

**Red Oak Landscaping
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Dear Mr. Smith,

At your request, I have looked at the three rows of trees bordering the Long Walk at Trinity College, as well as the two double rows of trees perpendicular to that, and the two groups of trees that flank the Brownell Statue. The plantings are designed to complement the architecture of the building and frame the view of the Brownell Statue from the mid-point of the Long Walk. They are also designed to provide shaded green archways beneath which to stroll and loll.

The plantings are comprised of three different genera: Ash (*Fraxinus*), Elm (*Ulmus*), and Zelkova (*Zelkova*). The trees vary greatly in age from about ten years old to over one hundred. The largest tree, an English Elm (*Ulmus procera*) measured 168 inches in circumference in 1998. Based on the average increase in circumference of one inch per year (perhaps slightly more for a fast growing species like elm), the tree easily dates from the late 19th century, perhaps as early as 1869 when the nearby Brownell Statue was installed. You informed me, however, that turn of the century photographs show the quadrangle barren of trees, so I must conclude that the original planting consisted of large specimens of elm, mostly or entirely English Elm, transplanted (possibly bare-root) in the early 20th century.

Obviously, the years have not been kind to the planting. What was once a uniform planting of elms has been ravaged by Dutch Elm Disease. Subsequent replacement plantings have consisted of other species of elm including American Elm (*Ulmus americana*), many of which have been killed by disease; Japanese Zelkova (*Zelkova serrata*), and Green Ash (*Fraxinus pensylvanica*). The result is a hodgepodge of tree sizes and shapes that does not live up to the original intent of uniformity, but still possesses a good deal of charm.

Most of the trees appear to be in fair to good health, and reasonably free from hazardous dead wood, however I did see abundant evidence of a general lack of preventive tree care, especially girdling roots and a need for cabling. Two elms appear to be suffering from Dutch Elm Disease, and a Zelkova is being strangled by its own roots. Another tree has been pruned inappropriately, perhaps by a construction worker. Most of

the trees should have the soil carefully excavated from around the root collars to look for and remove girdling roots, as that seems to be a widespread problem. Ironically, some of the youngest trees are in the worst shape, including four small American Elms that were poor specimens to begin with, and have not been improved much by heavy pruning. The trees should be inspected and their needs assessed and addressed. It appears that both a tree maintenance plan and a commitment to adequate maintenance are sorely needed.

From the design standpoint, I cannot fathom why a third row of Green Ash was added between the two rows of trees that parallel the Long Walk, sometime within the past twenty-five years. Aesthetically, it disrupts the formality of the pair, and culturally, it competes with the two outer rows for light, water, and nutrients. The trees in the center row bend to the right and left, reaching for the light, and have caused some of the trees in the outer rows to do the same, upsetting the overall appearance. I strongly recommend that the center row of ash be eliminated. That will allow the trees in the outer rows to grow more symmetrically.

As to the question of how to preserve or restore the planting, I had thought initially that almost the entire west row along the Long Walk could be removed and replaced with a uniform planting. Upon further review, however, I have concluded that that course of action is unnecessary and unduly harsh. Twelve or thirteen out of the sixteen trees are in good enough condition to warrant their retention. The reality is that, barring a tornado or extreme act of vandalism, the planting will always remain a mixture of species, ages, and sizes. I think that the best course of action is to work to maintain the trees that are worth maintaining, while in-filling with appropriate specimens.

The new Fuller Arch creates a great opportunity to embellish the existing landscape. I concur with your suggestion of installing a courtyard. The two trees that would be affected and not worth keeping: one exhibits dieback, the other is partially uprooted and leans precariously. The vista through the Fuller Arch, eastward across the quadrangle to the Brownell Statue could be improved in two ways. First, by pruning off some low limbs that block the view of the statue. Second, by planting a group of small trees behind the statue to stop the eye from traveling past it to the tenements and ball field. The trees should mature at no more than thirty feet in height, and be planted far enough back so as not to prevent the statue from being silhouetted against the sky upon close inspection. Yoshino Cherry (*Prunus x yedoensis*) would be a good choice. The Green Ash trees that flank the statue are in good shape and help frame the view, but a backdrop is needed to complete the picture. The two rows of trees on either side of that axis should be maintained and in-filled as needed and appropriate.

In light of the current problems with Dutch Elm Disease and the potential for new pest problems such as Emerald Ash Borer, it is unwise to attempt to recreate a monoculture, especially when the planting is already diverse. I recommend increasing the species and cultivar diversity by planting Black Birch (*Betula lenta*), improved cultivars of Chinese Elm (*Ulmus parvifolia*) and Japanese Zelkova, and 'Valley Forge' American Elm. No one species or cultivar should comprise more than twenty-five percent of the planting, and the species should be arranged in random order so that if all the trees of one

age and species die it does not result in large gaps in the planting. New trees should be as large as affordable and practical, and good after-care is essential, especially pruning to develop strong branching and a high canopy.

Once the existing trees have been inspected, and a sound management plan and commitment to best management practices have been put in place, maintenance and replacement of trees will become routine. The individual plants will change over time, but the overall design and effect will be timeless.

Very Truly Yours,

Mark S. Sutcliffe, CT Arborist #S-1501