

CASE HISTORY:

A new 9 holes on 19 acres

There are very few golfers who have never fantasized about designing the perfect golf hole or golf course. This pipe dreaming is fired by the thought that Pebble Beach, Pine Valley, and Merion were designed by amateurs. However, this flow of thoughts is slightly slowed by the remarks of Bobby Jones when asked why he, the leading golfer of the day, had hired golf architect Dr. Alister Mackenzie to help him with the Augusta National.

Jones wrote in his book *Golf Is My Game*; "I think Mackenzie and I managed to work as a completely sympathetic team. Of course, there was never any question that he was the architect and I his advisor and consultant. No man learns to design a golf course simply by playing golf, no matter how well." This statement is perhaps more true today when one considers the precise technology and strict specifications used in all aspects of golf course construction. But be that as it may, the urge to play the role of golf course designer still stirs in the restless spirit of most golfers.

The problem

To help sharpen your skills and understanding of golf architecture, a practical design problem is here presented with its real solution. The situation was that Troy Country Club in Troy, Ohio, had grown to the point where the membership felt it was time for a second nine holes and a tennis complex. But like many clubs, by the time they decided on their expansion, Troy Country Club found there was only 19 acres of available ground adjacent to their existing course. All other directions for expansion were blocked by Interstate 75, a heavily traveled secondary road, and very large expensive homes.

The existing course had originally been built in 1923 on approximately 88 acres of ground. The land was bisected on its long axis by a small stream that, since the last ice age, had carved a valley 250 to 300 feet wide and about 30 feet below the surrounding level land. Because during the initial con-



Before-and-after layouts show how architects Kidwell and Hurdzan shoehorned in 9 new holes at Troy Country — in just 19 additional acres of land.

struction horses and mules and scrapers were the only earthmoving equipment, most of the existing nine holes were laid out on the flat ground above the creek with only two fairways near the creek.

Therefore the problems for you the architect are:

1. Add another 9 holes with only 19 acres of new ground.
2. Design the course to accommodate all golfers' abilities, but still test the expert.
3. Keep the par at least 70.
4. Holes 9 and 18 should end near the clubhouse.
5. Allow for four to six tennis courts.
6. Keep the existing golf course in play during construction.
7. Stay within a construction budget decided feasible by the expansion committee.

With these design criteria and limitations in mind, use some onion skin paper to make some overlays to find a solution, and then compare it to the one the golf architects decided worked best.

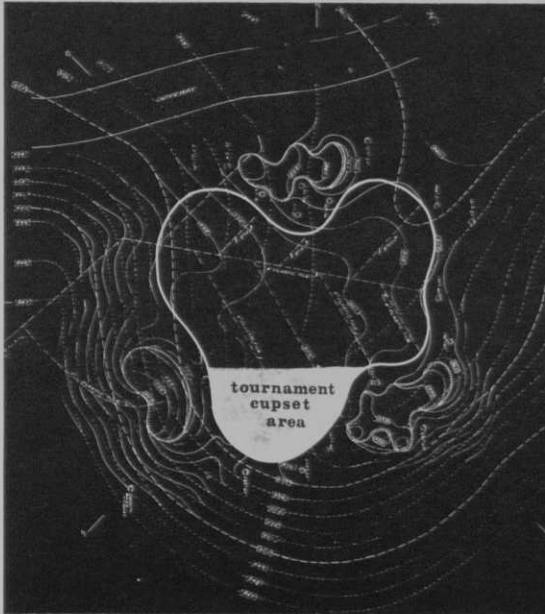
The solution.

Troy Country Club decided to employ Jack Kidwell (currently an officer in the American Society of Golf Course Architects) and Dr. Michael J. Hurdzan from Columbus, Ohio, to

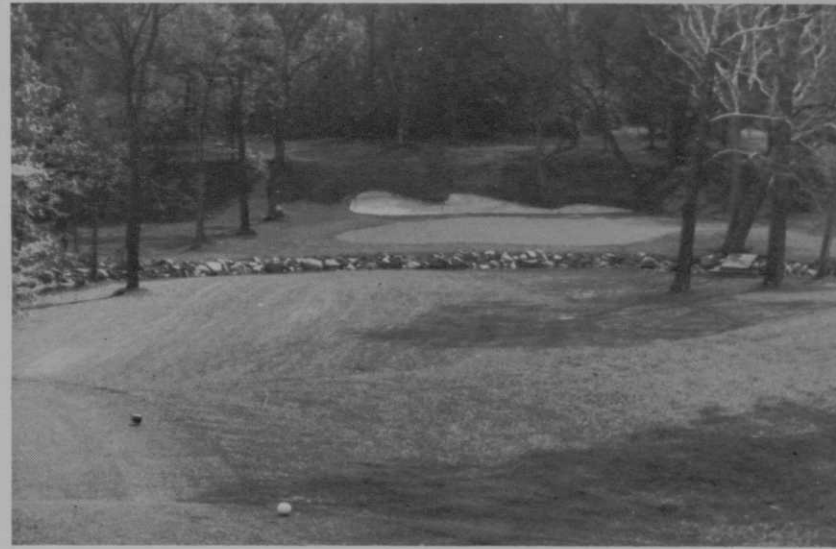
study the existing course and the available ground for expansion possibilities. Since the most critical part of expansion was the initial planning, many revisions were made until one layout was developed that would allow for a par 70 golf course and fulfill all the other requirements as well. But to make it possible required using imaginative golf architecture, including converting a trash dump into a spectacular par 3. In addition, to insure that the construction cost would not exceed the approved budget, very detailed plans and specifications were prepared to permit competitive bidding and the posting of a performance bond. The result was 2 percent of the architects' estimate and actually below the club's budget.

Kidwell and Hurdzan began by identifying problem areas, such as locating the possible starting and finishing holes. Since the tennis courts could best be built in the location of the hole, the possible starting holes were existing numbers 1 or 7 or a new hole built by reversing the 9th fairway. The possible finishing holes were numbers 5 or 9 or a new hole built using the 9th green. Since movement to the next hole is so important, the decision on starting and finishing holes was based on the best overall hole continuity.

The second problem was to find all possible locations for holes within the existing golf course. This meant examining the trash dump, the creek



Above: Green number 2 has been planned so the cup may be placed in the rear for average golfers and near the hazards next to the front for low handicap players. The unkept wooded area (upper right) was later turned into the 13th green.



valley, hills, and all other unused land. Then it was necessary to study the 19 available acres to see what combination of holes would make maximum use of the ground.

Jack Kidwell says, "Properly and safely planning the second nine required using all of the open areas created by the original design, and building on ground considered unusable 40 years ago. The early builders avoided earthmoving operations, such as digging large ponds, and hill cuts that are easy with modern equipment."

It was immediately evident that the new course design would be no more congested than the old, and that most construction could proceed without disturbing the existing golf course until after Labor Day.

The course construction actually began on the new 19 acres where two par 4 and two par 3 holes were planned. Two large ponds were planned and built to provide not only fill material for tees and greens, but also to be safety buffers and strategic installations. Many sandtraps were used to control wild shots, define play areas, and challenge the better golfer. "Because of limited acreage, Troy was not going to be a long golf course, so we felt it should be designed to require more skill the further you hit the ball," explains Dr. Michael Hurdzan. "A good example is the 7th hole. If you only hit the ball 200 yards, your landing area is about 60 yards wide. But if you hit it 250 yards, your landing area is narrowed to 15 yards by a large trap on the left, and the lake on the right. A smart player must balance the

advantage of the long drive against the risk of the hazards."

Kidwell and Hurdzan are also proponents of greens design that permits 80 percent of the green to be used for moderate pin placements and the other 20 percent to be used for pin placements to test the accomplished golfer. This is done as is shown in the drawing of green number 2. As can be readily seen, the unshaded area is relatively open, allowing a wider margin of error to an approach shot, compared to the shaded area. The shaded area requires a precisely hit shot which must carry to within a 40-foot circle or stand a chance of landing in a hazard.

Another design feature used to make the short yardage a test for the better player was to provide the most hazard from the longest tees. This was done by building the tees at an angle to the line of play. This is shown by the 4th hole where the short tee is virtually free from a hazardous carry while the longer tee must carry a sizable amount.

The contrast of the new holes to the old ones is noticeable, but since they are intermixed, few people detect a design change. The new holes are distinguished by the large raised greens, flowing putting surfaces, and sweeping traps. But the architectural expressions were not based only on aesthetics, but on a combination of aesthetics and functionalism. Kidwell and Hurdzan believe that the size of the green is governed by the amount of usable cupset space, not by the total size. To build a green of 8,000 square feet that has only five acceptable cup-

set areas is more foolish than building a 3,000-square-foot green with only five acceptable cupset areas. With most clubs playing 30,000 to 40,000 rounds a year, the superintendent is probably changing cups every day, and during the hot, stressful, slow turf growing part of the summer, it may take 3 weeks to completely heal a cupset area. Thus, greens should be designed to provide a minimum of twenty cupset areas. Since the worn-out area is usually a 20-foot-diameter circle, the total area needed for twenty cupsets equal about 6,200 square feet.

Dr. Hurdzan explains, "All things in nature are selected forms as a result of the function they must serve. If a golf course or even a golf green is to 'survive,' it must take on a form compatible with its function. A golf green must have good surface and internal drainage, so it must be raised and have roll and should drain in more than one direction. Raising a green above grade also defines the green and makes sand trap faces easier to see. Greens and sand traps should be able to be maintained by power equipment. Therefore, we feel that traps should not be closer than 8 feet to the putting surface to permit turning of greens mowers and other maintenance equipment on the fringe. Slope of sand traps and greens should be steep enough to enhance visual display, but gentle enough to accommodate power equipment."

The plan in action

The work at Troy Country Club was begun in May by Salyers Golf Course

Construction of Mt. Vernon, Ohio. Salyers is best known in Ohio for his meticulous work and long history of building outstanding golf courses.

Disruption of the existing golf course during construction can sometimes cause a membership to disapprove an improvement or addition to a course. But at Troy, the membership and the contractor worked together with a construction plan that involved only two fairway crossings until after Labor Day, so little player inconvenience was experienced. After Labor Day, the large earthmoving operations began in two existing fairway areas and were completed within a few weeks. Even then members were able to play a par 3 instead of a par 4 ninth hole.

Construction at Troy Country Club proceeded through the summer and seeding began in early September, but was seriously delayed by a severe cold, rainy spell. Seeding was finally complete in mid-October and for the

next 6 to 8 weeks, the weather was abnormally warm. This permitted golf course superintendent Charles Engster to nurse the young grass plants to near maturity. Before the cold weather came, Engster almost had the greens ready to open and a golfer could have played the ball 'down' in almost any area. Engster feels a major reason for his success was not only the good seedbed preparation, but also the good weather, adequate starter fertilizer, and improved turfgrass varieties. "We used a mixture of Adelphi, Majestic and Bonnie Blue bluegrasses, and it is impressive how quickly the sod knitted together. The architects recommended stiff-leaved bluegrasses that would give the ball good support, and I find them very easy to mow."

Milton Strausser, greens chairman during construction, says, "Our expansion went according to our plans and the golf course is beyond our best expectations. We are proud of our

new course and our increase in membership attests to the attractiveness of our new nine holes." He further states, "The new course was built to be enjoyable for the average club player, but from the back tees it will also test our best players."

Troy Country Club's success is not unique, for any course considering expansion can have the same result if professional assistance is sought early. Professional architects can provide the expertise in all stages of planning to insure a project as successful as Troy Country Club. Troy carefully selected their golf course architects for their past performance and actively met and worked with them through the early design stages. Once they had the golf course they wanted on the detailed plans and specifications, they used only competent contractors and the best quality materials. The result was new spice in the life of the people of Troy — at an affordable price. □

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