

CHAPTER TWO

GOLF COURSE DESIGN PRINCIPLES

- ❖ Shot Value & Strategy
- ❖ Playability
- ❖ Memorability

The three golf course design principles, shot value & strategy, playability, and memorability, are paramount with any design in order to achieve maximum golfer satisfaction. These design principles are still as important to me today as they were when I started practicing golf course design 24 years ago. They have held true from the days of old Tom Morris, were embraced by Dr. Alister MacKenzie and are still utilized by today's golf course architects. Lessen the emphasis on any of the three and you lessen the overall design. Pour your heart and soul into these principles and you are on track to gaining a better understanding of the profession of golf course architecture. Who knows—you may be the next Alister MacKenzie.

Shot value and strategy:

Out of the three golf course design principles highlighted above, shot value and strategy are the most important. My goal is to impart an astute appreciation for this principle to each class participant. I could devote 10 chapters to this one design principle, but at this time I will highlight the key elements of this significantly important principle. Seminar #2 in 2011 will dive into these principles in much greater detail.

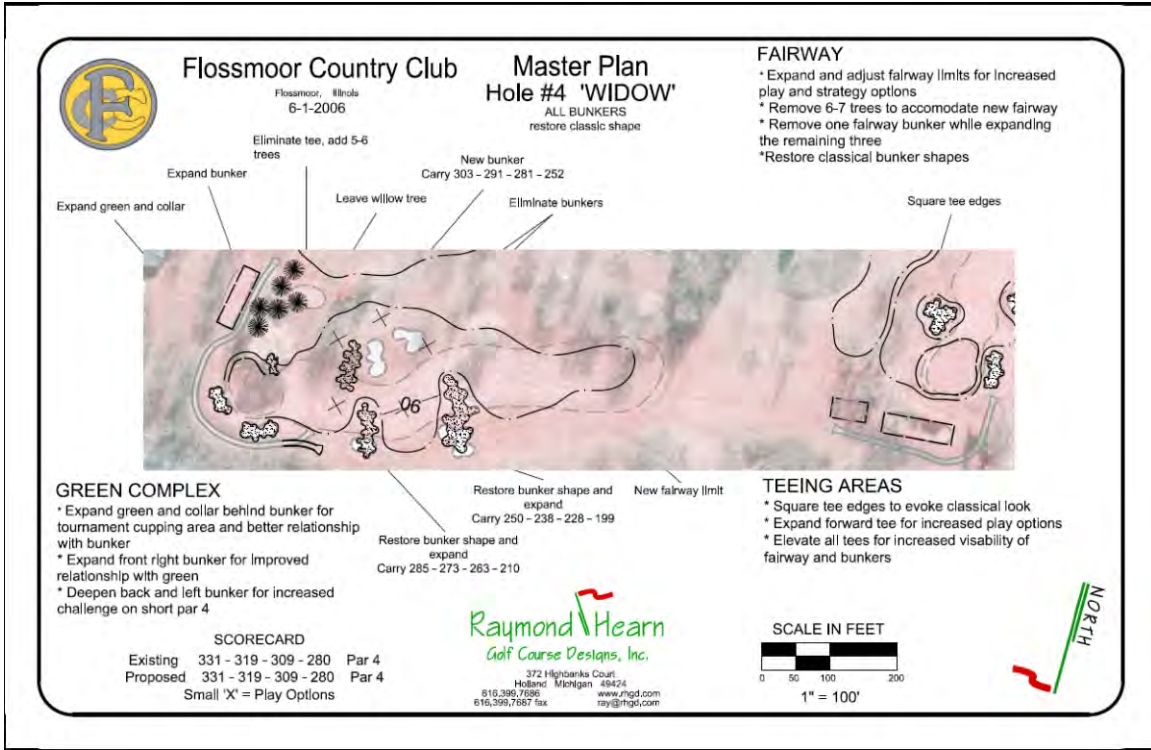
In my career as a golf course designer, the success I have achieved comes from years of education and experience. Part of the mastery of this principle comes not only from designing your own courses, but from playing and studying the strategy and related shot value associated with some of the greatest courses in the world.

Shot value is defined as the course's offering of play routes that involve varying degrees of risk versus the rewards these well-executed shots result in. The reward should be commensurate with the play avenue's risk in rewarding a player's distance, accuracy, and shot-

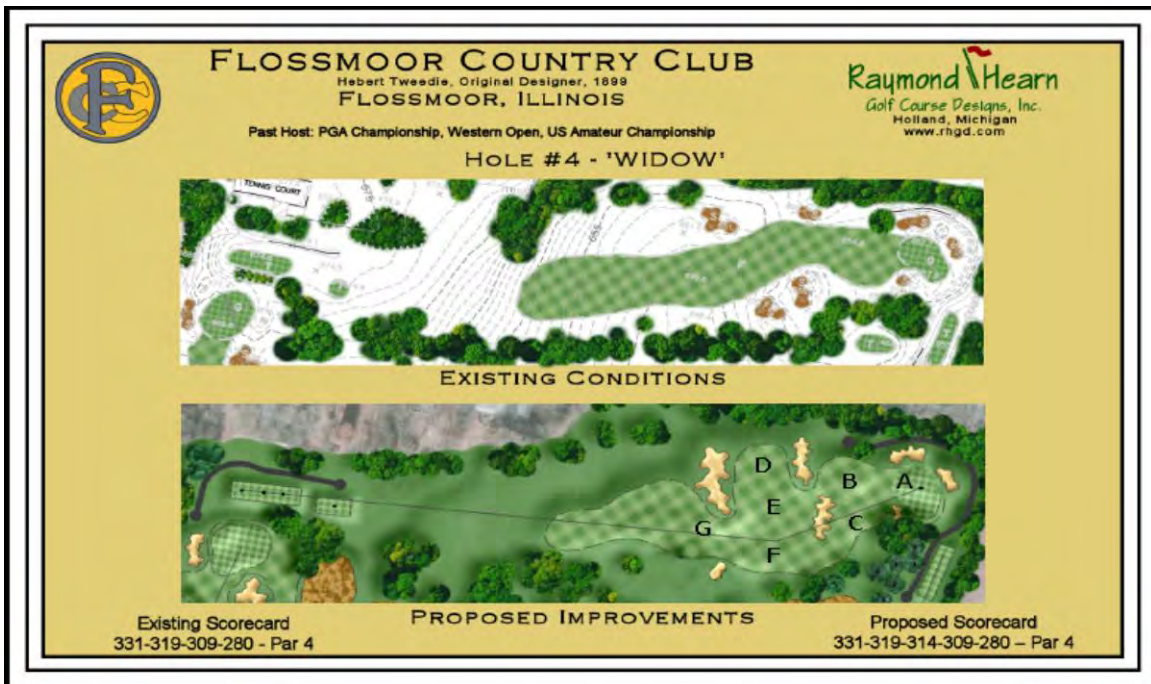
making creativity. Overall a well-executed shot via an intended play route over course hazard(s) should be rewarded as a good result, whether from the teeing area into a landing area, teeing area into a green, first landing area into a second landing area (par 5) or second landing area into a green (par five). Options, options and more options make for great shot value. In Chapter 9, we will cover the various design process phases, including strategy and feature development planning, in more detail. It is important to have variety of shot value (strategic options with risk and reward) for a player to choose from. This is important based on the fact that a wide variety of players with varying skill levels will play a particular hole under a variety of weather, match play, and tournament conditions. A player who negotiates an intended play route via his/her shot over hazard(s) should walk away with a feeling of accomplishment via a favorable shot or putt on the next shot in terms of premium positioning.

This principle also applies to the recreational golfer playing with a friend or maybe even playing alone. In the extreme case of a golfer playing solo, the golf hole should still challenge and present shot value options minus the match play or tournament conditions.

Below is a classic example of shot value as it relates to the risk / reward scenario described above. The course is the Flossmoor Country Club (1899, Hebert Tweedie Original). My company had the good fortune of master planning improvements to this historic gem, which has hosted the PGA Championship, Western Open Championship and the US Amateur Championship. We recently received Golf Magazine's most prestigious design award, "Renovation of the Year Award," for our work at this grand old club. At Flossmoor, Hole #4 was a lifeless, short par 4 with little shot value before my company dramatically improved it. Now, from the tee to the landing area or to the green, there are numerous choices with risk / reward shot value options. You will notice that the greatest risk to point A results in the maximum reward in terms of distance to the green and angle into the green. The least risk option to point G results in the least reward in terms of distance and angle into the green on the next shot.



Flossmoor CC (Flossmoor, IL) Hole #4 (Master Plan)
Source: RHGCD Archives



Flossmoor CC Hole #4 (Strategy and Shot Value Options)
Source: RHGCD Archives

Another good example of shot value as it directly relates to risk / reward strategy is Hole #8 566-550-535-512-413 (formerly Hole #5 at the Mistwood Golf Club in Romeoville, Illinois). This hole is ranked as one of the best par 5s in the USA by Golf Digest Magazine. From any of the five tees, the strategic risk / reward options are numerous (7+ options). A golfer should position the tee shot in terms of how the shot's risk relates to the hazards (lake, bunkers, moguls and rough grass) via a proportional reward for the next shot (distance and angle) into the second landing zone or into the green in the case of the second or third shot.



Mistwood GC (Romeoville, IL) Hole #8 (Strategy and Shot Value Options)
Source: RHGCD Archives

With shot value, golf shots that are not properly executed will result in a penalty on the next shot, compared to shots that are properly executed. Certainly larger fairways, approaches, and greens maximize the number of play angles. On a narrow fairway or approach, the

severity of the hazard definitely adds to the intimidation factor in a more significant manner, due to less playing area and the number of strokes that can be lost if the intended shot is not properly executed. Playing area width, number of hazards and severity of the hazards all impact the shot value. On the example shown above at Mistwood, the area along the lake presents the highest shot value for the severity of the penalty (stroke for a ball lost into the lake), versus a ball that ends up in a bunker or in the rough on the side of a mogul.

When positioning hazards or the width of fairways and approaches, I never lose sight of the fact that shot value strategic implications also apply to the high-handicap player. Many modern-day designers focus the majority of their time and effort related to shot value on professional golfers and/or low handicap golfers (more skilled golfers). The typical result is golf holes that are not fun to play for the mid-range or less-skilled (higher handicap) golfers. Dr. Alister MacKenzie was a genius with regard to shot value and its strategic implications in all of his designs. The shot value on his courses is still appropriate for a wide range of golfing skill levels.

Any golf course where the golf course architect has provided significant variety in shot value and strategy will have a greater chance of achieving success, compared to neighboring courses with less variety in shot value and strategy.

Playability:

Playability is often mistaken for shot value and strategy. Playability should be thought of when developing a hole's shot value and strategy, but at the same time should also be thought of independently. Playability is a more general concept, while shot value and strategy, which impact playability, are far more specific.

Playability is defined as the ease with which players of varying abilities can successfully negotiate the golf course. I like to plan an 18-hole sequence and the overall playability of each of the 18 holes, keeping varying levels of playability in mind. I also like to consider playability for the various players who will enjoy my courses (both male and female):

- ❖ Golf Professionals
- ❖ Low-Handicap Golfers
- ❖ Mid-Range Handicap Golfers
- ❖ High-Handicap Golfers
- ❖ Beginners

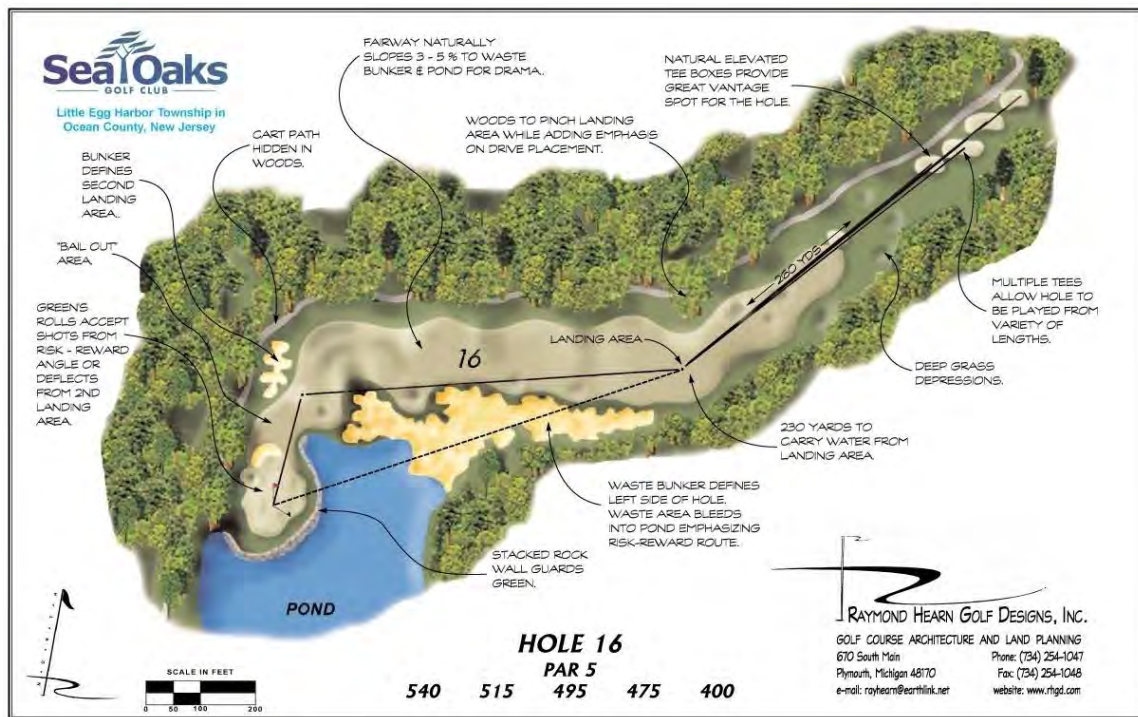
In each category, I also consider sub-categories for seniors and juniors. When you consider course playability for all of these different gender, age, and skill levels, you have the best chance for the course's overall playability success.



Fox Hills CC (Plymouth, MI) a course showing playability for beginners
Source: RHGCD Archives

I don't intend to oversimplify the concept of a hole's playability or a course's overall playability, but I find one element that definitely impacts playability in a positive manner, while also completing and enhancing shot value and strategy. I call this key element of playability "bail-out areas"—areas where golfers can choose to lessen

risk, shot value and strategic options, based on their play that day, position in a match or the conditions “mother nature” is throwing at them. Plain and simple, these are strategic areas of safety, in terms of their lack of significant spatial relationship to hazards (i.e. safe areas where golfers can miss a shot). The wider the better, for these “bail-out” (safe haven) areas.



Sea Oaks Golf Club (Little Egg Harbor Twsp, NJ) example showing a great strategic hole with “bail out” areas where golfers can aim away from the main hazard (pond).

Source: RHGCD Archives

In any discussion of playability we must address the question of fairness in terms of a hole’s playability. In almost all literature searches on fairness in golf course design, you will find that almost every author has a different opinion of fairness as it relates to playability. The concept of fairness is so ambiguous and open to varied interpretation that many golf course designers believe that anything they do is fair, and fairness is just a relative concept open to different interpretations. As a designer, I have always believed that a hole’s fairness should be measured by the fact that in most cases (exceptions do exist), a beginning golfer should be able to mindlessly “whack” a putter endlessly down the fairway all the way to the green

without negotiating a hazard if he or she desires to avoid it. Obviously, I am demonstrating a very exaggerated and extreme example of this concept of fairness and have been known to violate my own principle, especially in cases where I saw the possibility of a great golf hole over a forced carry, such as a lake, creek, bunker, rough, or other hazards. Dr. Alister MacKenzie diligently adhered to this key principle, but would at times violate the principle when a great hole containing a forced carry was called for. The important notion is to minimize the forced carries over hazards in the overall routing design. As a designer, if you require all golfers to negotiate numerous forced carries during an 18-hole round, you will negatively impact the playability and fairness of those golf holes.



Cypress Point Golf Club CC (Monterey, CA) showing the author playing Dr. MacKenzie's greatest forced carry hole design (Hole #16). Very important not to have too many of these in an 18 hole sequence.

Source: Ray Hearn



Sunningdale GC – Old Course (Berkshire, England) showing a forced carry from the tee to fairway over the wild secondary rough.

Source: RHGCD Archives

Playability is paramount in any design's success, especially if you are attempting to please a wide variety of golfers with varying degrees of skill level.

Memorability:

Your ability to create memorability will determine the quality and length of your career in the profession of golf course architecture. Memorability is defined as how the design has made each hole, segments of the course, or the course as a whole unique and memorable. In my travels around the world, the greatest courses are the ones with 18 memorable holes. Achieving 18 memorable holes is very difficult, but when this happens the course becomes a “must-play” for golfers around the world. Even though golf course architects rarely achieve 18 memorable golf holes, they should always strive to achieve this.

Shot value, strategy, playability and aesthetics significantly contribute to memorability. Combining these elements in a significant manner helps create a very special golf course. Since we have already covered shot value, strategy, and playability, I will cover the aesthetic (visual beauty) component of memorable golf holes and golf courses.

In order to achieve maximum memorability, each hole must be designed so that it is aesthetically pleasing to the eye of a golfer. Mastering design principles such as unity, variety, harmony, rhythm, and balance are critical in maximizing a hole’s aesthetic appeal. The aesthetic (visual beauty) component of each hole extends as far as the eye can see, so it is important to create beauty in close views while also directing, enhancing or blocking distant views.



Example of memorable golf hole
Mistwood GC (Romeoville, IL) Hole #1
Source: RHGCD Archives

As stated above, when shot value, strategy, and playability combine with aesthetics, the result is great memorability. If you as a designer are successful in doing this on all 18 holes, the resulting course design will ultimately be praised by golfers and the media as one of the world's better golf venues.

Below is a list of a few courses (two designed by me) that have a unique combination of 18 holes with outstanding memorability:

1. Royal County Down (Ireland)
2. The Old Course at St. Andrews (Scotland)
3. Cypress Point (USA)
4. Shinnecock (USA)
5. The National Golf Links (USA)
6. Turnberry (The Alisa Course) (Scotland)
7. Sunningdale Old (England)
8. Royal Dornoch (Scotland)
9. Cruden Bay (Scotland)
10. Mistwood Golf Club (USA, note designer bias)
11. Prairie Dunes
12. Flossmoor Country Club (USA, note designer bias)

Study, learn and embrace the three key design principles highlighted in this chapter and you will achieve great success in the field of golf course design!

READING ASSIGNMENT:

The Anatomy of a Golf Course by Tom Doak

Read Chapters 4, 5 & 6

Classic Golf Hole Design by Robert Graves and Geoffrey Cornish

Read Chapter 7

Golf Architecture (Second Edition) by Dr. Michael Hurdzan

Read Chapters 5, 6 & 7

Research more information on this subject matter via the Internet to assist you with your research paper and graphic illustration, if you want to go deeper.

ASSIGNMENT:

In a short essay, four pages minimum in overall length (including a hand-drawn graphic example), research and then elaborate on shot value and strategy design principles from an existing golf hole you have played or a hole that you envision (your design) but that has not been built.

Scan your example at a local print shop (if you do not have a scanner) and e-mail the hand-drawn example(s) to me as a jpg or pdf file along with your written text. E-mail to ray@rhgd.com, attention Raymond Hearn. Try to keep overall file size of jpg or pdf files to an overall file size of 5 MB or less for easy e-mail transfer. Graphics may be e-mailed separately from your report to stay below 5MB. I will review and e-mail my comments on your assignment within 14 days of receipt. Good luck, have fun and learn!