

# STRICTLY GOLF

## Bunker renovation



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### Step by step on how to make renovation decisions.

■ At times, a golf bunker may require some renovation: enlarging to original size, repairing drainage, replacing all the sand, or a combination of any of these.

Whatever the reason, first determine whether the bunker serves a function and is justified. This should be done with the aid and advice of your course architect.

Bunkers are designed and placed on a golf course to perform specific functions:

- to set shot value (strategic),
- to control shots or moving balls (safety),
- to keep balls from water or out-of-bounds (retention),
- to better define the hole (directional) and
- to improve eye appeal (aesthetic).

In evaluating a renovation program, you may determine that a bunker serves no function and may best be removed.

**Enlarging**—The bunker may only

require being placed back to its original form. Usually, the built-up rolls that form when the bunker closes in will indicate the original shape.

Take a paint gun and re-define the margin, being careful to maintain the shape and allow for exterior drainage. You don't want surface water draining into the bunker. Take hand edgers or sod spades and cut the new margin approximately six to eight inches, depending on the amount of sand to be replaced. Remove the old material (excellent for repairs and depressions), replace with new sand, and blend into the existing sand.

**Drainage repair**—It may be necessary to repair or replace the existing drains or install new drains where none existed. This means removing all material in the drainage area. Old drains should not be re-used as this cost is minimal. Old trenches should be upgraded and relined. New trenches should be a minimum of 12-by-12 inches and have a grade of 1 to 1-1/2 percent. All trenching, with the exception of the main line, should run perpendicular to the water flow.

The main line should run through the drain path of the bunker with the required minimum slope to the exit.

Tile should be slotted to accept water but prevent gravel. Experience has shown that wrapped tile promotes clogging. Place the tile on a graded slope of gravel 1 to 1-1/2 inches deep. Secure the tile to prevent floating and cover with pea gravel (1/4 to 3/8 inch) to a depth of approximately four inches. Leave two inches of trench to accept some sand to fill out the trench; prevent mixing the pea gravel into the sand during the raking operation.

If you are going to leave the trenches exposed for any length of time, be sure to cover the gravel with this sand layer to prevent contamination.

**Replacing sand**—If all the sand in the bunker is to be replaced, it must be removed down to a firm base. This could entail replacing some sand with a heavy material that will compact to prevent excessive depth of the sand layer.

Every superintendent has his or her own method of removing the old material, be it experience or trial-and-error. I have found that the least messy procedure is a rented Bobcat, two dump trucks (beg, borrow or steal), and two to three dozen sheets of outside, low-grade 3/4-inch plywood.

Keep your trucks on the car paths. Lay the sheets of plywood to the bunker and run the Bobcat over this roadbed. Reverse the procedure when placing the new sand. You will find the cost of plywood and rental of a Bobcat well worth the expense. In any case, save the hand edging until last to remove all scars of the operation.

When spreading the new sand, be careful not to disturb the base or drains. Do not run vehicles over the drains as they may crush your tile.

In any bunker renovation involving drainage, carry your outside tile (solid only) to a creek, lake, culvert or surface drain. You will find that anything less will be unacceptable.

—The author of this article, Al Frennette, CGCS, passed away in September, 1992. It originally appeared in "Through the Green," the publication of the Georgia Golf Course Superintendents Association, and is used with their permission.