

Aerial Photography

Aids Maintenance

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Innis Arden GC

Communication is of paramount importance to the golf course manager. The ability to communicate plans and programs to both superiors and staff many times present a challenge.

The ever-expanding world of visual aids via the use of aerial photography is a concept every Superintendent should be familiar with today. Communicating daily work plans for property covering several hundred acres to a dozen or more individuals will test the best golf course managers. Many superintendents are aware of horror stories when daily work orders were misunderstood by crew members: areas to be watered were not; areas not to be sprayed were; and in some extreme cases, wrong trees removed! Volumes could be written on this subject, some humorous; some not.

The communication challenge centers around taking ideas first conceived in our mind and which must then chronologically follow several steps to reach a point where they are finally translated into the finished product in the field. When I came to Innis Arden in 1977, we had an aerial photo of the course which, at that time, was three years old. I promptly placed it in a prominent location in the crew's quarters and began to use it in conjunction with the daily work orders. This helped in the orientation of staff members to the exact area in which they were to perform a particular task.

1983 brought many changes to Innis Arden due to the major renovation work completed under the direction of Jeff Cornish and Brian Silva. We realized that our existing aerial photo had heard of some courses outlinig their irrigation system on the ground before having a new aerial photo flown. The idea sounded like a good one, and I began making plans to paint all sprinkler heads and outline all greens and fairways before having the new aerial photo taken.

Making the arrangements for a flyover under the proper conditions is easier said than done. In some ways, it is not unlike the space shots from Cape Canaveral which require a certain "launch window" or limited time frame in which the launch can proceed.

The flyover should take place at a time when the following conditions have been met:



1. The course is clean of fallen leaves and other debris.
2. There is no snow or ice cover.
3. Trees are in their dormant stage without leaves or buds which would impair visibility.
4. There are minimum shadows. Ideally, flyover should take place at high noon.
5. Clear weather conditions exist.
6. There has been adequate lead time for proper painting of the course.

In mid-March of 1985, all plans were set in motion and Keystone Aerial Photo of Philadelphia photographed the course at a cost of \$550. The new aerial photo came out perfectly thanks to the careful preparation ground work done by Dave Kerr, then Assistant Superintendent and

(continued on page 53)

(continued from page 52)

Mark Angerosa, our current Assistant. The scale used was one inch to eighty feet. All sprinkler heads were painted with six foot by six foot "x's" and all perimeters of greens and fairways were outlined with broken white lines prior to the flyover. Our local power company located the underground electric lines leading to our pump house and maintenance shop and these too, were painted.

In addition to the instantly improved orientation of crew members for daily work assignments, it was obvious that additional visual aids could be made and utilized in conjunction with the photo. The idea of designing different "overlays," incorporating various maintenance programs, proved to be invaluable. The photo was framed with wood raised somewhat higher than the actual cover glass itself. A dozen pieces of clear plexiglass were then purchased, each designed to fit precisely within the frame and over the photo. To date, the following "overlays" have been designed and are in use at our Club:

Overlay for Tree Inventory and Maintenance Record

All major trees on the course are identified on this overlay and its corresponding inventory record with a number and letter combination. The number identifies the hole on which the tree is located and the letter identifies the tree species. For example, the inventory record explains that tree "1A" on the overlay is White Oak on hole number one. It also records a complete history of all maintenance work and related costs relative to that tree.

Overlay for Wilt Areas

All areas susceptible to wilt are colored red on this overlay. This helps in the training of new irrigation personnel.

Overlay for Crabgrass and Goosegrass Areas

Areas that have been problems in the past are highlighted on this overlay which helps in targeting next year's pre-emergence herbicide program.

Overlay for Wet and Soft Areas

Because an overly wet springtime at our sea level course can prove disastrous for maintenance equipment getting stuck, in a Wet/Soft Area overlay helps new staff members avoid problem areas of this kind.

Overlay for Weed Whip Work

All weed whip areas are on their own overlay allowing summer help to quickly identify areas to be cut prior to going out to their field assignments.

These are but a few programs which we have "maintenance mapped" through the use of overlays so far. I am sure there are many other programs which would be appropriate for "maintenance mapping" and I would appreciate hearing about any new ideas you may have. ■



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