FAO - Green Construction

The game of golf has changed over the years. However, while most of the attention is directed toward equipment issues, changes also have occurred on the course itself - most notably on the greens. Greens are mowed lower than ever before (often as low as 1/10 of an inch), must endure more traffic, and frequently are irrigated with poor quality water. In spite of these challenges, golfers expect and deserve high quality putting surfaces - ones that rival the championship courses they see on television - and they expect them on a daily basis.

Many older greens simply cannot meet such high demands. As a result, greens all over the country are being rebuilt in record numbers. While this is an important investment in the future of the golf course, it is almost always a challenging time for the players who may have little idea why the project is undertaken. Here are some commonly asked questions.

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How much does green construction cost?

The cost of green construction varies tremendously. The largest variables are the cost of materials, the architect involved, and the extent of the reconstruction process.

For example, to rebuild 19 greens will typically require about 7000 tons of rootzone mix (usually sand and peat). Largely dependent on trucking fees and local availability of the sand, the cost per ton might be as low as \$15 or it could be as high as \$45 --- a \$200,000 variance. Along the same lines, a lesser-known, but very capable, architect might charge fees half as much as one whose name would be recognized nationally.

Finally, some reconstruction projects involve rebuilding the complete green site, including the bunkers and mounding surrounding the green. In these cases, the old green(s) is typically flattened and the new green built from scratch. In contrast, on many courses the decision is made to simply remove the old rootzone and replace it with one that drains. This is often referred to as *shelling* and is significantly less costly since no work is done to the surrounding areas and architectural input is frequently unnecessary. Given these caveats, *avery general* estimation of the cost of new greens is that they will range from \$4 to \$7 dollars per square foot. In most cases, new greens will range from 6000 to 7000 square feet apiece.

How long will the new greens last?

This is much like trying to answer the question, "How long will your house last?" The answer to both questions depends on numerous factors. What kind of construction technique was used? How good were the construction materials? How high are the demands of the owners? Is the design still appropriate for those using the structure?

From an agronomic point of view, greens built according to the USGA Green Section's guidelines should last indefinitely *if they are cared for properly*. There are greens across the country built in accordance with these guidelines that are more than 40 years of age. In contrast, poorly built greens are likely to fail within a few short years, usually due to inadequate rootzone drainage.

Even greens that drain well are occasionally targeted for reconstruction. Many courses are much more heavily played now than when they were originally designed. Often, the greens are simply too small to withstand the increased traffic load and must be completely rebuilt to accommodate the new design.

The bottom line is that there is no fixed number of years of a green's life. There are golf courses in the country with greens that are over 100 years old and there are courses that rebuild the greens every 10 to 15 years in order to remain competitive with other facilities in the area. As a very general rule of thumb, it is reasonable to expect well-built greens to provide satisfactory service (both architecturally and agronomically) for at least 20 to 25 years.

How long will we have to wait to play golf again?

There are two aspects of the project that must be considered. The first is the actual construction process. The second is the grow-in of the new greens following construction.

The complete reconstruction of 19 greens normally takes from 6 to 12 weeks depending largely on the resources of the construction company and weather conditions. Once construction is finished and the greens are planted, the grow-in process begins. Bentgrass greens normally take 14 to 16 weeks of good growing weather to get ready for play, while bermudagrass greens are a little faster, typically needing 12 to 14 weeks.

The key phrase that must not be overlooked is *good growing weather*. Ideally, bentgrass greens should be planted in the fall and bermudagrass greens in early summer. Although it is certainly possible (and often unavoidable) to plant at less ideal times, it will take longer for the greens to mature enough to withstand traffic.

Obviously, there is much more to building and growing-in greens than can be covered in this short response. A great deal of information can be obtained by calling any of the Green Section's offices.