

## **MAINTAINING THE DESIGN**

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Over a period of time, golf courses lose their original shape, size, and character. Mother nature, erosion, gravity, as well as, modern maintenance practices have contributed to the evolution of old golf courses. Along with the ever increasing appreciation of the "classic" architects and their fine old golf course designs, the interest level of restoring golf courses to their original designs has come into vogue. We will look at the four main features of the golf course; greens, fairways, bunkers, and trees, identifying typical problems of each feature with regards to the original design intent. Once the problem has been identified, the causes will be analyzed and various solutions will be discussed. Finally, a look at how to keep the design intent of restored and newly constructed golf courses in conjunction with modern maintenance practices.

### **PUTTING GREENS**

Common complaints at many golf courses are the lack of cupping areas; contours are too severe at today's cutting heights; the greens are too small and lack character. All of the above mentioned problems are a result of maintenance practices over a long period of time. Mowing patterns have a habit of changing, whether it be from a change of superintendent, a change of the person mowing from day to day, or a change of machinery (walk behind vs. Triplex mower.) No matter what the case, the putting surface tends to shrink in size (sometimes 3,000 sq. ft. is lost) and take on an oval or round shape. Thus, losing the valuable cupping space and the original character of the putting surface.

There are several ways to reclaim lost putting surface. First locate the original perimeter. This can be achieved by looking at the fill pad on which the green is built. Many of the old classic architects designed greens with squared up front and rear corners. Putting surfaces generally followed the edge of the plane that it was built on, thus squared up fill pad meant squared up green. Original detail architectural drawings will give you a good indication of the shape and where the edge of the green laid (even though not all greens are built as planned.) These drawings can be found (if still in existence) with

a little investigating. Try the clubhouse attic, grill room walls, or up in that little used store room in the maintenance building. Another good source of information are old aerial photographs. They are available as far back as 1938 from the national archives.

Once the perimeter of the original putting surface is laid out, there are different methods to reclaim putting surface quality turf. The simplest method is to topdress, overseed and mow to putting green height. Generally, bentgrass mixtures already exist in these areas and the conversion is relatively simple. Another quick and simple method is stripping the extended areas of existing turf and replacing with new sod. A more extensive conversion incorporate sterilizing the entire putting surface using Methyl Bromide gas, amending the soil structure, and seeding.

In order to keep a new green from evolving, documentation of the perimeter is a must. Hand measured as-built drawings are the simplest form of documentation and takes little time. Computer surveyed drawings are expensive but are great if a green is being rebuilt. An ingenious method for new construction is to bury a thin irrigation wire below the edge of the green, then a metal detector can be used for future restoration. The proper documentation of a green will allow you to accurately restore the putting surfaces mowing edge each spring.

## **FAIRWAYS**

Older golf courses were built for a different type of game than is played today. Non irrigated fairways needed to be wide because the ball did not travel far in the air and many shots were played for the ball to roll great distances at different paths. As technology increased the distance the golf ball travel in the air and the use of irrigation (which meant softer landing and less roll), fairways tended to shrink in size. Golf has become a target game. Fairways in many cases are disjointed from fairway bunkers and approaches to the green are cut off and rounded out 10 yards before the green. Therein the strategy of a hole is lost. Golf's original intent was to be able to attack the course in a variety of ways depending on conditions that prevail. Thus the strategy of the original design and ground game should be restored for all levels of ability.

Old aerial photographs are the best way to detect the original mowing patterns. Simply put, new mowing patterns with some overseeding will extend and widen most fairways. Approaches to the green are a little more difficult to restore depending on the types of mowing equipment used for fairways and green collars at each course. It must be understood that the reach of the irrigation system generally dictates where the modern fairway edge is located. If a new system is to be put in, then that is the time to look into restoring your fairways back to the original design intent and must be incorporated into the irrigation design.

## **BUNKERS**

Sand bunkers evolve and lose their character faster than any feature of the golf course. They also are the most predominant feature that gives each golf course its unique look and strategy. Great old architects as well as modern architects are easily identified by the style of their bunkers. Bunkers are the backbone of how a hole strategically is set up to play. Thus, a very important feature to be addressed.

Typical sand bunker problems on most golf courses include, worn out bunker faces with high sand flashes; many original bunkers grassed over; out dated strategic fairway bunker location; and too much variety of bunker styles throughout the course. Many factors create the typically evolved bunker. First, the natural forces of wind and rain take a big toll on any slope of land, especially sand. The act of hitting a ball out of a bunker throws sand up onto the slopes and creates a droughty condition for grass to grow. The modern maintenance practices that includes daily raking of bunkers often with mechanical sand rakes increase sand migration and erosion. As bunker faces erode, edging becomes an ever increasing practice and the sand edge creeps up the slope. Soon the original style is lost and the need of maintenance is increased.

Due to money constraints in the past, many bunkers were eliminated by filling in and grassing over. In turn the strategic impact of these bunkers have been lost. The location of many old strategic fairway bunkers was dictated by the distance at which the ball typically landed. As stated earlier, the modern golf

ball carries further rendering some bunkers obsolete. These bunkers should either be moved to the new landing area and rebuilt with the same style and character, or the existing bunkers left in place and new bunkers built as an extension of the bunker complex.

If the choice is made to restore the original style of the bunkers, then some research is necessary. Old photographs, original drawings, original sketches, and working knowledge of the original architects style are needed in order to justifiably restore the golf course.

Proper construction techniques such as compaction of subbase, topsoiling, good surface and subsurface drainage are imperative for long lasting features. The use of sod around the bunker during grow in is very helpful for erosion control. Fine fescue sods are available for use in bunkers faces that help prevent the break down on the grass banks as sand is blown up during play. The maintenance philosophy of bunkers can be changed to less mechanical raking and more hand raking. This is labor intensive but may save from rebuilding bunkers in the long run.

## **TREES**

During the past several decades many golf courses engaged in major tree planting programs. As the trees have matured many are now encroaching on the original golf design. Bunkers and mound features surrounded by trees have become obsolete or double hazards. Specimen trees have also been encroached by under growth and plantings too close. The 150 yards marker trees that were once 3 feet high, are now towering pines that infringe upon the fairway let alone the golf corridor.

Selective clearing and pruning in many cases is necessary to open up the golf design. Clearing around specimen trees and allowing them to flourish will preserve and enhance a more natural look to the golf course. It is understandable for the need of planting of trees for safety considerations, but a well thought out tree planting program that takes the golf design into consideration first, will be the most successful for all.

## **SUMMARY**

It is important to look at each golf course, whether if be a 100 years old or brand new, and understand that over time the four main features will evolve and corrupt the original character, strategy and design. Greens and fairways are bound to shrink in size, bunkers will eventually wear and trees will some times grow to be a nuisance. Careful planning, documentation and preventative maintenance practices will keep a golf course close to its original intent. That is, a well designed enjoyable place to play golf.