



PLA. perkins landscape architecture, llc
landscape planning + design + urban forestry
www.pla-design.com | Lexington | 859.420.1158



L A N D S C A P E P L A N N I N G + D E S I G N + U R B A N F O R E S T R Y



It's *my* tree why do I need you?

When Landscape Architect - Arborists Can Help



- Tree Inventories & Comprehensive Assessments
 - Assessing health of new and/or existing trees
 - Hazardous? Healthy? Are there "targets"?
- Tree Planting Master Planning and Design
 - Determining locations of new trees – *macro-level*
 - Street tree master planning – per Ordinance, covenants, etc.
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Tree Inventories and Assessments

Inventories are Performed to Quantify:

- Amount of trees
- Species variation
- Locations of trees on a given site
- Missing trees – If a previous plan has been followed or provided
- Plant material health/conditions – structure, roots, diseases, location constraints
- Soil conditions – pH, organics, soil structure (sand, silt, clay), CEC, etc.

Assessments are Performed to:

- Place qualitative data on trees
- Make recommendations based on health, location, species, characteristics
- "Risk Assessments" identify issues as related to liabilities – Failure potential, hazards, targets, etc.
- Put together overall "Big Picture" for landscape



TREE RISK ASSESSMENT: Identifying, evaluating, and managing tree risk is important for ensuring safety and sustaining the benefits of trees.



Tree Inventories and Assessments



Evaluating Total Tree Health/Constraints



Assessing Flaws/Potential Failures



Measurements



Tree Inventories and Assessments

1306.1.6

Project LFUCG Division of Water Quality - Non-Paved Landscape
Created 2013-08-22 11:28:29 EDT by Jonathan Perkins, PERKINS LANDSCAPE ARCHITECTURE, LLC
Updated 2013-08-22 15:29:33 EDT by Jonathan Perkins, PERKINS LANDSCAPE ARCHITECTURE, LLC

Location 37.979944, -84.458019

Project Completion Status ■ In Progress

PLA Project Number: 1306.1.6

Site Location/Address: 1360 Grafton Dr
Lexington-Fayette, Kentucky 40515

Work-up Date: 2013-08-22

Field Inventory:

Plant I.D. Number: 1306.1.6-1

Plant Species Type: Oak, Pin

Tree Size (DBH) - Inches: 5.5"

Site Soil Condition Urban Soil - mid 1970's subdivision

Health/Safety/Pathogens

Plant Health/Condition: Excellent-Thriving

Root Condition: Expected Damage by New Construction

Percent Canopy Damage/Loss: N/A

Pathology: Insects: Gall

Hazardous: No: Removal Optional

Location of Tree Back Yard

Sidewalk Damage None

Reason for Plant Review: Request by Municipality

Require Additional Site Visit/Review: No

Additional Notes: LA and Arborist on-site to evaluate

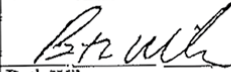
Photo



Individual Tree Reports



Tree Inventories and Assessments

From: Pulaski County Extension Office P.O. Box 720 Somerset, KY 42502-0720		UK COOPERATIVE EXTENSION SERVICE University of Kentucky – College of Agriculture		Soil Test Report Lexington 859-257-2785 Princeton 270-388-7641 www.es.uky.edu/soils					
COUNTY SAMPLE NO.: 0985 REPORT FORM: H		To: Miracle Lawn, 105 North Highway 2227 Somerset, KY 42501		 Beth Wilson (606)-679-6361 County Extension Agent for Horticulture					
Date	Owner Sample ID	Owner ID	County Code	UK Lab NO.					
11/17/2014	Ky. National Guard	50	199	31642					
Nutrient	Lab Results	Level of Adequacy					Calculated CEC Data Soil pH is too high to calculate CEC. Calcium carbonate at high pH causes errors in the calculation.		
Phosphorus (P)	19	Very Low	Low	Medium	High	Very High			
Potassium (K)	200								
Soil pH	7.6								
Buffer pH	7.4								
Calcium (Ca)	13516								
Magnesium (Mg)	354								
Zinc (Zn)	41.1								
Other Test		Plants to be Grown		Location (turf grass only)		New or Maintenance		Sunny or Shade	
		Fescue		Home Lawn		New Planting or Seeding		Mostly Sunny Location	
RECOMMENDATIONS:		Nitrogen		Phosphate (P2O5)		Potash (K2O)		Lime	
		45-55 lbs per A		130-215 lbs per A		45-85 lbs per A		None	

pH is very high. Target pH is 6.5. On large acreages, the best way to bring the pH down over time is by regular fertilization. **NO LIME** for at least 5 years and only then with a soil test.

P is low and K is medium. Apply 19-19-19 at a rate of 230-340# per A in the fall (September - December). You may repeat this application one or 2 extra times as long as the applications are made about a month apart.

COMMENTS:
 Mehlich II used for P, K, Ca, Mg, and Zn (lbs/acre). Crop response is highly probable with Very Low or Low soil levels, slight with Medium, and not likely with High or Very High. N, P2O5, K2O, Mg, and Zn recommendations are based on lbs of the nutrient. Fertilizer needed will depend on nutrient content in the fertilizer. Soil pH is calculated from 1 M KCl soil pH using: $0.91 \times 1 M KCl \text{ soil pH} + 1.34$. 1 M KCl soil pH and Sikora II buffer pH are used for determining lime needs based on 100% effective lime. Lime quality in KY is defined by relative neutralizing value (RNV). RNVs for ag lime are determined by the KY Dept of Ag and are on the internet (publications at soils.es.uky.edu).

Soils Reporting



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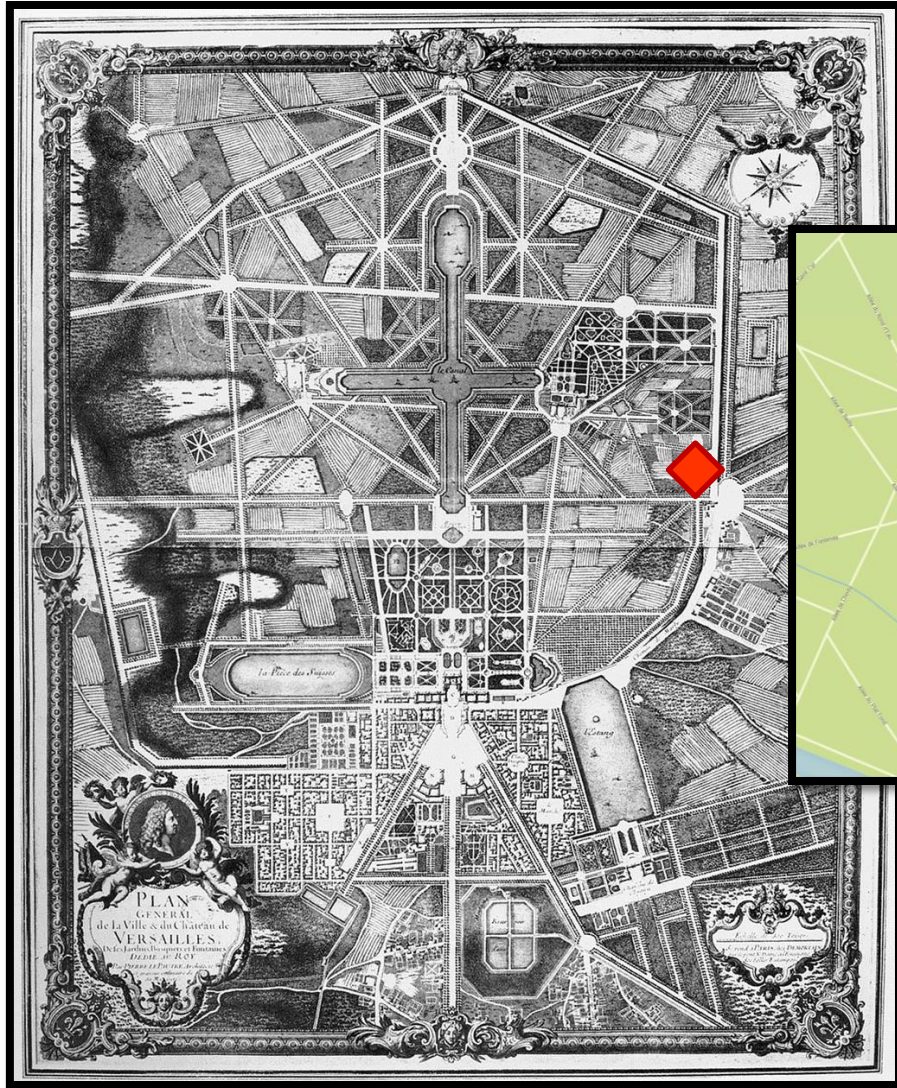
Tree Planting Master Planning & Design

Reasons Supporting Tree Planting Master Planning:

- Gives an overall plan for an area to be developed and/or implemented over time – *macro-level*
 - Where do new trees or stands of trees go?
 - Public or private lands consideration
- Takes future construction and development into account
- Soils, water bodies, structures, solar orientation
- Legal requirements – Street trees and development plans
 - Trees required or forbidden
 - Sizes permitted
 - "*Right Tree for the Right Place*"
- Evaluates findings of inventories and analyses
 - Considers existing and new trees
 - Considers site conditions – water, sun, soil
- Incorporates findings into long-term “living” and adapted plans

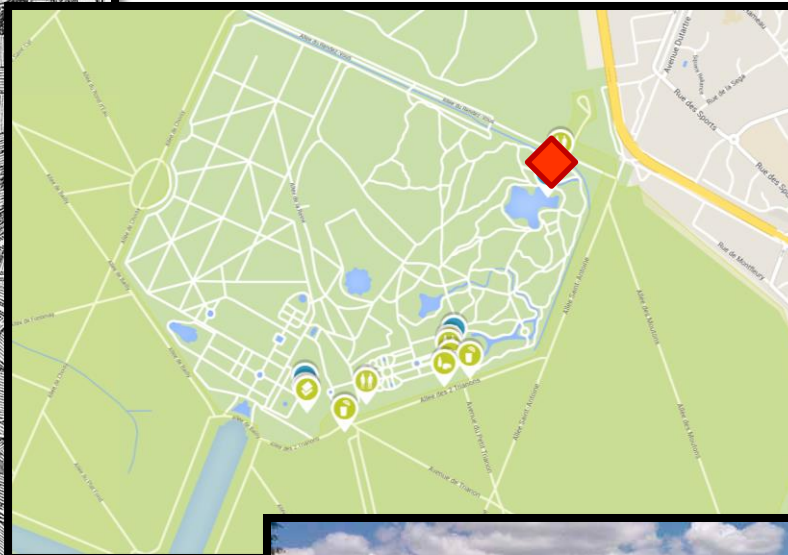


Tree Planting Master Planning & Design



Overall Master Plan:

- Conveys “*Big Picture*” ideas
- Doesn’t give specific details



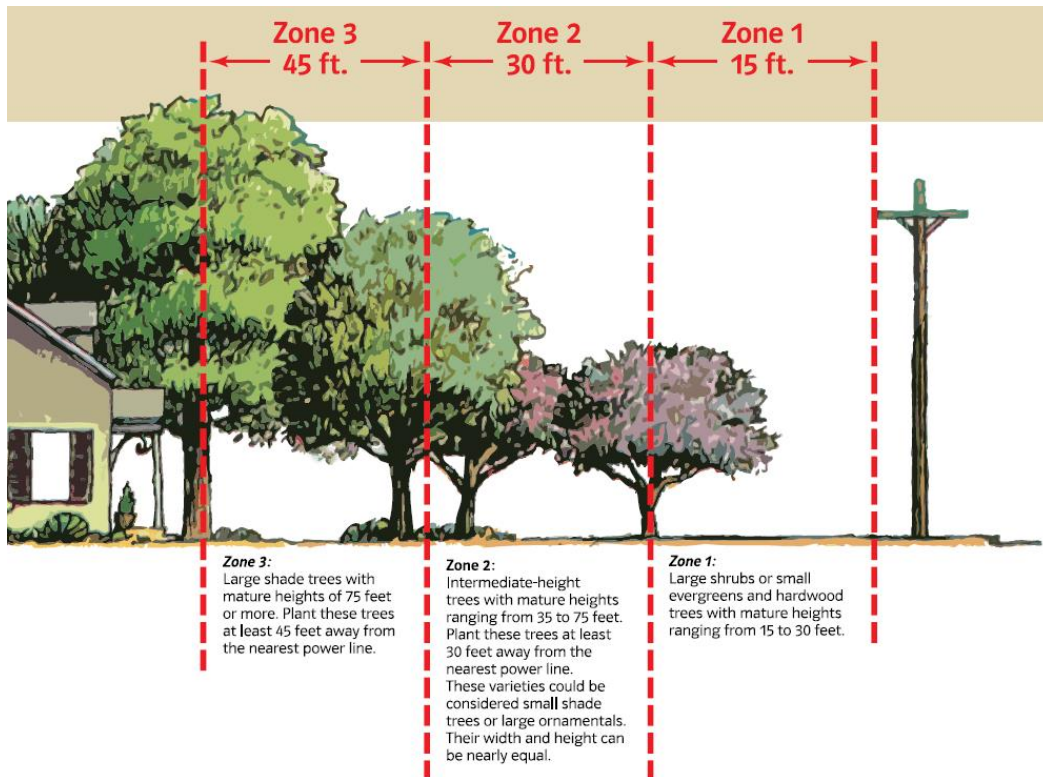
Master Plan to Site Design:

Large general concepts broken into small highly specific constructible plans

- Sizes
- Species
- Elevations
- Etc.



Tree Planting Master Planning & Design



“Right Tree in the Right Place”

(Courtesy of LGE/KU)



Wellington Place Condos



Avoidable Scenarios



It's *my* tree why do I need you?

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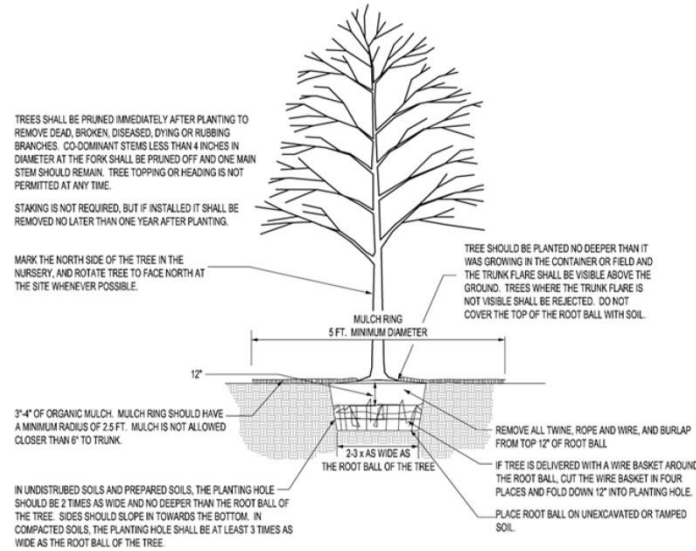
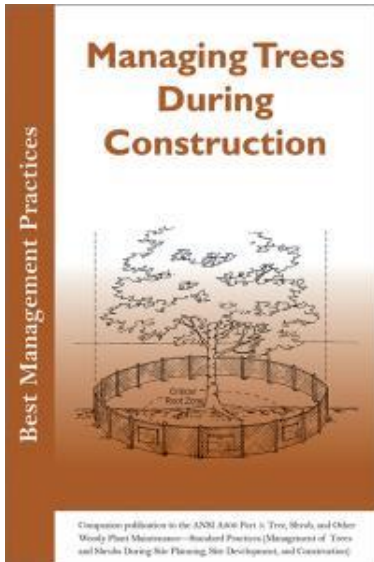


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Construction Mitigation & Tree Protection Planning

Preserving and Protecting Trees Before, During and After Construction



SOIL PREPARATION NOTES

1. SOIL WITHIN THE OPEN SOIL SURFACE AREA SHALL BE WELL AERATED TO A DEPTH OF EIGHT INCHES, EXCEPT THAT IN TREE PLANTING ISLANDS SURROUNDED BY PAVEMENT, IT SHALL BE WELL AERATED TO A DEPTH OF 18 INCHES.
2. THE SOIL SHALL CONTAIN AT LEAST 5% ORGANIC MATTER.
3. SOIL pH SHALL BE WITHIN THE RANGE OF 5.8 TO 7.0.



Tree Protection Strategies/Methodologies

Best Management Practices



Appropriate Construction/Installation
Detailing



Industry Standards are the go-to



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Tree Maintenance Recommendations/Plans

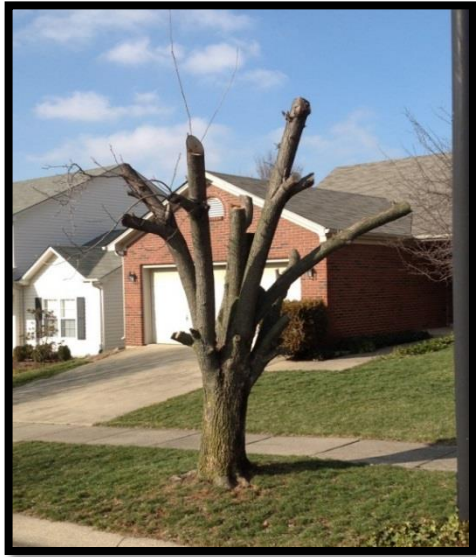
Preserving and Protecting Trees Before, During and After Construction

PLA is able to Provide Recommendations to:

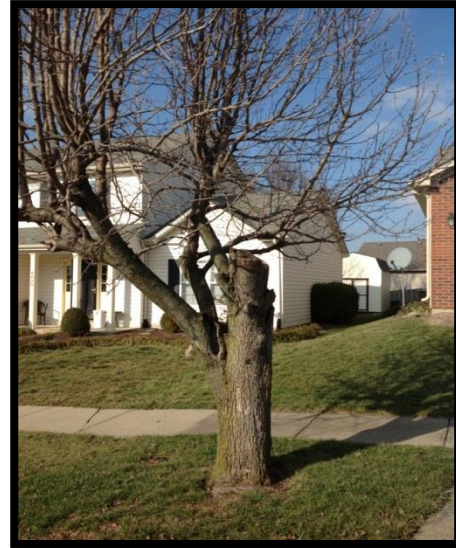
- Help insure extended life and good health
- Help take some of the guessing out of maintenance
 - No two Trees or plants are the same
- Make recommendations to Owner of reputable landscape maintenance companies and what they should look for when selecting a company:
 - Do they have certified professionals on staff? [Ethical standards] Legally required licenses (Commercial Applicator license, etc.)
 - Will they follow ANSI standards? Agree to?
 - Who will perform the work?
 - Will they wear ANSI & OSHA required PPE?
 - What are other examples of work done by them
 - Do they have training? – Proper mulching, pruning, fertilization
 - Will they “top” your trees, hedge all shrubs, use correct mulches, select proper plants for the site?



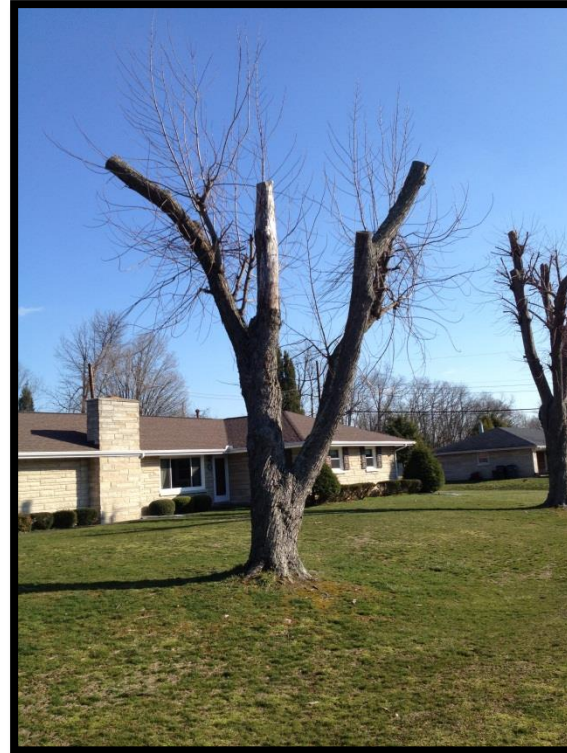
Palomar Hills



Palomar Hills



Palomar Hills



My Neighborhood – Open Gates

Caring for the Tree...

Pruning & Maintenance

TOPPING IS BAD!!!



New Tree Selection Services

At the Nursery or Garden Center Reseller

PLA is able to select desirable plant materials:

- The ability to identify healthy nursery stock
- Identify major rooting issues or root ball issues
 - B&B plants
 - Container plants
- Identification of good plant structure
 - Narrowly crotched trees/branch unions
 - Included bark
 - Co-dominant leaders
- Identify poorly grown plant material
 - Showing effects of tight liner growth in nursery or failure to thrive
- Select proper material per project specifications and details
 - Size matters – you pay for size and correct species
 - Verify everything before it goes into the ground



New Tree Selection Services

Healthy vs. Non-healthy Plant Material – Ex. Root bound plants



Ex. Boxwood Blight



Poor Root Health - Ex. Encircling/ Girdling Roots



Ex. Deep root flare – Compacted & Dry Soil
(Photo taken in Lexington, Kentucky)

Poor Tree Structure – Tight-croched Trees & Included bark



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Determining Value of Existing Trees

Trunk Formula Method

Guide for Plant Appraisal, 9th Edition

Case# 1305.1.7 Property 380 Bob O Link, Lexington, KY Date 9/9/2014

Appraiser Jonathan E. Perkins, ASLA, PLA Certified Arborist KY-0768A

Field Observations

1. Species Acer rubrum (cv.)
2. Condition 90 %
3. Trunk Circumference 1.75 in./cm Diameter 7 in./cm
4. Location % = [Site 90 % + Contribution 70 % + Placement 80 %] / 3 = 80.0 %

Regional Plant Appraisal Committee and/or Appraisal-Developed or -Modified Information

5. Species rating 90 %
6. Replacement Tree Size (diameter) 2.0 in./cm.
(Trunk Area) 3.0 in²/cm² TA_R
7. Replacement Tree Cost \$230.00
(see Regional Information to use Cost selected)
8. Installation Cost \$135.00
9. Installed Tree Cost (#7 + #8) \$365.00
10. Unit Tree Cost \$48.0 per in²/cm²
(see Regional Information to use Cost selected)

Calculations by Appraiser using Field and Regional information

11. Appraised Trunk Area:
(TA_A or ATA_A; use Tables 4.4-4.7)
or c² (#3) 49 x 0.08
or d² (#3) 49 x 0.785 } = 38.47 in²/cm²
12. Appraised Tree Trunk Increase (TA_{INCR}) =
TA_A or ATA_A 38.47 in²/cm² (#11) - TA_R 3.0 in²/cm² (#6) = 35.47 in²/cm²
13. Basic Tree Cost = TA_{INCR} (#12) 35.47 in²/cm² x Unit Tree Cost (#10) \$ 48.0 per in²/cm² +
Installed Tree Cost (#9) \$ 365.00 = \$ 2067.56
14. Appraised Value = Basic Tree Cost (#13) \$ 2067.56 x Species rating (#5) 90.00 %
x Condition (#2) 90.0 % x Location (#4) 80.0 % = \$ 1339.78
15. If the Appraised Value is \$5,000 or more, round it to the nearest \$100; if it
is less, round to the nearest \$10.
16. Appraised Value = (#14) \$ 1340.00

Items 5 through 10 are determined by the Regional Plant Appraisal Committee. The Wholesale Replacement Tree Cost, the Retail Replacement Tree Cost, or the Installed Tree Cost (#9) divided by the Replacement Tree Size (#6) can be used for the Unit Tree Cost (#10), or it can be set by the Regional Plant Appraisal Committee.

1/2/2013

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Tree Appraisals



Determining Value of Existing Trees

LFUCG Non-Paved Landscape Site Restoration

Estimated Replacement Cost

1600 Harrodsburg Road

Prepared by: Perkins Landscape Architecture, LLC

28 May 2013

PLA Proj. No.: 1305.1.2

ARV = Appraised Replacement Value

CSI Master Spec	Item -	Unit	Unit \$	Total Units	Total \$
Turf and Plant Material					
328113	Place 12" Prepared Planting Mix in Beds & Finish Grade (Machine)	CY	\$62.00	2.0	\$124
328113	Mulching 3" Hand spread (Aged Hardwood)	SY	\$30.00	2.0	\$60
Shrub Plantings					
329333	Burning Bush (Euonymus alatus) (No. 5 Cont.)	Ea	\$48.00	15.0	\$720
Deciduous Trees					
329343.30	ARV - White Ash - Fraxinus americana (26.75" Dia.)	Per Tree	\$624.10	1.0	\$624
	ARV - Common Hackberry - Celtis occidentalis (13.5" + 16.25" Dia.)	Per Tree	\$429.26	1.0	\$429
	ARV - Red Maple - Acer rubrum (4.75" Dia.)	Per Tree	\$402.32	1.0	\$402
	Misc items @ 5%				\$117
	Total -				\$2,457
Total Site Replacement:					\$2,457

Notes:

This document is an estimated Schedule of Values for installation/replacement of non-paved landscape materials. This estimate of probable replacement cost is based on past experience and represents Perkins Landscape Architecture, LLC's best judgement. Value of Existing trees (over 2.5" in diameter) has been determined by the "Trunk Formula Method" or by an independent professional - a ISA/ASCA Certified Consulting Arborist and will be provided per tree per property.

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CSI Master Spec	Item -	Unit	Unit \$	Total Units	Total \$
Turf and Plant Material					
329113	Place 12" Prepared Planting Mix in Beds & Finish Grade (Machine)	CY	\$52.00	2.0	\$104
329113	Mulching 3" Hand spread (Aged Hardwood)	SY	\$30.00	2.0	\$60
Shrub Plantings					
329333	Burning Bush (Euonymus alatus) (No. 5 Cont.)	Ea	\$48.00	15.0	\$720
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Additional Plant Material Replacement Costs



QUESTIONS???

Feel Free to Download This Presentation or any other in PDF format from my Website at:

<http://www.pla-design.com/downloads.html>

