SAN DIEGO ASLA
AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS

WORKSHOP AGENDA

SUSTAINABLE STRATEGIES

Plant Selection for San Diego's Changing Ecosystems

village nurseries
ROOTED IN QUALITY®

Urban Tree Foundation

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SUSTAINABLE STRATEGIES

Plant Selection for San Diego's Changing Ecosystems

1:30 - 3:00

INTRODUCTION:
MICHELLE LANDIS

HOW TO GROW / SPECIFY HEALTHY TREES:
BRIAN KEMPF – Urban Tree Foundation – Wood Architecture

RELIABLE LOW WATER PLANTS:
SUZIE WIEST - Village Nurseries

REGIONAL PESTS:
NICK BASINSKI– County of SD Agriculture Dept.

DESIGN / CONSTRUCTION TECHNIQUES FOR EXISTING TREES IN NEW LANDSCAPES:
VINCE MIKULANIS– Davey Resource Group – Community Forestry Advisory Board – San Diego Urban Forests Council

3:00-3:30

QUESTIONS AND COMMENTS
Panelists and Audience Discussion

3:30-4:30

NETWORKING & SOCIAL HOUR

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Tree Central Leaders:

Proper nursery practices, specification and correction

Brian Kempf – Urban Tree Foundation, Wood Architecture

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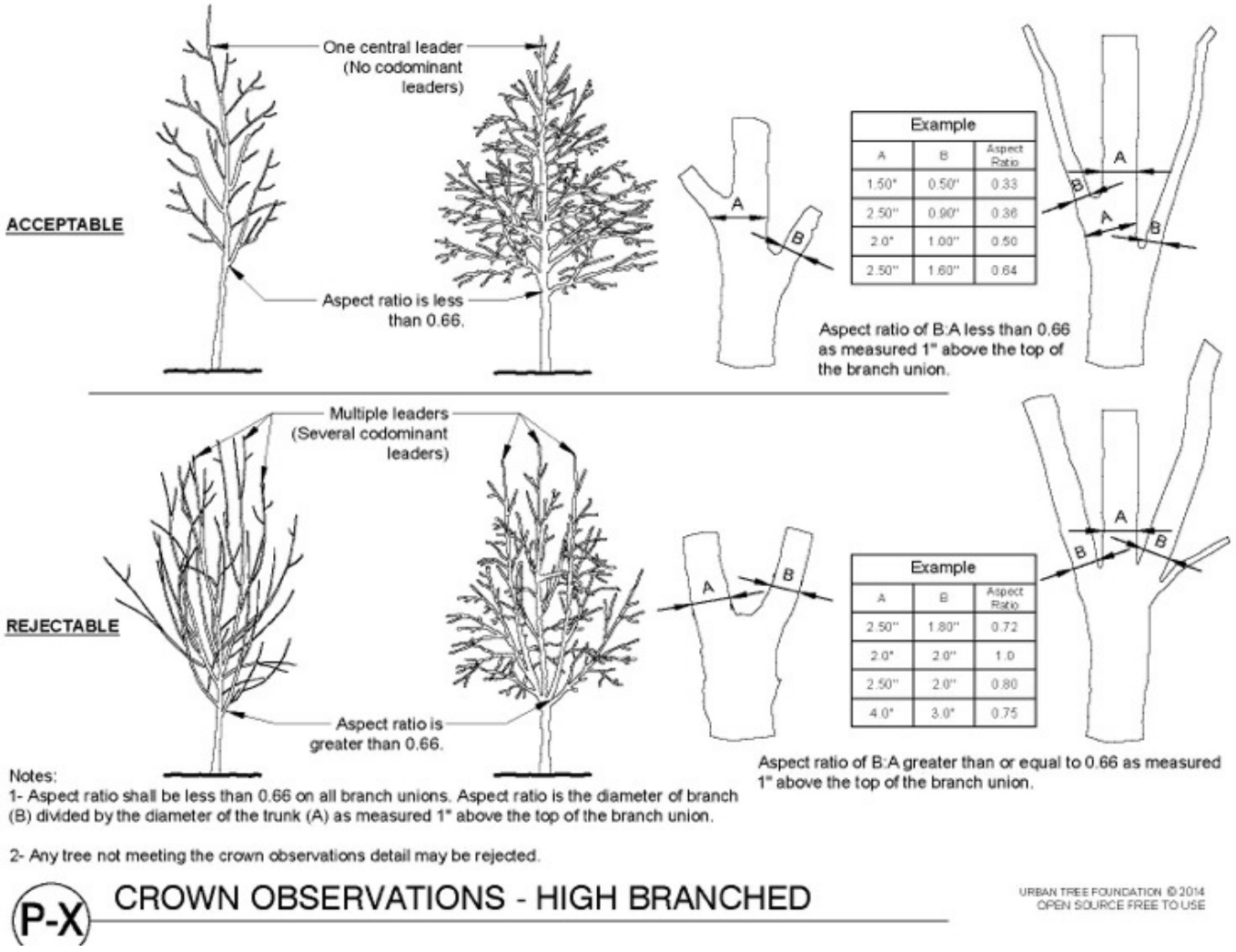


Structural Pruning

A GUIDE FOR THE GREEN INDUSTRY

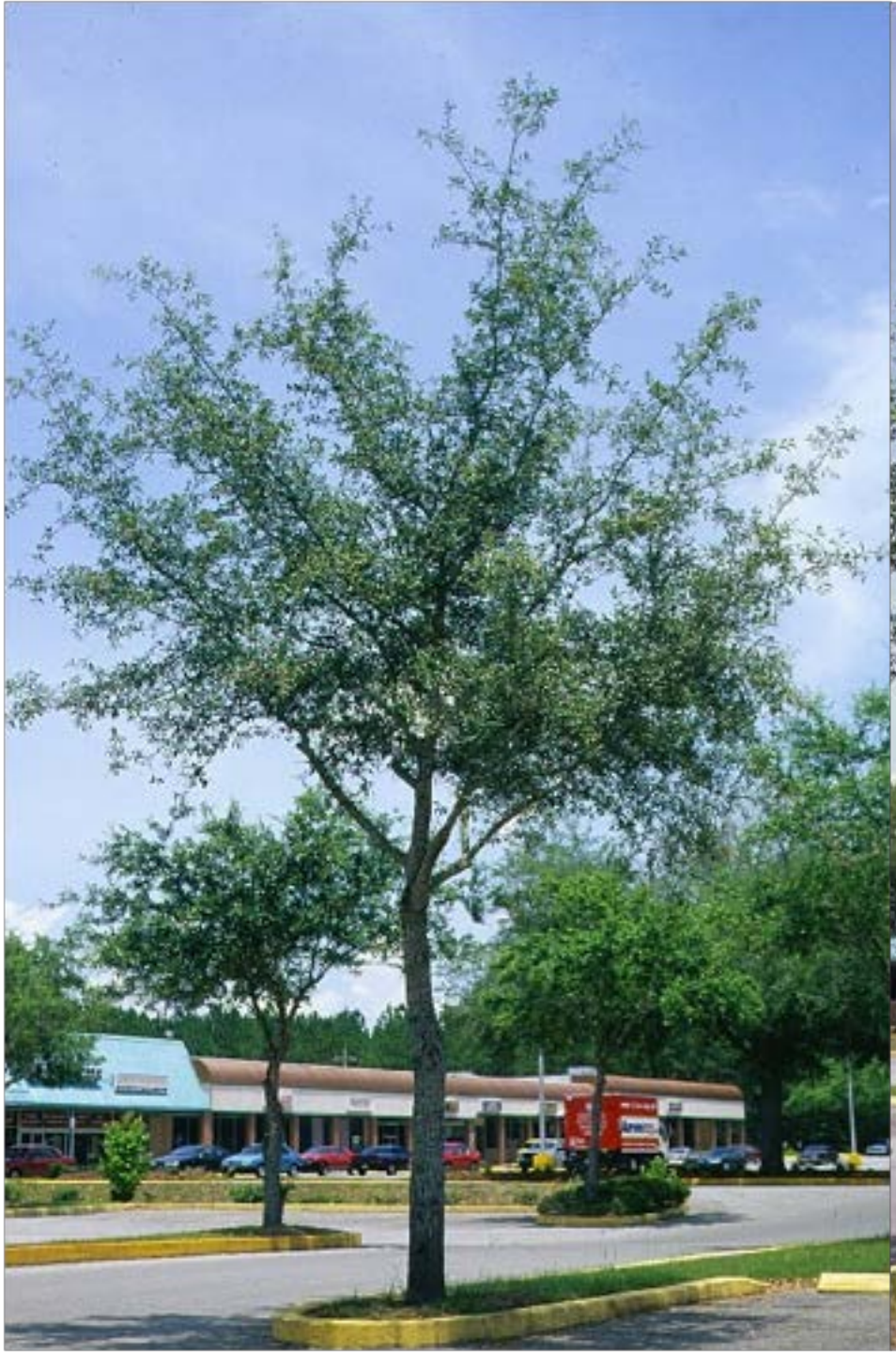
Edward F. Gilman

Brian Kempf

Nelda Matheny

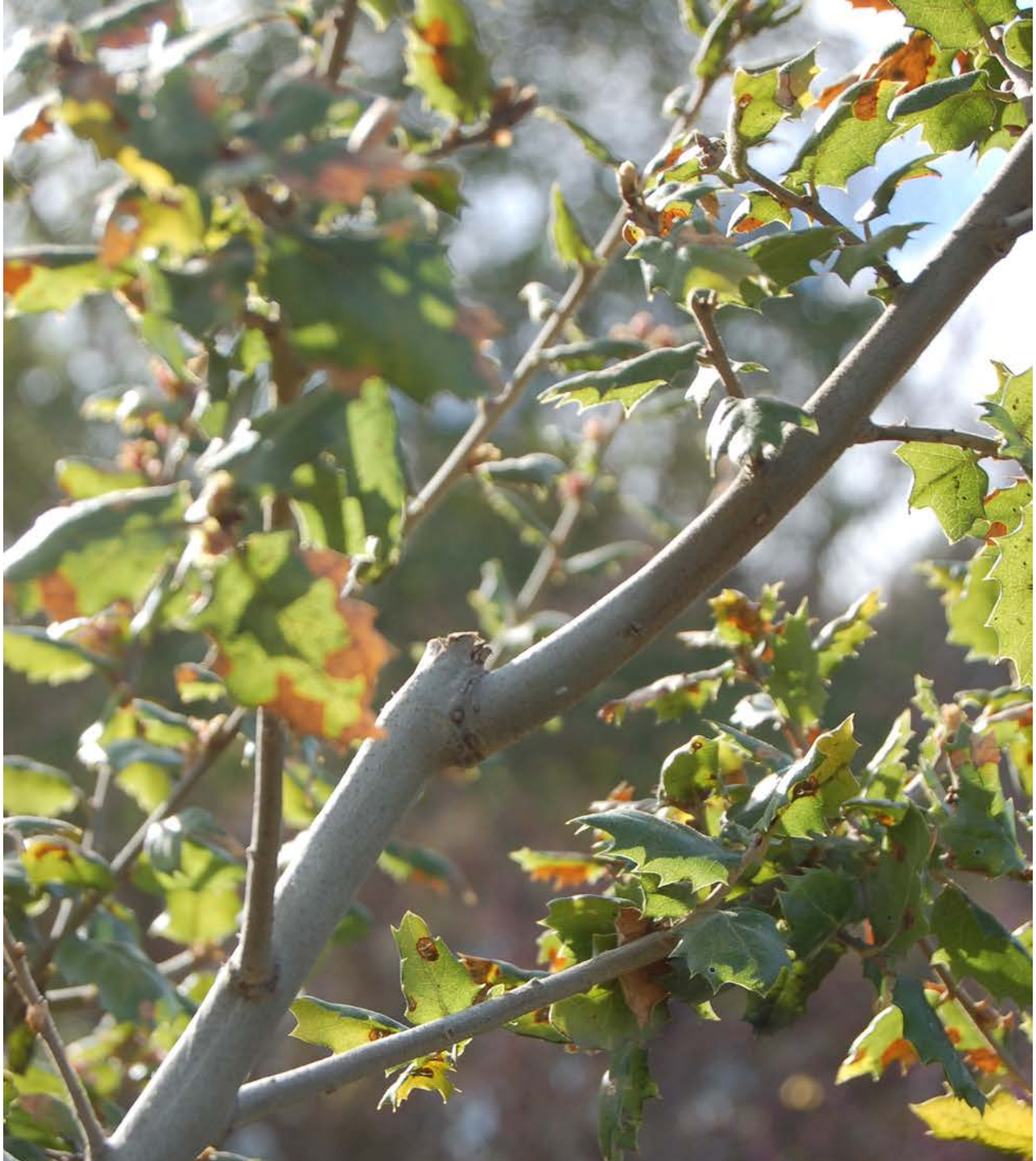
Jim Clark

Urban Tree Foundation




10/3/2012


10/3/2012
3/14/2013



2/27/2014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10/3/2012
2/27/2014


2/27/2014
9/22/2014


Absolute
BAIL
BONDS


BAIL BONDS


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733-2070
WEST


Absolute
BAIL BONDS
733-2070
Absolute
BAIL BONDS
733-2070

Photos Dick Harris


Fashion


Fashion


STOP
VISALIA COMMUNITY BANK


VISALIA COMMUNITY BANK


PLUS


VISALIA


NO
SKATEBOARDING
BICYCLE RIDING
OR SKATING ON
SIDEWALK


VISALIA
COMMUNITY
BANK


Pay
Nothing
for
One Year


Pay
Nothing
for
One Year


Franeys
Design Center
Fine Furniture
Serving The
Community
Since 1955
121 North Encina - Downtown Visalia - 733-9990
Floors - Walls - Window Coverings - Custom Decorating


VISALIA
COMMUNITY
BANK


VISALIA
COMMUNITY
BANK


VISALIA
COMMUNITY
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VISALIA
COMMUNITY
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Valhall



Franey's
FURNITURE


VISALIA
COMMUNITY
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Prizes


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VISALIA
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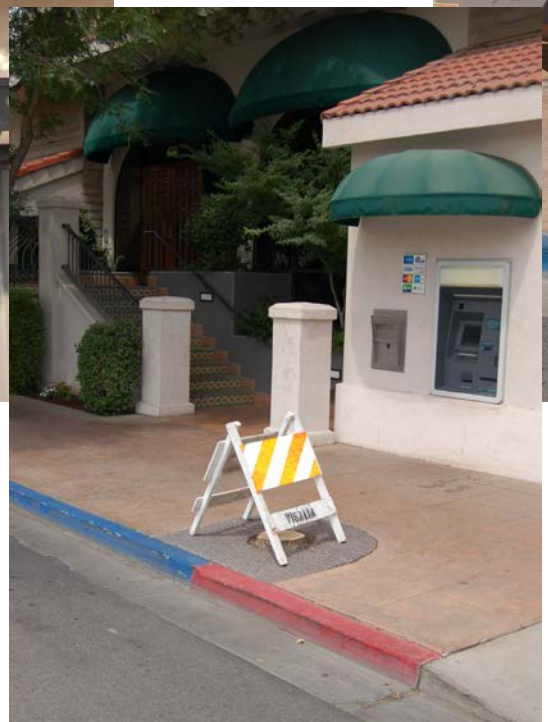


School
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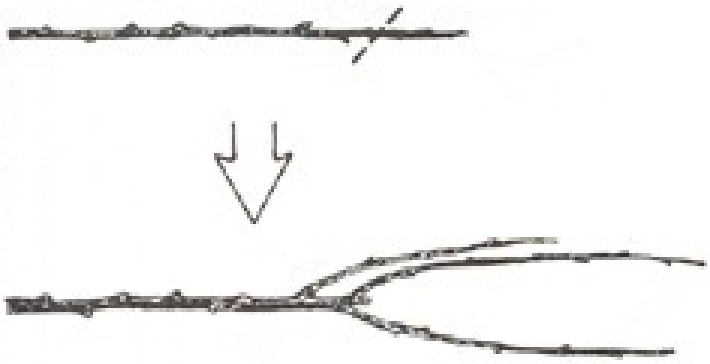
THRIFT STORE
STOP


School

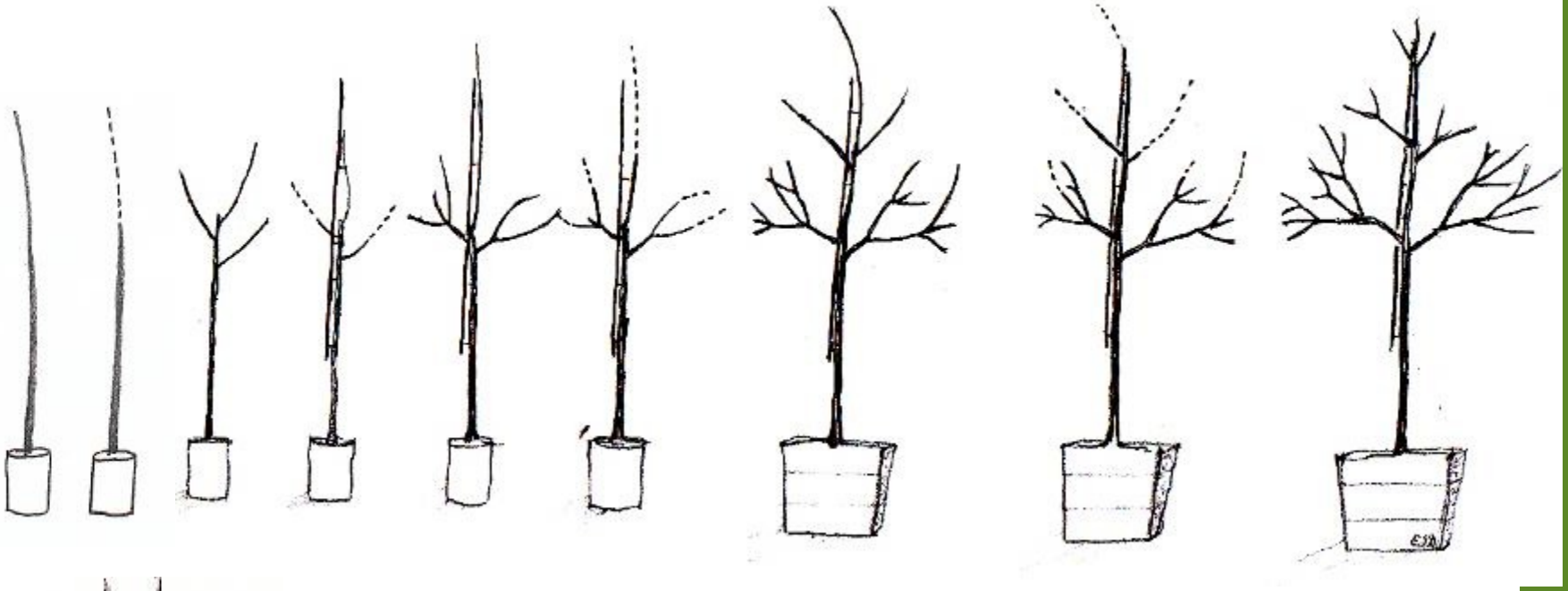


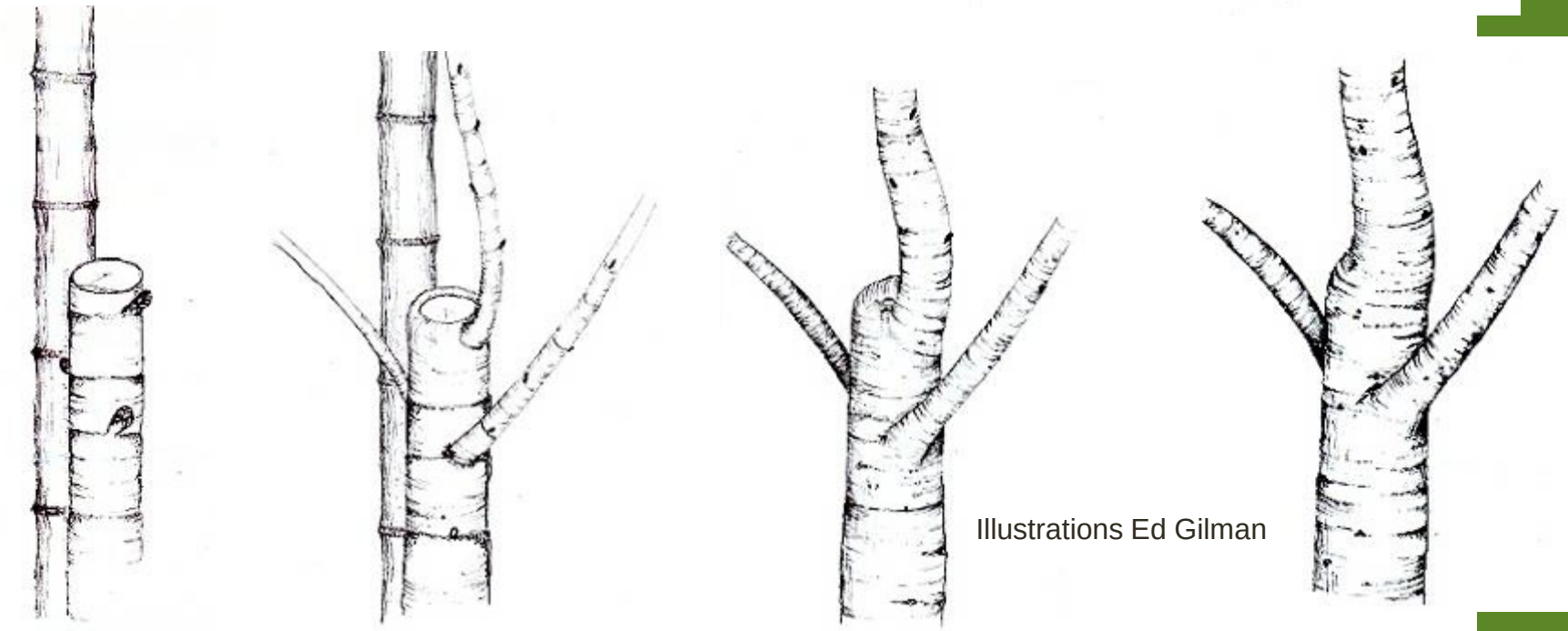

NO
PARKING
MIDNIGHT
8:00 AM


2003 LARGE BUSINESS OF THE YEAR

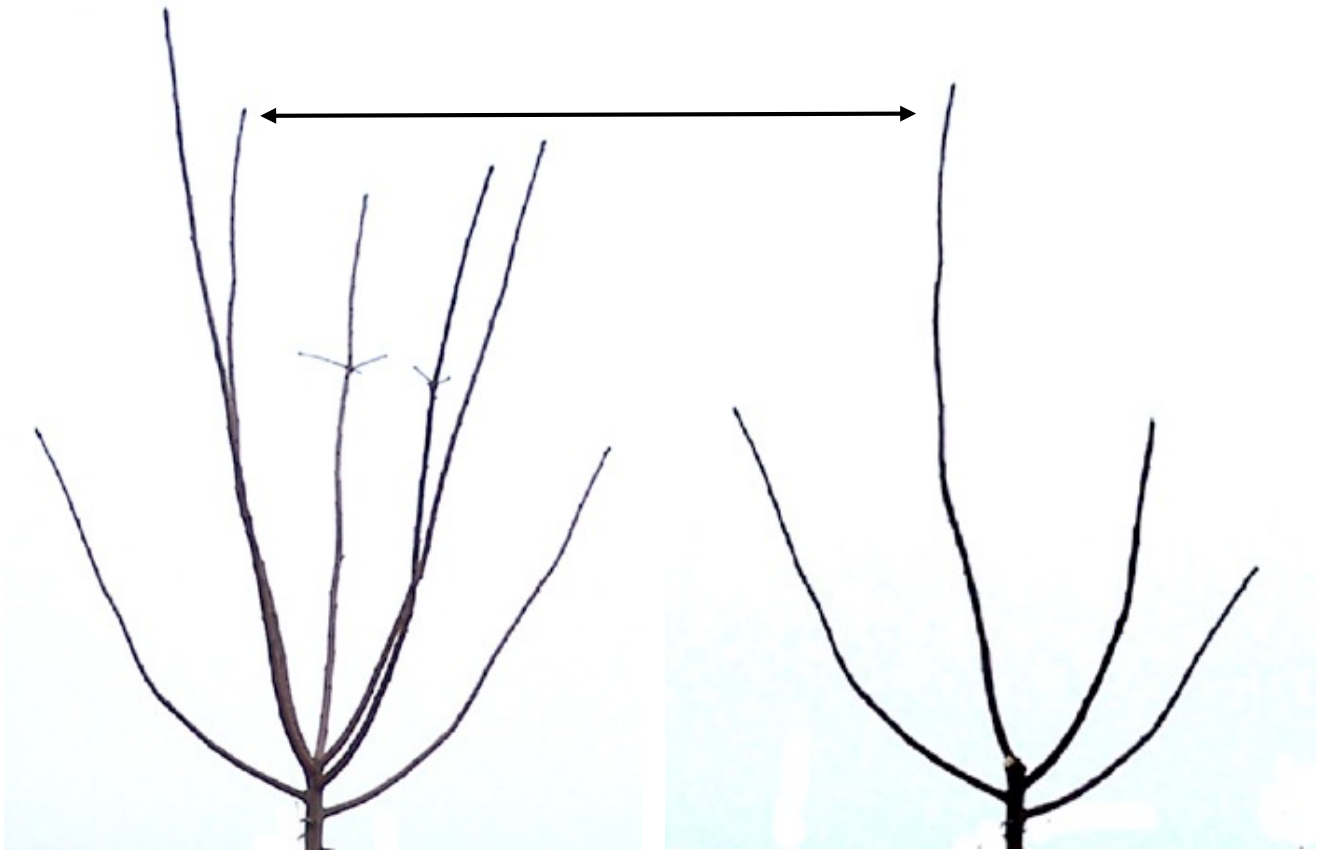

RESERVED


RESERVED

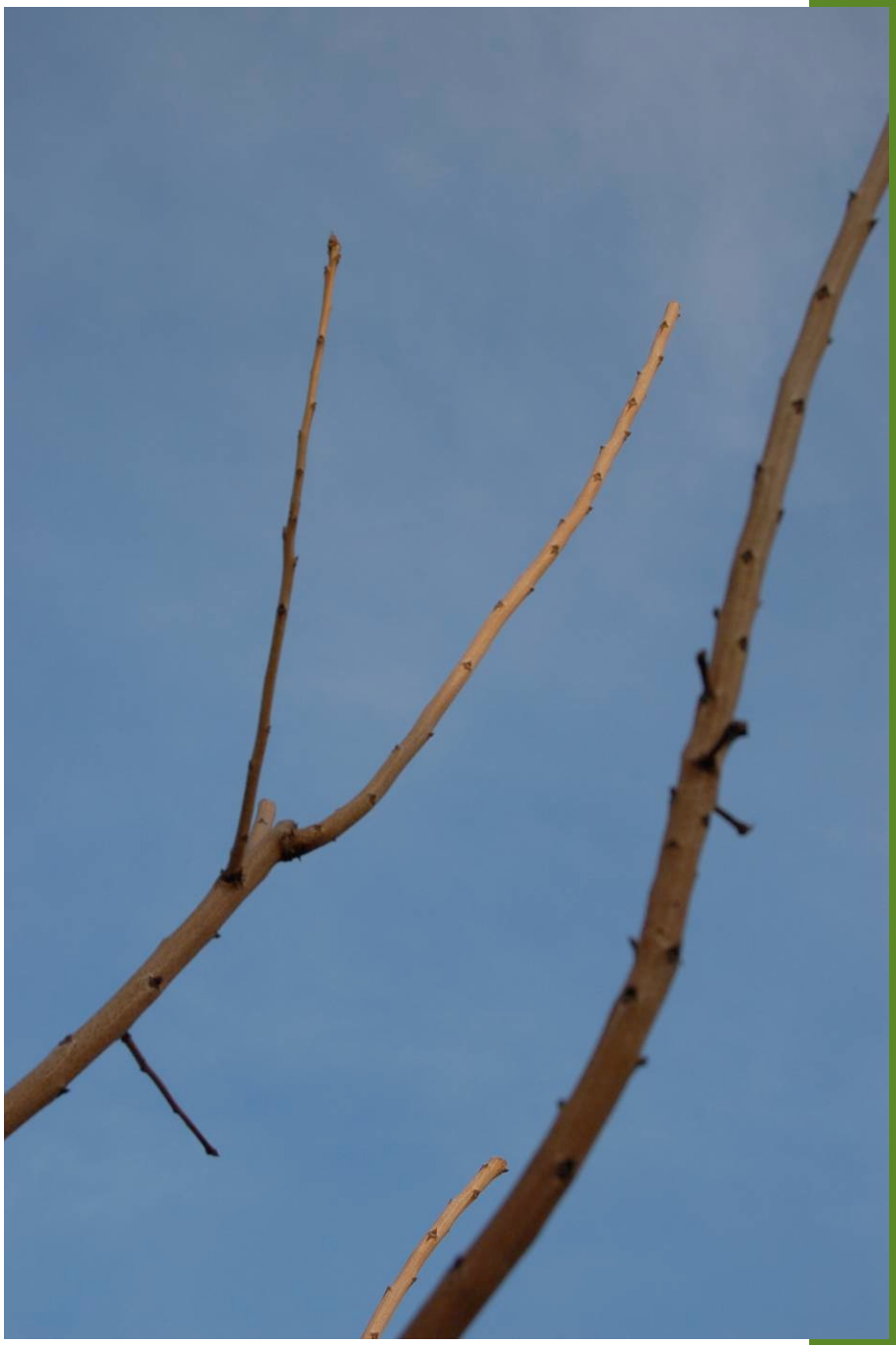




Illustrations Ed Gilman




TOYOTA




TOMMY'S


U.S.A1


7
ALL DAY
PARKING


TOMMY'S


TOMMY'S
TOMMY'S
7
ALL DAY
PARKING
FRANEYS

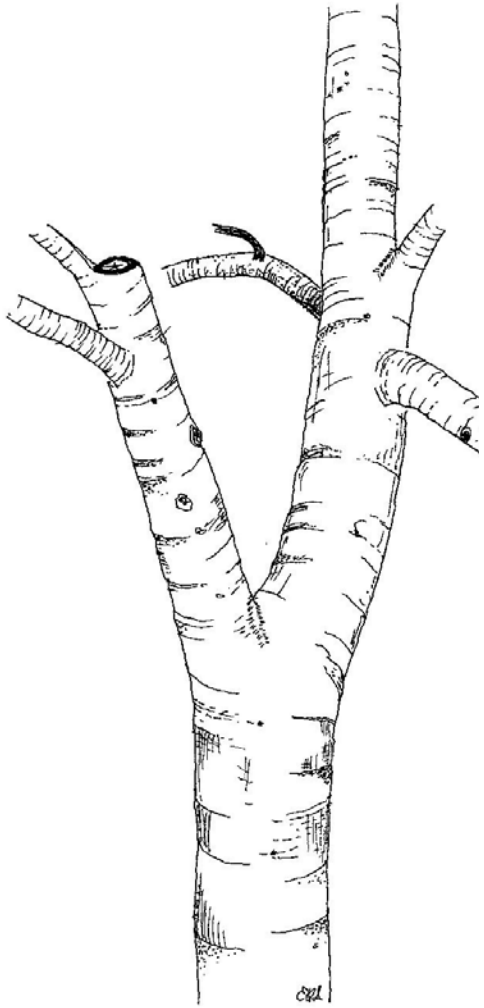

2910

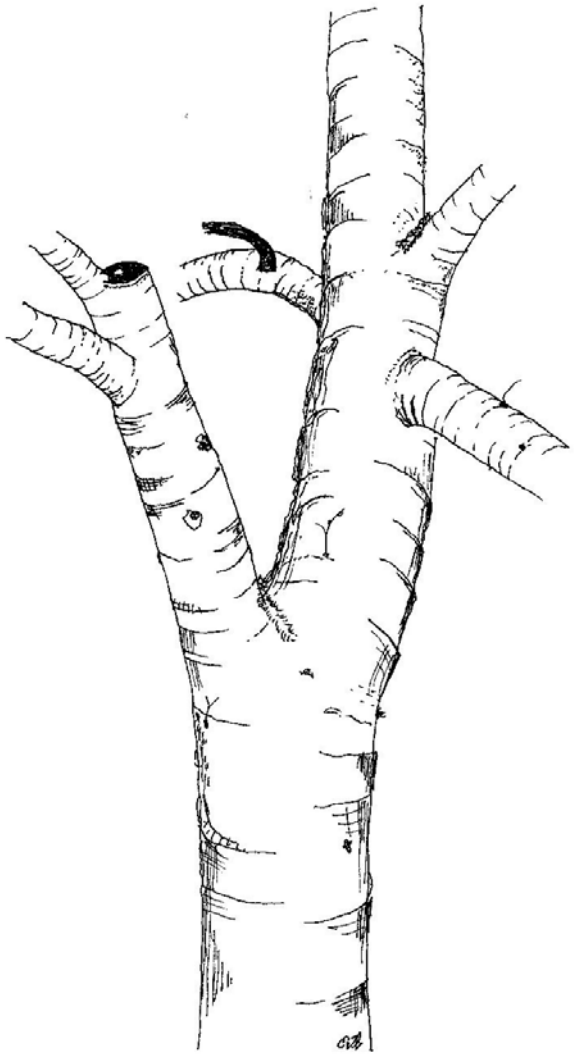

2910
Aquatic Park Center

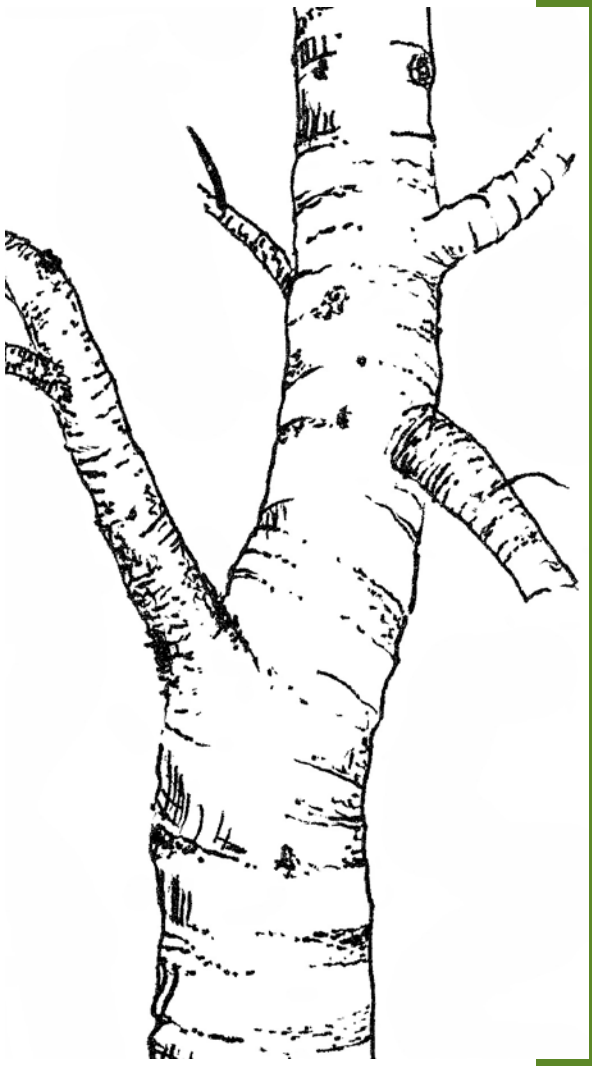
Illustrations Ed Gilman

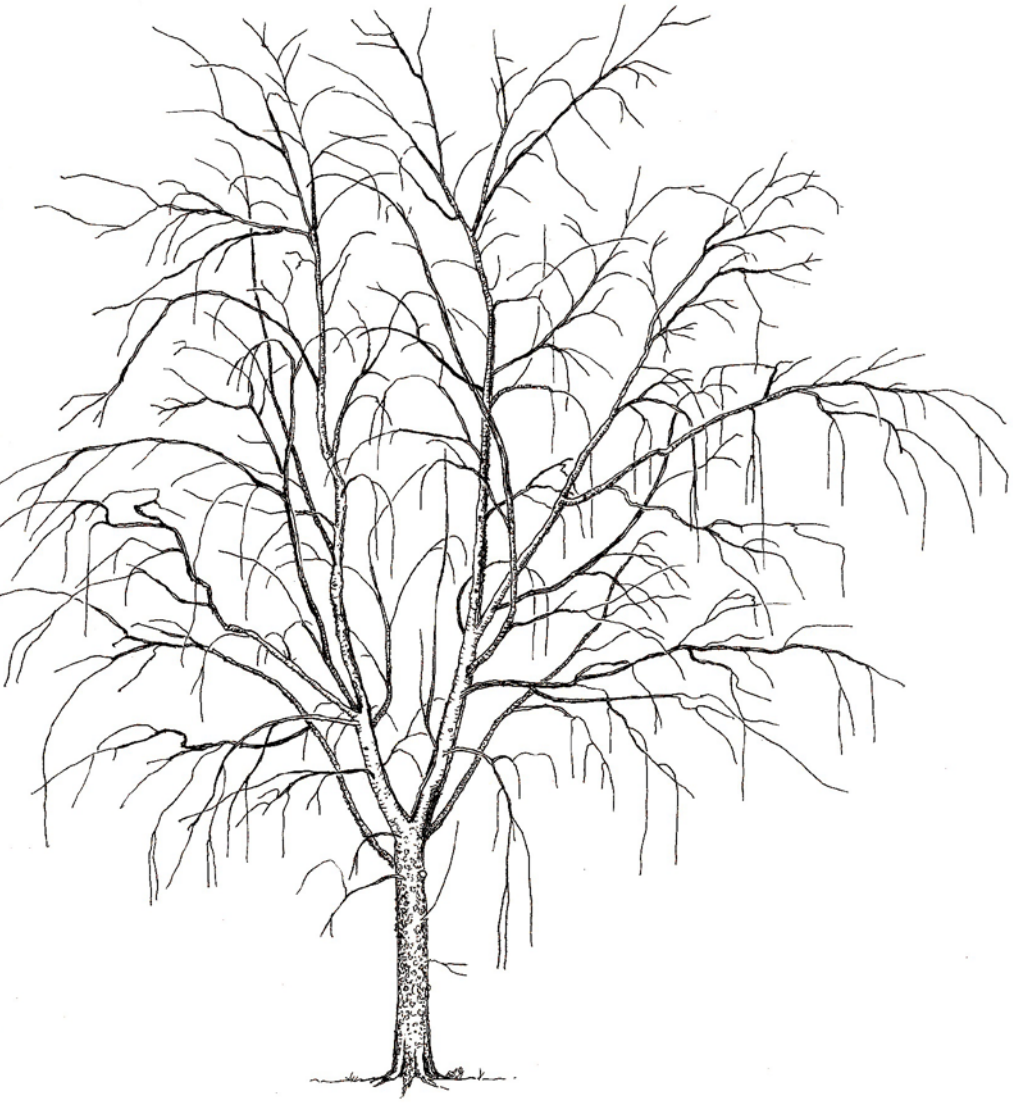

ADT

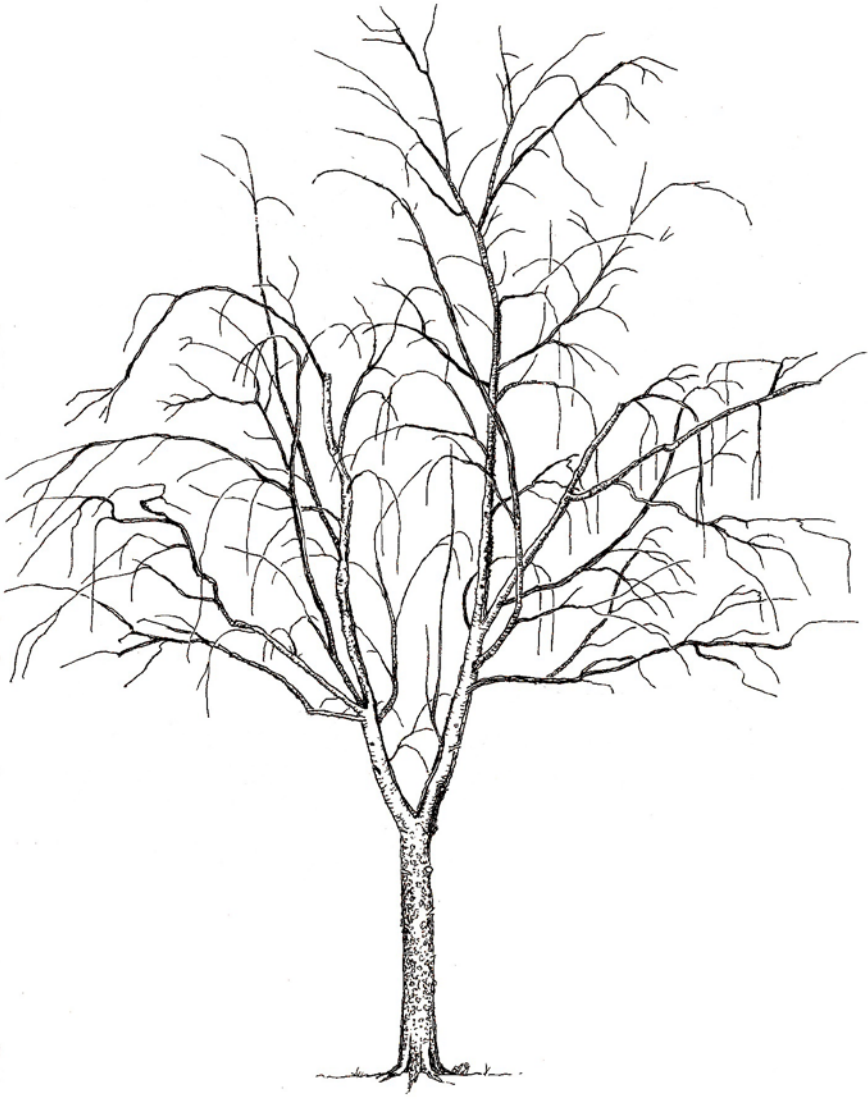
aspect 1



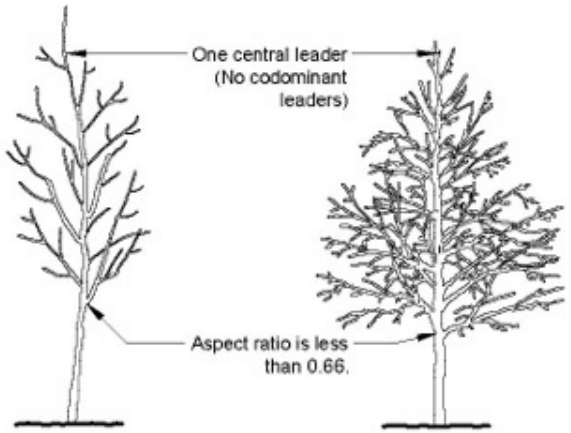


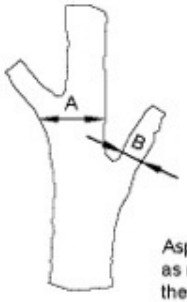




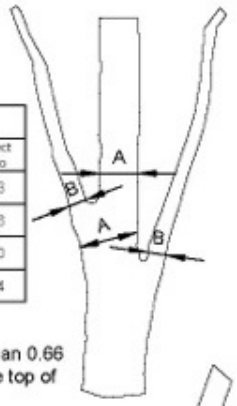


ACCEPTABLE



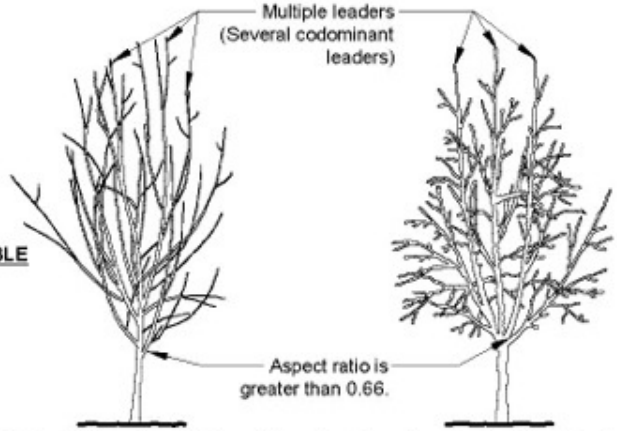


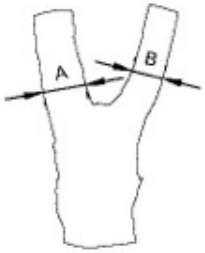
Example		
A	B	Aspect Ratio
1.50"	0.50"	0.33
2.50"	0.90"	0.36
2.0"	1.00"	0.50
2.50"	1.60"	0.64



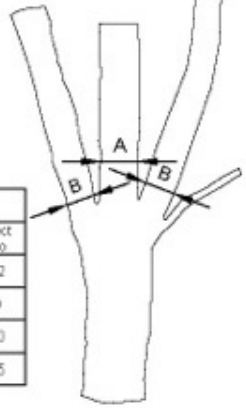
Aspect ratio of B:A less than 0.66 as measured 1" above the top of the branch union.

REJECTABLE





Example		
A	B	Aspect Ratio
2.50"	1.80"	0.72
2.0"	2.0"	1.0
2.50"	2.0"	0.80
4.0"	3.0"	0.75



Aspect ratio of B:A greater than or equal to 0.66 as measured 1" above the top of the branch union.

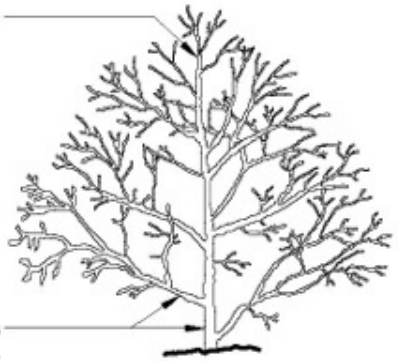
Notes:

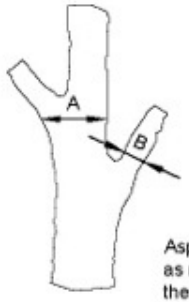
1- Aspect ratio shall be less than 0.66 on all branch unions. Aspect ratio is the diameter of branch (B) divided by the diameter of the trunk (A) as measured 1" above the top of the branch union.

2- Any tree not meeting the crown observations detail may be rejected.

P-X CROWN OBSERVATIONS - HIGH BRANCHED

ACCEPTABLE





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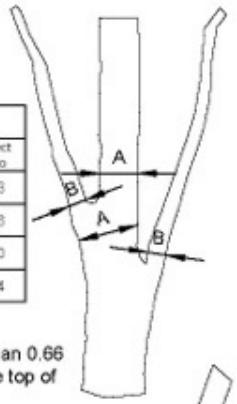
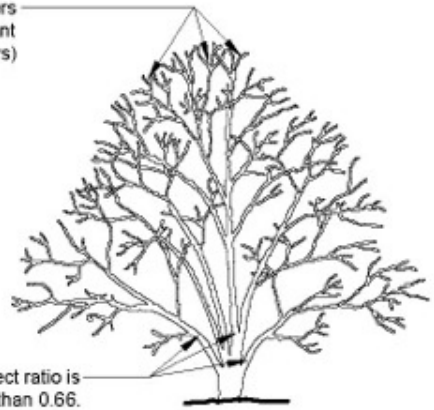
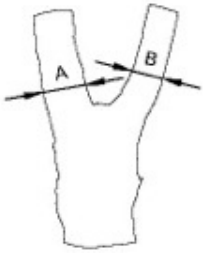
2.0"	1.00"	0.50
2.50"	1.60"	0.64



Aspect ratio of B:A less than 0.66 as measured 1" above the top of the branch union.

REJECTABLE





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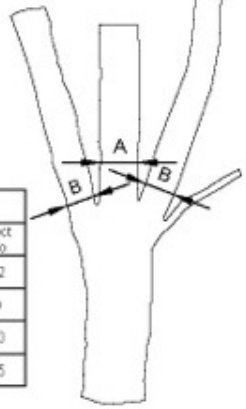


Aspect ratio of B:A greater than or equal to 0.66

Notes:

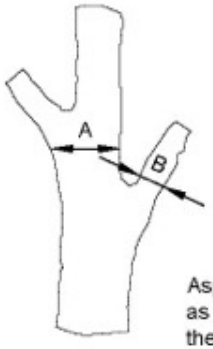
1- Aspect ratio shall be less than 0.66 on all branch unions. Aspect ratio is the diameter of branch (B) divided by the diameter of the trunk (A) as measured 1" above the top of the branch union.

2- Any tree not meeting the crown observations detail may be rejected.

P-X CROWN OBSERVATIONS - LOW BRANCHED

ACCEPTABLE

Aspect ratio is less than 0.66.



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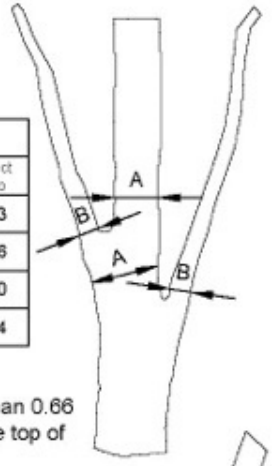
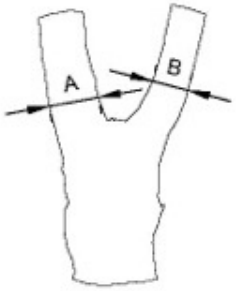
2.50"	0.90"	0.36
2.0"	1.00"	0.50
2.50"	1.60"	0.64



Aspect ratio of B:A less than 0.66 as measured 1" above the top of the branch union.

REJECTABLE

Aspect ratio is greater than 0.66.



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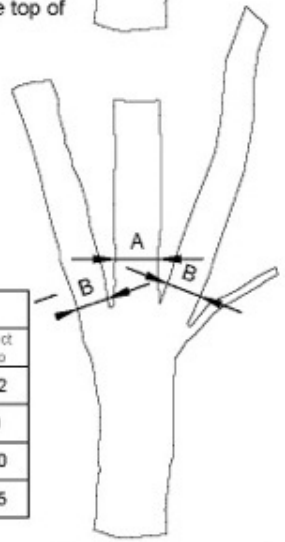

Aspect ratio of B:A greater than or equal to 0.66 as measured 1" above the top of the branch union.

Notes:

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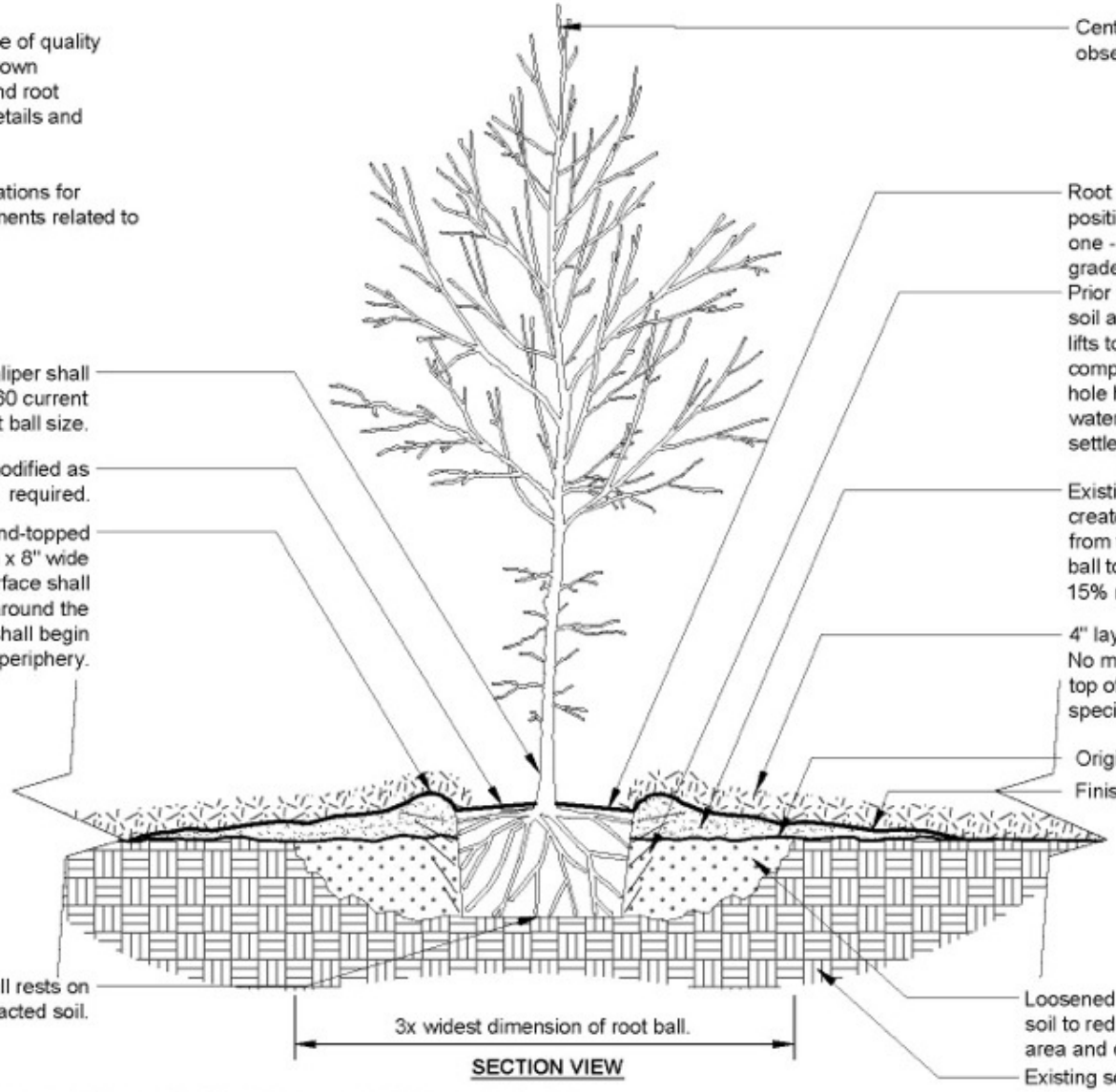
2- Any tree not meeting the crown observations detail may be rejected.

P-X

CROWN OBSERVATION DETAIL - MULTI

Notes:
1- Trees shall be of quality prescribed in crown observations and root observations details and specifications.

2- See specifications for further requirements related to this detail.



SECTION VIEW

P-X TREE IN POORLY DRAINED SOIL

Urban Tree Foundation

CALIFORNIA ReLEAF

Guideline Specifications for Nursery Tree Quality

Selecting Quality Nursery Stock

A committee comprised of municipal arborists, urban foresters, nurserymen, U.C. Cooperative Extension horticultural advisors, landscape architects, non–profit tree groups, horticultural consultants, etc., developed the attached specifications to ensure high quality landscape trees. After more than a year of work, they succeeded in drafting a document entitled Specification Guidelines for Container–grown Trees for California. This document will be published and the guidelines promoted throughout the nursery and landscape industry. Its intent is to help landscape professionals develop their own comprehensive and detailed specifications to ensure that they obtain high quality container–grown nursery trees. The document is also intended to help nursery professionals in their efforts to improve the quality of trees grown in California. These specifications can be modified for specific simulations.

The following people worked on the **Guideline Specifications for Nursery Tree Quality**:

David Burger	UC Davis, Department of Environmental Horticulture, Davis
Barrie Coate	Consulting Arborist, Los Gatos
Larry Costello	UC Cooperative Extension, Half Moon Bay
Robert Crudup	Valley Crest Tree Company, Sunol
Jim Geiger	Center for Urban Forest Research UC Davis, Davis
Bruce Hagen	California Dept. of Forestry & Fire Protection, Santa Rosa
Richard Harris	UC Davis Department of Environmental Horticulture, Davis
Brian Kempf	Urban Tree Foundation, Visalia
Jerry Koch	City of Berkeley Division of Urban Forestry, Berkeley
Bob Ludekens	L. E. Cooke Company, Visalia
Greg McPherson	Center for Urban Forest Research, UC Davis, Davis
Martha Ozonoff	California ReLeaf, Sacramento
Ed Perry	UC Cooperative Extension, Stanislaus County
Markio Robert	Caltrans, LDA Maintenance Division, Oakland

Illustrations:

Front page, c) temporary branches C. Trunk Taper Illustration by Edward F. Gilman, Professor, Environmental Horticulture Department, IFAS, University of Florida.
All other Illustrations adapted from Integrated Management of Landscape Trees, Shrubs and Vines, Fourth Edition, 2003, Harris, Clark, Matheny
Photos: Brian Kempf
For more information contact Brian Kempf 559–713–0631 or brian@urbantree.org

David Burger, UC Davis Department of Plant Sciences

Barrie Coate, Consulting Arborist, Los Gatos

Larry Costello, UC Cooperative Extension, Half Moon Bay

Robert Crudup, Valley Crest Tree Company, Sunol

Jim Geiger, US Forest Service, Pacific South West

RegionBruce Hagen, California Department of Forestry and Fire Protection, Santa Rosa,

RetiredRichard Harris, Professor Emeritus, UC Davis Department of Plant Sciences

Brian Kempf, Urban Tree Foundation, Visalia

Jerry Koch, City of Berkeley Division of Urban Forestry, Retired

Bob Ludekens, L. E. Cooke Company, Visalia

Greg McPherson, US Forest Service, PSW Research Station, Center for Urban Forest Research

Martha Ozonoff, California ReLeaf, Davis

Ed Perry, UC Cooperative Extension, Stanislaus County

Markio Robert, Caltrans LDA Maintenance Division, Oakland

Strategies for growing a high quality root system, trunk and canopy in a container nursery

Draft 2009

AcknowledgmentsSteering Committee: ***Dave Cox, LE Cooke Nursery; Haydi Boething Danielson, Boething Treeland Farms; Thomas Fetch, LE Cooke Nursery; Michael Frantz, Frantz Wholesale Nursery; Mark Marriott, Village Nurseries; John Serviss, Valley Crest Tree Co.; Sal Soriano, Monrovia: Chris Terry, Dave Wilson Nursery; Roger van Klaveren, Generation*** **Growers.Reviewers: Dr. Jim Clark, Hortscience Inc.; Dr. Laurence R. Costello, University of California Cooperative Extension; Sam Doane, J. Frank Schmidt & Son Co.; Bruce Hagen, California Department of Forestry and Fire Protection, Retired; Dr. Richard W. Harris, Professor Emeritus, University of California, Davis; Mark A. Halcomb, University of Tennessee Area Nursery Specialist Extension; Bruce Hammersmith, Skinners Nursery; Gordon Mann, Mann Made Resources; Michael D. Marshall, Marshall Tree Farm; John Melvin, California Department of Forestry and Fire Protection; Dave Muffly, Oaktopia.net; Dr. Daniel Struve, Ohio State University; Dennis Swartzell, Horticulture Consultants, Inc.; Dr. Gary Watson, Morton Arboretum; Keith Warren, J. Frank Schmidt & Son Co.This document was funded in part by a grant from the California Department of Forestry and Fire Protection.**

SAN DIEGO ASLA
AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS

ADDITIONAL INFORMATION

Additional Information:

- Urban Tree Foundation - PDF and CAD details and specifications: http://www.urbantree.org/
- International Society of Arboriculture – many resources for tree owners, arborists, contractors, planners and developers: http://www.isa-arbor.com/

SAN DIEGO ASLA
AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS

'LOW-WATER' PLANTS

Select 'Low-Water' Plants for MWELO Compliance

Suzie Wiest, Village Nurseries

August 4, 2017

SAN DIEGO ASLA
AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS

'LOW-WATER' PLANTS

Founded in 1976 and offering nearly **1,000 acres** of the West's most varied and **complete inventory** of trees, shrubs, and perennials, Village is your **single source for landscape** material.

Partnerships developed with top breeders keep Village on the **leading edge** with the latest and most improved **plant introductions**.

village nurseries
ROOTED IN QUALITY
Celebrating 40 Years

- **8 Growing Grounds** from Sacramento to San Diego provide the full spectrum in micro-climates allowing us to supply fully acclimatized and **top quality** plant material.

- **4 Landscape Centers** in Huntington Beach, Orange, San Diego, and Sacramento

About Village Nurseries

SAN DIEGO ASLA
AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS

Good News for New Introductions!!!

Although there is not a current method of adding plants onto the WUCOLS list, the regulation wording has been modified and is not quite as restrictive as in the original version. It now says …

UC Irrigation trial of Lomandra Platinum Beauty™

23 CCR § 492.4 - § 492.4. Water Efficient Landscape Worksheet.
(b) Water budget calculations shall adhere to the following requirements:
(1) The plant factor used shall be from **WUCOLS** or from **horticultural researchers with academic institutions** or **professional associations** as approved by the California Department of Water Resources (DWR).

WUCOLS IV
Water Use Classification of Landscape Species

UCDAVIS
COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES

SAN DIEGO ASLA
AMERICAN SOCIETY OF LANDSCAPE ARCHITECTS

UCDAVIS
COLLEGE OF AGRICULTURAL AND ENVIRONMENTAL SCIENCES

'LOW-WATER' PLANTS

Reports are available at: http://ccuh.ucdavis.edu/Resources/plant-trials
2005-2006, 2008-2009, 2011-2012, 2011-2013, 2012-2014, 2013-2015

ccuh
CALIFORNIA CENTER FOR URBAN HORTICULTURE

UC Davis Irrigation Field Trials for Landscape Plants

SAN DIEGO ASLA
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WUCOLS classification for the species is "Low"; 2017 UC Water Trials -"Low"

Bouteloua gracilis 'Blonde Ambition' (PP# 22,048)

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WUCOLS classification for Regions 3 and 4 – "Low"; UC Water Trials – "Low"

Ceanothus maritimus 'Valley Violet'

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'LOW-WATER' PLANTS

Laurus nobilis 'MonRik' Little Ragu® (PP# 25,915)

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'LOW-WATER' PLANTS

Included in the 2017 Irrigation Trial – observed as "Low" water use

Lomandra longifolia Platinum Beauty™ (PP# 25,962)

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'LOW-WATER' PLANTS

- To be included in the 2018 field trials; sponsored by Village Nurseries

Muhlenbergia capillaris 'Irvine' Plumetastic™ (PPAF)

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'LOW-WATER' PLANTS

WUCOLS classification in Regions 3 and 4 - "Low"; UC Davis Water Trials – "Low"

Penstemon heterophyllus 'Margarita BOP'

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'LOW-WATER' PLANTS

WUCOLS classification in Region 3 is "Low" and 4 - "Very Low"

Salvia clevelandii 'Winifred Gilman'

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'LOW-WATER' PLANTS

WUCOLS classification in Regions 3 and 4 - "Low"

Verbena lilacina 'De La Mina'

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WORKSHOP AGENDA

Emerging Wood Pests in San Diego County: How land managers can detect and respond to pests

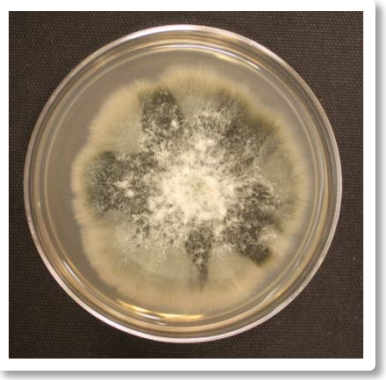
Nick Basinski, San Diego County Department of Agriculture, Weights & Measures

Invasive Shothole Borer Beetle and Fungi

Adult female: 1.8-2.5 mm long

Adult male: 1.5 mm long

Fusarium euwallaceae



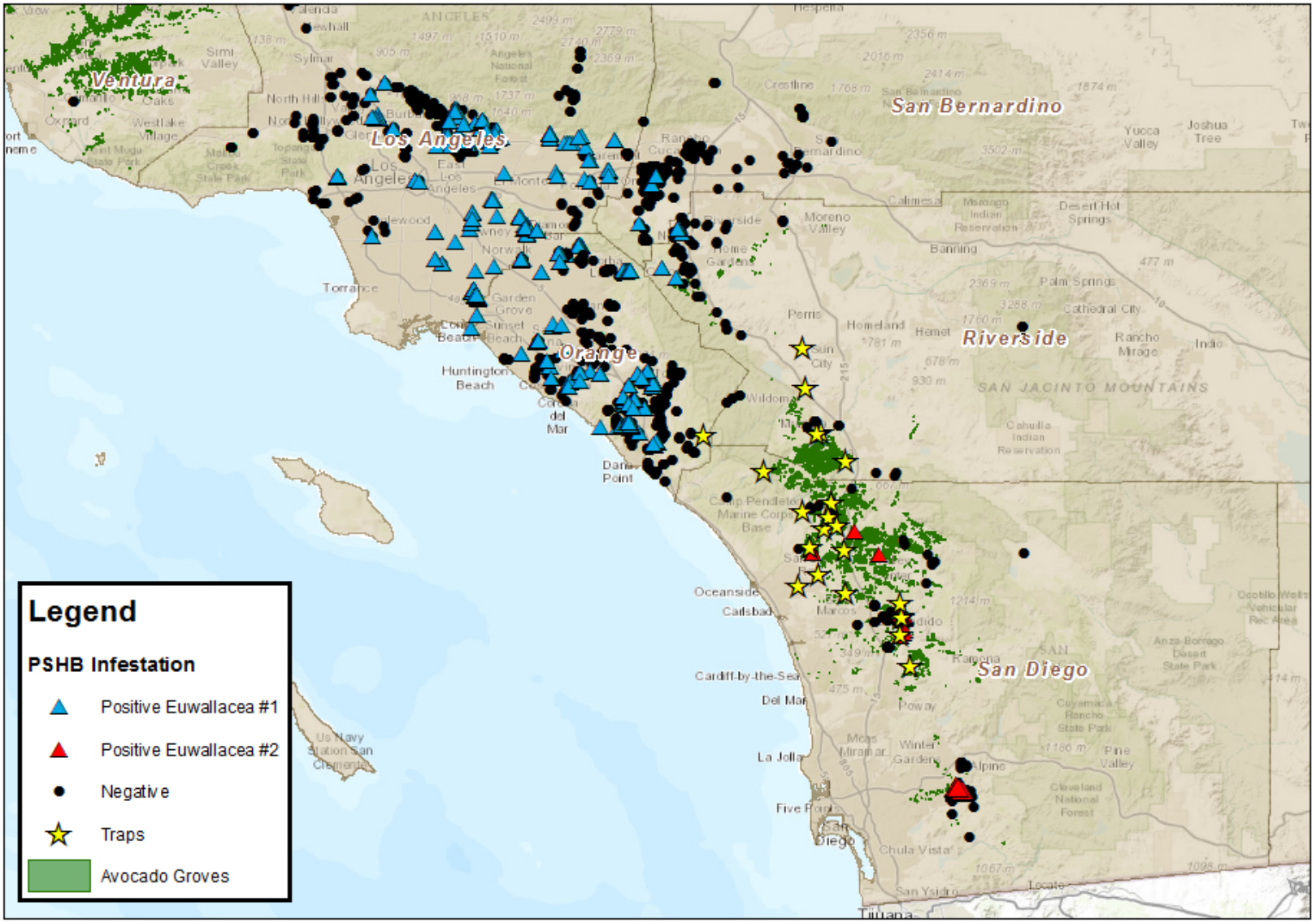
Graphium sp.

Acremonium sp.

Photos | top: Gevork Arakelian/LA County Dept of Agriculture; bottom: Akif Eskalen/UC Riverside

UC RIVERSIDE UNIVERSITY OF CALIFORNIA

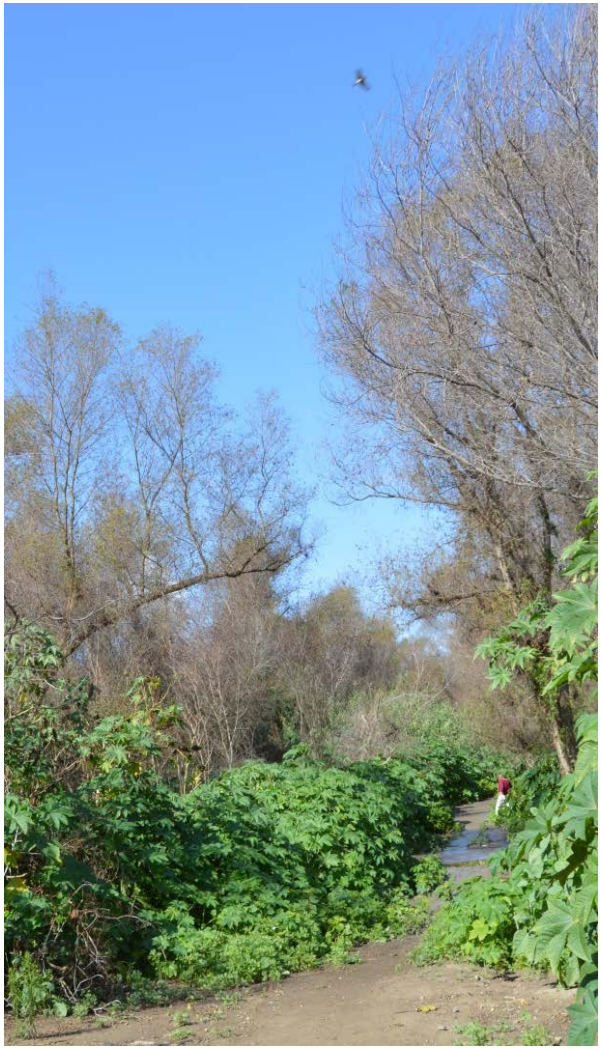
Polyphagous shot hole borer / Fusarium Dieback distribution map (December 2014)



0 5 10 20 30 40 Miles

Data source: Eskalen lab, Dept. of Plant Pathology and Microbiology, University of California, Riverside. www.eskalenlab.ucr.edu

Shothole Borer Infestation in Tijuana River Valley, November 2015



Signs and Symptoms

(a) Round entry/exit hole ~0.85 mm in diameter (b) staining beneath bark
(c) bark staining (d) gumming (e) frass (f) sugary exudate

Photos | a, c: Monica Dimson/UCCE Orange County; b, d: Akif Eskalen/UC Riverside

Infested Sycamore tree in UCI

24”
60cm

7”
18cm

ISHB Reproductive Hosts

1. **Box elder** (*Acer negundo*)*
2. **Big leaf maple** (*Acer macrophyllum*)*
3. **Evergreen maple** (*Acer paxii*)
4. **Trident maple** (*Acer buergerianum*)
5. **Japanese maple** (*Acer palmatum*)
6. **Castor bean** (*Ricinus communis*)
7. **California sycamore** (*Platanus racemosa*)*
8. **Mexican sycamore** (*Platanus mexicana*)
9. **Red willow** (*Salix laevigata*)*
10. **Avocado** (*Persea americana*)
11. **Mimosa/Silk tree** (*Albizia julibrissin*)
12. **English oak** (*Quercus robur*)
13. **Coast live oak** (*Quercus agrifolia*)*
14. **London plane** (*Platanus x acerifolia*)
15. **Fremont cottonwood** (*Populus fremontii*)*
16. **Black cottonwood** (*Populus trichocarpa*)*
17. **White alder** (*Alnus rhombifolia*)*
18. **Titoki** (*Alectryon excelsus*)
19. **Engelmann oak** (*Quercus engelmannii*)*
20. **Cork oak** (*Quercus suber*)
21. **Valley oak** (*Quercus lobata*)*
22. **Coral tree** (*Erythrina corallodendron*)
23. **Blue palo verde** (*Cercidium floridum*)*
24. **Palo verde** (*Parkinsonia aculeata*)
25. **Moreton Bay chestnut** (*Castanospermum australe*)
26. **Brea** (*Cercidium sonorae*)
27. **Mesquite** (*Prosopis articulata*)*
28. **Weeping willow** (*Salix babylonica*)
29. **Chinese holly** (*Ilex cornuta*)
30. **Camellia** (*Camellia semiserrata*)
31. **Acacia** (*Acacia spp.*)
32. **American sweetgum** (*Liquidambar styraciflua*)
33. **Red flowering gum** (*Eucalyptus ficifolia*)
34. **Japanese wisteria** (*Wisteria floribunda*)
35. **Goodding's black willow** (*Salix gooddingii*)*
36. **Tree of heaven** (*Alianthus altissima*)
37. **Kurrajong** (*Brachychiton populneus*)
38. **Black mission fig** (*Ficus carica*)
39. **Japanese beech** (*Fagus crenata*)
40. **Shiny xylosma** (*Xylosma congestum*)
41. **Mimosa/Silk tree** (*Albizia julibrissin*
42. **Draft coral tree** (*Erythrina humeana*
43. **Black poplar** (*Populus nigra*)*
44. **Black Willow** (*Salix nigra*)*
45. And the list keeps growing

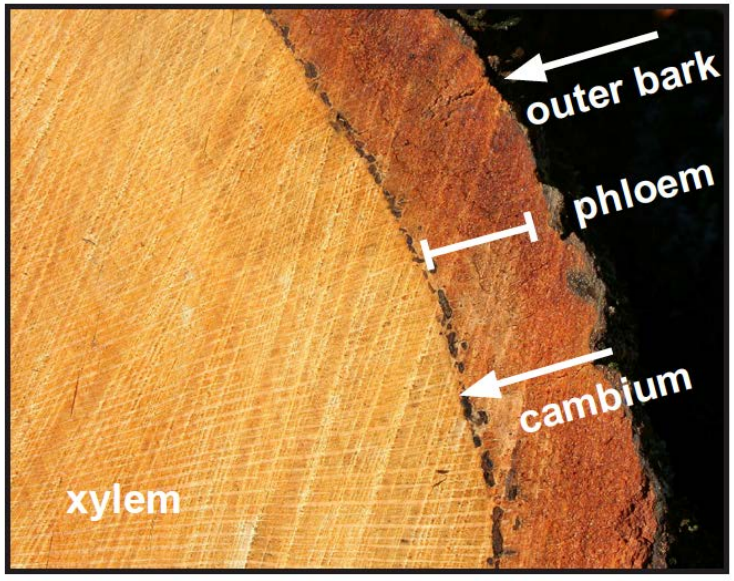
* Native Species

Cultural Control and Sanitation

- Tree removal
- Treatment of slash and debris
- Chipping or grinding
- Solarization and composting
- Firewood movement

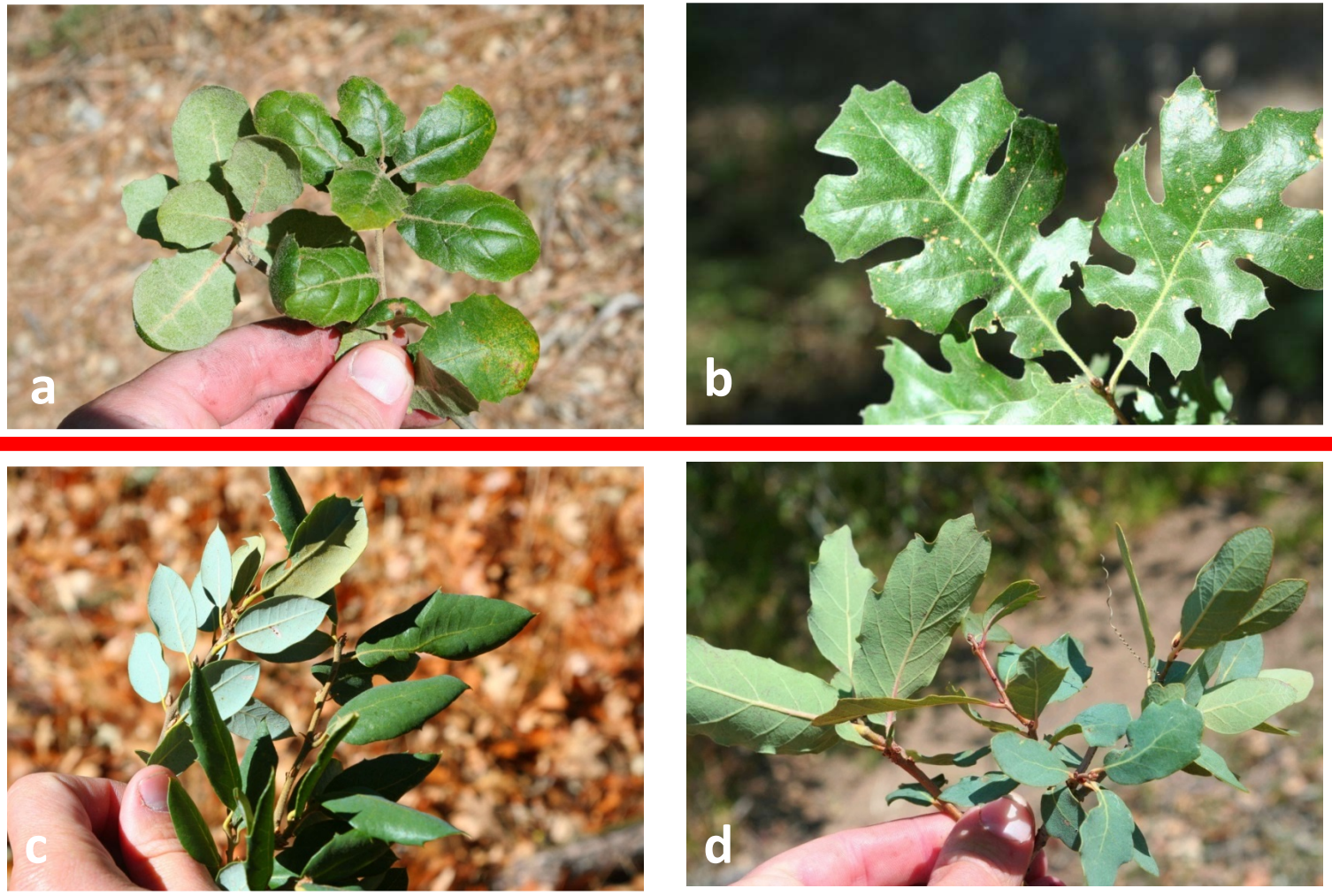
Goldspotted Oak Borer (GSOB)

(Agrilus auroguttatus)



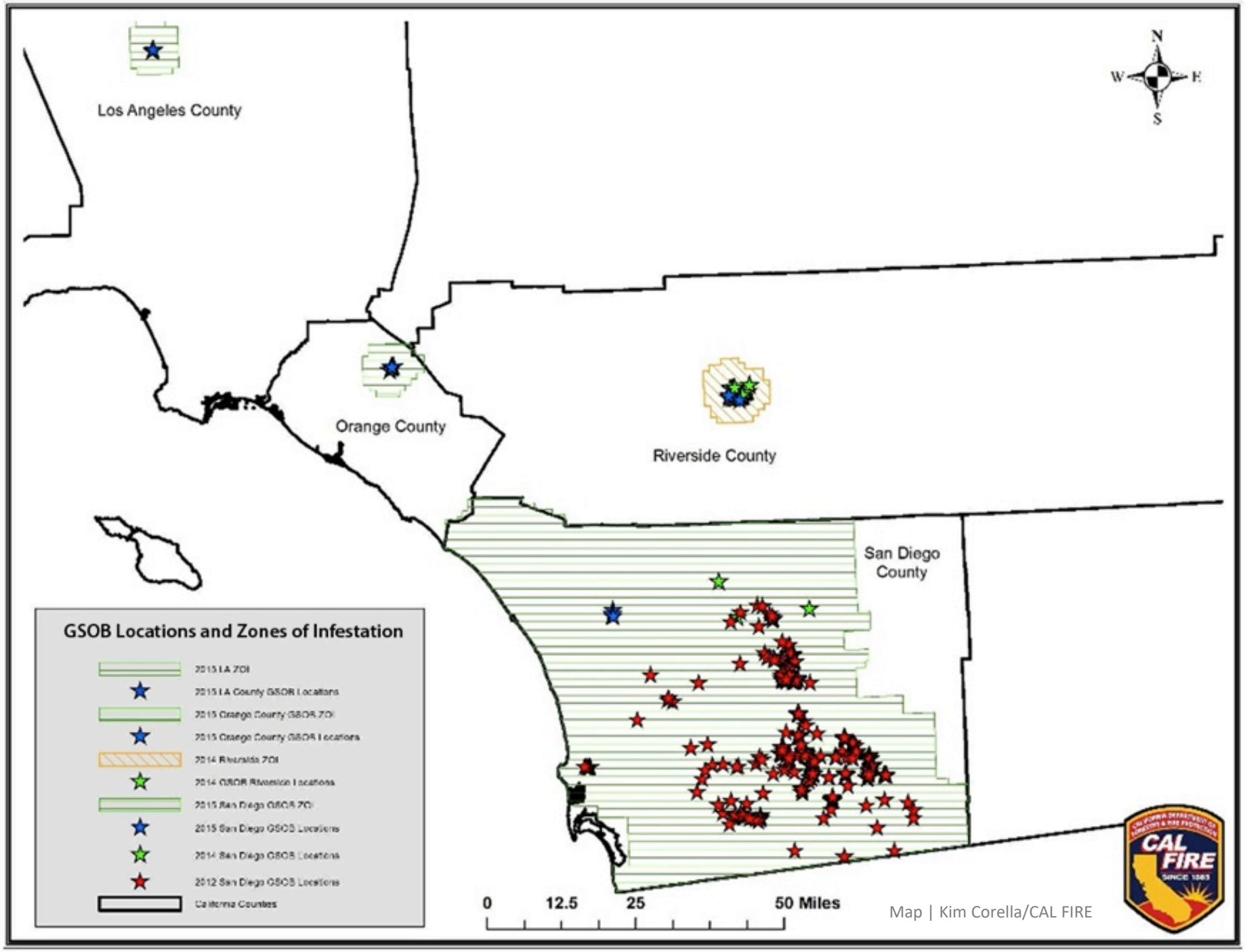
Photos | Tom Coleman, PhD/USDA Forest Service-Forest Health Protection

GSOB hosts in California



(a) Coast live oak, *Quercus agrifolia* (b) California black oak, *Q. kelloggii*
(c) Canyon live oak, *Q. chrysolepsis* (d) Englemann oak, *Q. engelmanni*

Photos | Tom Coleman, PhD/USDA Forest Service-Forest Health Protection



Map | Kim Corella/CAL FIRE

GSOB injury across several size classes

<10" DBH

30% injured by GSOB

6% dead with GSOB injury

10-20" DBH

61% injured by GSOB

8% dead with GSOB injury

20-30" DBH

77% injured by GSOB

26% dead with GSOB injury

>30" DBH

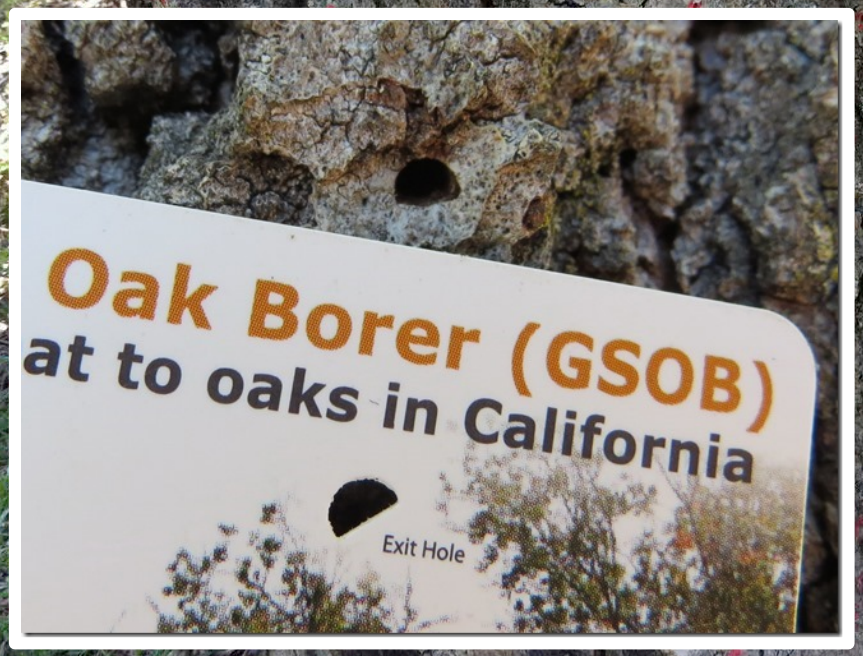
85% injured by GSOB

40% dead with GSOB injury

DBH=tree diameter at breast height

Symptoms/Evidence of Attack

GSOB exit holes



Integrated pest management (IPM)

Managing GSOB-infested wood

Infested wood treatment and utilization

The danger posed by infested wood:

This amount of bark produced…

…168 beetles

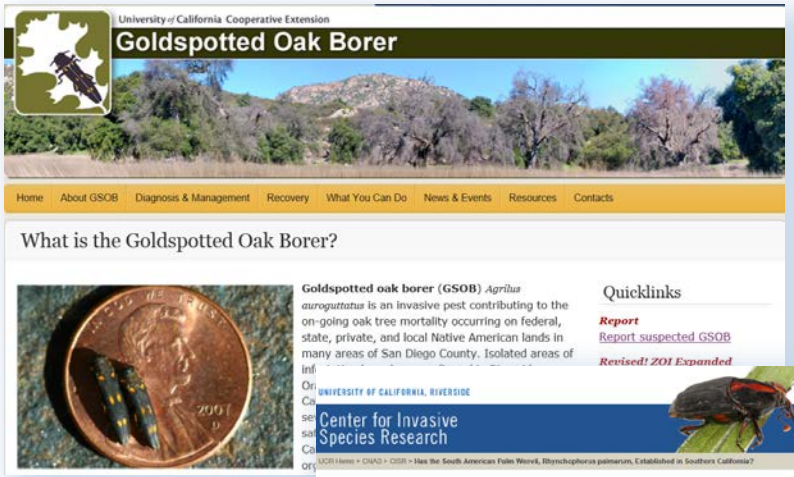
South American Palm Weevil

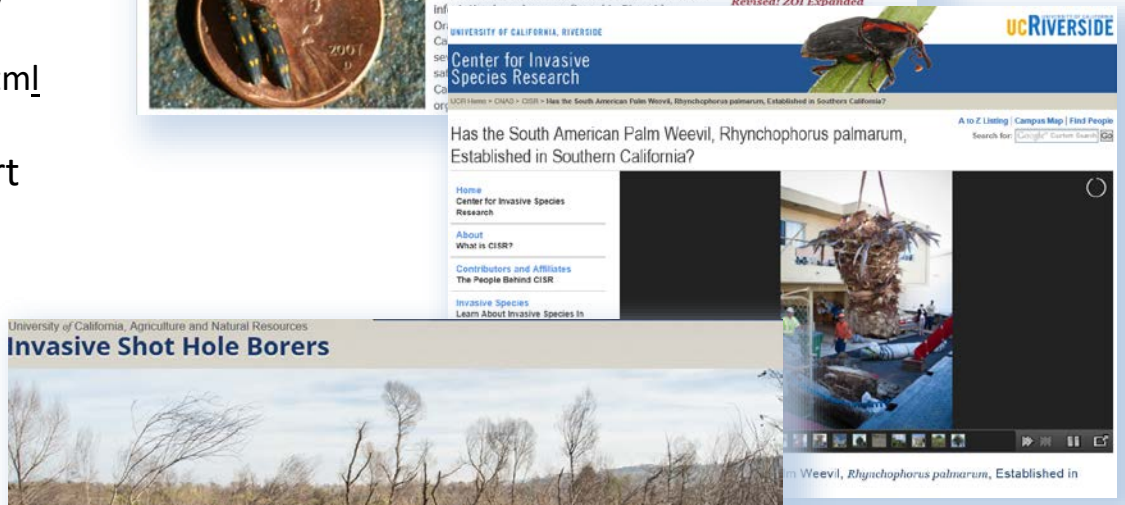
www.dontmovefirewood.org

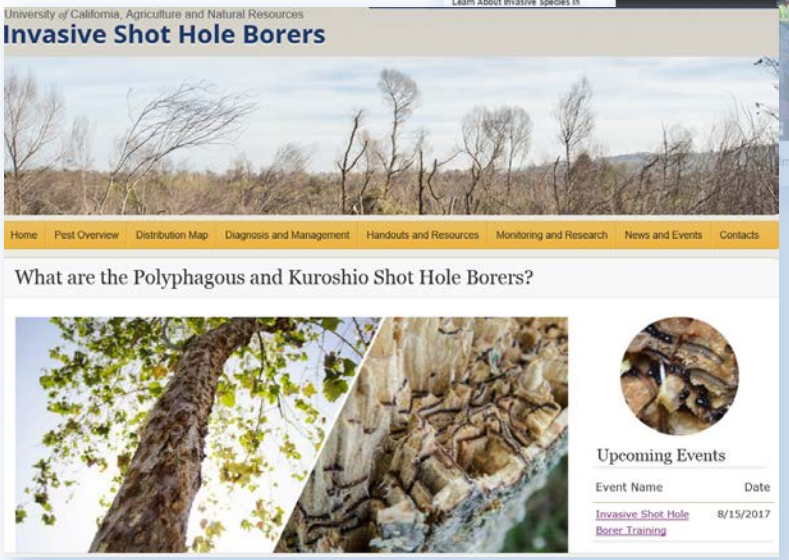
Tree Pest Websites

http://ucanr.edu/sites/gsobinfo/
http://ucanr.edu/sites/pshb/
http://cisr.ucr.edu/palmarum.html

Distribution maps and report forms can be accessed from these pages







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Design and Construction Techniques for Trees in New Landscapes

Vince Mikulanis
Operations Manager - Davey Resource Group
San Diego Community Forestry Advisory Board
San Diego Urban Forests Council

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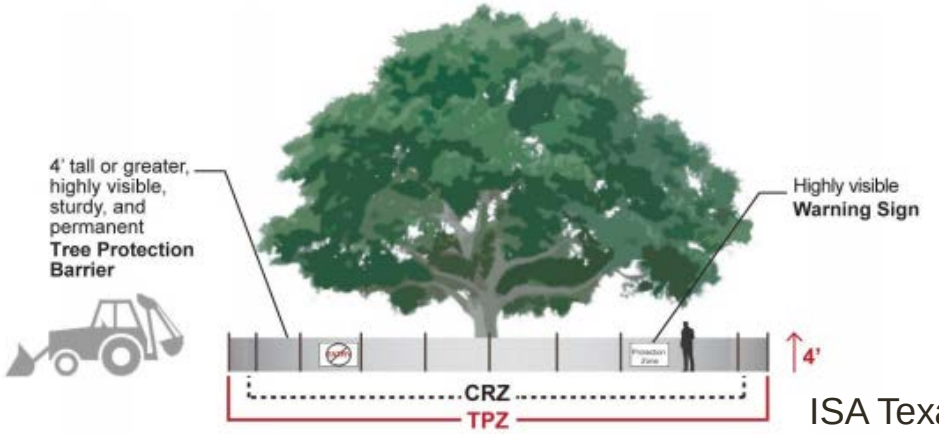
Tree Protection

Existing trees on site require protection from construction activities

- **Tree Protection** is often a requirement of the local jurisdiction
- **Critical Root Zone** – 1ft radius for every 1in diameter of trunk
- **Tree Protection Zone** – Area where construction activities prohibited
  - Mulching, watering may be required within the TPZ
- **Tree Protection Barrier** – 4ft tall min, highly visible, sturdy barrier



ISA Texas

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SAN DIEGO ASLA STEWARDSHIP COMMITTEE

SUSTAINABLE STRATEGIES– Plant Selection for SD's Changing Ecosystems

WORKSHOP August 4TH, 2017

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Irrigation BMP's

- **Design** for Water Use Efficiency and site
  - Proper watering for all landscape elements
  - Site specific Requirements – drip, bubbler, rotor
- **Install** to Meet Design Criteria
  - Ensure contractors install to specs
- **Manage** Landscape Water Resources

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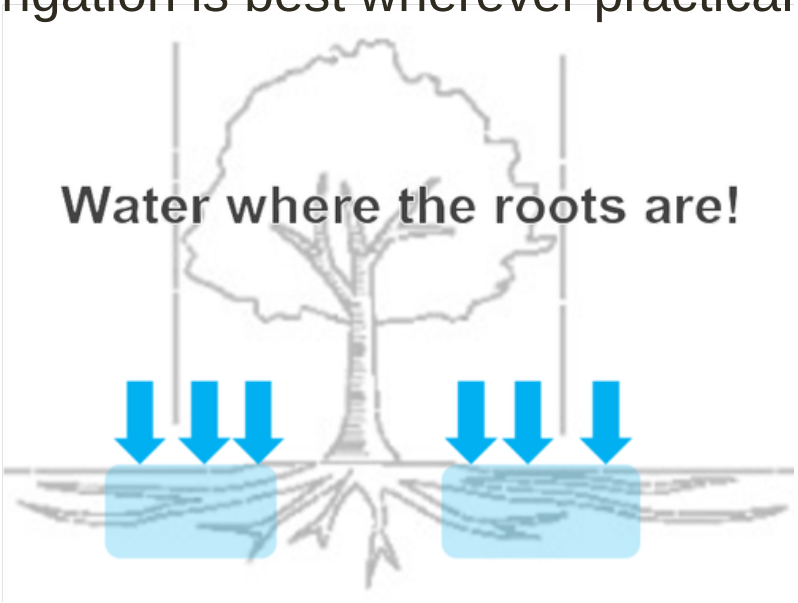
Tree Irrigation BMP's

- **Trees require separate irrigation control valves!**
  - Infrequent, DEEP irrigation
- Water where the roots are!
- Drip / micro irrigation is best wherever practical



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Organic Mulch

Consider Mulch as a Design Element

Benefits

- Helps retain soil moisture
- Adds Nutrients / Improves Soil Fertility and Structure
- Protects Drip Irrigation
- Reduces Competition
- Mower Damage Protection

Methods

- 3-4in deep
- Keep away from tree trunk
- Extend to dripline or 4-5ft min

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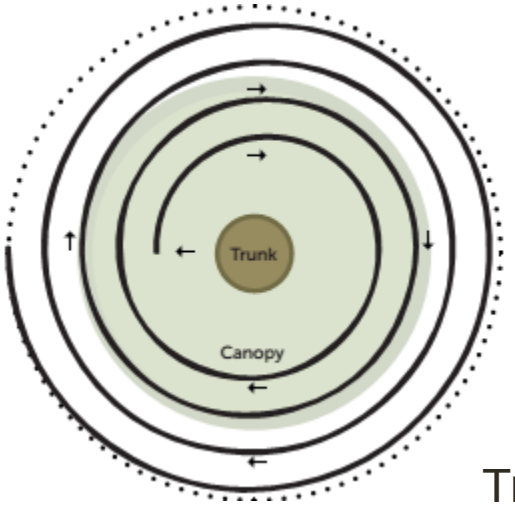
Drip Systems for Trees

- Spiral drip tubing with in-line emitters.
- Start near the trunk and spiral outward beyond dripline
- Place under mulch for maximum effectiveness



TreePeople

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Water Considerations

- Watering requirements for trees depend on size, species, location and season.
  - Consult an Arborist!
- Can vary from 10gal/week for new trees to 500+ gal per month for large trees
- May need to run irrigation for **HOURS** not minutes to ensure proper watering
  - Separate Irrigation Control Valves
- When watering, ensure soil is moist to a depth of 12-14 inches

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Establishment Alternative

- Tree Watering Bags can be very effective
  - Provide sufficient water during establishment
- Must be manually filled
- Not a long term solution

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Turf Replacement

- Great time to ensure proper irrigation for trees
- Mulch is very important
- If mulch was not already present – use a thinner layer of organic
- Heat from rock and artificial turf and damage existing AND new trees

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Surviving Drought

- Lawns are less expensive to replace than trees of significant size
- Reducing turf irrigation – need to consider effects on trees
- 20% to 40% reduction CAN be OK but monitor tree health
- Supplemental irrigation may be required (soaker hose, slow drip from hose – may require watering times of a couple of hours)
- Provide a deep watering 1-2 times per month

- Check www.sdrufc.com for more info

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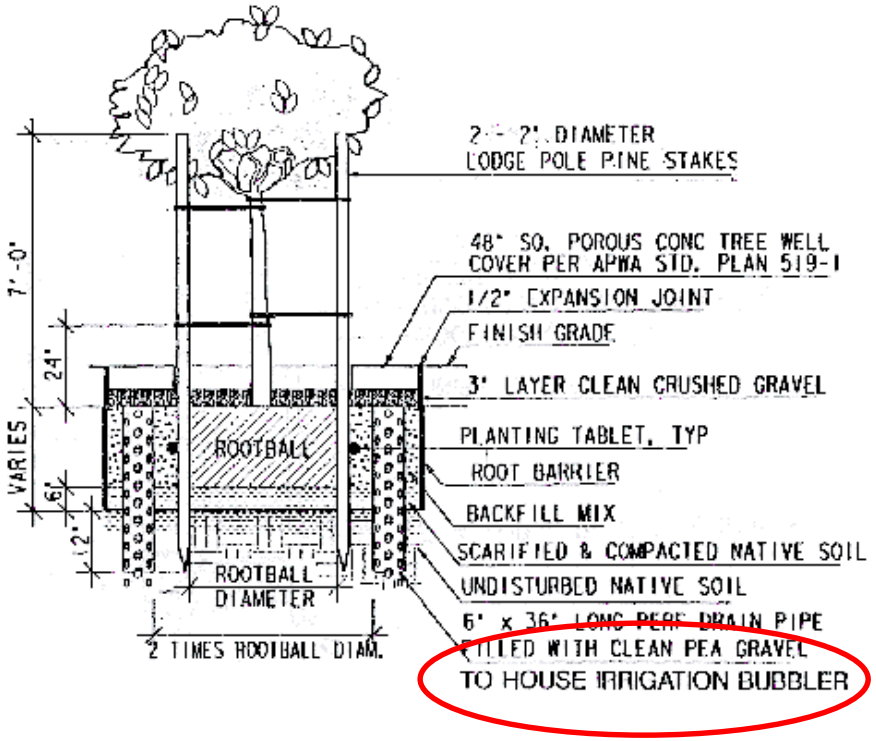
Non-Preferred Irrigation

- Bubblers are not recommended within arborist community
- Do not provide proper soil moisture for trees
- Consider working with entity requiring irrigation bubbler for alternative methods
- If not possible, separate control valves and monitoring are necessary



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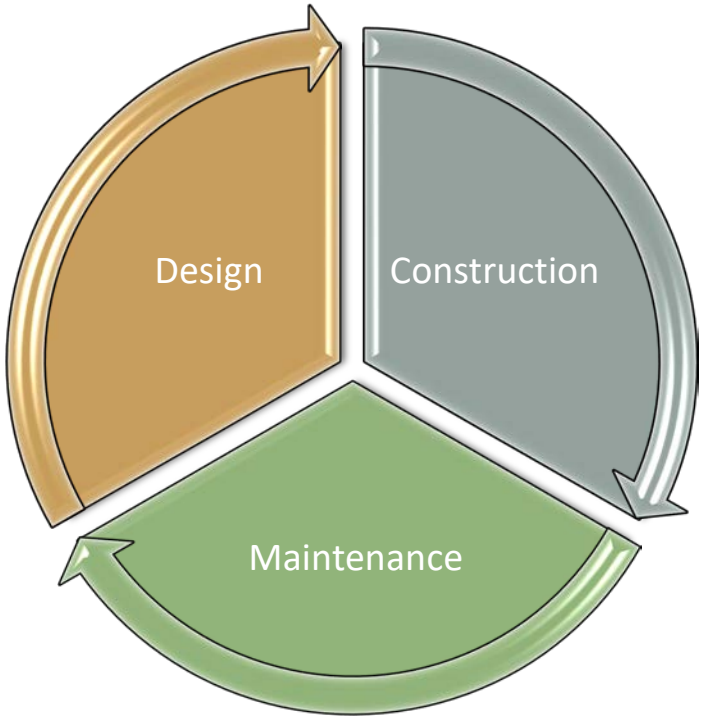
Landscape and Tree Health Requires Full Circle Partnership and Education



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TREES: NATURE'S SUNSCREEN

According to the American Cancer Society, shade is a valuable means of protection from the damaging effects of the sun's ultraviolet (UV) rays. Trees are as important as a hat or sunglasses.

TREES KEEP US HEALTHY. FOLLOW THESE 5 STEPS TO KEEP THEM HEALTHY TOO:

1 **GET MOVING**

Inspect trees and shrubs from the bottom up and look for specific problems such as brittle or dead branches, soft or decaying wood, small holes in trunk, or shallow pits in the bark and weak or off-color foliage.

2 **STAY WELL FED**

Help your trees stay healthy by applying a slow-release fertilizer. This replaces nutrients and improves resistance to injury from disease, insects and stressful weather.

3 **HEARTY HYDRATION**

Trees need to stay well-hydrated throughout the year. A subsurface watering method to quench their roots is ideal for all trees and shrubs, especially those suffering from drought stress.

4 **MAKE GOOD CHOICES**

A little research and planning will maximize both your trees' lifespan and your landscape's economic rewards when you plant the right tree in the right place.

5 **SCHEDULE REGULAR CHECK-UPS**

Notice something that worries you? Schedule a check-up with a certified arborist to ensure the best care for your trees.

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When Partnerships Fail

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SUSTAINABLE STRATEGIES

Plant Selection for San Diego's Changing Ecosystems

village nurseries
ROOTED IN QUALITY®

Urban Tree Foundation

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