

The Greening of Cantigny

by Tony Rzadzik, Ass't. Supt.
Cantigny Golf Club

One of the nice things about new golf course construction is being involved with it's creation from the start. I consider myself fortunate to be in such a position. Anyone who has experienced new construction may enjoy this article, others may learn something. Confrontations, mistakes, education, and eventually growth are all a part of the daily struggle to green 250 acres.

With the sudden explosion of golf course construction within and surrounding our Midwest Association, I thought that I might share some of my experiences of the past two years.

Design and Construction.

One of the first things that Jesse Felix, assistant director of the Cantigny Gardens, told me was that "construction designs and plans are conceptions on paper." They are the best thoughts of an architect and his best efforts to convey these expressions in an understandable form.

One of the first things that Mike Nass, my boss, told me was that "this golf course was not designed to be easily maintained." Twenty seven holes of bent grass, 60 acres in rolling fairways alone. Square tees edged in flagstone, island tees surrounded by rock boulders, an island with a double green on it, acres of wildflower plantings, over 13 acres of annual beds, and over 100,000 feet of irrigation pipe and over 1500 sprinkler heads!

When we seeded those square tees I first thought, "What a maintenance nightmare! What is this architect trying to do? Why can't we make this easier Mike?" I soon found out that this 'concept' was to stay. After a season of mowing (yes it is time consuming to walk mow tees) I realized that both Mike and Jesse were right.

The point that I would like to make is that some courses are designed and the overall plan is sound. Changes though, are sometimes hard to appeal once a design is accepted. The end result is you. What are you willing to accept? What can you reasonably and feasibly best maintain? The time to do something about a design problem is before the construction in this area begins. Design ideas are not cut in stone.

Also to consider is that once the construction company pulls out you are left with their finished product. You may have a one year 'guarantee' on your site, but it is a lot easier to get the job done while they are there with their equipment and crew.

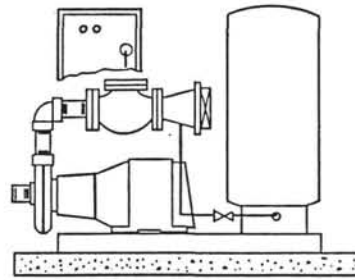
Drainage.

As earth is moved and terrain changed, so is the watershed. Consideration to your neighbors I feel is a priority. While the construction goes on and mainlines, berms, and retention ponds are being built, look after your neighbors. The design may be good, but bordering or even across the border conditions may necessitate you to make a change. Water runs down hill. It really ran in August of 1987, along with five holes of newly seeded fairways, tees, and greens; right next door! It took us about a week to clean up all the silt that our neighbors collected from us. We also had to reseed and replace many ornamentals that the flood water suffocated.

Another funny thing that happens with drainage is how those bird baths turn up a week or two after seeding. There's a big beautiful spread of green fairway or tee — with nasty puddles here or there; what a mess, what a shame. You know that the

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(Cantigny cont'd.)

construction crew did their best but there it is on your tee, green, or fairway; your own little rice patty.

Maybe it's time to tighten up the reins and slow down the transit crew. Often times this is a hard thing to do with deadlines, owners, and mother nature all fighting against you, but try to keep at a reasonable pace. It may pay off in the long run.

Utilities

Utilities, one of my favorite words. With all new construction there will be new buildings also. A maintenance facility, clubhouse, washrooms, pumphouse, tennis and/or swimming pool, starter house, cart barn, and who knows what else. Some of these buildings will need some if not all of the following: gas line, phone cable, power supply, water pipe, sewer line, and you may even get to put in a closed circuit television cable too.

I had first had experience in installing all of the above utilities. Do yourself a favor. Make sure you dig your lines deep enough. Try to foresee possible locations of your buildings and roads, so if necessary you can sleeve conduit under your roadway or cartpath before it's installed. Mark your trenches with cable tape, sand, or even flush mount in ground markers. Finally, watch the other contractors on the job site! You're bound to have outside contractors digging a light pole or putting in a parking lot. Believe me they dig first and ask questions later. Our phone line was cut at least four times. Our power line twice and television cable once. I had to cut a new cartpath to get a phone and water line to a washroom, but I was able to push a sleeve under two cart paths without digging them up. Luckily, after all of this melee, no one was killed.

Irrigation.

I think that this past summer taught all of us our faults in each of our irrigation systems. I'll bet some of us found a need for a few more key sprinkler placements, a deeper well, a couple of more quick couplers, or even considered an effluent water supply. Most of these wishes can easily come true, and at more reasonable cost, while the construction irrigation crew is on the site.

Other things to consider are your satellite placements. Are they safely out of sight of play? Are the controllers wired to your liking? Tee sprinklers together, greens together, fairways together, etc. in each zone. This makes field programming much easier and understandable. Also, before the irrigation crew leaves, check over the asbuilt that they leave you. Things sometimes change as the course develops, so will your irrigation needs.

The pump station, the heart of your operation, requires special attention. If your pumping system is a new design to you, get to learn as much as you can about it's operation. This may prevent you from having to blow your system out twice like we had to this past fall.

Personnel.

In 1987 five other seasonal employees and myself worked at Cantigny. In 1988 we had over twenty employees and we still had not opened. We were due to open in August of 1988, but our clubhouse was still under construction.

The hardest part about managing all of these new employees is getting to know them and their individual talent. This seemed to be a daily experience as you send the men out and see

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what results you will get at the end of the day. Sooner or later you'll find out which horse pulls harder and which one needs a little leather to perk him up. Once this happens you can harness your team and expect good results.

Paper mulch, Straw mulch and Green covers.

About the time our last greens and tees were being paper mulched, I heard the controversy of paper mulch vs. straw mulch vs. nothing begin.

After the 87 monsoon we straw mulched all of our rough areas. We had already lost five holes and we wanted to get our turf started and established especially on our hillsides as quickly as possible since fall was approaching. We did get a good catch of grass and extra expense was worth it.

One thing that inevitably will happen, even with straw mulch and drought conditions, are washouts. Even if it doesn't rain, when you irrigate a slope you will get rills or gully washers somewhere.

The silva-fiber paper mulch we used on our greens and tees did an adequate job, but not without problems. When we watered heavy for seed establishment or it rained like hell, sometimes the fibers would float and mass together. They would build up in a wave-like fashion as they moved to the lower areas of a tee or green. This would cause a layering and lining effect on the green surface as the seeds matured. After raking the fibers out, something you supposedly should not have to do, and several top dressings, we got back our smooth putting surface.

The funny thing about all of this is that we seeded sixty acres of fairways with no mulch at all and except for one fairway they all germinated surprisingly well. From all of this I believe that I would lean toward no paper mulching. I might straw mulch tees and greens just to get some protective insurance. Straw mulch is also a lot easier to rake out.

One thing every new course should invest in, if possible, is greens covers. I'm sure you've all heard about them, and for new seed establishment especially late fall or early spring the results are fantastic! It's not necessary (but it would be nice) to cover all of the greens. One of the problems with greens covers is anchoring them in sand based greens. I've heard that some people use sod staples over reinforcement rods to hold the covers down. We are developing our own device to do the same job.

Sod nursery.

On August 31 of 1987 we began construction of our first Penn-cross seaside sod nursery. Two weeks prior to this we had our record rainfall and we saw a future need for bent sod to repair our enormous washouts. Our foresight paid off. During the 1988 season we used up almost half of our one acre nursery.

In our haste, I should say dire need of sod for the coming season, we did not have time to irrigate our nursery. In hindsight I would make an irrigated nursery area a part of any new golf course construction. The initial cost to install and set aside an acre or two for a nursery may be expensive, but it will always be there when mother nature throws you a curve.

We have twenty five acres of farm land across the road from us. This season we plan to develop a two acre sod nursery as well as two more acres for a tree nursery. This time we are fully irrigating the nursery and plan to use quick couplers for the tree nursery.

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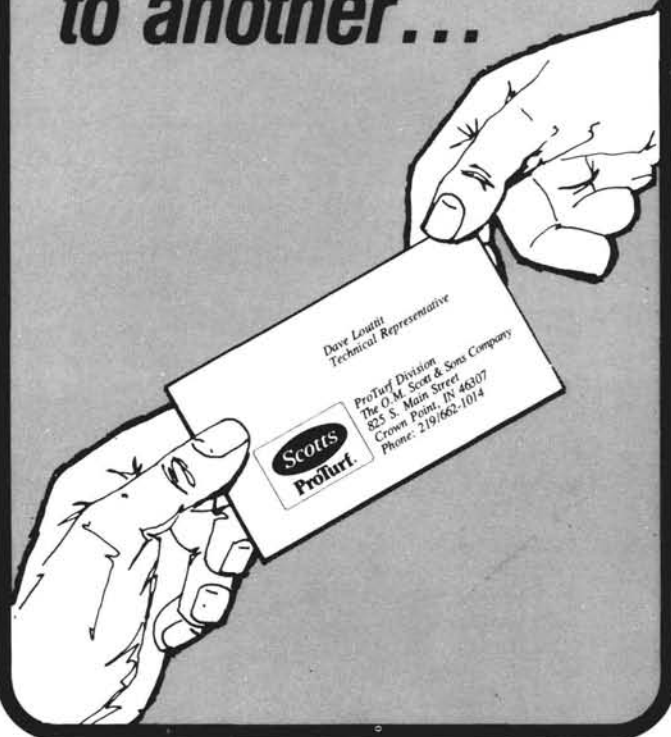
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From one professional to another...



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Equipment.

Less than a month after our first tee and green were seeded we were mowing grass. We started in April of 1987 with two cushmans and a pickup truck. As we begin this 1989 season I believe we have \$500,000 in our equipment inventory. The key to acquiring equipment is to purchase machinery as needed and only what is necessary while under construction. This helps to make the entire equipment expenditure amount a little easier to bear if you spread it over two years.

At Cantigny we have 80/20 sand based greens, therefore the rocks, sticks, tree stumps, and logs that our fairways contained were rarely encountered as we mowed. We triplex mowed our greens until the spring of 1988, then we began walk mowing them.

Our fairways were another story. The rockhound does not get all of the debris. As you irrigate new seed on bare ground more rocks also begin to appear. No matter how many times that you hand pick your fairways, between the construction crew and ourselves we picked rocks four to six times, you never get all of them. We used Toro 216's to mow our fairways for the first time. The heavy duty six blade reels and beefy bedknives did an excellent job even as the reels changed along the new fairway grass.

In 1987 we purchased a New Holland 'bobcat' loader and a Ford 3910 tractor along with a Vicon fertilizer spreader for our first fall application. We also purchased an Olathe overseeder in 1988, the drought was showing our weak spots and the construction company was on their way out. In 1987 we bought an SDI 100 gallon spray tank that we mounted on our cushman for our first season spraying needs. A Sand Pro with a plow blade is a good machine to have as traps are being constructed. Sand traps will wash down in rainstorms or weeds will also soon develop if they are not raked occasionally.

These are the basic equipment pieces that we started with. We were fortunate to be able to borrow equipment from the Cantigny Gardens Department when we needed it. Without their help our initial equipment expenditure would have been substantially greater.

The Punch List.

We all make mistakes, forget things, and golf course construction crews are fallible. The punch list signifies the day when we go through the course and tie up the loose ends. As I said before, when the construction crew pulls out you're left holding the bag. You may see some minor changes that need to be taken care of or observed a situation or circumstance that won't work later during play. This is the time to get it done. And do yourself a favor, bring along a fine tooth comb.

Getting used to the boss.

These past two years have been exciting, educational, and inspirational. As April approaches so does our first opening day. I hope that the public will enjoy this effort in green and appreciate all of our work as much as Mike Nass does. He gives me enough rope to hang myself with and when I do get tangled up, he knows just how to untie the knots. He is an intelligent manager, fine turf man, and teacher.

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The following 10 factors were presented in a National Survey to employees and again to employers. Each group was asked to rank each category on a scale of 1-10 with 1 being the most important and 10 being least important. As you can see, the bosses and employees did not agree very often:

Employee Response		Employer Response
1	Full Appreciation of Work Done	8
2	Feeling "In" on things	10
3	Sympathetic help on problems	9
4	Job Security	2
5	Good Wages	1
6	Work that is interesting	5
7	Promotion and Growth	3
8	Personal loyalty to workers	6
9	Good working conditions	4
10	Tactful disciplining	7

Andy Dauksas is the new Superintendent at Glen Oak Country Club, having moved up from the assistants position.