

# Down the Golf Car Path

Construction, placement of the mini-roads require careful planning

By David B. Hueber

**C**onstruction and placement of golf car paths represent a substantial investment for a club. About 80 per cent of the paths constructed are built after the golf courses already have been in operation.

The decisions for the construction and placement of these paths often rest with individuals who are facing this problem for the first time. This decision should be made with a thorough appreciation of the needs of both the golf course and the golfers.

## Why Golf Car Paths?

The benefits of having golf car paths are many. Complete tee-to-green paths permit play by golf car after severe rains without damage to the turf—and without the loss of rental fees. Golf car paths direct golfers onto a surface designed for volume traffic. This “herding” of the golfers moves the traffic away from the playing areas, thereby making golf course maintenance easier.

In addition to increasing the rounds played by golf car, paved paths can mean lower maintenance costs on golf cars. Even though golf cars are designed to traverse rolling terrain, severe jolts to the suspension system can cause damage and the golf car can go out of alignment. Poor alignment leads to inefficient tire wear and unsafe maneuverability of the vehicle.

Mud and other debris from dirt paths also can clog up the mechanical systems. Frequent breakdowns mean fewer rental dollars and fewer golf cars available when the golfers probably want them the most.

Owners of electric golf car fleets should note that complete paths will probably increase the range of their cars. (However, there will be a slight increase in tire wear.) The exact amount of electric car range will depend upon the climate of the area, the terrain of the golf course, and the age and make of the golf cars. An easy

experiment that demonstrates the difference between asphalt pavement and grass is to drive a golf car on both surfaces, noting the difference in speed and handling.

It also would be worthwhile to check with other local electric fleet operators who have complete paths. If they have good maintenance programs, they probably are getting good range from their cars and experiencing fewer breakdowns.

Another factor favoring the extensive use of golf car paths is safety. Golf car paths not only protect the turf, they also protect the golfer. Not all golf car drivers are created equal, unfortunately, and you can expect that some drivers will not use good judgment in operating their vehicles. They might try to climb too steep of a hill when the grass is wet and slippery, or they might go down a hill too quickly and lose control after hitting a bump or dip in the ground. Golf car paths can minimize some of these risks. It also is a good idea to place curbs in those areas where golfers might want to tempt fate and take a dangerous shortcut.

## How Extensive?

Golf car path installation is expensive. Like any investment, a good return for the money is desired. Several factors should be considered when determining the extent of path construction.

Two questions should be asked initially. How can the placement of paths help certain problem maintenance areas? Does the size of the golf car fleet and/or its use justify the installation of complete or partial paths? The former question can be answered by the golf course superintendent. The latter question requires careful consideration because the cost of installing complete paths will continue to increase. All of the benefits of having complete or partial paths must be weighed against the cost of current versus future installation.



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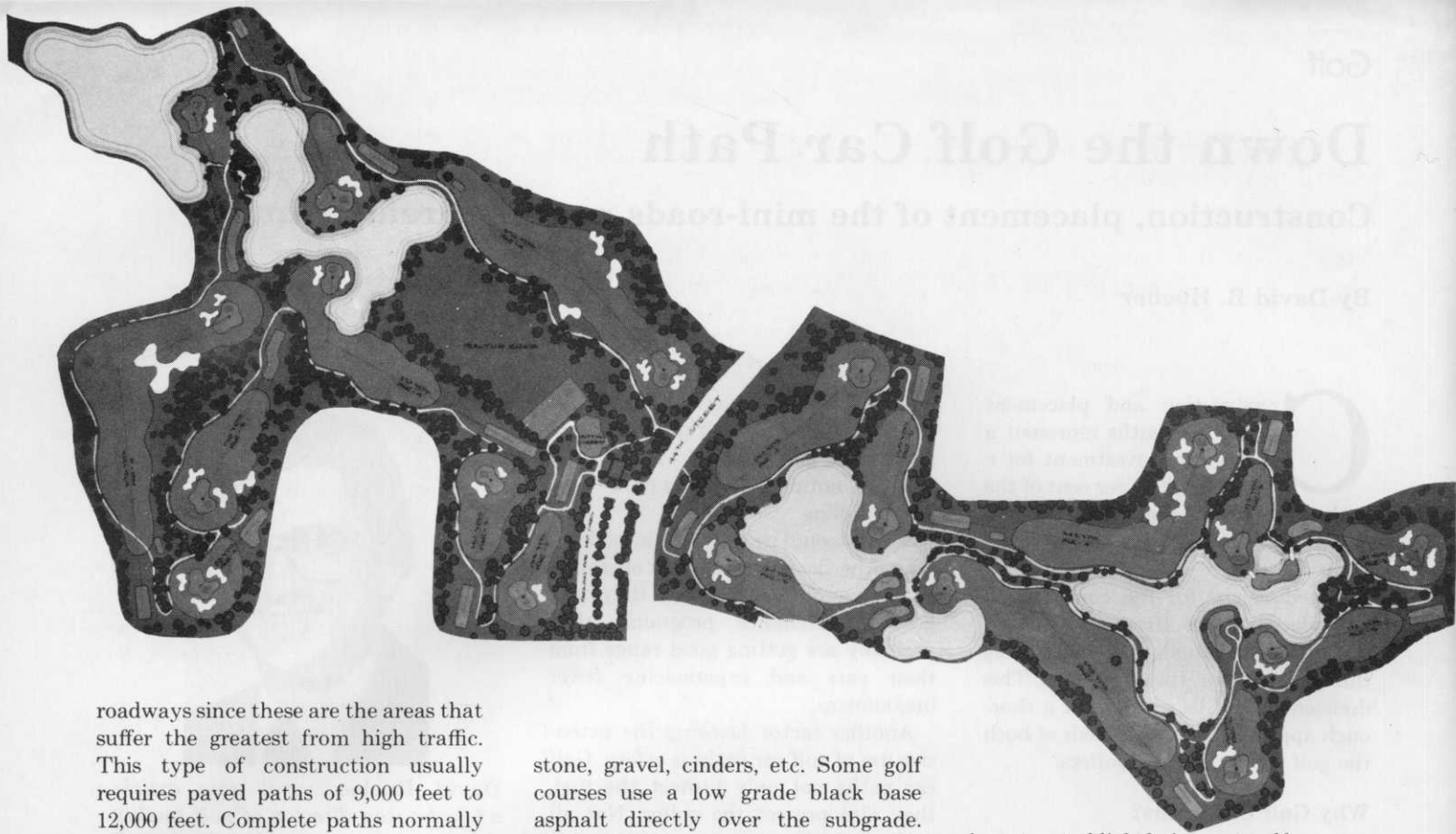
There is no set formula for determining the exact number of golf car rounds to justify either complete or partial paths. The factors in this decision vary in importance from region to region. The type of golf course, its length, the climate, the turf, the terrain and the number of golf car rounds all must be considered.

For example, turf damage is not only made in wet weather; it may be that drought conditions and water shortages make the turf particularly sensitive to heavy traffic.

Any rule of thumb as to the number of golf car rounds that would justify complete path installation would be inappropriate for general use. An initial guideline would be that if a golf course (18 holes regulation length) has a busy fleet of about 40 golf cars, some consideration should be given to installing complete paths.

Most golf courses have paths that just go around the tees and greens. This is an efficient utilization of the

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roadways since these are the areas that suffer the greatest from high traffic. This type of construction usually requires paved paths of 9,000 feet to 12,000 feet. Complete paths normally will range from 18,000 to 25,000, depending upon the course length.

#### How To Construct

Golf car paths can be constructed of either concrete or asphalt. Concrete is a more desirable material because of its durability. Some golf courses in the southwest have concrete paths because asphalt softens with extreme heat. Many municipal and other government-supported courses also have concrete paths. Most golf courses have asphalt paths, however, because it is considerably less expensive.

The Urban Land Institute, in its *Technical Bulletin 70*, recommends that golf car paths have "a base course and a paving course placed on a finished subgrade. The base course usually consists of crushed stone, slag gravel, sand or cinders. The paving course may consist of asphalt concrete, plant mix, or macadam. The more asphalt cement, the higher the quality and more durable the surface. Generally, a four-inch base course and a two- to four-inch paving course is recommended."

A four-inch base course is recommended to promote good drainage and to provide a stable foundation during the expansion and contraction caused by temperature changes. The type of material used as a base course is dictated by what is more economical and locally available. It could be lime-

stone, gravel, cinders, etc. Some golf courses use a low grade black base asphalt directly over the subgrade. Although it is not recommended, this surface is laid about four inches thick and also serves as the paving course.

Golf car path construction costs usually are broken down by the linear foot. The paths are typically six feet wide, and those paths that also accommodate maintenance vehicles are typically eight feet wide. Eight-foot wide paths should be considered for extensive use because the installation cost increment between six- and eight-foot paths is not substantial. The machinery that applies the asphalt is designed to install eight-foot strips and is adjusted to lay six-foot paths. The golf course superintendent will know where the eight-foot paths can be optimally placed.

The price per linear foot will vary by region due to the costs of materials and labor. One note of caution: Decide first upon the asphalt grade that is needed. Often, one of the members of a club can get the work done cheaper. This may or may not be a bargain. It is important to set the construction standards because it makes the selection of contractors easier. It can become very confusing when competitors might be bidding various prices for various grades of asphalt and construction work.

#### Where To Place

The placement of golf car paths has

been treated lightly in most golf course design literature. A good master plan will route the paths throughout the entire golf course even though only partial paths are constructed initially. This advance planning saves money in the long-run because you avoid the expensive pitfalls of poor planning.

The easiest way to design a master plan is from an aerial photograph or a scaled drawing of the golf course. Once the route is plotted on paper it should be checked out on the golf course for unforeseen problem areas.

Some guidelines should be followed when developing a master plan. The placement of the paths will either encourage or discourage golfers from using them. Regardless of any rules or regulations that are made concerning golf car operation, the location of the paths will either make it easy or difficult for the golfers to abide by the rules.

The typical golfer likely will not appreciate why it is important to keep the golf car on the path. If the path is in the left rough and the golfer's slice is in the right rough, more than likely the golf car also will end up in the right rough.

The logical approach to this problem provides the best solution. Most golfers are right-handed and most golfers slice. When it is possible, the path should be placed on the right side

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## Golf Car Paths

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where most golfers typically hit their shots. The guideline is to place the paths in those areas where most golfers will find it convenient.

There are instances when it would not be appropriate to have the path on the right side. There might be a lake, a creek, or an out of bounds, etc., along the right side of the fairway, and in this case it would be desirable to have the path on the left side. A path next to a hazard could unfairly come into play by exaggerating the consequences of a misdirected shot. The paths are not intended to come into play.

As a general rule the paths should be placed in the right rough about twenty-five feet from the fairway edge. The idea is to keep the path far enough from the fairway to keep it out of play and yet close enough to the areas where most golfers might play their shots. Common sense within the scope of these guidelines is the best placement determinant.

There always will be exceptions to

the rule. The design of the hole might encourage golfers to keep it on the left side; in this instance, the path should be placed where it is convenient for the golfers.

Another guideline is that the path should not cross the fairway if possible. If a path must cross the fairway, it should cross in front of the tee and never in front of the green. Placement of the path in front of the green detracts from the beauty and playability of the hole. Usually this problem can be circumvented by good planning.

Paths should always go in the rough around behind the green or alongside the green; and, whenever possible, go along the right-hand side of the tee and down the right rough. Again, there are exceptions. For example, if the tee is quite large, the golf car path can be used to divide the tee. This division will reduce wear by keeping the traffic off one tee while the other is in use. When a fairway must be crossed, it

should be crossed away from the usual shot-landing areas.

Even if a club is only planning partial paths, the development of a master plan will help avoid such problems as the crossing of fairways. Problems often arise when "unplanned" partial paths are extended to the full length of the course. If the original partial paths are not placed with their future extension in mind, the costs of extending these paths will be significantly higher. It is not unusual to see a golf course completely tear up the old paths because the old paths could not be adapted to a full-course routing.

The use of one common path for two adjacent holes is not recommended. In the short-run common paths are cheaper; however, in the long-run these savings may not be worth the risk and inconvenience. Common paths are not as safe and they concentrate activity onto a single roadway. Collisions are always possible. Play is

slowed because the path will be convenient to most players on only one out of two holes. Only in rare situations will a common path serve two holes equally well.

### A Sample Master Plan

A master plan will facilitate the successful routing of complete paths throughout the golf course. The illustration on the second page of this article is a master plan. The routing of the path is indicated by a white line. It is always easier to design the master plan on some type of scaled drawing of the golf course.

After the routing plan is designed, it is a good idea to double-check the plan with a first-hand review of the course by golf car. This exercise might stimulate new ideas and help you avoid mistakes.

Not all of the guidelines suggested could be strictly followed on this master plan because of the unique characteristics of the golf course layout. The

front nine of Ahwatukee Lakes Golf Course in Phoenix presented some unique path-routing problems for the architect, Gary Panks.

Ahwatukee Lakes is a middle (executive)-length golf course. Although the routing of the paths generally follow the established guidelines, some changes were made to accommodate expected traffic patterns.

In summation, plotting the route of any complete path requires a thorough appreciation of the needs of the golf course and the golfers. It requires a practical understanding of some planning fundamentals and a lot of common sense in applying the principles. The suggested guidelines for construction and placement of golf car paths should be utilized, but they should be suited to the unique needs of each golf course.

Finally, the development of a master plan is the key to having car paths that are functionally located and convenient to use. □