stake meets the conditions of only 4 and 5 . The 2 -in.-square stake generally fails in requirements $2,3,4$, and 6 . The $2-\mathrm{in}$. by 4 -in. stake, or 4 -in.-square stake, generally fails in all requirements but 1. The double or triple 2 -in.-square stake is an improvement, but fails to meet condition 6 , and partially fails in 2 unless the tree is specially secured with loop wire ties.

## Double Support Stake Works

Double 2-in.-square support stakes with rigid cross braces ("Pomona stakes") fulfill these requirements and give trees the support needed for several years in the landscape. A center 1 -in.square leader stake attached to the cross brace affords support required for the trunk and for development of scaffold branches.
By placing support stakes 15 in. apart, they will not interfere with the root ball or damage it at time of planting. When secured 18 in. into the soil and tied together with cross braces, this type of stake is far stronger than any single stake that might be used.
There is no way around the problem of securing the tree to the stake. Again, a small leader stake is most desirable for this purpose. A larger stake, 1 in . by 3 in . or 1 in . by 4 in ., will seriously interfere with branch de-
velopment, since the tree must be tied to the stake.

Cheapest and most satisfactory method is to tie the tree to a thin leader with 1 -in. plastic nurseryman's tape. Rope or wire, even though protected by a heavy rubber shield, will cause a great deal of damage to trees.

What about kind of wood for the stake? Redwood, long noted for its lasting qualities, is brittle. One park department collected nearly 2,000 redwood stakes that broke off at the ground line for one reason or another. Heartwood from slow-growth timber is increasingly difficult to get. Redwood, sapwood, or heartwood from rapid-growth timber may be little better than pine or other untreated soft wood. Douglas fir is being tried and looks promising.

A protective material, such as copper naphthalate, pentachlorophenol, or creosote, should be used to treat the base of the stake to a few inches above ground to make it last. For best results when selecting lumber for stakes, choose a uniform grade with only small tight knots.

Important as staking a young tree is, it should be realized that this is only one facet of growing potentially beautiful and valuable trees in controlled landscapes.


## AAN Makes Landscape Awards

Thirteen U. S. companies from across the country have received industrial landscaping awards from the American Association of Nurserymen. Presented at a recent luncheon in Washington, D. C., the awards are designed to stimulate interest in industrial beautification.

Award recipients for 1966 are Anheuser Busch, Inc., for its Busch Gardens at Van Nuys, Calif.; Atlantic Richfield Co., Arco Chemical Div., Anaheim, Calif.; Bullock's Fashion Square, Santa Ana, Calif.; Capitol Car Distributors, Inc., Lanham, Md.; College of San Mateo, San Mateo, Calif.; First National Bank in Dallas, Dallas, Tex.; International Minerals and Chemical Corp., Skokie, Ill.; Lincoln First Federal Savings \& Loan Association, Spokane, Wash.; Peoria County Courthouse, Peoria, Ill.; Prudential Insurance Co. of America, Boston, Mass.; Raleigh Savings and Loan Association, and Wachovia Bank and Trust Co., Raleigh, N. C.; Rossmoor Leisure World, Rockville, Md.; and Washoe County Library, Reno, Nev.

## Ohio Tree, Turf, Nursery Men Meet Together in Jan.

Nearly all phases of nonfarm vegetation management will be covered by the 38 th Annual Ohio. State University Short Course for Arborists, Turf Managers, Landscape Contractors, Garden Center Operators, and Nurserymen, at the Sheraton-Columbus Hotel, Columbus, Ohio, Jan. 23-26.

Turf topics will highlight one of the split sessions on opening day, with items of interest to commercial, utility, and municipal treemen on the other. Successive days will be devoted to landscape, garden center, and nursery interests. Ohio Nurserymen's Assn. and Ohio Chapter, International Shade Tree Conference, will also hold annual meetings.

For more details, contact Dr. L. C. Chadwick, Department of Horticulture and Forestry, Ohio State University, 1827 Neil Ave., Columbus, Ohio 43210.

