Marsh grasses and large sand traps test golfers on the 16th green.

Charlotte Enters Renaissance In Municipal Golf

Golf may have been born in Scotland, but the United States has become its foster parent. Americans have the world's greatest access to golf courses with more than one course for every 20,000 citizens. The National Golf Foundation estimates that 17 million Americans play golf regularly and that the number will increase to 22 million by the year 2000.

Golf is a major part of American sports, yet you can count the number of minority professional golfers on one hand. Professional sports, such as football, baseball, and basketball, have been an important ladder for minorities with exceptional athletic ability. An abundance of facilities for these sports has provided opportunity for athletes of all means to achieve wealth and recognition. The same cannot be said for golf.

A shortage of municipal or daily-fee courses with championship layouts has been blamed for preventing the development of more golf professionals. To hone and test their skills, those aspiring to a career in golf must have access to challenging courses. Too often these courses are unavailable to people either because of location (resort courses), financial means, or membership restrictions.

Nine years ago, the people of Charlotte, NC, decided to change this. They were tired of driving more than an hour to the closest public championship course, Tanglewood Park Golf Club in Winston-Salem, NC.

Revolution Park Golf Course, the only municipal course in Charlotte, has a simple nine-hole layout. It is fine for casual golfers, but it lacks the degree of difficulty needed to develop the type of game played in strong amateur competition.

In 1981, Charlotte City Council, encouraged by Mayor Eddie Knox, commissioned Woolpert Consultants based in Dayton, OH, to develop a Master Plan for the city's parks. The city and state owned hundreds of acres near the airport on the southwest side. The largest section was a 260-acre landfill predicted to reach its capacity in 1986. Woolpert was asked to design a multi-sport park to occupy the landfill site plus another 200 acres of virgin forest off the Billy Graham Parkway.

Knox, a golfer, believed the growing city needed to provide more municipal golf courses for its residents. During public hearings about the Master Plan, the strongest voices were those of the golfers. Sentiment was strong not just for an 18-hole golf course, but for a championship layout similar to Tanglewood. They felt excluded from private courses in the area. Even if they had the money for membership, most of these courses had long waiting lists.

Charlotte Park Superintendent Tom McDermott recalls the hearings, "Residents made it clear that they wanted a tough course, one that would challenge scratch golfers as well as recreational golfers. The course had to be available to those of moderate means. Race was not the issue, public access to a championship golf course was."

Knox's support for the project was carried on by his successor, Harvey Gantt, the first black to become mayor of the city. Gantt was proud of Charlotte's commitment to recreation, especially to golf. He wanted to open up the sport to athletes of all means and backgrounds. He played a pivotal role in getting Charlotte voters to pass a bond issue for the project.

Woolpert developed a phased plan to include 24 tennis courts, eight softball fields, six soccer fields, an exercise trail, bikeways, recreation center with an indoor pool, children's creative play area, an 18-hole disc golf course, and the 18-hole championship golf course. The total estimated cost for the complex was $15 million. Completion was scheduled for 1989. The name given to the project reflected its intended impact on the area, Renaissance Park.

In 1985, Kidwell and Hurdzan, a golf course architectural firm based in Columbus, OH, was assigned the task of designing the golf course. "It was a dynamic project from the start," states Mike Hurdzan. "We had to lay the course into the terrain because we could not disturb any portion of the landfill. The landfill portion of the site was a series of ridges and valleys when construction began. To reflect the rolling hilltops of the Piedmont, Hurdzan followed the ridges as much as possible. Lakes, bunkers, tees, and greens either had

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"Residents made it clear that they wanted a tough course, one that would challenge scratch golfers as well as recreational golfers. The main issue was public access to a championship golf course."

18th green during construction. More than 30,000 spectators can sit on slope surrounding the green.

Same green one week after Hurricane Hugo. Note mature trees down in background.

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to be located off the landfill or built above it."

The city wanted a championship course. That meant long, mounded, heavily-bunkered, and challenging holes for the scratch golfer. Yet, Hurdzan had to allow for the casual golfer with multiple tees. In the end, he delivered a 7,480-yard layout with a tremendous finishing hole capable of holding 30,000 spectators. "It's definintely a championship course worthy of any tournament," boasts Hurdzan today.

Being located on a landfill presents many problems. Strict guidelines have to be followed regarding settling, methane gas, leaching, and drainage. Every move had to be approved by the U.S, Corps of Engineers. In 18 years, more than six million tons of trash had been deposited at the site. The result was a layer ranging in depth from 35 to 80 feet deep. All refuse had been compacted like a roadbed.

To produce Hurdzan's design, Moore Golf of Culpepper, VA, had to truck in more than 300,000 cubic yards of dirt. A foot of topsoil was deposited over the landfill in the location of the fairways, roughs, and driving range. Hurdzan placed tees and greens off the edge of the landfill wherever possible. In some cases, this was impractical, so he selected sites with the least amount of trash underneath.

To protect greens and tees in these locations from settling, geotextile was laid over the refuse and covered with six inches of clean fill dirt. Then a heavy plastic membrane was installed over the dirt to prevent damage by methane gas escaping from the decomposing refuse. Drain tile was placed on top of the membrane before the appropriate soil mix was brought in.

In the fairways and rough, a series of pipes vent the methane generated by the material below to the surface. Two lakes built over the landfill were lined with thick polyethylene. As a precaution water from these lakes is not used for irrigation. Instead, an irrigation reservoir was constructed off the landfill site.

"When construction started (in 1986)," explained Hurdzan, "trucks were still hauling garbage to the site." The Charlotte Amateur Tournament had been scheduled for the course for September 1988. Hurdzan and Moore had less than two years to get the course to grow in.

The first ten holes are located over the landfill. Moore started by carving out the last eight holes from the hilly forest. Oak, pine, hickory, maple, poplar, and dogwood trees were carefully selected before cutting. Hurdzan wanted to save as many trees as possible and to preserve the dramatic natural changes in elevation.

An example is the 65 foot drop in elevation between the tees and the green on the 13th hole. The par-3 hole becomes tougher due to the fact that it's 200 yards from the blue tee to the green. Even the red tee is 120 yards from the flag. Trees threaten on the right while two bunkers await errant shots on the left side of the green.

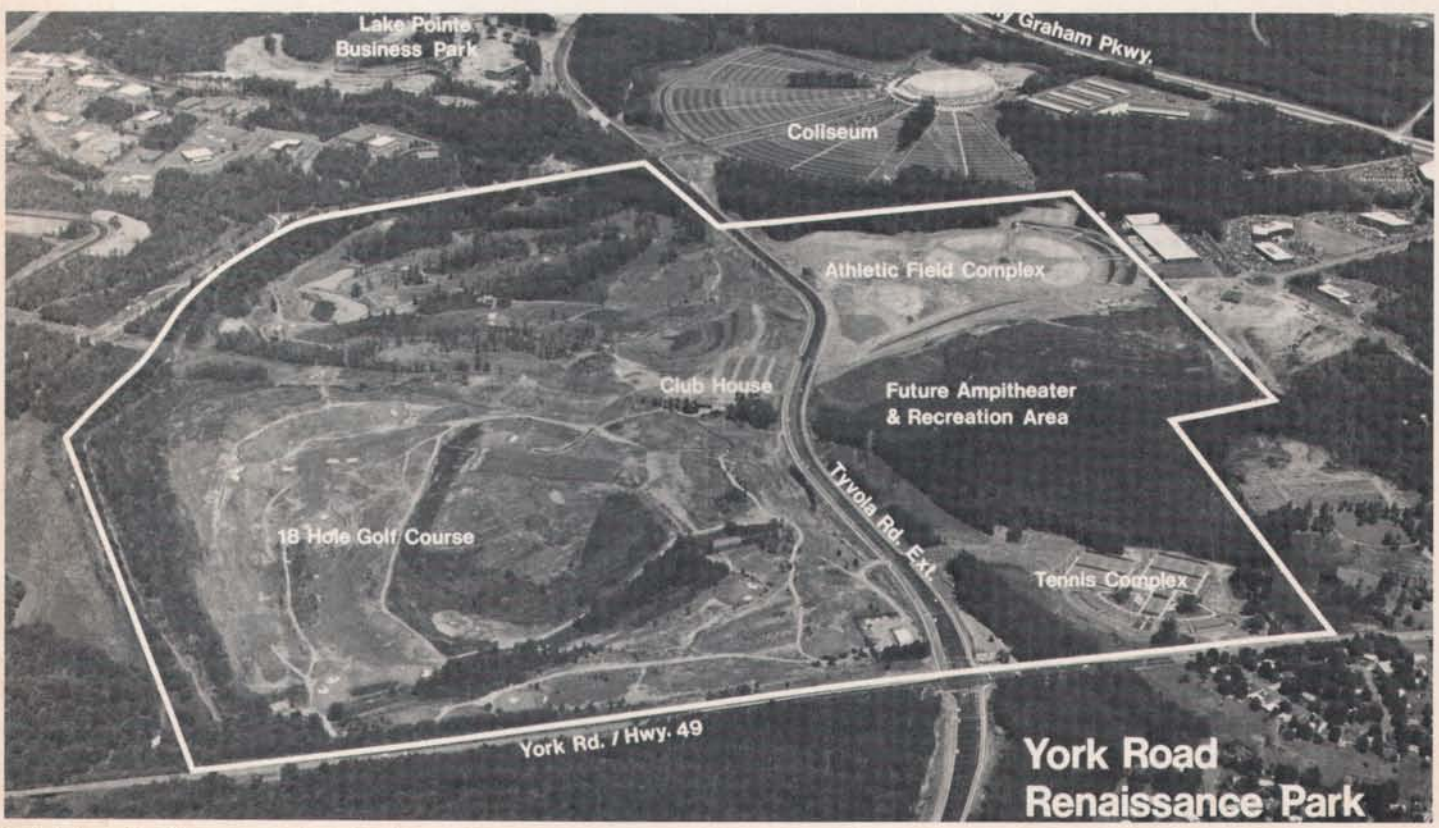
"You feel like you're playing from one hilltop to another," adds Hurdzan. Landing areas were graded to between two and six percent slope. More than 80 bunkers were included in the design. A creek running the length of the course on one side added to its appearance and challenge. The course would clearly require study for golfers to master. Word of the difficulty of Renaissance Park began to spread before it was completed.

The topography of the ten holes built over the landfill resembled links-type courses. To further strengthen the links appearance, Hurdzan specified ornamental grasses for the mounds and grassy hollows. Zebra grass, plumegrass, Miscanthus (Maiden grass) and lovegrass wave in the wind to alert golfers to hazards. Wind is a common factor in the coastal city.

There are 21 greens plus a nursery at Renaissance Park, including one practice green and two teaching greens. All are Penncross creeping bentgrass. The root-zone consists of 12 inches of sand above a network of perforated drainpipe. Two inches of peat were tilled into the top eight inches of sand. There is a total of 210,000 square feet of bentgrass putting surface on the course. Many of the greens have undulating surfaces as you would expect from a championship course.

Green banks were sprigged with Tifgreen 328 for two reasons. The first was to reduce encroachment of bermudagrass into the bentgrass, a serious problem in courses with bentgrass greens in the South. The more aggressive Tifway is often blamed for this maintenance headache. The Tifgreen also has a lower growing habit and slower growth rate.

The tees and fairways are constructed of native topsoil. Tifway's aggressiveness was



Aerial view of golf course, park and coliseum. The area on the bottom left used to be the landfill.

put to use in this instance. Fast establishment was essential in opening the course on time. The tee on the driving range alone covers more than two acres. Many of the tees are large to accomodate different tee positions and the amount of play expected for the municipal course. Overall, there are seven acres of tees.

Hurdzan selected two different turfgrasses for the roughs. Turf-type tall fescue was sown in the roughs on the tree-covered back nine due to its improved shade tolerance. Over the landfill, he switched to common bermudagrass. He wanted an aggressive turf that would spread quickly and stabilize the imported soil. It also would stand up well to the full sun in these areas.

During his career, Hurdzan has developed a knack for providing the most golf course for municipal budgets. In the case of Charlotte, he economized by allowing the roughs to rely on natural rainfall instead of irrigation. The plan called for thousands of additional trees to be planted over the landfill in the roughs. In fact, if the plan is followed, the number of trees will increase more than six-fold.

Hurdzan hired Smith Turf and Irrigation to design the irrigation system. All 350 sprinkler heads were confined to greens, tees, and fairways. Thirty-seven Toro field satellites, a VT-2 central controller, and rain gauges were installed to regulate the heads. The capacity of the controllers exceeds the present needs of the irrigation system to allow for future expansion.

More than 80 bunkers dot the course. Most are located around greens, but a fair share are placed to challenge the long driver. There are grassy hollows, sod-faced bunkers and sand traps. A marsh along the creek was preserved during construction and comes into play on four holes.

As construction proceeded, two things became evident. The size and complexity of the project was putting a strain on the budget. The Park and Recreation Department had its hands full completing the new softball, tennis, and soccer complexes and managing 40 other parks in the city.

Overall, Renaissance Park was a major success. The Charlotte Hornets, an expansion National Basketball Association franchise, was launched. A new coliseum was built for the team across from the golf course. The park area was the focal point of the city's growth.

To meet the budget, Hurdzan amended certain aspects of the golf course's construction. Wooden walls along the creek were eliminated. The amount of earth moving for the driving range was reduced. Further construction of the cart paths and shelter houses was halted.

Despite these problems, twelve different golf course management companies wanted to take the course to its full potential. The city had been impressed with the job American Golf Corporation had performed at Revolution Park. The company had developed a system for bring new life to

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municipal golf courses across the country, including those in Metropolitan New York. An agreement was signed in 1987 to lease Renaissance Park Golf Course to American Golf.

Without delay the company sent a team to Charlotte to finish the course and plan its opening. Another 12,000 feet of cart path were built. Additional drain lines were installed in the valleys. Truckloads of maintenance equipment were shipped in from courses as far south as Atlanta.

Renaissance Park was placed under the supervision of the Atlanta Region of American Golf headquartered at North Fulton Golf Course in Atlanta. Soon Jack Duncan, general manager at North Fulton, was transferred to Renaissance Park. The search began for a superintendent while regional superintendent Jerry Owens and Mike Heacock, vice president of maintenance, put together a set of guidelines for the new course.

The company felt the position called for someone with a background in soils. It needed a person capable of solving the special problems associated with building over a landfill. Experience with new course construction would also be beneficial.

Greg Bozak had recently moved from American Golf's operation in New York City to Hidden Hills Country Club, a private course the company manages in Stone Mountain, GA. Bozak has a degree in soils and crops from Michigan State University in E. Lansing, MI. He also completed MSU's two-year course in turf management. Before joining the company four years before, he had been the assistant at exclusive Ocean Reef Club in Key Largo, FL.

When American Golf took over management of the municipal courses in metropolitan New York, there was a severe problem with soils. They sent Bozak to Pelham/Split Rock Golf Course in the Bronx to correct the situation with soil conditions. After just six weeks at Hidden Hills, Bozak got the call to go the Charlotte.

"Unless you've been on a landfill before, you wouldn't know how to deal with all the problems that come up," Bozak remarks. "You learn to recognize problems such as settling and turf stress caused by gas." For example, Bozak points out that methane damage occurs most often on higher elevations rather than low spots as you might expect. There is also good reason to be alert for fires on a golf course or park built above a landfill.

To meet the September 1988 deadline, Bozak pushed the bermudagrass and bentgrass. The greens were placed on a program of preventative fungicides with applications every ten days. Three members of the crew spent six hours each day hand watering the greens. Treatments with Fore were made to guard against algae problems. Wetting agents were also used generously to correct any localized dry spots.

Sand topdressing proved extremely helpful in solving minor settling problems on the greens. "We took the grooming units off our Greensmaster because they would scalp where settling had occured," Bozak stated. "When you're cutting at two tenths of an inch, it doesn't take much settling to cause a problem."

The 419 bermudagrass responded to one pound of nitrogen per month. Five fairways, however, were thinner than Bozak would have liked for the opening. Bozak also noticed a few large areas of bermuda on one fairway that didn't respond as well to wetting agents and fertilization. He suspected methane was the cause and was able to correct the problem with aerification and additional fertilization.

Portions of rough outside of the throw of the irrigation system were also thinner than he would have liked for the opening. But no one seemed to notice these small flaws during the Charlotte Amateur Open a month after Bozak arrived. They were too busy trying to beat the tough course. After the Open, Bozak overseeded the tees with Prelude perennial ryegrass. He also overseeded the tall fescue roughs with a blend of improved turf-type tall fescue. When the Tifway and Tifgreen went dormant, he was able to remove any patches of grassy or broadleaf weeds with glyphosate.

This past spring Bozak applied Regalstar, a fertilizer containing Ronstar preemergence herbicide, to block chickweed and Poa annua from germinating. He followed up with a late spring treatment of Trimec for broadleaf weeds and Sencor/MSMA for crabgrass. A second application was needed for the green banks after a heavy rain. A few thin spots in the common bermuda roughs were reseeded.

"We had very few insect problems so far," Bozak reports. "We stay on top of cutworms on the greens. Other than that, we don't have problems with grubs like northern courses and we don't run into mole crickets or sod webworms like they have in the South. It could be that the course is new and they haven't had a chance to move in."

This year the greens were aerified six

Renaissance Park Golf Course crew and equipment. Seated on motorcycles (L to R): superintendent Greg Bozak and mechanic Chris McElhattan. Seated on mowers (L to R): Rich Shinholt, Chris Burris, Jerry Sherrill, and Tony Sherrill. Standing in truck beds (L to R): assistant superintendent Alan McCurry and irrigation technician Sean Patterson.

times, three with hollow tines and three with solid tines. During the summer the cutting height on the greens was raised to 1/4 inch. Bozak drops it to two tenths inch for the winter.

He raises the cutting height of the 450D fairway mower in the fall to 3/4 inch from 1/2 inch as a precaution for winter dead spot. The fairways are core aerified three times during the year. The tees are maintained at four-tenths of an inch year round and aerified six times a year. They are overseeded in the fall along with the greens.

Both the common bermudagrass and tall fescue roughs are cut at 2½ inch throughout the year. The tall fescue is reseeded in the fall to maintain density.

By this fall Renaissance Park was as beautiful and staggering as any private course in Charlotte. The entire park was a shining example of what city parks can be with lighted softball and soccer fields busy every night. Business was also brisk at the golf course's lighted driving range. The Hornets were getting ready to start their season at the Coliseum.

This fall as Bozak was preparing the tees for overseeding, the National Weather Service issued a hurricane warning for the Atlantic Coast from Miami to Charlotte. Hurricane warnings are nothing new for Charlotte residents. They had escaped severe damage for nearly 30 years.

But on the morning of September 29, hurricane Hugo hit Charlotte with all its furry, toppling trees like matchsticks and destroying homes and businesses for miles. Renaissance Park, located six miles inland was not spared. When Duncan and Bozak reached the courses that afternoon, they counted more than 300 trees down. "They were all old trees on the back nine," said Bozak. "One big beech tree that fell on the 13th green had initials carved in it date 1930."

"Unless you've been on a landfill before, you wouldn't know how to deal with all the problems that come up."

While the loss was severe, only one green had been damaged by falling trees. After trying unsuccessfully to find an arborist who could remove the trees, Duncan called American Golf in Atlanta for help. The next morning a crew of 11 from Atlanta arrived at Renaissance with chain saws, a chipper, and a dozer. By that evening all the trees on the greens and blocking the cart paths were gone.

On the second day, Bozak and assistant superintendent Allen McCurry prepared a temporary green on the fairway next to the damaged green. The front nine was opened on the third day. After repairing and resodding the damaged green, the back nine was reopened the following weekend.

"We have months of work ahead of us to clean up from the storm," Bozak adds. "But, some courses were closed for nearly a month. I still can't believe how much equipment the company brought in to get us back open. They also helped out two other courses in Charlotte."

"In another year, Renaissance is going to be one of the best municipal courses in the Southeast," he boasts. "It's a bargain at $28 [for a cart and greens fee] on the weekend. There's no doubt it's a tough course. You can't play it once and hope to do well. You have to hit straight and learn how to play the bounce. You use every club in your bag."

Perhaps in the future, a number of young Charlotte golfers will make the tour and work their way up the money list. If they do, everyone involved with the Renaissance Park project will feel a sense of accomplishment and pride. Not only did they reclaim a landfill, they gave golfers of all backgrounds a chance to develop their game to its full potential.