

2007 Texas Arboricultural Project of the Year Award



Submitted for the



Darrell K. Royal - Texas Memorial Stadium Tree Relocation Project



 **The University of Texas at Austin** 

The History

Since the University's inception in 1883, efforts have been made to create the park like atmosphere of the campus we recognized today. One important characteristic of the campus is the awe inspiring trees. The combination of Spanish Revival architecture coupled with the grand stature of these numerous Live oak trees, it is difficult to ignore the benefit they add to the quality of this learning institution. They are appreciated by the entire community and serve as a natural recruitment tool for prospective students. A direct correlation is made between the trees, the feel of the campus and the quality of education.

A select few of these trees can be traced back to beyond the Civil War serving as sentries of the University during its infancy. However, as the demands for higher education grew, so did the size of the University. Many acres were acquired to fulfill the need for the demand. As a result the urban forest expanded, but it was the efforts of the University forefathers that began the painstaking task of planting hundreds of oak trees across the campus landscape. Today, the University consists of 426 acres graced with 4817 of these awe inspiring trees.

Unfortunately, throughout the history of the University these trees have been under the constant threat of a growing campus needs and infrastructure upgrades. The association between growth and tree preservation has not always been synonymous.

In October of 1969, while in route to a National Football Championship the University Board of Regents elected to expand Texas Memorial Stadium. The 20 million dollar project increased stadium capacity to 75,704. However, the expansion came at a cost to trees located in the footprint of the expansion. Given the social climate of the era and the lack of concern for the trees, the campus community protested the operations.

On October 22, a riot ensued as the work began clearing several hundred feet of trees located between the stadium and Waller Creek. Student and Faculty protesters picketed, blocked equipment and chained themselves to trees in a failed attempt to try and protect them.



After several hours of protest, local law enforcement agencies were called in to assist with the confrontation. With a hardhat and bullhorn in hand, Chancellor of the Board of Regents Frank Erwin directed authorities to break up the melee by stating, "Arrest them all... in twenty minutes they will not have anything to protest!" Under these orders, the law enforcement officials went to work. The resistance ensued and in the end 27 students were arrested.



Within moments of the first arrest, the bulldozers went to work dismantling trees. What took decades to grow was diminished to firewood within minutes. Dozens of Live oaks were lost as well as many specimen Bald cypress trees lining Waller Creek.





After the dust cleared and the final tree was toppled, the students re-organized. All woody debris capable of being carried or dragged was hauled and used to barricade all entrances and exits to the main administration building. The protest continued throughout the day with a constant barrage of criticism and speeches from students, faculty and staff.



Over time the stadium expansion was finally completed and, the memory of the incident faded. It was not until recent months did the incident receive attention again. The University was planning another expansion and this time history would not repeat itself.

The Project

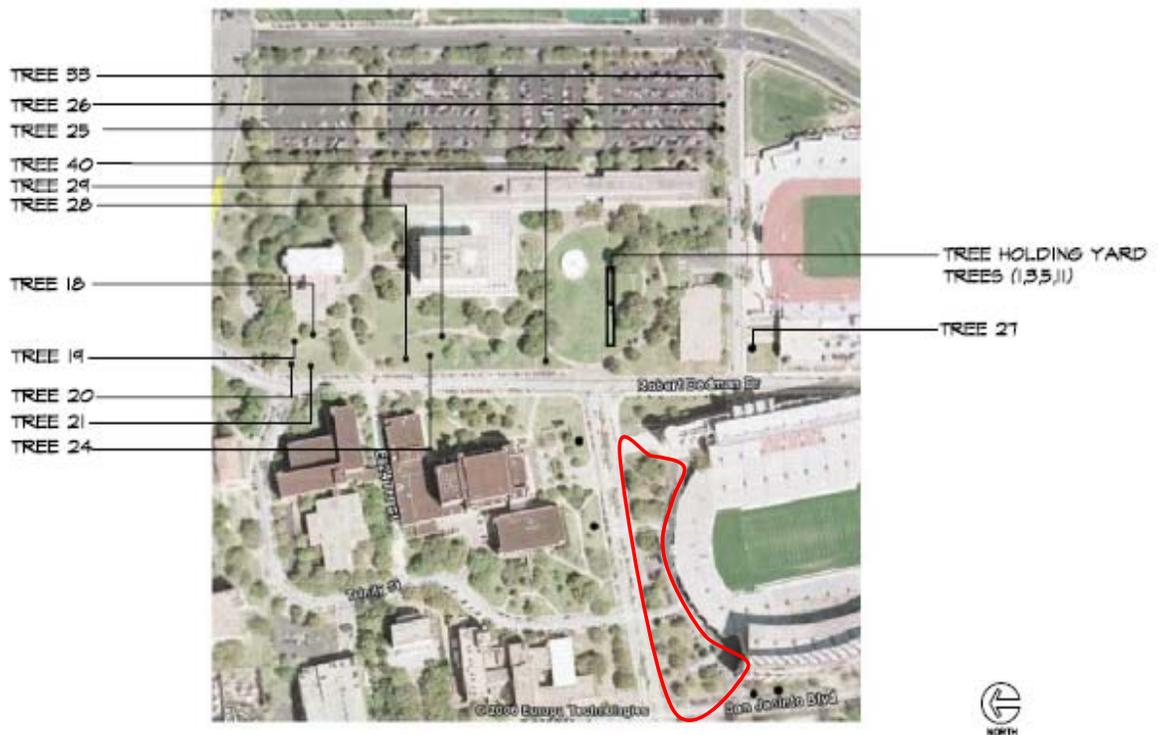
On the tail of another National Championship season in 2005, the University Intercollegiate Athletics Department and Board of Regents elected to begin another stadium expansion project. With a 150 million dollar price tag, the project was slated to raise the stadium capacity to more than 90,000.



The new stadium expansion was designed to permanently close-in the north end zone. The east and west stands would finally wrap around to form a bowl complete with the latest amenities, technology and luxury boxes. Unfortunately, the footprint of the stadium placed upwards of 40 existing trees in jeopardy. After a comprehensive inventory and assessment, it was determined that 20 of these trees were legitimate preservation candidates. To avoid having these trees face the same demise of previous stadium expansions, the University of Texas at Austin elected to preserve the trees by any means necessary. With the expansion inevitable, the University decided to have the trees relocated to other locations throughout the campus.



The tree relocation preliminaries presented many unique challenges. After reviewing the layout of underground utilities (natural gas etc.) it was determined only 16 of these trees could be moved safely and effectively. Another challenge was determining locations for tree placement. Space on the campus was relatively limited and the cost of relocating trees increases exponentially with distance. After weeks of investigation final locations were determined. Interestingly, these activities caught the attention of other campus projects interested in receiving one or more of these trees. A temporary holding yard was established to facilitate the arrival of four trees for those projects .



DARRELL K. ROYAL - TEXAS MEMORIAL STADIUM TREE TRANSPLANT PLAN
 NOT TO SCALE

Competitive bids were received for the project. Funding was through the stadium expansion project. Environmental Design Inc. was selected to perform the tree relocations with Bartlett Tree Experts performing preliminary work such as pruning and fertilization. The schedule was very tight. A handful of tree moves would have to be performed on away game weekends with the remaining trees to be moved following the football season.

The Process

The process of tree moving is a very slow and painstaking process. Trenching and root pruning must be done manually with shovels and handsaws. The root ball size formula for these transplants was 1' diameter root ball for every inch of tree diameter. Once the trenches are laid and roots pruned, outer soil is removed. Thus begins the task of inserting pipe to sever any deep roots and to serve as support when lifting.



With the pipe underlayment complete, cables are installed and the tree is lifted from the earth and placed on vehicle. Average weight per tree was approximately 140,000 lbs.



Once tree is loaded and secure, the long slow journey begins to its new location.



Once arriving to the final site, the process is reversed and the tree is set into place.



Once the last tree is lifted and moved, demolition of the north ends zone begins.



After several hectic weeks for all those involved, the actual moving and transporting of trees was completed. However, hundreds of man hours and thousands of dollars were still necessary to return all hardscapes and landscapes to pre-existing conditions.



Healthy Transplants



Pending the completion of our new Executive Education and Conference Center and the renovation of the Bass Concert Hall, the University will begin the coordination of moving the 4 trees currently located in the temporary holding yard. They are currently outfitted with intricate misting systems and receive constant attention.



Although the biggest challenges have been conquered, continual efforts are necessary to ensure the survival of all the trees. They have been through quite a traumatic experience and it will require a few years for the trees to completely rebound.

In Conclusion

The benefits of such a project are not difficult to quantify. These trees will continue to add benefit for generations. More importantly though is the statement made by the University of Texas at Austin that trees are recognized as a valuable asset worthy of preservation. The University demonstrated this commitment by investing \$563,000.00 for this tree relocation project.

This project was a collaborate effort from many University entities most importantly the office of Vice President for Employee and Campus Services which was responsible for putting the project into motion. The project management was the responsibility of University of Texas System's Office of Facilities Planning and Construction, University of Texas Project Management and Construction Services and Landscape Services. Contractors providing support included; Hensel Phelps Construction Co. (general contractor for stadium expansion) Environmental Design Inc. (tree movers) and Bartlett Tree Experts (initial tree care).

Project being nominated: DKR - Texas Memorial Stadium -Tree Relocation Project

Location of Project: University of Texas at Austin

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