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GUEST SPEAKER, Summary of Talk by Mr. Ellis Maples on Golf Course Design and Construction.

" Gentlemen, I feel highly honored in being invited to attend this joint meeting of three turfgrass associations.

My success as a golf architect and builder depends a great deal on the men who supervise the construction work and the man who takes over asgolf course superintendent after construction has been completed. The best designed course will only be as good as the grooming it receives once it is open for play.

Any group planning a new golf course should contact a competent golf course architect prior to the actual purchase of a tract of land, if possible several sites should be given consideration - then choose one on which there is an ample supply of water, good soil and is not too hilly. Gently rolling land is most preferable.

Often inexpensive land becomes very expensive due to higher construction and maintenance costs over a period of years.

After a site has been selected a topographical map should be made of the area. On flat or slightly rolling terrain, two foot (2°) contour intervals will suffice. On rolling or hilly terrain five foot (5°) contour intervals are considered adequate and the horizontal scales could be one inch $(1^{\circ}) = 200$ feet on either topo.

The design is always worked out in close cooperation with the planning group so that any special features or requests can be worked into the plan before construction starts. Changes later are sometimes expensive and time consuming. The club house parking lot, swimming pool, practice area, maintenance shop, pump house, ponds, bridges and access roads are all shown on the original drawings.

Golf courses are layed out and designed to furnish a playing yardage of from say 6,600-7,000 yards from championship tees and 6,000-6,600 yards for the regular tees, and say 5600-6000 yards for the short course. I have found that many men players would prefer to play the short course.

This has proven true at Pinehurst, N.C., where their championship #2 course wasn't popular at all with the regular golfer until short tees were installed giving a playing yardage of about 5,900 yards. This fine course is now the most popular of the four layouts at Pinehurst.

Once 1 have a topo, the next step is to meet with the club planning group and decide the location of the club house. When this has been decided the actual layout of the golf course begins. The following factors govern to a large extent the layout of the new 18 hole course; (a) it may not be best to locate the club house on the highest elevation of the property. This can lead to the finishing holes being played uphill which is tiresome for most golfers.(b) Both front and back nines finish at the club house. (c) Where possible the club property lines should be at least 200 feet from the centerline of a fairway. Property lines nearer to a fairway invite out-of-bounds stakes, and this is highly undesireable since neighbors don't like golfers looking for balls on their property. (d) Where possible, holes are layed out generally to follow the contour of the land. Climbling steep hills or prolonged uphill grades are avoided. Golfers don't like to walk up hills, but they like to see approach shots land on the green. (e) Green designs are drawn on graph paper with 1 foot (1°) contour lines shown. Cross section profile lines are shown so greens surface can be visualized from 4 or more angles. With these the planning group can see how a finished green will look.

Size of greens is quite variable depending on the approach shot required and the strategy involved for the particular hole.

The trend is however toward larger greens, 5,000 sq. ft. and up, which allows for numerous pin placement positions and the fact that the foot traffic due to heavy play can be shifted to avoid excessive wear on the turf. The type of putting green grasses, namely Tifton 328 bermuda being introduced in the south, encourages larger greens due to its true, fast putting quality when closely mowed.

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Each golf hole designed must offer a challenge and test the skill of any golfer, however, an easier route of play is always left for the women players and those not willing to gamble with the hazards involved. Routes for mechanical carts are given careful and thoughtful study in the design of courses today. Even so they are still a problem to the greens superintendent in his job of maintaining the golf course.

Economical maintenance is one of the governing factors in golf course design. However sand traps close to the putting surfaces of many greens is necessary and essential if the game is to retain its strategy and hazards necessary to penalize misplaced shots. A really fine golf course is a work of art and beauty, so some small amount of maintenance which might be considered uneconomical is necessary if greatness is to be retained in the design and work.

When building greens and tees or mounds with today's bulldozers and earthmovers, it is essential that the fill material be constantly worked with a farm type tractor and wide (5°) cultivator attachments plus drag harrows or other suitable means to insure compaction of the material and also keep the work in proper contour. This will assure even settlement and eliminate the need for any delay before seeding or planting.

Greens are constructed in regions with heavy soils as follows : (a) Allowing for 2-3 way surface drainage. (b) Herring-bone tile drains undergound using 3/4" crushed stone to surface of subgrade. (c) A topsoil mixture of approximately 70% coarse sand, 20% loam soil and 10% peat. (d) On contoured greens it is believed best to mix the topsoil mixture off site, then same can be uniformly spread to a depth of 10 inches over the subgrade of the greens. (e) Final shaping of greens prior to planting is accomplished by the use of tractor, cultivators and an arrangement of board drags we have developed for this particular purpose. * - Ellis Maples.

PRESIDENT'S MESSAGE " I look back with utmost pride on our 1960 Baltimore Conference. in my many years in this field I have attended a great many conferences in various parts of the country. None has ever been finer. The committee on arrangements is surely to be congratulated. The 1960 Conference gives future committees a mark to shoot at that will be a real challenge. But, knowing the Mid-Atlantic group as 1 do now, 1'm very confident no one needs fear for the ruture. The joint meeting at Meadowbrook in Richmond was most gratifying. It was a wonderful turnout and something that I hope can become an annual affair. Our thanks to Central Virginia and Tidewater for their excellent cooperation. It is my desire that we consider the business of By-Laws at the Norbeck meeting. Please bring with you the copy of the proposed By-Laws you received in February so you can join in the discussion. If you wish to bring a guest to Norbeck to play golf you must check with host superintendent Bill Wright at HEmlock 4-5335 - IN ADVANCE, Please do this to prevent embarrassment to all. At a recent Executive Committee meeting a resolution was passed to the effect that in the future it will be mandatory that all Mid-Atlantic members and their guests wear coats and ties in the host club house at all meetings " F. Dunlap

FROM THE GOLF CHAIRMAN . " We hope to have a good, workable handicap system by the time the annual tournament comes around, but will make an effort to have it sooner. Be sure all score cards are turned in. Forty-eight golfers played in a Blind Bogey at Meadowbrook and 7 winning names were drawn as follows: R.R. Gurtis, C.J. Bridgman, C.E. Schoening, Winch Durker, Harry McSloy, Tommy Willock and Tom Dawson. " - E. Stanley.

EXCUSE OUR MISTAKES DEPARTMENT. On Page 2 of the Webruary "NEWSLETTER"we wrote that " the words of the speakers (at the Baltimore Conference) are being transcribed and will be published in booklet form and mailed to all who registered as a part of the registration fee. Others desiring this publication may secure same by sending to the Secretary the sum of \$2.00 to cover mailing and handling costs. " This cost figure should have been \$4.00. We regret this error. - Editor.