

Golf Course Architecture and Construction

Designing the Course. Part 1.

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When the architect has discussed with the club the type of course required he is then free to proceed unhampered with the layout.

In addition to the designing of the course he must consider the question of club house site, parking area, practice ground, entrance roads, etc., because all these should coordinate with the course itself.

In order to get the best possible layout on any property the architect must have a topographical plan of the ground on which he is working.

In gently undulating or hilly country the contours should be shown at five-foot intervals while in flatter country two-foot intervals are generally better.

All woodland should be shown accurately as well as prominent trees in the open. Streams, fence lines, stone walls and old buildings should also be plotted. With these details indicated along with the contours it is a much simpler matter for the architect to locate and familiarize himself with the ground. A topographical map is also of inestimable value in determining drainage problems, in designing the water system, locating the club house site, and other attendant facilities.

No club building a golf course should work without such a plan for in the long run the original cost of it can be saved by the economies effected from its use. The cost of preparing such a plan varies first with the acreage to be surveyed, second with the amount of woodland thereon and third with the character of the undulations.

The best and cheapest results are obtained when the foliage is off the trees, particularly in wooded country because better visibility is to be had for the surveyors. It naturally follows that the best time for surveying is either in the winter or the early spring. In most cases a local surveyor is better qualified to do the job because he should be more familiar with details involved with properties in that particular section as well as saving the expense of importing an out-of-town corps.

Armed with this topographical plan the architect then proceeds to make a study of the ground familiarizing himself with all its variations. First of all he follows along the boundaries so as to know exactly what the limitations of the property are, then he crosses and recrosses, stopping here and there to locate himself until he is thoroughly familiar with the ground.

Following this he settles upon the club house site and the starting and finishing points of the course around it, as well as the other necessary facilities.

The most satisfactory layout in an 18-hole course today is the one which has two starting and two finishing points in close proximity to the club house. The advantages of this plan are too well known to make it necessary to go into details.

A popular plan which is being widely inaugurated in newly formed clubs is to have three nine-hole loops radiating from the club house.

While a course of this kind will not accommodate as many players as a 36-hole course, yet, it is capable of taking care of the play of most metropolitan clubs on busy days and gives a varied interchange of holes. In fact, it is possible to play six distinct 18-hole courses by changing the sequence of the various nines.

The character and quality of the course should naturally come first but it sometimes happens that a club has selected a property partly because a fine house was on the ground and could be readily adapted to the club needs. In a case of this kind the starting point of the course becomes fixed.

When there is no existing house to be considered the architect is then in a better position to work out what he thinks is best as regards both course and club house.

From the viewpoint of expense it is better to locate the club house as near as possible to a boundary of the property which abutts on a public highway. This will then eliminate the necessity of expensive road building, the parking space can be laid out between the public highway and the club house and the highway can be used as an overflow parking space whenever required.

In designing the parking space it is well to remember that approximately 200 cars can be fitted into an acre and the number of cars to be parked and the area required for parking them can be figured accordingly.

The club house should be set far enough back from the public highway to secure privacy, but on the other hand this can be taken care of very readily by planting quick-growing trees and shrubs.

An ideal situation exists when such a spot overlooks the golf course and permits visibility of a large portion of the links as well as providing starting and finishing points as outlined above.

Often, however, in order to get the best out of a property it is necessary to pick a site for the club house and the starting point of the golf course well within the property. This is to be avoided whenever possible because it means expensive road construction and the added nuisance of having a roadway running through the golf course even though it be a private one. The beauty of the view to be had should have a certain amount of bearing on the club house site also.

The character of the topography in the vicinity must also be considered for it is much simpler to build tennis courts and parking areas on flat ground than it is to do the same work where the slopes are steep and irregular.

The practice putting green and the practice driving area should receive careful attention and the present-day club should by no means be without either of these. A practice hole with tees set at say 150-190-230 yards should be given consideration in the complete plan because a hole of this kind gives the members an opportunity to play shots to a green without interfering with the use of the course.

In locating the club house on a hill overlooking the course it is well to remember that while the get-away is easy the return both at the ninth and eighteenth may possibly be severe from a climbing standpoint and care should be taken in selecting an eminence that provides gentle slopes at least for the return holes.

When the architect has determined on the club house site and his starting and finishing points for the golf course he then proceeds to find the holes for the course.

While the procedure of all architects is not necessarily similar, yet, they all work to the same end and the following is purely the method of one individual.

The most important point in designing golf holes is to select proper green sites. The first condition in selecting a green site is its adaptability to the game on a particular type of hole. The second is the question of the cost of constructing the green on any particular site. The third is the beauty to be had both in the background and vistas.

The finest layout in the world may lack interest if the surroundings are unpleasant while the mediocre course appeals a great deal to the majority when the backgrounds and vistas are well thought out.

It quite frequently happens that the architect will select perhaps 30 or 40 different green sites on a property when his ultimate job is to secure only 18. This is done to exhaust all the possibilities of securing good holes. It often occurs that an architect lays out perhaps three different courses on paper before he definitely decides which, in his estimation, is best.

Contrary to the way the course is played, that is from tee to green, the architect selects his greens first and then works backward to his tees radiating in all directions from the green until he eventually secures what he is after.

The principal thought in designing a course is to produce 18 interesting holes with variety of play. A course which has variety of play and character in its natural state can readily be made even more interesting by the installation of a limited number of man-made hazards.

When the architect selects a suitable spot for a green site he marks it on the contour plan which he always carries in the field. All the while he is making notes on the topographical map and in his notebook as to the character of the ground, drainage, size of trees, and all sorts of points that will enter into the cost of construction.

When he has made a complete study of the ground and exhausted all the possibilities of green locations, etc., he takes his marked plan back to his drafting room and then with his notes ties in the various green sites.

During the tying in process the architect always has in mind the question of the sequence of the various types taking care not to have holes of similar length and character coming too closely together. The most interesting course is one where the lengths and types of holes are broken up, where two or three drive and pitch holes or any other type for that matter do not follow each other.

Perhaps the majority of players enjoy the one shot holes on any course better than the longer ones and the architect should be careful to get distinctive short holes of the proper length.

The principal thought in mind is to fit the best possible holes to the ground and while the custom is to have four short holes there is no reason why this number should not be reduced to three or increased to five if conditions warrant it.

The question as to the number of the various types of two and three shot holes for a course is one that has created a great deal of discussion in the past and this will continue as long as the game is played, but more of this later.

Unlike most other games golf has no definitely prescribed area over which the game shall be played. While in the past 10 years or

more the yardage held up as being suitable for a "championship" course ranged between 6,000 to 6,500 yards, this year's open championship was decided on a course approximately 7,000 yards long. But all courses can not be "championship" courses, that is, links where championships are decided, for they would be too expensive for the average club.

It should be the aim of the architect to lay out his course in such a way as to get the proper length holes at the proper places.

Actual yardage, however, is not the determining factor in this or that type of hole for a 430-yard hole down hill may very easily be a drive and mashie niblic while a hole reversed on similar ground might be two full wood shots.

Again the question of the ball has a great bearing on what type a certain length hole will be. Time was, and not so many years ago, when a hole 400 yards long on average ground was a good two-shot hole for the star players; now, the same hole is perhaps a drive and spade for the better class golfers.

In view of this the architect of today plans his full two-shot holes from 440 to 500 yards, depending on the character of the land and if the distance to be obtained with the ball continues to increase it will be necessary to increase the length of all holes on golf courses accordingly if the same standards of play are to be maintained.

All architects will be a lot more comfortable when the powers that be in golf finally solve the ball problem. A great deal of experimentation is now going on and it is to be hoped that before long a solution will be found to control the distance of the elusive pill.

If, as in the past, the distance to be gotten with the ball continues to increase, it will be necessary to go to 7,500 and even 8,000 yard courses and more yards mean more acres to buy, more course to construct, more fairway to maintain and more money for the golfer to fork out.

In addition to getting the proper length and sequence of holes in the layout the architect should be careful to leave sufficient room between the various fairways. When there is continued paralleling of fairways there is not as much chance to segregate holes as in the triangulating method of design.

The question of handling galleries must be considered in designing the present-day championship course and ample room must be allowed to take care of the tremendous crowds that mill back and forth following their favorites.

Many times the less prominent players, particularly in medal competitions, have been completely thrown off their game by the crowd following the favorite overflowing or rushing to gain advantage point and thus greatly hampering those just behind or in front.

Having plotted a layout on paper after having given all the above points due consideration the architect now has a preliminary plan which is ready for the engineer to stake on the ground.

Most courses have entirely too many traps that are badly placed and poorly constructed; that cost too much money to maintain; and whose removal would help the average player, improve appearances, reduce upkeep, and practically leave the star player unaffected.