole public facility, owned a six-acre plot across the nearby Route 42 that was part of the original course routing, but had been abandoned and was unused. The site was perfect as a ‘grow the game’ short course location, where golfers of all ages could learn the game in a low stress environment before graduating to the 18-hole course. As well as providing another park activity, the course would also introduce golf to a novice audience.

Peninsula Golf Associates (PGA), a private, non-profit entity that leases the land, contacted the Wadsworth Golf Foundation’s Links Across America (LAA) to assist with funding. With LAA, its partners and a number of private donors contributing to the US\$600,000 project costs, the State of Wisconsin also jumped on board. Ground was broken in the summer of 2013, finished by September 2013, and the facility opened in August 2014.

“The six holes on the par-three routing range from 65 to 110 yards,” says architect Bob Lohmann, ASGCA of Lohmann Golf Designs. “Famous holes, including the twelfth at Augusta, a Redan, and a Punchbowl, were used as loose templates.”

Lohmann continues, “For ease of play and maintenance, the teeing areas are built as extensions of the fairway and grassed in low-mow bluegrass, and the bentgrass greens have generous collars. There’s also talk of using larger cups.”

PGA estimates the new Short Course and Learning Center will accommodate 8,000 rounds a year, with an affordable cost of under US\$10 each. “The course will be affiliated with the Green Bay Chapter of The First Tee and will have a full time instructor to work there and at the big course, which will use it as a feeder,” adds Lohmann. “Targeting parents and kids, the short course is all about growing the number of new golfers around the area and getting them hooked on the game.”

**Location:**  
Appleton, Wisconsin

**Architect:**  
Todd Quitno, ASGCA Associate  
Lohmann Golf Designs  
[www.lohmann.com](http://www.lohmann.com)

**Project summary:**  
In order to improve water management and avoid localized flooding, Todd Quitno, ASGCA Associate helped increase Reid Municipal's retention capacity and simultaneously made a number of alterations and improvements to the course.

**Partners:**  
AECOM  
T.J. Emmerich Associates  
The Toro Company  
Ryan Inc. Central  
Waupaca Sand and Solutions

[www.reidgolfcourse.org](http://www.reidgolfcourse.org)

**“These upgrades are expected to increase the course’s local and regional draw and breathe some life into a lagging local golf economy”**



Ly<sup>L</sup>ying entirely within the Lower Fox River Watershed and surrounded by urban development, the Reid municipal golf course for many years has served a practical water management purpose for the city of Appleton, gathering overflow from the course and also from the paved streets around it via a concrete channel. This water was ultimately delivered into the Lower Fox River, which flows into the Wisconsin River.

Two problems were faced regularly however. Firstly, not enough water was actually making it downstream in an efficient manner, resulting in localized flooding, some on course but mainly off course. Secondly, the water that did reach the Wisconsin River did not meet new state standards for water quality.

Working with Todd Quitno, ASGCA Associate, of Lohmann Golf Designs and taking two years to plan and build, the concrete channel was naturalized and the course's retention capacity hugely increased. This involved the creation of four

acres of new ponds, representing 50 acre-feet of new storage. The new wetlands filter storm water as it passes through the on-course system before heading downstream.

In accommodating this, a series of changes to the course were also made. “The relocation of four new greens and the equivalent of four fairways helped to maximize spatial relationships and improve risk-reward strategies at the edges of the water hazards,” explains architect Quitno. “Green contours were preserved thanks to thorough mapping prior to construction, and the greens were built using a ‘modified push-up’ style that emulated the profile of the 14 remaining greens. This allows the new greens to behave more or less like the old ones in terms of maintenance and playability.

“These upgrades are expected to increase the course's local and regional draw and breathe some life into a lagging local golf economy,” adds Quitno. “Given the positive early response to the re-opening, it appears things are on the right track.”



One of the new ponds comes into play on the transformed twelfth hole, seen before (left) and after the renovation

# TRUMP GOLF LINKS AT FERRY POINT



From 1948 to 1970, the Ferry Point site at the foot of the Whitestone Bridge in the Bronx, New York operated as a landfill. But in 2008, New York City Mayor Michael Bloomberg initiated the design and build of a public golf course on the site.

“Any golf course designed atop a landfill has special challenges. These include additional infrastructure, landfill closure requirements, permit approvals, methane venting and monitoring, extreme differential settlement control measures, massive erosion control, wetlands creation, and water quantity and quality,” explains John Sanford, ASGCA, who has considerable experience in landfill projects and was the project manager on this Jack Nicklaus Signature Golf Course, with Jim Lipe, ASGCA the senior design associate.

“To meet this challenge and create landforms that emulate a links course, two million cubic yards of fill was imported over a four-year period,” said Sanford. “Union contractors and ‘Big

Apple’ bureaucracy made the design and construction process extremely complicated.” A mandate to use city water put a premium on water conservation, and excavation was minimized to reduce the impacts of removing unearthed municipal solid waste from the site.

With just 70 acres of irrigated area, water consumption was minimized, as was the use of fertilizers and pesticides. Over a third of the runoff is recirculated back to the irrigation pond through the drainage system and reused on the golf course. The

balance is delivered to a series of detention basins designed with micro pools and wetland plantings to trap and biologically filter sediments, nutrients and chemicals.

“An integral part of building this golf course was ‘closing’ the landfill,” says Sanford. “Venting systems were designed to alleviate the buildup of methane gases and avoid internal combustion.”

Trump Golf Links at Ferry Point will open to the public in 2015, and Sanford believes “will become the model for environmental stewardship in the landfill reclamation industry.”



#### Location:

Bronx, New York

#### Architect:

Jack Nicklaus, ASGCA Fellow  
Jim Lipe, ASGCA  
John Sanford, ASGCA  
Nicklaus Design/Sanford Golf Design  
[www.nicklaus.com/design](http://www.nicklaus.com/design)  
[www.sanfordgolfdesign.com](http://www.sanfordgolfdesign.com)

#### Project summary:

A former landfill in New York City was transformed to an Irish links-style golf course that demonstrates a high level of environmental stewardship.

#### Partners:

Toro Irrigation

[www.trumpferrypoint.com](http://www.trumpferrypoint.com)





**Location:**  
Beijing City, China

**Architect:**  
Rick Robbins, ASGCA and  
Brian Lussier, ASGCA  
Robbins & Associates International  
[www.robbsingolf.com](http://www.robbsingolf.com)

**Project summary:**  
To address air quality and water management issues at Yintai Hongye GC, Rick Robbins, ASGCA developed a unified design program to improve both the environment and quality of golf.

**Partners:**  
Jacklin Seed  
Rain Bird Irrigation  
Profile Products

**“The project has achieved significant air and water quality improvements and the golf course is far more strategically and visually exciting than before”**

When hired to renovate the Yinhong #6 course at Yintai Hongye GC near Beijing, China, Robbins & Associates were faced with the challenge of how best to achieve the quality of golf course expected by the owner while also fulfilling environmental goals for the city.

The site had originally been home to several dozen stone mining factories, which had been closed for over 30 years. The barren land was the source of the biggest sand storms in west Beijing, causing significant air quality concerns, and it was prone to flooding from the nearby Yong Ding River.

The Beijing city government had granted the owner use of the land for golf under the terms that it would help address these issues, and make productive use of what had become a dumping site.

“The owner understood that the course that had initially been designed and built by himself and the contractor did not meet the government’s environmental goals or his own expectations for playability,” says Rick Robbins, ASGCA. “The solution was to let us coordinate all aspects of the course redesign and construction.

“Working with the owner and his

staff throughout the construction period with numerous site visits, we were able to implement a coordinated program for water use reduction, flood detention and air quality improvements by irrigation system changes, grassing selections, landscape modifications and staff training,” Robbins explains. “At the same time, reconstruction of all 18 greens complexes and new bunkering has given the course an entirely different appearance.”

The scale of the project was huge: backfilling 300,000 cubic meters of trash and 540,000 cu m of earthworks to restore river banks; 30 lakes collect rainwater with 600,000 cu m detention; 160,000 local species were planted on 80 hectares of landscape area; and dust in Beijing has been reduced by 100,000 tons per year.

Purified wastewater usage has been introduced, as has a new solar lighting system and underground heating system, and a wildlife habitat has been restored, for wild rabbits and chickens, hedgehogs and swans.

“The project has achieved significant air and water quality improvements and the golf course is far more strategically and visually exciting than before,” adds Robbins.



Image: © 2014 Dave Sartorn

**H**aving acquired land that included a golf course that had never opened for play, the owners of Yishan GC in Wuhan, China hired Robbins & Associates to design a new course that would meet multiple new objectives. These included a revised land plan that would accommodate real estate, a desire to host a professional tournament, and fulfilling the requirements set by the local government in the city of Wuhan.

Due to its location in Optics Valley, an entirely new development in Wuhan that would also be home to government offices, the project was under close scrutiny, and was given a defined area within which to build the golf course, which did not work particularly well with the topography.

“We spent a lot of time working with the master planners, clubhouse designers, landscape designers, owners and local officials to get a final master plan and routing that fit the site terrain and provided the best value for real estate,” explains Rick Robbins, ASGCA. “The back nine holes were especially difficult to design because the government planners dictated that the golf course be placed on the higher elevations and the housing would go in the lower part in the center. To

**“We spent a lot of time to get a final master plan and routing that fit the site terrain and provided the best value for real estate”**

make the transition easier from golf to housing, we lowered the golf elevations by several meters and used the material to fill the housing pads. An existing stream was used to tie the housing into the lowest part of the site.”

In order to make the golf course different from the typical ‘parkland’ style that is common in China, Robbins chose to emulate the bunkering style of Alister MacKenzie at the San Francisco Golf Club and then added large areas of links-style grass typical of Ireland in less used areas to reduce the requirements for water and chemicals. The fairways were made wider than normal but that was offset by extra contouring of the greens.

Shortly after completion, the owners’ objective of hosting a professional tournament was achieved when the Wuhan China Open, an event on the new PGA China Tour, was held in May 2014.

**Location:**  
Wuhan, China

**Architect:**  
Rick Robbins, ASGCA and  
Brian Lussier, ASGCA  
Robbins & Associates International  
[www.robbsingolf.com](http://www.robbsingolf.com)

**Project summary:**  
An existing course was replaced by a new design that met strict government planning criteria and made the best use of a land plan that included real estate development.

**Partners:**  
Jacklin Seed  
John Deere Equipment  
Rain Bird Irrigation



Bonita Bay Club | Stuart Hackwell and Matt Corentin

# On a mission to save water

Bonita Bay Club has implemented a new state-of-the-art irrigation system to help reduce water use, electricity and maintenance costs



**B**onita Bay Club in Southwest Florida is on a mission to deliver top caliber playing conditions while aggressively managing water use on five championship golf courses. Originally envisioned with naturalized areas and native buffers between the holes, Bonita Bay Club achieved certified Audubon Cooperative Sanctuary status in 1995. Carefully managing resources has been integral to their core beliefs since inception.

The three West courses, designed in the 1990s by Arthur Hills, ASGCA, incorporated irrigation systems with standard design practices of that era. A typical golf course irrigation system was designed with approximately 1,100 large sprinklers at 80 feet spacing. Each sprinkler used 60 gallons of water per minute. Two sprinklers operated on each station and, with large radius of throw, watered large areas of turf – even if the objective was to water one small, dry spot.

Hal Akins, Director of Golf Course Operations at the club, recognized the need to reduce water consumption, improve playability, reduce irrigation repairs and save electricity. He embarked on a plan to upgrade the original irrigation. In 2012, Dave Ragan of Ragan Technical

Solutions was hired to design a modern state-of-the-art system that would achieve all of these objectives. The new design specified smaller-gallonage, high-efficiency sprinklers, spaced at 65 feet, with individual sprinkler head control, to provide precision irrigation coverage.

Bonita Bay Club completed the first phase of the renovation of the Marsh course in fall 2013. After a thorough review, Akins selected a Rain Bird® Integrated Control (IC) System™ with a 3,000gpm Rain Bird pump station. The IC System™ has intelligent control modules located at each sprinkler, eliminating field satellites and 90 percent of the wire compared to traditional satellite control systems. When Akins first started evaluating sprinkler systems for the renovation, the IC System was relatively new. “When I first learned of this technology and its abilities, I was excited to know that I could get away from control boxes in the field and all the associated maintenance costs,” he says. “At that point it was a matter of evaluating the different control systems on the market. After a lot of research I chose the Rain Bird IC System because I considered it the most technologically advanced and

proven system. And we have been extremely happy with our choice. I tell folks that the system is ‘simple yet sophisticated’ – the components of the system are few and simple, yet its capabilities are very sophisticated.”

Immediately after installation, the club began seeing results. It has high-efficiency sprinklers, closer spacing, single-head control, and – with Cirrus, advanced computer control software – the system provides targeted precision irrigation. Akins found that it was possible to control water better, dry out the course when needed and still keep it looking good. Akins states: “It’s a balance between playability and aesthetics; you want it looking good, and play firm. We have a diverse membership here at Bonita Bay Club and members have high expectations.”

Fertilizer can now be applied through the irrigation system, something they had stopped doing with the old system due to poor sprinkler uniformity and a lack of control. Akins finds that there is more effective response of fertilizer – better results with the same inputs.

Taking targeted irrigation to a new level, Akins installed smaller spray zones to irrigate the tops of mounds. Each spray has a low-flow



Rotary spray nozzles enable the club to be extremely precise with water application

rotary spray nozzle to apply water in limited areas, approximately 20 feet in diameter. Since the tops of mounds tend to dry out first, using rotary spray nozzles – which allow extremely precise irrigation to irrigate just these areas – saves water by reducing the need to turn on the larger sprinklers. Akins comments: “Many times we don’t turn on the larger overhead sprinklers like we used to because the rotary nozzles apply a small amount of water every day and keep the mounds looking good. Without rotary nozzles, the new sprinklers would still do a better job than the old irrigation system, but rotary nozzles just take the efficiency to another level. We use them to manage moisture on bunker faces and surrounds too.” And they have eliminated over-watering.

Some rotary nozzle stations were installed after completion of the project. One of the advantages of the IC System is that each wire path has capacity for 750 stations with unlimited simultaneous operation. This allowed Bonita Bay Club to add additional stations of rotary spray nozzles anywhere on the course. It was easy to install a new zone simply by locating the

closest pipe and control wire which could be as close as the nearest large sprinkler. When a new rotary mister station was connected to the control system, the central control software communicated with the new station immediately. This flexibility eliminated the need to install a wire from the station back to a satellite box in a traditional control system. Akins acknowledges that it is more expensive to install rotary mister zones and that they have to be carefully managed during aeration, but the water savings being achieved by not turning on the larger sprinklers is worth the investment.

After 14 months of operation with the new irrigation system, the results are dramatic. Comparing water use at the Marsh course to the adjacent Creekside course, which has an old irrigation system, the Marsh course used 32% less water, on a water-used-per-acre basis.

Akins observes: “I’ve heard it said that ‘more sprinklers use less water’ and I wondered about that at first, but we’re using less water. If I could do it all over again, I would do it exactly the same. I wouldn’t know what to do differently. We tried to incorporate every new piece of

technology into this system and I feel we were very successful in doing so.”

Saving water and delivering more consistent playing conditions are critical for Akins. As Bonita Bay Club starts the next phase of the irrigation upgrade, he comments: “What does this mean when we finish all 54 holes? The benefits will be huge.” ●



### Stuart Hackwell and Matt Corentin

Stuart Hackwell, International Sales Manager, has been with Rain Bird Corporation for 22 years and works with golf course specifiers on water management projects worldwide. Matt Corentin, Rain Bird’s District Sales Manager for the Southeast USA, has been in the golf industry for 20 years and has a degree in Turfgrass from University of Georgia.

Practice facilities | Lester George, ASGCA

# The practice of practice

Lester George, ASGCA considers the most important characteristics of a practice facility and the keys to success when expanding existing facilities or creating new ones

Throughout 2014, I have had the honor of sharing an architectural perspective of golf practice facilities at several Golf Range Association of America boot camps around the country, talking to a mix of PGA Professionals, owners, managers, superintendents, and operators to provide real-world solutions for the logistical and financial challenges they face while trying to offer more practice options for their players.

In my opinion, the single most important characteristic of a practice facility must be that it provides strategic training that can be applied on the golf course. For private clubs, universities, stand-alone public courses, and First Links and First Tee facilities, it is paramount to continually expand the skill sets of golfers through teaching in order to keep players engaged. Through design, ASGCA architects should provide a platform to engage golfers in an interactive manner, which ensures that they will return for more frequent play.

As always, practice serves as an entry point to the game, but with the economic downturn in the golf industry, practice has become the activity of choice for many golfers who love the game but might not be able to afford a golf membership or

a full round of golf at a daily fee golf course. Not only do the target range, chipping, and putting facilities provide a less expensive manner in which to enjoy golf, they also enable players to improve their skill and technique. This, in turn, makes them more eager to play full rounds of golf, which will help the game grow as the economy strengthens.

**“The single most important characteristic of a practice facility must be that it provides strategic training that can be applied on the golf course”**

I think the key to success in the expansion of an existing practice facility, or the creation of a new one, is to conceptualize imaginative options that the owner/operator might not have previously considered. My approach to creating these facilities is to start the planning process as if there are no boundaries, envisioning a dream golf practice area that



Lester George, ASGCA

The principal of George Golf Design, Lester George, ASGCA has designed award-winning new golf courses such as Kinloch GC in Virginia and renovated many of the most historic and well regarded courses on the East coast of the USA.

has every desired feature. Then, I take steps back from that ideal that will enable the design of the practice area to fit into the financial and operational realities of the situation, as well as the custom teaching curriculum. Once the unique physical characteristics and operational procedures are carefully evaluated, the architect can provide a variety of realistic expansion and conversion options.

In my 25 years of designing practice facilities, I have seen just about every property scenario, including a significant lack of space. Repurposing existing land is an excellent way to expand or create a teaching facility. Additionally, indoor teaching facilities, covered range bays, and golf simulators can all offer private one-on-one coaching sessions while providing year-round opportunities to avoid inclement weather.

ASGCA members – along with PGA Professionals, teaching professionals and the owner/operators of standalone facilities – should concentrate on offering genuinely educational practice options that simulate real conditions on the golf course. This is what will best prepare players for their rounds and keep them coming back for more, thereby expanding both their imagination and their ability to enjoy the game of golf. ●





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