AUTOMATIC IRRIGATION:

DO IT RIGHT THE FIRST TIME

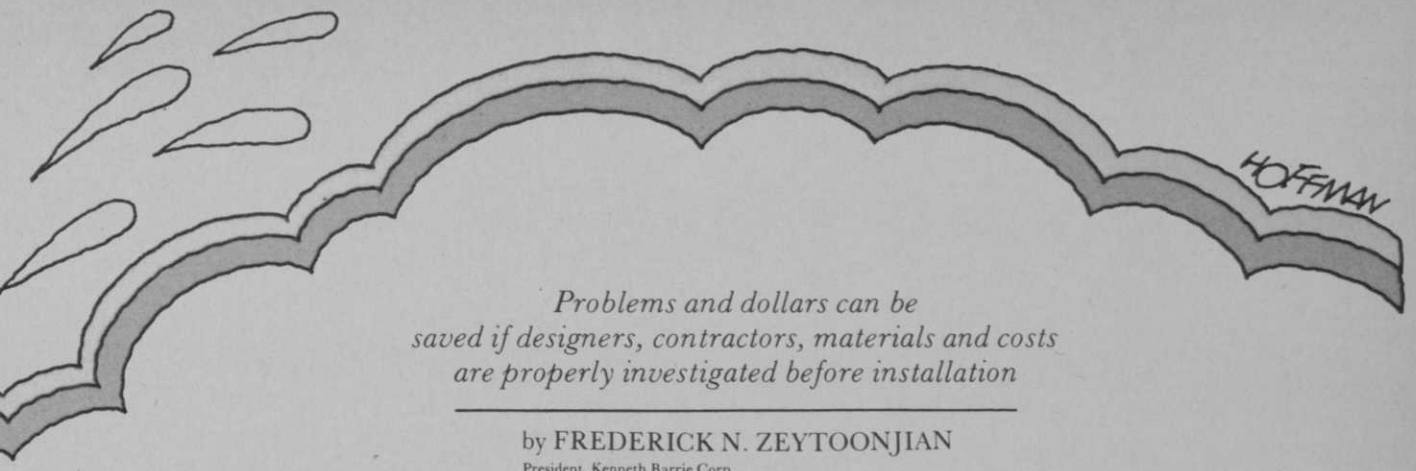
Although golf course irrigation has come a long way in the last 10 years, golf courses still make mistakes that cause them problems and waste many dollars. Here are specific examples of what happened to two courses and how they should have approached the problem.

The first golf course decided that they wanted an automatic irrigation system. The information given out to the prospective bidders by the club included the water source, the pumphouse location and a request for an automatic system. The bids were received and without analysis the club awarded the installation to the lowest bidder, who was 20 to 25 per cent below the other two bidders. The contract was drawn up based on the lowest bidder's plans and specifications. Three years later, after much trouble, the golf course asked again for bids on a new system. For some unknown reason, they proceeded with the bidding in the same way as before, but this time items were cut to lower the price so that it was acceptable to the membership. As a result the club was $200,000 poorer and no wiser.

The second golf course decided to install an automatic irrigation system, then went to the club members to see what money was available. One member, who was a sewer pipe contractor, told the club that he could buy the materials wholesale and install it with "no problems." The sewer contractor ordered fairway heads, valves, controllers and wire from a sprinkler distributor. He bought the pipe direct. The distributor, without any further investigation, sold the club the items the sewer contractor ordered. Was this a savings to the club?

After the system was installed, which took 10 months, several problems occurred. Valves kept sticking open. Sprinklers would not rotate and were breaking off. Sprinklers would not throw water to desired distances. Pipes were blowing out of the ground. And the control wire was breaking apart.

The valves should have been a different type because of the silt condi-



Problems and dollars can be saved if designers, contractors, materials and costs are properly investigated before installation

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tion from the pond. The sprinklers stuck because they were not installed with crushed stone around them for drainage. The swing joints were placed over the pipe, not off to the side, so that when heavy equipment went over them, it crushed the pipe. The sprinklers did not throw the proper distance because the pumping system could not deliver the gallonage at the required pressure. And finally, the pipe, being pressure pipe, was installed at an improper depth, with the thrust blocks in the wrong places. The wires were breaking because of insufficient slack to allow for settling of the trenches.

There is, however, a right way to approach the designing, engineering and installation of an automatic irrigation system. The golf club superintendent should first go to the club members to request a feasability study for the proposed system. A committee should then be formed to select a responsible firm to design, engineer and install the irrigation system. Before selection, several companies should be interviewed to find out how long they have been in business, what courses they have done and who they have worked for in the past.

The bondability of the firm should be determined. This indicates that the insurance company has investigated the firm, and they believe it can perform the work. It also guarantees the club that the work will be done at the agreed price.

Design fees should be investigated. In order to do the job properly, the design firm must go through a lot of work. Find out the cost of this work before going any further.

Is the company designing the system also in the installation business? Many good design firms are in the installation business because of the special skills necessary to do the job properly. However, be on the lookout for firms that write specifications around only the products they represent. A good firm will design the system around the club's particular needs and not their particular products.

Once the designer has been selected, he should be expected to meet with the superintendent and decide what type system would be the most suitable to the particular golf course. He should walk the course with the superintendent and make notes of each hole and the problems he has had to deal with—drainage, excessive wet areas or any others. He must speak to the committee and find out if they have any special problems to add.

A preliminary plan must then be designed and gone over with the people involved with additional corrections made if necessary.

The designer's final plans and specifications should include hydraulic tables, the type of pumping system to be used, a materials list, the terms of payment, the time necessary to complete the job (in working days), complete specifications, installation instructions and a list of all additional costs that may occur, such as rock and ledge removal, sand and sod removal or replacement. This reduces the problem of negotiating after the contract has been awarded.

The irrigation system is now ready for bidding. The designer and the superintendent should ask responsible people to bid on the contract and allow them time to get their prices to the club.

Once the contract is awarded, the designer and the superintendent should meet often to make sure that the system is being installed according to specification. The key to a good installation is the superintendent. His interest in the daily work should stop any problems before they arise.

After the installation is completed, the installer should turn over to the designer a set of system blueprints. This is important, because after the installer has gone, the superintendent must maintain the system. He should know what is in the ground and where. If the installation and design is done in this way, the golf course will have an efficient problem-free system for many years, because the superintendent took the time and learned about his system as it was being installed.

Installation of a good automatic irrigation system depends on good communication among all the parties involved. If this is carried out throughout the job, no problems should arise that cannot be solved. □

Steps Toward Successful Installation

- **Request feasibility study**
- **Interview firms in irrigation field and find out how long they have been in business, what courses they have done and who they have worked for in the past**
- **Determine bondability of firm**
- **Investigate design fees**
- **Explore problems for each course hole with the designer, once selected**
- **Submit final plans which should include hydraulic tables, type of pumping system, list of materials, terms of payment, time necessary to complete the job, complete specifications, installation instructions and list of additional costs**
- **Accept bids for system**
- **Make frequent checks on installation in meetings between designer and superintendent**
- **Obtain system blueprints from installer after installation is complete**