# Final Report and Findings for Remove and Replace: Assistance for Low-Income Homeowners with High Risk Trees

Date: June 24th, 2019

Submitted by TreeFolks, Inc. to the City of Austin as a final report to the Urban Forestry Grant Program for our 2018 Remove and Replace program. Amended after March 22<sup>nd</sup> meeting with Development Services Department. The goal of this report is to summarize the findings from the pilot phase of this new initiative and discuss the potential for program development during the 2019 second phase.

## **Executive Summary**

Diseased or dying/hazardous trees pose a health and safety risk to homeowners. Funded at the \$21,250 level by Austin City Council in fall 2017, The TreeFolks Remove and Replace pilot program functioned as a resource for low-income homeowners within the Austin city limits to have hazardous, diseased, or dying trees removed from their property at **no cost to them** by insured, certified, local tree-care companies. TreeFolks then replaced with a five-gallon native or adapted tree through our NeighborWoods program. The program launched in April 2018, and by May 2018 all removals were completed at the funding level given and any remaining requests were added to a waitlist.

Need was far higher than anticipated, with 38 applicants in four weeks after very limited publicity. Applicants were predominantly people of color, retired, disabled, and female. Trees were also both larger and more emergent than anticipated. In addition, fewer arborist firms were willing to participate than anticipated (4 total) and tree removal costs were higher than originally budgeted for. These draft findings indicate by the end of the program, 17 trees have been removed from 13 customers at a total cost of **approximately** \$1,354.23 per customer or \$1,035.59 per tree. Arborist firms donated a total of \$15,080, or 71% of the original funding amount. TreeFolks provided a 19% match in staffing costs.

14 people have been prequalified, with another 28 on the waitlist. Our assessment is \$76,089 would pay for 25% of the need and administrative costs in the coming year that would be able to be handled by the arborist community. TreeFolks hopes to continue this program to meet the remaining need in upcoming years.

#### Location

This program takes place on privately owned lots within the Austin Full Purpose Jurisdiction

# Description

The TreeFolks Remove-and-Replace Program offers low, discounted, or at-cost rates to local certified, insured arborist companies to remove trees for homeowners that qualify for low-income government assistance program (SNAP/LoneStar/WIC/Social Security or equivalent). In Fall 2017, Austin City Council allocated \$20,000 to fund a pilot for this program through the Urban Forest Grant Program. The program was eventually funded at \$21,250 to cover third party approvals.

#### Goals

Homeowners living in poverty are exceedingly unlikely to pay for removal by an arborist, and the dead trees represent a component of the urban forest that is neither actively growing nor providing ecosystem benefits needed to combat urbanization, such as shade and storm-water retention. In those cases, residents often remove the tree without the proper permit putting them at risk of a fine or wait for the tree to fall and hope their insurance agrees to cover it. Remove and Replace functions as a resource for low-income homeowners to have hazardous, diseased, or dying trees that pose a risk to the home removed from their property at no cost to them by insured and certified, local tree-care companies and replaced with a five-gallon native or adapted tree through our NeighborWoods program. Low-income eligibility is self-reported and our established cut off for low-income households is 80% Austin area median family income (MFI) or participation in other programs for low-income residents. Tree-care companies are required to have been in business for five years, to be insured, and to be certified by International Society of Arboriculture (ISA) both as arborists and in Tree Risk Assessment Qualification (TRAQ). Details on methodology for qualifying homeowners, high risk trees, and arborist firms can be found in the original project proposal.

#### Assessment of need

For years TreeFolks has maintained a list of people interested in free or low-cost tree care that served as the initial soft launch of Remove and Replace. Of the five people we were still able to contact, two were eligible and had their trees removed through the program in early April. Based on the very low numbers of calls anecdotally through the years, we anticipated one or two calls per month by low-income Austin residents with hazardous trees that were risky enough to qualify for the program. TreeFolks kicked off the Remove and Replace program officially on 4/14/18 with a press release and quickly saw higher levels of interest in the program than anticipated.

The Remove and Replace program had a total of 38 contacts expressing interest in only four weeks. Of those 38, 32 were ultimately reachable to determine eligibility. Of the 32 reachable applicants, 26 were remaining after review of their application for eligibility. Of the 26 eligible applicants, 13 were served by the initial pilot season funding and 14 homeowners plus are prequalified for removals given additional funding. Another 28 homeowners have signed up for our waitlist.

No efforts were put into marketing or publicity of this program in its pilot stage beyond the press release and placement in our newsletter, in order to keep the numbers manageable. It is our assessment that higher numbers of applicants can be expected with any publicity push for this program.

The trees submitted to the program were both larger and more critical than expected. The trees removed and proposed to be removed are 22.5in in diameter on average, 91% of which were rated as hazardous and thereby eligible for the program by participating firms. About 40% of all estimated removals are rated "high risk" by arborists. The homeowners appear to have been waiting until the tree is very hazardous, as evidenced by cracking of the trunk, before

calling. Again, the lack of prior existence of the program means that homeowners may have been waiting under these conditions for some time. The first was an Arizona ash that ended up being an emergency, high-risk removal. The homeowner was so afraid of this tree falling on her house, she had been sleeping on the opposite side of the house. Upon inspection, the tree proved to be extremely unstable with visible cracks widening in the wind. Austin Tree Experts received approval, removed the tree that same day, and stayed on site to make sure the homeowner stayed safe. The tree was so dangerous that the city fast-tracked the normal permit requirements despite it being 22" in diameter.

Ultimately, our assessment is that there is considerable need for continued funding for this program and that the risk level for low income homeowners is high.

#### Outcomes

**Proposed Outcome 1**: List of participating arborist companies with a preference for those who perform significant work in Austin.

**Actual Outcome 1**: Nine arborist firms were contacted to gauge interest in the program. Ultimately four agreed to work with the program and were included in every request for removal, but only two had the capacity to participate fully in the program and complete a minimum of two removals.

*Improvement plan:* Increase frequency of personal communication with arborists to better gauge capacity and plan removal requests accordingly. Detailed MOU's and contingency planning will be implemented to increase firms participation. Clearly highlight arborist company benefits during initial contact and ensure accountability. Through this pilot year we learned most arborist firms participated to help the community and not for the publicity benefits. The 2019 proposal will expand on this desired improvement.

#### **Arborist firms initially contacted:**

- They Might be Monkeys
- Full Canopy Tree Care
- Just Trees
- Austin Tree Experts
- Davey Tree
- Hamlin Tree Care
- Bartlett Tree Company
- Certified Arbor Care
- Tree Care Austin

# Participating arborist firms:

- Davey Tree
- Austin Tree Experts
- Certified Arbor Care

• Heritage Tree Care has been involved in most aspects of program development, including cost scoping. However, they are precluded from paid program participation given their CEO, Vincent DeBrock, serving as a TreeFolks Board member.

#### Arborists firms that met participation requirements for benefits (completed 2 removals)

- Davey tree
- Austin Tree Experts

**Proposed Outcome 2:** Number of Austin residents served and their demographics including geography, income status, ethnicity, and council district.

Actual Outcome 2: Number of Austin residents served and their demographics including geography, income status, ethnicity, and council district is shown below. The original projections for quantity of residents served were based off incorrect estimates of tree removal costs, therefore only 13 residents were served during the pilot year. The demographic information was provided for 13 residents served in addition to the 26 eligible applicants (below and Appendix A2).

*Improvement plan*: The adjusted cost analysis developed in response to the pilot will be used to accurately predict the attainable amount of residents served. The 2019 proposal will expand on this desired improvement.

### Population Demographics

Demographic information for the 26 applicants shows that the program has served predominantly older, retired people of low income. They are predominantly people of color, and female. They are also disproportionately disabled. Of the 26 servable applicants:

- *Gender*: Male 26%, Female 74%
- *Age:* 48% over 50 years, 52% under
- Ethnicity: 21% African American, 31% Caucasian, 48% Hispanic
- *Employment status:* 61% retired,21% Working full time, 11% unemployed and 7% chose not to answer the question
- *Veteran Status:* 9% veteran, 91% non-veteran
- *Disability:* 47% either Temporarily, Physically, or Mentally Disabled, and 52% non-disabled
- *MFI Status*: 74% of applicants made less than 80% of Austin's median income, 23% made less than 60, and 3% made less than 40%

Demographic information of the 13 applicants actually served shows paralleling trends found within the larger applicant population:

- *Gender:* 38.5% Male, 61.5% Female
- *Age*: 69% over 50 years, 31% under
- Ethnicity: 23% African American, 38.5% Hispanic, 38.5% Caucasian,
- Employment Status: 61% retired, 23% unemployed, 8% employed, 8% chose not to answer

- *Veteran Status:* 15% veteran, 85% non-veteran
- *Disability:* 54% either Temporarily, Physically or Mentally Disabled, 46% non-disabled
- *MFI Status*: 100% made less than 80% of Austin's median income, 54% made less than 60%, 8% made less than 40%

Information on geography and council district can be found in Appendix A2.

**Proposed Outcome 3:** Number, species, and size of tree removed.

**Actual Outcome 3:** The number, species, and size of trees removed is shown in the table below. The original projections for quantity of trees was based off incorrect estimates of tree removal costs, therefore only 17 removals were completed, instead of the projected 20-36.

**Improvement Plan:** Use the new tiered pricing system developed to more accurately predict removal costs and budget variance. Make sure to communicate any budget changes with the grantor immediately if they are necessary. The 2019 proposal will expand on this desired improvement.

#### Trees Removed

Tree Species Removed	DBH (in)	Arborist
Ash	22	Austin Tree Experts
Hackberry	24	Davey Tree
Chinaberry	19	Austin Tree Experts
Ash	34	Davey
Ash	36	Davey
Sycamore	22	Austin Tree Experts
Ash	14	Davey Tree
Ash (2)	8,10	Austin Tree Experts
Hackberry (2)	18,14	Austin Tree Experts
Sycamore (3)	17,20,21	Austin Tree Experts
Mulberry	12	Certified Arbor Care
Ash	22	Davey
Tallow	24	Davey

#### Replacement Trees

Trees were replaced in the fall planting season through our NeighborWoods program. All trees were replaced with native or adapted three to five-gallon trees as specified in the NeighborWoods agreement with the City of Austin. We asked homeowners if they had any preference for the replacement tree species and received requests for specific species and stature.

Three homeowners declined trees, they cited personal health issues and/or lack of ability to care for a new tree. Other homeowners, who were more fearful of the costs and energy of maintaining a large stature tree, were offered smaller stature trees instead of a shade tree. Participants were mostly contacted over the phone. We mailed a letter to one participant, whose

phone was disconnected, but we received no reply. Participants were given planting and care instructions over the phone and on paper. We provide in-person consultations for the participants who required planting assistance from us. In total, the NeighborWoods team delivered 18 trees to nine participants and planted five of the 18 trees for three participants. Only 17 trees were removed from the pilot season of Remove and Replace, implying a net gain in tree cover, despite some homeowners opting out of replacements. In future iterations, we will make a replacement tree a requirement, except in exceptional circumstances (such as health issues preventing proper watering).

**Proposed Outcome 4:** The equivalent value of the marketing provided by TreeFolks including staff time.

Actual Outcome 4: TreeFolks offered participating companies the benefits of sponsorship after two completed removals, and then more benefits after their third removal. Those benefits included; listing of the company name on the TreeFolks website, highlight in our e-newsletter, Looking Up!, social media recognition, and a tax credit letter. The proposal also mentioned other potential benefits, including blog posts about program with the company mentioned and news story pitched, which did not occur.

Two of the arborist companies did not see the value in our marketing benefits because they felt they were already well known enough and they were more interested in the community service. They were still grateful for the opportunity to have their names listed on our website, but mentioned it did not affect their participation in the program either way.

**Plan for Improvement:** The arborist firms that qualified are still listed on our website and were mentioned in our newsletter, social media, and provided with a tax letter. TreeFolks staff will encourage arborist companies during the 2019 year to take full advantage of these marketing opportunities.

**Proposed Outcome 5:** Cost savings, i.e. equivalent value of tree removal service

**Actual Outcome 5:** \$15,000 in services donated by arborist firms, documented by tax letters sent to participating arborist firms, located within the backup folder.

**Plan for Improvement:** Aborist firms did not disclose the price of each removal because this was proprietary information. Tax letters were provided to participating companies after the conclusion of the program, totaling \$17,705, which was rounded down to \$15,000 to account for debris removal costs not originally included in the in-kind match. TreeFolks plans to explain to arborist firms the importance of accurately assessing their donated value, and will continually pursue gathering estimated prices of each removal.

## Valuation of Program

The program was funded at \$21,250 with the recognition that third-party approvals would cost \$125 per approval. Arborists, however, decided it would be better for them to provide third-party approvals as an in-kind donation to TreeFolks.

Invoices paid to arborist firms	\$17,605
Invoices paid to third party approvals	\$0
TreeFolks program coordination	\$3,579.45
TreeFolks staff time donation	\$4,060
Matching arborist donation	\$15,080
Heritage Tree Care donation	\$225
<b>Total Programmatic Value</b>	\$40,549.45

Grant Budget		Actual		Match	
Removal fee 20-36 removals \$500-\$1,000	\$18,000	Invoices paid to arborist firms	\$17,605	TreeFolks staff time donation	\$4,060
TreeFolks Staff time	\$2,000	Invoices paid to third party approvals	\$0	Matching arborist donation	\$15,080
Third party approvals	\$1,250	TreeFolks program coordination	\$3,579.45	Heritage Tree Care donation	\$225

We estimate the value of the program to be \$40,439, representing a 90% match to the City of Austin. In order to fill as much demand as possible, TreeFolks donated significant staff time to this program.

#### Valuation per Tree & Cost/Benefit Analysis

Overall, the total programmatic value of Remove and Replace is \$40,439 which means each customer has received \$3,111 worth of removal assistance.

Customers received a tree from our NeighborWoods program valued around \$67 (\$18 for the tree and \$49 for program coordination). The cost of the RR program per person served is \$1,321. If the NW replacement costs are added, then the cost per person served is \$1,388.

#### Challenges and Adaptations

As a pilot, the initial launch of this program came across several challenges for which we needed to find a solution. Eligibility verification, debris removal, higher tree removal costs, arborist firm participation levels and emergency tree removals all presented unique barriers.

# Eligibility verification

The person applying for the tree removal must be an Austin resident, own the home, and qualify for a federal low-income program including WIC, Food Stamps, Medicaid, SNAP, or equivalent, or fall below 80% the Median Family Income of Austin, which is the same process used by the City of Austin's Housing and Community Development department when qualifying Austin residents for housing assistance. All income and eligibility information was self-reported by applicants on our online application or when applying over the phone. Disability information and employment status were also taken as indicators of need. A follow up call was made to the homeowner to verify their reporting. Candidates that were ineligible for various reasons were contacted via phone and offered a list of arborist companies qualified to work with Remove and

Replace to take care of their tree needs. 3 out of the 13 residents served did not meet the program parameters of being the owner of the home when the addresses were cross checked with TCAD. This backup data could potentially be skewed because several elderly residents were unable to fill out their own application and instead their children or individuals with power of attorney filled out the application for them. All participants indicated that they owned their own home on the application and in phone interviews. No landlords called to indicate that a tree was removed without permission. Screening during the pilot year occurred through self-reporting without third party verification, which will be changed during the second year.

#### Debris Removal

The original proposal assumed cooperation with Austin Resource Recovery (ARR) in debris removal, but ARR has let us know they are currently unable to help with debris removal. ARR offered to pick up debris from jobs for \$100 per job if debris was bundled and left on the curb or suggested that we use the biannual yard waste pick up service; these scenarios are unworkable given the scale of debris that needs to be removed. Tree care companies have agreed to pick up debris for the time being to help with this issue, which represent significant cost and time.

In order to make tree removal more affordable and increase arborist participation, we have enlisted the help of Texas Urban Sawmill to remove some debris. Texas Urban Sawmill has agreed to remove as many trees as they are able from the front yards of homes. So far they have removed a single trunk for Remove and Replace, but the associated arborist firm let us know that they appreciated it and that Texas Urban Sawmill was professional in the completion of the job.

#### Higher Tree Removal Costs

The original proposal assumed tree care companies would be able to remove trees for \$500-\$1,000, based on casual consultations with private firms. However, costs for tree removals turned out to be higher than anticipated. Even with the discounts provided by arborists, tree removals amount to costs over \$1,000 per tree on average and up to \$3,100 for larger, more hazardous trees. Remove and Replace developed a tiered pricing solution that will be amenable to arborists, increase participation, and allow us to remove as many trees as possible in a year (see Appendix A1 for cost analysis).

#### Arborist firm participation levels

Due to restrictions in the original proposal, specifically worker's comp, our list of qualifying arborists was not very large to begin with. As such, our list of qualifying arborists interested in participating in this project was even smaller. This led to Remove and Replace relying initially on two arborist companies for the vast majority of jobs. While these two arborists companies have taken on many of our clients, they are unable to take only Remove and Replace clients as they rely on full paying customers to keep prices low for us. This led to a backlog of Remove and Replace requests than cannot be accepted until arborist schedules permit. After hearing from arborist firms, it is our assessment that participation will increase under the following conditions:

- removing the worker's comp requirement
- adjusted, tiered pricing system

#### **Emergency Tree Removal**

Some trees are serious emergencies, such as the first applicant's tree. In cases where it may pose serious danger to everyone involved to wait for a 3<sup>rd</sup> party verification, we have waived that requirement. We have also added a disclaimer on our website to let applicants know that we may be unable to help with emergency situations in the time needed, offering a list of insured, certified arborist companies that can assist with the emergency removal without our financial assistance to anyone requesting it.

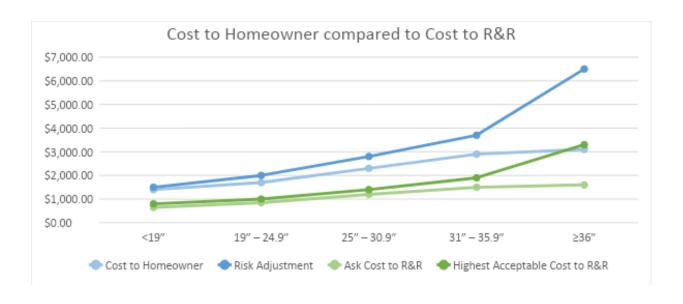
## Proposal for Program Development

Our assessment is that at-cost tree removals are likely to cost approximately \$1,321 per tree (at-cost rate), and that we will be able to request a 30-50% match from participating arborist firms.

Remove and Replace has created a tiered pricing system from the data collected in our pilot program. Through this pricing system, we are asking for a 50% in-kind donation from arborist firms in order to keep the program sustainable. We have established a risk adjustment margin to show the highest acceptable costs for tree removals of different size classes if they are classified as high risk by the arborist. We have had positive responses from arborists to this proposal so far and anticipate being able to find a mutually agreeable solution with all participating arborist firms. Establishing this new tiered pricing system will allow us to serve additional Austin area residents.

Estimated Costs by DBH, Requested Donations, and Asking price (A1)

DBH (inch)	Full Price Cost to Homeowner	Risk adjustment (X% of ↑DB	Н	Requeste d in-kind donation	Ask price for Remove and Replace	Highest price for Remove
		cost)				and Replace
<19"	\$1,400.00	<b>10%</b> \$1,500.00	to	50%	\$650.00	\$800.00
19" – 24.9"	\$1,700.00	<b>15%</b> \$2,000.00	to	50%	\$850.00	\$1000.00
25" – 30.9"	\$2,300.00	<b>20%</b> \$2,800.00	to	50%	\$1,200.00	\$1,400.0 0
31" – 35.9"	\$2,900.00	<b>25%</b> \$3,700.00	to	50%	\$1,500.00	\$1,900.0 0
≥36"	\$3,100-5,000.00	<b>30%</b> \$6,500.00	to	50%	\$1,600- 2,500.00	\$3,300.0 0



# Appendices Contents

A1. Remove and Replace Cost Analysis	11
Scope	11
Austin Tree Expert's Cost, Davey Quotes, Heritage Tree Care Estimates	11
All costs (estimated, proposed, and actual) by DBH	12
A2. Remove and Replace Applicant Numbers Overview	13
Scope	13
Interest in Remove and Replace	13
Number of Eligible Remove and Replace Applicants by Zip Code	14
Number of Eligible Remove and Replace Applicants by Council District	14
A3. Pilot Budget	15

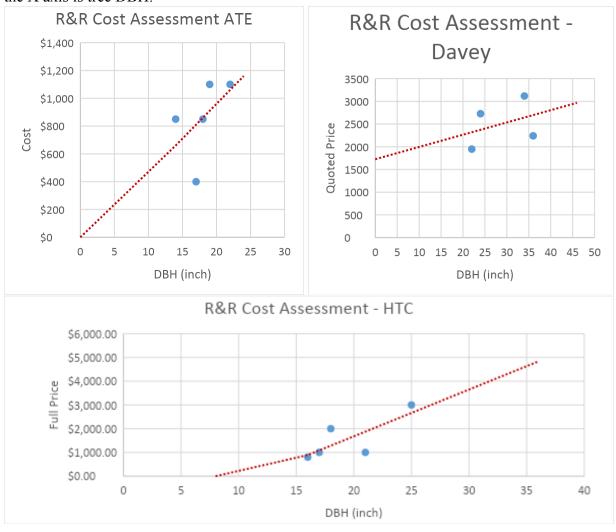
#### A1. Remove and Replace Cost Analysis

#### Scope

This appendix serves as an outline for Remove and Replace cost determination and attempts to forecast seasonal costs associated with tree removal. It is intended to serve as the guiding document for amending the current pricing structure of \$500 for low risk, small trees and \$1,000 high risk, large trees to a more progressive sliding scale based on the data presented below.

## Austin Tree Expert's Cost, Davey Quotes, Heritage Tree Care Estimates

Austin Tree Experts has removed five trees total for Remove and Replace. Austin Tree Experts reliably charges Remove and Replace the least amount of money for tree removals. Davey Tree has quoted four jobs for Remove and Replace. Davey Tree's costs are reliably above what we estimated to be a normal at-cost price for Remove and Replace. Vincent DeBrock of Heritage Tree Care (HTC) and board member of TreeFolks donated his time by estimating cost for removal on several proposed tree removals. Vincent's estimates were more in line with what we expected for tree removals though tended to be higher than anticipated. The Y axis is cost and the X axis is tree DBH.



# All costs (estimated, proposed, and actual) by DBH

We combined all available datapoints to create our pricing equation through fitting a trend line. This equation was applied to our size classes to create our new tiered pricing structure (see below).



# A2. Remove and Replace Applicant Numbers Overview

#### Scope

This appendix serves as an outline for Remove and Replace to assess the level of interest displayed in the program and the eligibility of interested parties. It is intended to show the number of tree removals we are able to perform this year and our resulting waitlist.

#### Interest in Remove and Replace

Of the 38 total contacts that expressed interest, only six were unreachable by Remove and Replace staff for various reasons. This left us 32 reachable, interested parties with which to run our pilot program. Of the 32 reachable, interested parties, 86.8% of applicants were deemed eligible with a potential for 5.3% to be ineligible once arborists have taken a look at their trees. This left us with 26 applicants to serve. Remove and Replace only has two removal requests that are currently unaccepted by arborists with 11 accepted. We have another 13 prequalified removals and four homeowners on our waitlist. We anticipate being able to serve these customers when our funding it renewed.

Interest in Remove and Replace Number of Applicants

Reachable Applicants	32
Unreachable or uninterested	3
Left message for homeowner, no response	3
<b>Total Contacts</b>	38

**Percent of Applicants** 

Economically eligible	97.4%	
Economically and otherwise eligible	86.8%	
(Potentially ineligible trees)	(5.3%)	
Total Eligibility	86.8%-81.5%	

## **Number of Requests**

Removal request not yet accepted by arborists	2
Removal request accepted by arborists	14
Total removal requests sent out to arborists	16
Tree deemed ineligible by arborist	1
All removals 2018 (complete w/ upcoming)	13
Prequalified for removals	13
Waitlist for removals	4

# Number of Eligible Remove and Replace Applicants and Served by Zip Code

The highest number of applicants came from 78745, followed by 78757

Zip Code	Applicants	Served
78745	7	5
78704	2	1
78721	2	1
78757	3	3
78702	1	
78703	1	
78704	1	1
78723	1	
78724	1	
78728	1	
78741	1	1
78744	1	
78748	1	
78749	1	1
78750	1	
78753	1	
Total	26	13

# Number of Eligible Remove and Replace Applicants and Served by Council District

Council districts 2 and 3 saw the most applicants, followed by district 7

Council		Served		
District	Applicants			
District 2	5	5		
District 3	5	3		
District 1	4	1		
District 5	4			
District 7	4	3		
District 6	1			
District 8	1	1		
District 9	1			
No District	1			
Total	26	13		

# A3. Pilot Budget

Item	Cost	DBH (in)	Tree Species
Staff Hours to date (238.63@\$15/hr)	\$3,579.45		
Tree removal 1	\$1,100	22	Ash
Tree removal 2	\$2,250	24	Hackberry
Tree removal 3	\$1,000	19	Chinaberry
Tree removal 4	\$2,400	34	Ash
Tree removal 5	\$2,000	19	Ash
Tree removal 6	\$1,000	22	Sycamore
Tree removal 7	\$360	14	Ash
Tree removal 8,9	\$1,000	8,10	Ash
Tree removal 10,11	\$1,000	18,14	Hackberry
Tree removal 12,13,14	\$2,000	17,20,21	Sycamore
Tree removal 15	\$495	12	Mulberry
Tree removal 16	\$1,500	22	Ash
Tree removal 17	\$1,500	24	Tallow
Total Cost	\$21,184.45		
Total Funded by UFGP	\$21,250		
TreeFolks Match (Staff Time)	\$4,060		
Arborist Match	\$15,080		
Heritage Tree Care Match (Program Development)	\$225		
Subtotal (All Match)	\$19,365		
Total Programmatic Value	\$40,549.45		