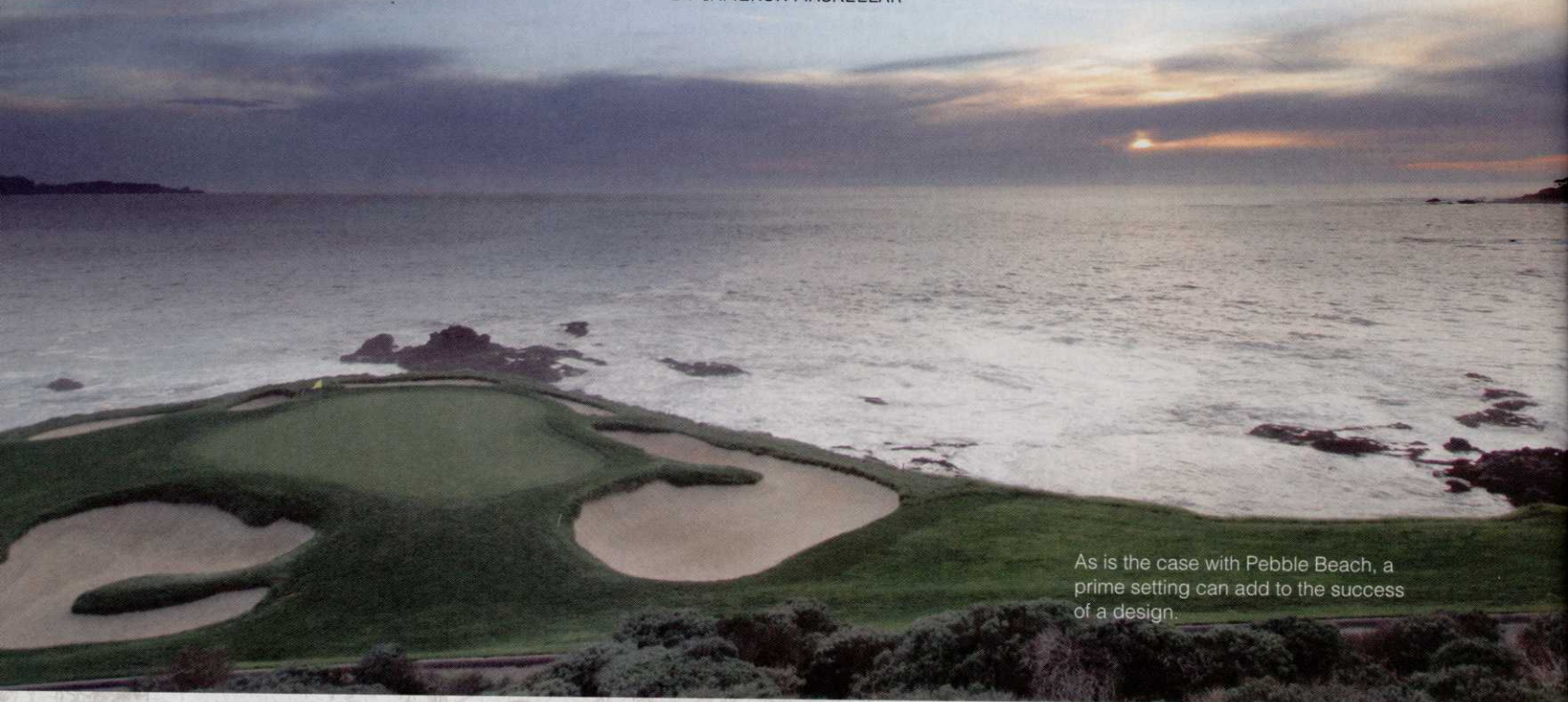


WHAT MAKES A GOOD GOLF COURSE?

It's not easy to define, but an architect's discretion has as much to do with the outcome as location

BY CAMERON MACKELLAR



As is the case with Pebble Beach, a prime setting can add to the success of a design.

To paraphrase an old saying, "I can't define good golf course architecture, but I know it when I see it." This comment reveals how difficult it can be to define the merits of a good golf course.

What is it that destines a course to be considered a top 100 or even an example of good golf course architecture? Is it the setting (Pebble Beach)? Is it the beauty (Augusta National)? Is it the challenge (Pine Valley)? All magazine rankings aside, there must be a reasonably objective framework that distinguishes a well-designed golf course. For those of us in this profession, the basic principles of golf course design are fairly evident, or they should be.

Is the success of a design the result of following the basic principles and applying them to

each current project? Simply put, yes. However, as in the game of golf, there lies the rub of golf course design. Assembling these principles to create an original, quality playing field, while dealing with unforeseen conditions and ambiguous details that the books rarely mention, is the challenge. Countless choices must be made. Each architect – whether it's A.W. Tillinghast, Alister MacKenzie, Pete Dye, Robert Trent Jones Jr., Tom Fazio or Tom Doak – has a signature framework with which he assembles the choices that determine the golf experience.

PROVIDING A PERSONALITY

Golf is like no other sport. The dimensions and characteristics of an individual golf course change from day to day, week to week and

throughout the span of its lifetime. And the differences between golf courses are infinite. Like human beings, each is separate and unique with distinct personalities and characteristics. Each reacts to different golfers, varied weather or different times of the year.

An average golfer sees the course as a sequence of par 3s, 4s and 5s that total a par of about 72. Tee locations, green sizes, depth of bunkers, turf types and water hazards provide the personality of a golf course. That personality is the result of the architect's vision. Generally, golfers can sense the atmosphere of the golf course or feel the dread of a hazard but rarely understand why.

A good architect will use existing site features to develop the character and flavor of the course.

Much like a good meal or enjoyable music, the strategic, visual and textural golf experience lingers with a golfer long after the event, leaving him fulfilled and satisfied, neither wanting nor overwhelmed. A golf course is the product of an architect's ability to integrate his artistic creativity, scientific knowledge and golf acumen into the landscape.

THE ART OF COURSE DESIGN

A golf course should be considered a work of art because it has a unique and discernible theme, structure and style. Artistic design theory is one of the reservoirs of knowledge from which an architect draws. Unity and variety; line, form and color; scale and composition; foreground and background are all considerations of the designer. However, a work of art must be composed within the framework of golf theater.

The trick is to make the parts fit the whole. An architect may have the desire to create a feature to enhance the aesthetic of the golf landscape or the challenge and playability of a particular golf hole. It's easy enough to have good, solid, individual ideas, but the real challenge is creating a coherent, well-integrated experience. Taking clues from the site and its surrounds makes an architect's job more effective, efficient and inspirational.

THE ROUTING PLAN

Great golf courses are the result of positive landscape management. The aim is continuity of an experience. Robert Trent Jones Jr. said, "Like a good tailor, a routing plan must fit well to wear well. If it's cut wrong to begin with, the garment will never wear well."

The routing plan should reflect and expose the best of the site features without theatrics and convulsion. Golf holes should have variety, but also should feel like they belong within the family of 18. Changing bunker styles, drastic or distracting topographic features, inappropriate locations for water or improperly sized tee surfaces can ruin the aesthetic and systematically detract from the beauty of the golf experience. The outcome will be better if an idea springs from the landscape, rather than affixing an idea or image to it.

Site characteristics, client objectives and budget, and the target market will determine how a project will evolve. A larger budget will allow more bells and whistles. A great site dynamic will allow more efficient use of materials and a

better routing plan. Natural systems of the site such as woodlands, wetlands, floodplains and watercourses, will affect the physical layout (routing plan) of the golf course and the impact on the functional elements of the design.

CONSTANT STATE OF REFINEMENT

An architect is constantly gauging the site resources with the client's objectives and budget while offering plan and detail alternatives. An architect is in a constant state of plan refinement, seeking solutions and alternatives to reach the goals. Choices must be made, often dozens at a time, affecting the budget, strategy and function of a golf course.

For example, relocating a green by 30 yards may save thousands of dollars while adding to the golf experience. But, at the expense of a stand of mature oak trees, is it worth it? Adding a bunker may cost money, but it stimulates the golfing public visually and strategically. Should it be included? A water feature is proposed at a far corner of the site but offers little strategic or aesthetic value. Should it be constructed? The architect faces these and many other questions daily during design and construction.

Architects require a basic understanding of numerous related professions: Hydrology, drainage, agronomy, turfgrasses, physics, geometry, civil engineering, soil sciences, botany, psychology and natural systems are all part of the training. Decisions in each of these disciplines are linked inherently to other parts of the golf course, giving it its personality and life.

For example, existing soil conditions will determine the extent of drainage systems and soil amendment requirements. Weather patterns and topography will determine the necessity for irrigation requirements and turf types. Turf types will be determined by soil conditions and available water. Available water and a budget will determine grassing limits and the pumping station requirements. And so on.

The quality of a golf course is affected equally by the materials underground as it is by the visible portions of the facility.

DRAINAGE AND HYDROLOGY

If the maxim of real estate is location, location, location, then the maxim of golf course design is drainage, drainage, drainage. Poor hydrology can be the greatest shortcoming of a golf course. If the course lacks a sound drainage network, then, at worst, there will be areas of

standing water making the course unplayable, or at best, soil conditions that cause weak or diseased turf.

Quality drainage systems and shaping can never be compromised. The value of positive at grade drainage isn't measurable. Directing water to the appropriate locations for collection and ultimate release is generating a great deal of attention because of more stringent environmental factors and regulations.

These protective environmental issues have forced golf course architects to integrate golf holes into the landscape more sensitively. Wetlands, floodplains and mitigation are terms that are surfacing during design and development more regularly. While golf courses have been blamed for environmental problems in the past, on balance, golf has been an environmental benefit far more than a detriment. Golf courses can solve a host of environmental problems with buffer zones, stormwater management and wildlife habitat establishment.

EARTHWORK AND GRADING

As Ben Hogan once said, "It's in the dirt". To adequately create the features that must be created for greens, tees and bunkers, earth must be moved. All architects attempt to reduce the amount of mass earthwork (removal and placement) as much as possible. So, what's appropriate? What's good design? That's as tricky as a flop shot over a creek from a hardpan lie.

Earthwork movement should reflect the intent of the architect balanced by the site needs and landscape environment. A golf course architect has to assess earthwork quantities constantly to create a mound or raised area in one place to, in turn, create a hollow or swale in another place to balance the movement of earth, all the while making it look as natural as possible.

Furthermore, it's important to balance earthwork to smaller, adjacent areas to reduce hauling costs. An architect may be creating a low spot or pond in one area of a site, but, if that excavated earth has to be trucked to a far corner of the site, the balance of cut to fill is more costly.

Then there's the possibility that, when creating a depression in one area, an architect inadvertently causes a drainage problem (i.e., wet area on the golf course where water collects) and then must install underground drainage infrastructure, which also can prove costly. Again, shaping and grading must accomplish the direct golf-specific goals, while providing

for the functional movement of overland and underground drainage systems.

IRRIGATION

Irrigation is a costly item and should be designed

with the ultimate intent for water distribution to be adequate and consistent. However, it's widely understood that irrigation systems are designed with a worst-case scenario in mind. An irrigation system must be developed to provide

water during the most difficult times of the year – July and August. Pumping systems and head distribution are determined with an extended dry period in mind.

THE GREAT CHALLENGE

So what draws us to golf? Nervous anticipation? Pleasure? Beauty? Wonder?

Is it the game, the camaraderie or the interaction with nature? It's all of the above. The most compelling aspect of golf is the infinite variety of possibilities during play. The personality of a golf course is determined greatly by the architect with the routing plan, as well as the details of the functional and golf-specific matters.

The game was meant to be enjoyed with friends, recreating more than competing and enjoying nature. It can rejuvenate our senses. It's a gentleman's game with a proud legacy. It should be accepted as a difficult game to be enjoyed. Therefore, it's incumbent upon architects to make the game as enjoyable as possible for as many people as possible. This is a great challenge and a dilemma.

Clearly, there are exceptions. Some courses need to be more difficult and others less devious. However, the great golf course design debate isn't about risk and reward; rather, it's about playability and difficulty.

Architects spend just as much time determining the balance of challenge, the budget and the degree of difficulty as they do contemplating the details of the grading, drainage and bunkers, the subtleties of the green contours, the widths of the fairways, the tee positions, the hazard locations, etc. Why? Because these items have a direct impact on the fun factor of a golf course.

A golf course without features or challenges won't engage the better golfer. Therefore, it's the architect's goal to create a valuable golf experience that will challenge every golfer to a degree equal to his ability. Each project and site requires distinct choices and a different tact to implement the appropriate level of challenge, recreation, quality and beauty. Good golf architecture isn't swiftly identifiable, but it's most certainly felt. **GCI**

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