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MODERN DRAINAGE ISN'T SO BAD

This past November, another industry magazine featured an article about modern golf course drainage written by a golf architecture columnist and historian. Its main points were: (1) The good-old days of golf design were perfect; (2) modern architecture sucks; and (3) golfers don't like catch basins in prime play areas.

The first point is open to debate, the second ruffles my feathers, and the third requires deeper thought. I've discussed the basics of how to design drainage (see my October 2004 column) but would like to address why modern golf courses seem to need more drainage than older ones.

The aforementioned columnist believes older courses magically drained themselves, and modern golf course architects just can't figure it out. Fact is, most old courses drain well now because superintendents have installed new drainage throughout the years. The columnist admits old courses have added much drainage throughout the years, blaming it on wholesale redesigns intended to wipe out the original architecture.

Earlier generations might have accepted soggy turf in wet swales, probably because they sensed technology and/or budgets couldn't prevent it. Nostalgia aside, playing wet courses couldn't have been as pleasant as some might imagine viewing old photos. Nowadays, golfers don't accept the idea that a course takes several years to get in great shape. More importantly, owners and bankers know the value of good drainage to a golf course business plan that depends on:

- Making great first impressions on opening day and beyond. This garners awards, buzz and good word-of-mouth publicity.
- Minimizing down time. Getting back

in play immediately after most rain events – especially if an outing has been booked – maximizes the balance sheet.

The advent of PVC drain pipe makes installation cheaper than ever, raising its cost/benefit ratio to where it makes no sense not to use it. It's easy to imagine Golden Age architects saying the same thing if PVC drain pipe had been available to them. Drain pipe and easy earthmoving wasn't available, so they used natural drainage patterns more than modern architects. Because we have higher per-

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mitting and design requirements now, we must modify natural contours more than we'd like. Challenges we face that would stun Golden Age architects, include:

- Courses with surrounding housing;
- Accommodating golf carts without tire ruts;
- Accommodating sites that are too flat or steep;
- Environmental concerns; and
- Flood-control regulations.

Naturally, we respond differently.

Architects used to consider only greens and tees as critical protection areas from drainage. With fairways and roughs maintained at higher levels, we grade most turf areas to assure no off-site water crosses them. And given the cart path the primary circulation route through the course, it's better to pick up off-site drainage outside

the cart paths to keep them dry and safe. Increased maintenance levels couldn't be achieved without improved drainage.

Typically, the biggest drainage issue is from adjacent housing. We drain the occasional rain as well as nuisance water from overwatered home lawns. Even on sunny days, there's constant drainage trickling across a course, which would saturate many of those long natural swales formerly used for drainage. Surface drainage concentrates significantly within 300 feet of originating flow, so it's wise to pick up drainage with a catch basin at lesser intervals to prevent rutting from golf carts.

Often, golf courses are part of a regional flood-control plan or have environmental requirements that dictate drainage be directed away from natural creek channels and toward ponds, wetlands, or other holding or filtering areas before being released back to the natural stream system. The goal is to filter storm water and hold it to prevent downstream flooding. These modern regulations were never demanded in the old days, and it's easy to see why our designs are graded more extensively.

Many golfers don't like seeing catch basins on golf courses, and unless necessary, they're placed out of the way. Even 200 12-square-inch basins in 40 fairway acres gives you only a 0.5-percent chance your ball will land on one. I've had only a dozen shots affected by catch basins throughout the years and suspect the actual nuisance is less than perceived visual distraction. A shot is more likely to be affected by one of more than 1,000 sprinkler heads, yet few complain about those.

Seeing more catch basins on a modern golf course doesn't seem like a bad trade-off, considering how much modern drainage has improved turf quality, the playing experience and environmental protection, while helping out everyone's bottom line by reducing maintenance and course downtime to increase revenues. **GCI**