## Paving the Way tor the colif car Bonanza

Now that golf cars are here to stay-and increasing in numbers-some country clubs have found that their present car paths are inadequate and have begun to replace them with concrete paths


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By 1970 it is estimated that in the United States more than 10,000 public and private golf courses will serve thousands of golf addicts, many of whom now are tooling over lush layouts in two-man electric or gasoline cars. In all but a few instances the club garage or car shelter has replaced the caddie shack or stockade. This transfer to mechanization has brought new problems in course maintenance to superintendents.

With the advent of golf cars and their increasing numbers, primitive car paths began haphazardly to appear throughout the fairways of the land. They were made of gravel, chat, stone or asphalt. And problems of maintaining these paths increased right along with numbers of cars using the paths.

However, two country clubs in Texas and one in Oklahoma, at the latest count, are trying to remedy this situation by replacing crumbling asphalt trails with concrete.

The luxurious Las Colinas CC in Irving, Tex., located between Dallas and Fort Worth and the scene of the 69th Annual United States Women's Amateur Golf championship, has built approximately four miles of five- and $10-$ foot wide concrete car trails during the past year. These trails run from tee to green on 15 holes of the course. The other three trails will be built later this fall when the golfing season slows down.
Sam Moore, Las Colinas pro, says that all concrete trails, along with several prestressed concrete bridges, have replaced the asphalt trails, which were put in when the club was organized and built in 1964.
The Quail Creek CC, Oklahoma City, organized in 1962, originally built several miles of asphalt car trails, but is now replacing them with green concrete trails.


Ridgewood's Otis Beck (opposite) oversees final stages of path construction. Next step: Applying wet burlap material to implement curving. Turn-around (far left) near Las Colinas' clubhouse is both decorative and functional and the No. 15 tee and fairway (top left) is in excellent condition because cars travel only on trails. A green path(above) blends with its surroundings and does not mar the view for the residents whose homes border Quail Creek.

## PAVING THE WAY

continued from page 69
Ernie Vossler, Quail Creek's pro and a former touring pro, says that tee to green trails will be built over the next five years.

Possibly the pioneer of concrete golf trails in Texas is Odis Beck, pro at Waco's Ridgewood CC. Beck, who is tremendously proud of his modern path system, launched a pilot program of concrete car paving in 1966 and easily convinced the club golf committee and board of directors to include a concrete paving item in the annual budget.

By using permanent maintenance crews Ridgewood has been able to build concrete trails for approximately $\$ 1$ per running foot. Trails are five-feet wide and four inches thick. Only reusable forming lumber and ready-mixed concrete figure into the actual outlay of club funds.
Las Colinas, which has spent
about $\$ 45,000$ on its trails, had about half of them built by contract, but is now using its own crew to do the paving.

Quail Creek's project is being built under contract at 48 cents per square foot.

Ridgewood has paved about a mile of trails since the first pilot job. Plans for about the same length of construction are in the mill for the next two years.

Beck and members of the golf and greens committees had paved first those areas on the course where more drainage facilities were needed. Drainage improvements were worked into the paving program.

Beck says that course maintenance has been reduced since the concrete trails were built. Possibly the greatest advantage of concrete trails, besides cutting maintenance costs, is that car play is possible immediately after a heavy rain, whereas usually af-
ter a heavy downpour, only the walkers are allowed out.
Another factor that all pros consider is the reduced maintenance on electric and gasoline cars. There is less wear on the vehicles if they ride on a smooth surface.
"Repairs to asphalt trails were frequent," Beck says. "Concrete is easier to put down than asphalt because we don't need rollers to compact the surface."

A 25 -year PGA member, Beck went to Waco 22 years ago as Ridgewood's first pro. Coach of Baylor University's golf team, Beck has developed several Southwest Conference championship teams and always fields a strong contender.

Moore, Beck and Vossler are in agreement that the concrete trails "ought to last forever" and comment that members operate the cars more carefully.


All agree too that construction of permanent concrete trails has added to the beauty of their respective courses. Once forms are removed from the cured concrete, sod is applied and bare spots, which were almost inevitable around tees, greens and turn-arounds, are eliminated.

Both Quail Creek and Las Colinas have developed attractive planting areas featuring trees, perennials and plants.

Design of the trails follows virtually the same pattern on all three courses. Simple excavation work is carried out by light, equipment, usually a front end loader on a small tractor. Most trails are basically five-feet wide and four inches thick. Wider trails are built around tees, and at turn-arounds.
The only subbase material used is a thin application of a good grade of sand. Wire mesh, generally not necessary if a rich mix of concrete is applied, is laid on top of the sand subbase.

Concrete mix usually runs on a five- to six-bag formula and an air entraining element is added. This adds to the durability of the concrete, especially in regions where there is a severe freezethaw cycle. Contraction joints, usually redwood planks, are spaced at intervals of about 1 $1 / 2$ times the width of the trail.

One-by-four planks are used in the forming, since they can be bent easily at curving portions of the trails.

Once concrete is placed from the ready mix truck or from smaller vehicles in places where the truck cannot reach, it is screened off with two-by-fours, floated briefly and brushed off with a broom or heavy burlap to create a skid resistant riding surface. There is considerable saving in time and labor costs on the relatively rough finish.

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