

Project Title: Zilker Tree Rescue Program

Submitted by: Charlie McCabe, Austin Parks Foundation, 7/13/10, Revised 8/23/10

Introduction and Objectives:

Recently, the City of Austin Parks and Recreation Forestry Division began the unpleasant task of removing 50 dead trees from the Polo Fields Area of Zilker Park. Based on discussions with the City Arborist Program, an effort was established to improve the health and extend the longevity of the more than 600 trees in that portion of Zilker Park to reduce future tree deaths due to combined stressors of soil compaction, drought and other environmental factors.

As a result, the Austin Parks Foundation, in partnership with the City of Austin Parks and Recreation Department, The City of Austin Arborist Program as well as the Austin Heritage Tree Foundation, is proposing the Zilker Tree Rescue Program.

The program has three major objectives:

- 1) The largest 89 trees (with diameters of 21-inches or greater) will be the primary targets of the program. We seek to aerate the critical root zone, applying compost to the depth of 8 inches and mulch. These services will be contracted to certified arborists in an agreement with the Austin Parks Foundation and will be overseen by City Parks and City Arborist Staff.
[Compost and Mulch will be provided by the City of Austin. Additional compost donations are being solicited by the Austin Heritage Tree Foundation.]
- 2) The remaining 600 trees will be mulched by hundreds of volunteers to be organized by the Austin Parks Foundation in multiple workdays this summer (July-September).
- 3) If dry spells emerge during the summer and fall, supplemental watering will be undertaken by city staff using hoses and temporarily placed storage tanks along Andrew Zilker Road. Tanks and water will be supplied by City Parks Forestry Staff.

Approach and Methods:

Our approach is to apply both professional services as well as volunteers working jointly with the Austin Parks Foundation and City of Austin to improve the health and extend the longevity of established trees in the polo field area of Zilker Park. We strongly believe that we can reduce future tree deaths due to the combined stressors of soil compaction, drought, and other environmental factors.

The largest 89 trees (21" in diameter or greater) among the more than 600 in the treatment area are the primary target of the program. The treatment area is located entirely within Zilker Park and extends east of Mopac to Stratford Drive and extends south from Barton Springs Road to Andrew Zilker Road. The remaining 600 trees not given treatments will be mulched by volunteers with 3-6 inches of mulch in the critical root zones of each tree. Supplemental water will be supplied by volunteers using water in storage tanks located near the treatment area if dry spells emerge during the summer and fall of 2010.

Treatment will be provided to improve soil conditions resulting in healthier and better functioning root systems for the community of trees in this area. Connected root systems and shared canopy space allow these trees to benefit and protect each other. Soil condition improvements will be performed in areas of highest potential benefit. Selected areas will receive aeration, compost,

mulch, fertilization, and supplemental water.

Treatment regime includes the following steps:

- Aeration to break up soil compaction and improve oxygen availability to tree roots - To be done with either an air spade or air knife
- Compost amendment to increase the organic matter content in the soil and further prevent compaction
- Soil test to determine the need for additional nutrients to promote tree health
- Fertilizer application, based on soil test results
- Mulch within the Critical Root Zone (CRZ) of trees to retain moisture and reduce soil compaction
- Provide supplemental watering before and after aeration and during periods with little rainfall
- Protect root zones of trees with physical barriers to discourage compaction
- Monitor trees to determine efficacy of treatment, need for additional treatment

The project contract bid request will allow an expandable scope on per tree pricing to utilize available funding for maximum impact. Treatment area boundaries will remain consistent.

The Austin Parks Foundation will organize and manage a series of workdays, working collaboratively with the City of Austin Parks and Recreation Department to mulch the remaining 600 trees over a series of workdays. We did a similar effort to mulch approximately 100 trees in the Great Lawn Area of Zilker Park prior to its re-opening last August. The City Parks Dept is committed to providing the mulch necessary to complete the task. We strongly believe that this will be an excellent example of a public/private partnership. Further, if supplemental water is needed, the Austin Parks Foundation is working to secure the temporary usage of several large water storage containers. These can be located along Andrew Zilker Road and re-supplied by the Parks Department Water Tanker Trucks. The Austin Parks Foundation will organize volunteers to water the 89 treated trees and as many of the 600 other trees should dry spells emerge this summer and fall.

The Austin Parks Foundation has previous experience in the areas of tree care and mobilizing large numbers of volunteers. Our annual citywide It's My Park Day has drawn over 2,500 volunteers in both 2009 and 2010 for over 60 park improvement projects in a single day.

Further, the foundation has been funding a number of similar approaches for older, heritage trees in some of Austin's central parks in recent years. We have greatly improved the health of a number of live oaks, post oaks and cedar elms in our downtown historic squares – Republic Square, Brush Square and Wooldridge Square. In addition, our community groups have led efforts to invigorate older trees, plant new trees and removed invasive trees in collaboration with PARD staff in the following parks in 2009-2010:

- Pease Park and Shoal Creek Greenbelt (over 300 trees planted with irrigation) Over 1 acre of invasive species removed. Monitoring of re-sprouts continues.
- Barton Creek Greenbelt (over 10 acres of invasive species removed, monitoring of re-sprouts)
- Zilker Preserve (nearly 75% of invasives have been removed through volunteer and grant funded professional services)
- West Bouldin Creek Greenbelt – 1 acre of invasive species have been removed through volunteer and grant funded professional services.

Budget:

The Total Budget for this project is \$145,013. The requested grant amount is \$60,400.

Tree Treatments: 89 trees with DBH of between 21-inches and 48-inches at an average of \$558.98 per tree for a total of \$49,750, plus intergration of compost up to a depth of 8-inches assuming 20 cents a square foot times 53,250 square feet equaling \$10,650. Total costs are \$60,400. Standard costs for treatments on average range from \$800 to \$1500 per tree depending on the DBH of the trees, the prices are a significant savings. Tree Treatments will be performed by experienced personnel supervised by a certified arborist under contract with the Austin Parks Foundation.

Compost: 165 cubic yards of compost will be provided by the City of Austin. Sufficient quantities for 2 inches of coverage for 89 trees with a radius of 10 to 20 feet (as determined by bid) – donated through the Austin Heritage Tree Foundation or obtained by the City of Austin Parks Forestry Division. Compost will be applied by arborist personnel under contract with the Austin Parks Foundation.

Mulch: 1745 cubic yards of compost will be provided by the City of Austin. Sufficient quantities for 3-6 inches of coverage for 600 plus trees out to the drip line of each tree – donated by the City of Austin Parks and Recreation Dept. Mulch will be spread by volunteers with support of staff from the City of Austin Parks and Recreation Dept in a series of volunteer workdays to be organized by the Austin Parks Foundation. We estimate 300 volunteers working 3 hours each at 3 workdays to spread mulch would yield a donation of \$28,755 in labor alone to the City (at the volunteer rate of \$10.65 per hour.)

Water: two 20,000 tanks with attached hoses set up in strategic locations along Andrew Zilker Road inside the treatment area – will be donated through the Austin Parks Foundation.

Labor: PARD Forestry Division staff will provide 585 hours for work at a donated value of \$11,390.96.

Equipment: PARD Forestry Division staff will provide 585 hours of usage for vehicles and equipment for donated value of \$9,869.04.

Volunteers: We estimate 5 workdays with 150 volunteers at each workday working a total of 3 hours. The City volunteer labor rate is \$10.65 per hour, totaling \$7,987.50 in donated labor.

The total for donated services from the City Parks department and volunteers is \$84,613.

Contact Information:

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Personnel Qualifications (Separate Page):

Charlie McCabe – Executive Director, Austin Parks Foundation. Charlie will oversee the volunteer workdays and hold the contract with the chosen vendor, working closely with the Urban Forestry Program Manager, Walter Passmore and his staff.

Charlie has served as Executive Director of the Austin Parks Foundation since June 2005. With two fulltime staff, the foundation relies heavily on a volunteer corps numbering in the thousands. The foundation supports the efforts of over 60 community groups through out Austin who have adopted and work to improve and maintain Austin parks.

Since joining the foundation, Charlie has seen annual park grants awarded by the foundation grow from under \$5,000 in 2005 to over \$300,000 in 2009. It's My Park Day, the foundation's signature annual citywide park volunteer day has grown from 980 volunteers at 23 projects in 2005 to 2,500 volunteers at 68 projects in 2010.

The foundation was recently awarded several grants totaling \$120,000 for the startup of the Barton Creek Trail Corps project. A joint effort with the Hill Country Conservancy, The City of Austin Parks and Recreation Department and numerous volunteer groups, it will leverage another \$100,000 in funding to tackle trail improvement projects and invasive species removal and native plant restoration efforts along major portions of the Barton Creek Greenbelt beginning in September 2010 and concluding in December 2011.

Charlie and APF Volunteers have led hundreds of volunteer workdays in the past five years engaged in efforts ranging from mulching trees, removing invasive species, rebuilding trails, reseeding natives, planting natives, picking up mountains of trash and rebuilding eroded and flood damaged areas.

Zilker Tree Rescue Budget - 8/23/10 - revised - Austin Parks Foundation (Charlie McCabe, cmccabe@austinparks.org, 512.477.1566 ext 2)

Job Description: Treat trees at Zilker Park following specifications of the tree rescue project. PARD Forestry Program staff will haul and distribute compost and mulch, fill water tanks, monitor tree health, assist volunteers, and perform other duties as needed to accomplish project objectives. Estimated time for hauling 14, 12 yard dump truck loads of compost is 42 hours; 73 brush truck loads of mulch is 219 hours; 60 water truck deliveries to tanks is 180 hours.

Project Budget	Amount	Funds Requested	Donation	Grand Total
Tree Root Zone Work	89 Trees @ \$558.98 per service	\$49,750		\$49,750
Integration of compost to 8 inch depth	\$.20 per sq ft X 53,250 sq ft	\$10,650		\$10,650
Labor - PARD Forestry	585 hours		\$11,390.96	\$11,391
Equipment - PARD Forestry	585 hours		\$9,869.04	\$9,869
Commodities	1910 Cubic yards		\$55,365	\$55,365
Volunteer Workdays	750 volunteers, 3,750 hours @10.65 per hour		\$7,988	\$7,988
Grand Totals		\$60,400	\$84,613	\$145,013

Labor - in kind donation by the PARD Forestry Division

Staff Position	Rate	# of hours	total	fringe and overhead (33%)	Grand total
Forestry technician	\$12.39	441	\$5,463.99	\$1,803.12	\$7,267.11
Forestry technician senior	\$14.88		\$0.00	\$0.00	\$0.00
Supervisor	\$20.81	44	\$915.64	\$302.16	\$1,217.80
Forester/specialist	\$21.85	100	\$2,185.00	\$721.05	\$2,906.05
Total					\$11,390.96

Equipment - in kind donation by the PARD Forestry Division

Type	Rate	# of hours	total
Pick up truck	\$4.00	144	\$576.00
Bucket truck	\$25.00		\$0.00
Brush truck	\$22.16	219	\$4,853.04
Dump Truck (12 yard)	\$20.00	42	\$840.00
Water truck	\$20.00	180	\$3,600.00
Chipper	\$13.75		\$0.00
Air spade and compressor	\$13.50		\$0.00
Total		585	\$9,869.04

Commodities - in kind donation by the PARD Forestry Division

Type	Cost	amount	total
Mulch	\$27	1745	\$47,115.00
Dillo Dirt Compost	\$50	165	\$8,250.00
Total		1910	\$55,365.00

Grand Total cost estimate - PARD **\$76,625.00**