



STATE OF MONTANA, FISH WILDLIFE AND PARKS
INVITATION FOR BID
 (THIS IS NOT AN ORDER)

IFB Number: 140086	IFB Title: <u>Tree Trimming Services – Region 4 Parks</u>
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IFB Due Date and Time: <u>November 7, 2013</u> 2:00 p.m., Local Time	Number of Pages: 28
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ISSUING AGENCY INFORMATION

Purchasing Officer: Kari Shinn	Issue Date: 10/15/2013
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Fish, Wildlife & Parks Kari Shinn, Purchasing Unit 930 Custer Ave W (Delivered) PO Box 200701 (Mailed) Helena, MT 59620-0701	Phone: (406) <u>495-3249</u> Fax: (406) <u>495-3253</u> TTY Users, Dial 711 Website: http://www.fwp.mt.gov
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INSTRUCTIONS TO BIDDERS

COMPLETE THE INFORMATION BELOW AND RETURN THIS PAGE WITH YOUR BID AND ANY REQUIRED DOCUMENTS TO THE ADDRESS LISTED ABOVE UNDER "ISSUING AGENCY INFORMATION."	Mark Face of Envelope/Package:
	IFB Number: 140086 IFB Due Date: <u>11/7/2013</u>
	Special Instructions:

Alternate Bids:
 Vendors may submit alternate bids (a bid on supplies other than specified). Alternate bids are considered only if the vendor is the lowest responsible vendor on their primary bid. Bids must be clearly identified as "Primary" and "Alternate."

BIDDERS MUST COMPLETE THE FOLLOWING

Payment Terms: Net 30 days	Delivery Date:
Bidder Name/Address;	Authorized Bidder Signatory: (Please print name and sign in ink)
Bidder Phone Number:	Bidder FAX Number:
Bidder E-mail Address:	Federal ID Number:

DEBARMENT: The contractor certifies, by submitting this bid or proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction (contract) by any governmental department or agency. If the contractor cannot certify this statement, attach a written explanation for review by the State.

IMPORTANT: SEE STANDARD TERMS AND CONDITIONS

Standard Terms and Conditions

By submitting a response to this invitation for bid, request for proposal, limited solicitation, or acceptance of a contract, the vendor agrees to acceptance of the following Standard Terms and Conditions and any other provisions that are specific to this solicitation or contract.

ACCEPTANCE/REJECTION OF BIDS, PROPOSALS, OR LIMITED SOLICITATION RESPONSES: The State reserves the right to accept or reject any or all bids, proposals, or limited solicitation responses, wholly or in part, and to make awards in any manner deemed in the best interest of the State. Bids, proposals, and limited solicitation responses will be firm for 30 days, unless stated otherwise in the text of the invitation for bid, request for proposal, or limited solicitation.

ACCESS AND RETENTION OF RECORDS: The contractor agrees to provide the department, Legislative Auditor, or their authorized agents, access to any records necessary to determine contract compliance. (Section 18-1-118, MCA). The contractor agrees to create and retain records supporting the services rendered or supplies delivered for a period of eight years after either the completion date of the contract or the conclusion of any claim, litigation, or exception relating to the contract taken by the State of Montana or third party.

ALTERATION OF SOLICITATION DOCUMENT: In the event of inconsistencies or contradictions between language contained in the State's solicitation document and a vendor's response, the language contained in the State's original solicitation document will prevail. Intentional manipulation and/or alteration of solicitation document language will result in the vendor's disqualification and possible debarment.

ASSIGNMENT, TRANSFER AND SUBCONTRACTING: The contractor shall not assign, transfer or subcontract any portion of the contract without the express written consent of the department. (Section 18-4-141, MCA.)

AUTHORITY: The attached bid, request for proposal, limited solicitation, or contract is issued under authority of Title 18, Montana Code Annotated, and the Administrative Rules of Montana, Title 2, chapter 5.

COMPLIANCE WITH LAWS: The contractor must, in performance of work under the contract, fully comply with all applicable federal, state, or local laws, rules and regulations, including the Montana Human Rights Act, the Civil Rights Act of 1964, the Age Discrimination Act of 1975, the Americans with Disabilities Act of 1990, and Section 504 of the Rehabilitation Act of 1973. Any subletting or subcontracting by the contractor subjects subcontractors to the same provision. In accordance with section 49-3-207, MCA, the contractor agrees that the hiring of persons to perform the contract will be made on the basis of merit and qualifications and there will be no discrimination based upon race, color, religion, creed, political ideas, sex, age, marital status, physical or mental disability, or national origin by the persons performing the contract.

CONFORMANCE WITH CONTRACT: No alteration of the terms, conditions, delivery, price, quality, quantities, or specifications of the contract shall be granted without prior written consent of Montana Fish, Wildlife & Parks. Supplies delivered which do not conform to the contract terms, conditions, and specifications may be rejected and returned at the contractor's expense.

DEBARMENT: The contractor certifies, by submitting this bid or proposal, that neither it nor its principals are presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participation in this transaction (contract) by any governmental department or agency. If the contractor cannot certify this statement, attach a written explanation for review by the State.

DISABILITY ACCOMMODATIONS: The State of Montana does not discriminate on the basis of disability in admission to, access to, or operations of its programs, services, or activities. Individuals who need aids, alternative document formats, or services for effective communications or other disability related accommodations in the programs and services offered are invited to make their needs and preferences known to this office. Interested parties should provide as much advance notice as possible.

FACSIMILE RESPONSES: Facsimile responses will be accepted for invitations for bids, small purchases, or limited solicitations ONLY if they are completely received by Montana Fish, Wildlife & Parks prior to the time set for receipt. Bids or portions thereof, received after the due time will not be considered. Facsimile responses to requests for proposals are ONLY accepted on an exception basis with prior approval of the procurement officer.

FAILURE TO HONOR BID/PROPOSAL: If a bidder/offeror to whom a contract is awarded refuses to accept the award (PO/contract) or fails to deliver in accordance with the contract terms and conditions, the department may, in its discretion, suspend the bidder/offeror for a period of time from entering into any contracts with the State of Montana.

FORCE MAJEURE: Neither party shall be responsible for failure to fulfill its obligations due to causes beyond its reasonable control, including without limitation, acts or omissions of government or military authority, acts of God, materials shortages, transportation delays, fires, floods, labor disturbances, riots, wars, terrorist acts, or any other causes, directly or indirectly beyond the reasonable control of the nonperforming party, so long as such party is using its best efforts to remedy such failure or delays.

HOLD HARMLESS/INDEMNIFICATION: The contractor agrees to protect, defend, and save the State, its elected and appointed officials, agents, and employees, while acting within the scope of their duties as such, harmless from and against all claims, demands, causes of action of any kind or character, including the cost of defense thereof, arising in favor of the contractor's employees or third parties on account of bodily or personal injuries, death, or damage to property arising out of services performed or omissions of services or in any way resulting from the acts or omissions of the contractor and/or its agents, employees, representatives, assigns, subcontractors, except the sole negligence of the State, under this agreement.

LATE BIDS AND PROPOSALS: Regardless of cause, late bids and proposals will not be accepted and will automatically be disqualified from further consideration. It shall be solely the vendor's risk to ensure delivery at the designated office by the designated time. Late bids and proposals will not be opened and may be returned to the vendor at the expense of the vendor or destroyed if requested.

PAYMENT TERM: All payment terms will be computed from the date of delivery of supplies or services OR receipt of a properly executed invoice, whichever is later. Unless otherwise noted in the solicitation document, the State is allowed 30 days to pay such invoices. All contractors will be required to provide banking information at the time of contract execution in order to facilitate State electronic funds transfer payments.

RECIPROCAL PREFERENCE: The State of Montana applies a reciprocal preference against a vendor submitting a bid from a state or country that grants a residency preference to its resident businesses. A reciprocal preference is only applied to an invitation for bid for supplies or an invitation for bid for nonconstruction services for public works as defined in section 18-2-401(9), MCA, and then only if federal funds are not involved. For a list of states that grant resident preference, see <http://gsd.mt.gov/procurement/preferences.asp>.

REFERENCE TO CONTRACT: The contract or purchase order number MUST appear on all invoices, packing lists, packages, and correspondence pertaining to the contract.

REGISTRATION WITH THE SECRETARY OF STATE: Any business intending to transact business in Montana must register with the Secretary of State. Businesses that are incorporated in another state or country, but which are conducting activity in Montana, must determine whether they are transacting business in Montana in accordance with sections 35-1-1026 and 35-8-1001, MCA. Such businesses may want to obtain the guidance of their attorney or accountant to determine whether their activity is considered transacting business.

If businesses determine that they are transacting business in Montana, they must register with the Secretary of State and obtain a certificate of authority to demonstrate that they are in good standing in Montana. To obtain registration materials, call the Office of the Secretary of State at (406) 444-3665, or visit their website at <http://sos.mt.gov>.

SEPARABILITY CLAUSE: A declaration by any court, or any other binding legal source, that any provision of the contract is illegal and void shall not affect the legality and enforceability of any other provision of the contract, unless the provisions are mutually dependent.

SHIPPING: Supplies shall be shipped prepaid, F.O.B. Destination, unless the contract specifies otherwise.

SOLICITATION DOCUMENT EXAMINATION: Vendors shall promptly notify the State of any ambiguity, inconsistency, or error which they may discover upon examination of a solicitation document.

TAX EXEMPTION: The State of Montana is exempt from Federal Excise Taxes (#81-0302402).

TECHNOLOGY ACCESS FOR BLIND OR VISUALLY IMPAIRED: Contractor acknowledges that no state funds may be expended for the purchase of information technology equipment and software for use by employees, program participants, or members of the public unless it provides blind or visually impaired individuals with access, including interactive use of the equipment and services, that is equivalent to that provided to individuals who are not blind or visually impaired. (Section 18-5-603, MCA.) Contact the State Procurement Bureau at (406) 444-2575 for more information concerning nonvisual access standards.

TERMINATION OF CONTRACT: Unless otherwise stated, the State may, by written notice to the contractor, terminate the contract in whole or in part at any time the contractor fails to perform the contract.

UNAVAILABILITY OF FUNDING: The contracting agency, at its sole discretion, may terminate or reduce the scope of the contract if available funding is reduced for any reason. (Section 18-4-313(4), MCA.)

U.S. FUNDS: All prices and payments must be in U.S. dollars.

VENUE: This solicitation is governed by the laws of Montana. The parties agree that any litigation concerning this bid, request for proposal, limited solicitation, or subsequent contract, must be brought in the First Judicial District in and for the County of Lewis and Clark, State of Montana, and each party shall pay its own costs and attorney fees. (Section 18-1-401, MCA.)

WARRANTIES: The contractor warrants that items offered will conform to the specifications requested, to be fit and sufficient for the purpose manufactured, of good material and workmanship, and free from defect. Items offered must be new and unused and of the latest model or manufacture, unless otherwise specified by the State. They shall be equal in quality and performance to those indicated herein. Descriptions used herein are specified solely for the purpose of indicating standards of quality, performance, and/or use desired. Exceptions will be rejected.



1.0 INTRODUCTION

The STATE OF MONTANA, Fish, Wildlife & Parks (hereinafter referred to as "the State") is soliciting bids for tree trimming services in Region 4 Parks, Great Falls. Further specifications are in Section 2.0 of this solicitation.

1.1.1 Procurement Officer Contact Information. Contact information for the procurement officer is as follows:

Procurement Officer Contact Information.
Contact information for the procurement officer is as follows:
Procurement Officer: Kari Shinn
Address: 930 Custer Avenue West, Helena, MT
Telephone Number: 406-495-3249
Fax Number: 406-495-3253
E-mail Address: kshinn@mt.gov

1.1.2 Examination of Solicitation Documents and Explanation to Bidders. Bidders are responsible for examining the solicitation documents and any addenda issued to become informed as to all conditions that might in any way affect the cost or performance of any work. Failure to do so will be at the sole risk of the bidder. Should the bidder find discrepancies in or omissions from the solicitation documents, or should their intent or meaning appear unclear or ambiguous, or should any other question arise relative to the solicitation documents, the bidder shall promptly notify the Procurement Officer in writing. The bidder making such request will be solely responsible for its timely receipt by the Procurement Officer. Replies to such notices may be made in the form of an addendum to the solicitation.

1.1.3 Interpretation or Representations. The State of Montana assumes no responsibility for any interpretation or representations made by any of its officers or agents unless interpretations or representations are incorporated into a formal written addendum to the solicitation.

1.1.4 Acknowledgment of Addendum. If the IFB is amended, then all terms and conditions which are not modified remain unchanged. It is the bidder's responsibility to keep informed of any changes to the solicitation. Bidders must sign and return with their bid an Acknowledgment of Addendum for any addendum issued. Bids that fail to include an Acknowledgment of Addendum may be considered nonresponsive.

1.1.5 Contract Term. The contract term is for a period of **one-year** beginning **December 1, 2013** and ending **November 30, 2014**. This contract may be renewed for one additional year, if all conditions remain the same and renewal is approved by all parties and is in the best interest of the state. This contract, including any renewals, may not exceed a total of two (2) years.

1.1.6 Extension of Prices. In the case of error in the extension of prices in the bid, the unit price will govern. In a lot bid, the lot price will govern.

1.1.7 Bid Preparation Costs. The costs for developing and delivering responses to this IFB are entirely the responsibility of the bidder. The State is not liable for any expense incurred by the bidder in the preparation and presentation of their bid or any other costs incurred by the bidder prior to execution of a purchase order or contract.

1.2 BID SUBMISSION

1.2.1 Bids Must Be Sealed and Labeled. Bids must be sealed and labeled on the outside of the package to clearly indicate that they are in response to **IFB 140086. Bids must be received at the receptionist's desk of the FWP Warehouse, Centralized Support Services, at 930 Custer Avenue West, Helena, MT prior to 2 p.m., local time, 11/7/2013.** All prices and notations must be printed in ink or typewritten. Errors should be crossed out, corrections entered, and initialed by the person signing the bid.

1.2.2 Late Bids. *Regardless of cause, late bids will not be accepted and will automatically be disqualified from further consideration.* It shall be the bidder's sole risk to assure delivery at the receptionist's desk at the designated office by the designated time. Late bids will not be opened and may be returned to the bidder at the expense of the bidder or destroyed if requested.

1.2.3 Bidder's Signature. The solicitation must be signed in ink by an individual authorized to legally bind the business submitting the bid. The bidder's signature on a bid in response to this IFB guarantees that the offer has been established without collusion and without effort to preclude the State of Montana from obtaining the best possible supply or service.

1.2.4 Alternate Bids. Vendors may submit alternate bids (a bid on supplies other than specified). Alternate bids are considered only if the vendor is the lowest responsible vendor on their primary bid. Bids must be clearly identified as "Primary" and "Alternate."

1.3 CHANGE OR WITHDRAWAL OF BIDS

1.3.1 Change or Withdrawal PRIOR to Bid Opening. Should any bidder desire to change or withdraw a bid prior to the scheduled opening, the bidder may do so by making such request in writing to the Procurement Officer listed in Section 1.1.1 above. This communication must be received prior to the date and hour of the bid opening by a request in writing or facsimile to the procurement officer (e-mail notices containing prices are not allowed and will be disqualified).

1.3.2 Change AFTER Bid Opening But Prior to Bid Award. After bids are opened, they may not be changed except to correct patently obvious mistakes and minor variations as allowed by ARM 2.5.505. The bidder shall submit verification of the correct bid to the State prior to the final award by the State.

1.4 BID AWARDS

1.4.1 Basis for Award. Bid award, if made, will be to the responsive and responsible bidder who provides all required documents as listed in section 2.0, and Cost Proposal.

1.4.2 Rejection of Bids. While the State has every intention to award a contract as a result of this IFB, issuance of the IFB in no way constitutes a commitment by the State of Montana to award and execute a contract. Upon a determination such actions would be in its best interest, the State, in its sole discretion, reserves the right to:

Cancel or terminate this IFB (18-4-307, MCA); Waive any undesirable, inconsequential, or inconsistent provisions of this IFB which would not have significant impact on any bid (ARM 2.5.505); or if awarded, terminate any contract if the State determines adequate state funds are not available (18-4-313, MCA).

2.0 SCOPE OF WORK

Montana Fish, Wildlife & Parks is looking for a Contractor or multiple contractors that will provide tree trimming/pruning and hazard tree/limb removal work with use of an aerial bucket truck, by climbing, or use of ladders to remove unhealthy limbs and trunks as needed at parks in Region 4 State Parks recreation sites. The Parks that would require the Contractor's service: Giant Springs, Sluice Boxes, Smith River/Eden Bridge,

Spring Meadow and Black Sandy. Each tree is assessed by contractor in consultation with Park staff to determine appropriate pruning or removal requirements in accordance with ANSI A300 pruning standards (Attachment A).

Require Services:

- 1) Contractor must be able to reach all heights of trees in all Parks mentioned.
- 2) Contractor must provide ground-based tree trimming work to remove unhealthy limbs or trees in recreation sites.
- 3) Contractor must provide limb and debris clean up and hauling from site.
- 4) Contractor must provide chipping and hauling of wood chips from site.
- 5) Contractor must provide stump grinding and site restoration, including hauling of wood chips from site.

Following sites and locations:

Giant Springs – 4803 Giant Springs Road, Great Falls, MT 59405
Sluice Boxes – 38 Evans Riceville Road, Belt, MT 59412
Eden Bridge – 6 Boston Coulee Road, Ulm, MT 59485
Smith River – 791 Clear Range Road, White Sulphur Springs, MT 59645
Spring Meadow – 2715 Country Club Drive, Helena, MT 59601
Black Sandy – 6563 Hauser Dam Road, Helena, MT 59602

3.0 BIDDING/CONTRACT REQUIREMENT

3.1 INSURANCE REQUIREMENTS.

General Requirements. The Contractor shall maintain for the duration of the contract, at its cost and expense, insurance against claims for injuries to persons or damages to property, including contractual liability, which may arise from or in connection with the performance of the work by the Contractor, agents, employees, representatives, assigns, or subcontractors. This insurance shall cover such claims as may be caused by any negligent act or omission.

Primary Insurance. The Contractor's insurance coverage shall be primary insurance with respect to the State, its officers, officials, employees, and volunteers and shall apply separately to each project or location. Any insurance or self-insurance maintained by the State, its officers, officials, employees or volunteers shall be excess of the Contractor's insurance and shall not contribute with it.

Specific Requirements for Commercial General Liability. The Contractor shall purchase and maintain occurrence coverage with combined single limits for bodily injury, personal injury, and property damage of **\$500,000** per occurrence and **\$1,000,000** aggregate per year to cover such claims as may be caused by any act, omission, or negligence of the Contractor or its officers, agents, representatives, assigns, or subcontractors.

The State, its officers, officials, employees, and volunteers are to be covered and listed as additional insureds; for liability arising out of activities performed by or on behalf of the Contractor, including the insured's general supervision of the Contractor; products, and completed operations; premises owned, leased, occupied, or used.

Specific Requirements for Automobile Liability. If at any time during the contract, the Contractor offers to transport employees, volunteers, or members of other cooperative agencies, the following insurance requirement must be met.

The Contractor will obtain prior approval by submitting a copy of the following insurance certificate to the assigned Contracts Officer at FWP:

Contractor shall purchase and maintain coverage with split limits of \$500,000 per person (personal injury), \$1,000,000 per accident occurrence (personal injury), and \$100,000 per accident occurrence (property damage), OR combined single limits of \$1,000,000 per occurrence to cover such claims as may be caused by

any act, omission, or negligence of Contractor or its officers, agents, representatives, assigns, or subcontractors.

The State, its officers, officials, employees, and volunteers are to be covered and listed as additional insureds for automobiles leased, hired, or borrowed by Contractor.

Deductibles and Self-Insured Retentions. Any deductible or self-insured retention must be declared to and approved by the state agency. At the request of the agency either: (1) the insurer shall reduce or eliminate such deductibles or self-insured retentions as respects the State, its officers, officials, employees, or volunteers; or (2) at the expense of the Contractor, the Contractor shall procure a bond guaranteeing payment of losses and related investigations, claims administration, and defense expenses.

Certificate of Insurance/Endorsements. A certificate of insurance from an insurer with a Best's rating of no less than A- indicating compliance with the required coverages, has been received by Montana Fish, Wildlife & Parks, P.O. Box 200701, Helena, MT 59620-0701. The Contractor must notify the State immediately, of any material change in insurance coverage, such as changes in limits, coverages, change in status of policy, etc. The State reserves the right to require complete copies of insurance policies at all times.

COMPLIANCE WITH WORKERS' COMPENSATION ACT

Contractors are required to comply with the provisions of the Montana Workers' Compensation Act while performing work for the State of Montana in accordance with sections 39-71-401, 39-71-405, and 39-71-417, MCA. Proof of compliance must be in the form of workers' compensation insurance, an independent contractor's exemption, or documentation of corporate officer status. Neither the contractor nor its employees are employees of the State. This insurance/exemption must be valid for the entire term of the contract. A renewal document must be sent to Montana Fish, Wildlife & Parks, P.O. Box 200701, Helena, MT 59620-0701, upon expiration.

Cost of Proposal: Contractor may bid on one or all State Park recreation sites. Contractor will be called on "as needed" basis. Contractor must fill out and send this cost proposal sheet with their bid proposal.

State Park	Hourly Rate
Giant Springs	
Sluice Boxes	
Smith River	
Eden Bridge	
Spring Meadow	
Black Sandy	

FWP anticipates awarding contracts to multiple offerors. FWP makes no guarantee of award or multiple awards based on this IFB.

The intent of this solicitation is to establish a qualified vendor list to provide the agency with an expedited means of procuring services. The contract will be for the convenience of the agency and is considered by the Montana Fish, Wildlife & Parks to be a "Non-exclusive" use contract. Therefore, the agency may obtain this service from sources other than the contract holder(s) as long as they comply with Title 18, MCA, and their delegation agreement. The agency does not guarantee any usage.

NOTE TO VENDORS:

A) Failure to display Invitation for Bid - IFB #140086 on your sealed bid envelope may result in bid disqualification.

HAVE YOU REMEMBERED TO:

- * Bid F.O.B. Destination (Ship To: Address) Freight Prepaid
- * Mark envelope or box with bid number IFB 140086 and opening date 11/07/2013
- * Review "Standard Terms and Conditions"
- * Sign your bid on the cover sheet
- * Initial all bid/pricing changes you made
- * Review and complete all listed requirements to ensure compliance
- * Include literature (if requested)
- * Include Montana-Made preference affidavit, if applicable
- * Have current Montana resident preference affidavit in place, if applicable

American National Standard

*for Tree Care Operations —
Tree, Shrub, and Other Woody Plant
Management —
Standard Practices (Pruning)*

ANSI A300 (Part 1)-2008 Pruning
Revision of ANSI A300 (Part 1)-2001



for Tree Care Operations —
Tree, Shrub, and Other Woody Plant Management —
Standard Practices (*Pruning*)

Secretariat
Tree Care Industry Association, Inc.

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American National Standard

Approval of an American National Standard requires review by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer.

Consensus is established when, in the judgement of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution.

The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he has approved the standards or not, from manufacturing, marketing, purchasing or using products, processes or procedures not conforming to the standards.

The American National Standards Institute does not develop standards and will in no circumstances give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretations should be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

CAUTION NOTICE: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken periodically to reaffirm, revise, or withdraw this standard. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

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* The term pruning type is replaced with the term pruning method. The purpose of this is to label the processes detailed in section 6 with greater accuracy.

Foreword This foreword is not part of American National Standard A300 (Part 1)-2008
Pruning

ANSI A300 Standards are divided into multiple parts, each focusing on a specific aspect of woody plant management (e.g. Pruning, Fertilization, etc).

These standards are used to develop written specifications for work assignments. They are not intended to be used as specifications in and of themselves. Management objectives may differ considerably and therefore must be specifically defined by the user. Specifications are then written to meet the established objectives and must include measurable criteria.

ANSI A300 standards apply to professionals who provide for or supervise the management of trees, shrubs, and other woody landscape plants. Intended users include businesses, government agencies, property owners, property managers, and utilities. The standard does not apply to agriculture, horticultural production, or silviculture, except where explicitly noted otherwise.

This standard has been developed by the Tree Care Industry Association (TCIA), an ANSI-accredited Standards Developing Organization (SDO). TCIA is secretariat of the ANSI A300 standards, and develops standards using procedures accredited by the American National Standards Institute (ANSI).

Consensus for standards writing was developed by the Accredited Standards Committee on Tree, Shrub, and Other Woody Plant Management Operations – Standard Practices, A300 (ASC A300).

Prior to 1991, various industry associations and practitioners developed their own standards and recommendations for tree care practices. Recognizing the need for a standardized, scientific approach, green industry associations, government agencies and tree care companies agreed to develop consensus for an official American National Standard.

The result – ANSI A300 standards – unify and take authoritative precedence over all previously existing tree care industry standards. ANSI requires that approved standards be developed according to accepted principles, and that they be reviewed and, if necessary, revised every five years.

TCIA was accredited as a standards developing organization with ASC A300 as the consensus body on June 28, 1991. ASC A300 meets regularly to write new, and review and revise existing ANSI A300 standards. The committee includes industry representatives with broad knowledge and technical expertise from residential and commercial tree care, utility, municipal and federal sectors, landscape and nursery industries, and other interested organizations.

Suggestions for improvement of this standard should be forwarded to: A300 Secretary, c/o Tree Care Industry Association, Inc., 136 Harvey Road - Suite B101-B110, Londonderry, NH, 03053.

ANSI A300 (Part 1)-2008 Pruning was approved as an American National Standard by ANSI on May 1, 2008. ANSI approval does not require unanimous approval by ASC A300. The ASC A300 committee contained the following members at the time of ANSI approval:

Tim Johnson, Chair
(Artistic Arborist, Inc.)

Bob Rouse, Secretary
(Tree Care Industry Association, Inc.)

(Continued)

<i>Organizations Represented</i>	<i>Name of Representative</i>
American Nursery and Landscape Association	Warren Quinn
American Society of Consulting Arborists	Craig J. Regelbrugge (Alt.)
American Society of Landscape Architects	Donald Zimar
Asplundh Tree Expert Company	Ron Leighton
Bartlett Tree Expert Company	Geoff Kempter
Davey Tree Expert Company	Peter Fengler (Alt.)
International Society of Arboriculture	Peter Becker
National Park Service	Dr. Thomas Smiley (Alt.)
Professional Grounds Management Society	Joseph Tommasi
Professional Land Care Network	R.J. Laverne (Alt.)
Society of Municipal Arborists	Bruce Hagen
Tree Care Industry Association	Sharon Lilly (Alt.)
USDA Forest Service	Robert DeFeo
Utility Arborist Association	Dr. James Sherald (Alt.)
	Thomas Shaner
	Preston Leyshon
	Gordon Mann
	Andy Hillman (Alt.)
	Dane Buell
	James McGuire (Alt.)
	Ed Macie
	Keith Cline (Alt.)
	Matthew Simons
	Jeffrey Smith (Alt.)

Additional organizations and individuals:

- American Forests (Observer)
- Mike Galvin (Observer)
- Peter Gerstenberger (Observer)
- Dick Jones (Observer)
- Myron Laible (Observer)
- Beth Palys (Observer)
- Richard Rathjens (Observer)
- Richard Roux (NFPA-780 Liaison)

ASC A300 mission statement:

Mission: To develop consensus performance standards based on current research and sound practice for writing specifications to manage trees, shrubs, and other woody plants.

American National Standard
for Tree Care Operations —

Tree, Shrub, and Other
Woody Plant
Maintenance —
Standard Practices
(Pruning)

1 ANSI A300 standards

1.1 Scope

ANSI A300 standards present performance standards for the care and management of trees, shrubs, and other woody plants.

1.2 Purpose

ANSI A300 performance standards are intended for use by federal, state, municipal and private entities including arborists, property owners, property managers, and utilities for developing written specifications.

1.3 Application

ANSI A300 performance standards shall apply to any person or entity engaged in the management of trees, shrubs, or other woody plants.

2 Part 1 – Pruning standards

2.1 Purpose

The purpose of Part 1 – *Pruning* is to provide performance standards for developing written specifications for pruning.

2.2 Reasons for pruning

The reasons for tree pruning may include, but are not limited to, reducing risk, managing tree health and structure, improving aesthetics, or achieving other specific objectives. Pruning practices for agricultural, horticultural production, or silvicultural purposes are exempt from this standard unless this standard, or a portion thereof, is expressly referenced in standards for these other related areas.

2.3 Implementation

2.3.1 Specifications for pruning should be written and administered by an arborist.

2.3.1.1 Specifications should include location of tree(s), objectives, methods (types), and extent of pruning (location, percentage, part size, etc).

2.3.2 Pruning specifications shall be adhered to.

2.4 Safety

2.4.1 Pruning shall be implemented by an arborist, familiar with the practices and hazards of pruning and the equipment used in such operations.

2.4.2 This performance standard shall not take precedence over applicable industry safe work practices.

2.4.3 Performance shall comply with applicable Federal and State Occupational Safety and Health standards, ANSI Z133.1, Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) and other Federal Environmental Protection Agency (EPA) regulations, as well as state and local regulations.

3 Normative references

The following standards contain provisions, which, through reference in the text, constitute provisions of this American National Standard. All standards are subject to revision, and parties to agreements based on this American National Standard shall apply the most recent edition of the standards indicated below.

ANSI Z60.1, Nursery stock
ANSI Z133.1, Arboriculture – Safety requirements
29 CFR 1910, General industry ¹⁾
29 CFR 1910.268, Telecommunications ¹⁾
29 CFR 1910.269, Electric power generation, transmission, and distribution ¹⁾
29 CFR 1910.331 - 335, Electrical safety-related work practices ¹⁾

4 Definitions

4.1 arboriculture: The art, science, technology, and business of commercial, public, and utility tree care.

¹⁾ Available from U.S. Department of Labor, 200 Constitution Avenue, NW, Washington, DC 20210

4.2 arborist: An individual engaged in the profession of arboriculture who, through experience, education, and related training, possesses the competence to provide for or supervise the management of trees and other woody plants.

4.3 arborist trainee: An individual undergoing on-the-job training to obtain the experience and the competence required to provide for or supervise the management of trees and other woody plants. Such trainees shall be under the direct supervision of an arborist.

4.4 branch: A shoot or stem growing from a parent branch or stem (See Fig. 4.4).

4.4.1 codominant branches/codominant leaders: Branches or stems arising from a common junction, having nearly the same size diameter (See Fig. 4.4).

4.4.2 lateral branch: A shoot or stem growing from another branch (See Fig. 4.4).

4.4.3 parent branch or stem: A tree trunk or branch from which other branches or shoots grow (See Fig. 4.4).

4.4.4 scaffold branch: A primary branch that forms part of the main structure of the crown (See Fig. 4.4).

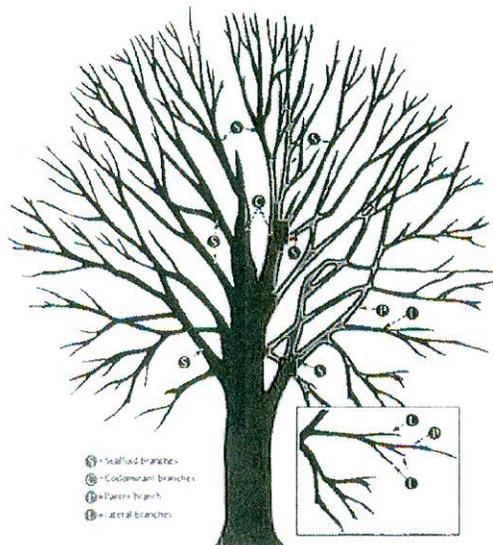


Figure 4.4 Standard branch definitions.

4.5 branch bark ridge: The raised area of bark in the branch crotch that marks where the branch and parent stem meet. (See Figs. 5.3.2 and 5.3.3).

4.6 branch collar: The swollen area at the base of a branch.

4.7 callus: Undifferentiated tissue formed by the cambium around a wound.

4.8 cambium: The dividing layer of cells that forms sapwood (xylem) to the inside and inner bark (phloem) to the outside.

4.9 clean: Selective pruning to remove one or more of the following non-beneficial parts: dead, diseased, and/or broken branches (7.2).

4.10 climbing spurs: Sharp, pointed devices strapped to a climber's lower legs used to assist in climbing trees. (syn.: gaffs, hooks, spurs, spikes, climbers)

4.11 closure: The process in a woody plant by which woundwood grows over a pruning cut or injury.

4.12 crown: Upper part of a tree, measured from the lowest branch, including all the branches and foliage.

4.13 decay: The degradation of woody tissue caused by microorganisms.

4.14 espalier: The combination of pruning, supporting, and training branches to orient a plant in one plane (6.5).

4.15 establishment: The point after planting when a tree's root system has grown sufficiently into the surrounding soil to support growth and anchor the tree.

4.16 facility: A structure or equipment used to deliver or provide protection for the delivery of an essential service, such as electricity or communications.

4.17 frond: A leaf structure of a palm.

4.18 heading: The reduction of a shoot, stem, or branch back to a bud or to a lateral branch not large enough to assume the terminal role.

- 4.19 interfering branches:** Crossing, rubbing, or upright branches that have the potential to damage tree structure and/or health.
- 4.20 internode:** The area between lateral branches or buds.
- 4.21 job briefing:** The communication of at least the following subjects for arboricultural operations: work specifications, hazards associated with the job, work procedures involved, special precautions, electrical hazards, job assignments, and personal protective equipment.
- 4.22 leader:** A dominant, typically upright, stem – usually the main trunk. There can be several leaders in one tree.
- 4.23 lion's tailing:** The removal of an excessive number of inner and/or lower lateral branches from parent branches. Lion's tailing is not an acceptable pruning practice (6.1.7).
- 4.24 live crown ratio:** Crown height relative to overall plant height.
- 4.25 mechanical pruning:** A pruning technique where large-scale power equipment is used to cut back branches (9.3.2).
- 4.26 method:** A procedure or process for achieving an objective.
- 4.27 peeling:** The removal of dead frond bases without damaging living trunk tissue at the point they make contact with the trunk. (syn.: shaving)
- 4.28 petiole:** A stalk of a leaf or frond.
- 4.29 pollarding:** Pruning method in which tree branches are initially headed and then reduced on a regular basis without disturbing the callus knob (6.6).
- 4.30 pruning:** The selective removal of plant parts to meet specific goals and objectives.
- 4.31 qualified line-clearance arborist:** An individual who, through related training and on-the-job experience, is familiar with the equipment and hazards in line clearance and has demonstrated the ability to perform the special techniques involved. This individual may or may not be currently employed by a line-clearance contractor.
- 4.32 qualified line-clearance arborist trainee:** An individual undergoing line-clearance training under the direct supervision of a qualified line-clearance arborist. In the course of such training, the trainee becomes familiar with the equipment and hazards in line clearance and demonstrates ability in the performance of the special techniques involved.
- 4.33 raise:** Pruning to provide vertical clearance (7.3).
- 4.34 reduce:** Pruning to decrease height and/or spread (7.4).
- 4.35 remote area:** As used in the utility pruning section of this standard, an unpopulated area.
- 4.36 restoration:** Pruning to redevelop structure, form, and appearance of topped or damaged trees (6.3).
- 4.37 rural area:** As used in the utility pruning section of this standard, a sparsely populated place away from large cities, suburbs, or towns but distinct from remote areas.
- 4.38 shall:** As used in this standard, denotes a mandatory requirement.
- 4.39 shoot:** Stem or branch and its leaves, especially when young.
- 4.40 should:** As used in this standard, denotes an advisory recommendation.
- 4.41 specifications:** A document stating a detailed, measurable plan or proposal for provision of a product or service.
- 4.42 sprouts:** New shoots originating from epicormic or adventitious buds, not to be confused with suckers. (syn.: watersprouts, epicormic shoots)
- 4.43 standard, ANSI A300:** The performance parameters established by industry consensus as a rule for the measure of extent, quality, quantity, value or weight used to write specifications.
- 4.44 stem:** A woody structure bearing buds, foliage, and giving rise to other stems.
- 4.45 structural pruning:** Pruning to improve branch architecture (6.2).

4.46 stub: Portion of a branch or stem remaining after an internodal cut or branch breakage.

4.47 subordination: Pruning to reduce the size and ensuing growth rate of a branch or leader in relation to other branches or leaders.

4.48 sucker: Shoot arising from the roots.

4.49 thin: pruning to reduce density of live branches (7.5).

4.50 throw line: A small, lightweight line with a weighted end used to position a climber's rope in a tree.

4.51 topping: Reduction of tree size using internodal cuts without regard to tree health or structural integrity. Topping is not an acceptable pruning practice (6.1.7).

4.52 tracing: The removal of loose, damaged tissue from in and around the wound.

4.53 trunk: The main woody part of a tree beginning at and including the trunk flare and extending up into the crown from which scaffold branches grow.

4.54 trunk flare: 1. The area at the base of the plant's trunk where it broadens to form roots. 2. The area of transition between the root system and trunk (syn.: root flare).

4.55 urban/residential areas: Populated areas including public and private property that are normally associated with human activity.

4.56 utility: A public or private entity that delivers a public service, such as electricity or communications.

4.57 utility space: The physical area occupied by a utility's facilities and the additional space required to ensure its operation.

4.58 vista/view prune: Pruning to enhance a specific view without jeopardizing the health of the tree (6.4).

4.59 wound: An opening that is created when the bark of a live branch or stem is cut, penetrated, damaged, or removed.

4.60 woundwood: Partially differentiated tissue responsible for closing wounds. Woundwood develops from callus associated with wounds.

5 Pruning practices

5.1 Tree inspection

5.1.1 An arborist or arborist trainee shall visually inspect each tree before beginning work.

5.1.2 If a condition is observed requiring attention beyond the original scope of the work, the condition should be reported to an immediate supervisor, the owner, or the person responsible for authorizing the work.

5.1.3 Job briefings shall be performed as outlined in ANSI Z133.1, subclause 3.1.4.

5.2 Tools and equipment

5.2.1 Equipment, tools, and work practices that damage living tissue and bark beyond the scope of normal work practices shall be avoided.

5.2.2 Climbing spurs shall not be used when entering and climbing trees for the purpose of pruning.

Exceptions:

- when branches are more than throw-line distance apart and there is no other means of climbing the tree;
- when the outer bark is thick enough to prevent damage to the inner bark and cambium;
- in remote or rural utility rights-of-way.

5.3 Pruning cuts

5.3.1 Pruning tools used in making pruning cuts shall be sharp.

5.3.2 A pruning cut that removes a branch at its point of origin shall be made close to the trunk or parent branch without cutting into the branch bark ridge or branch collar or leaving a stub (see Figure 5.3.2).

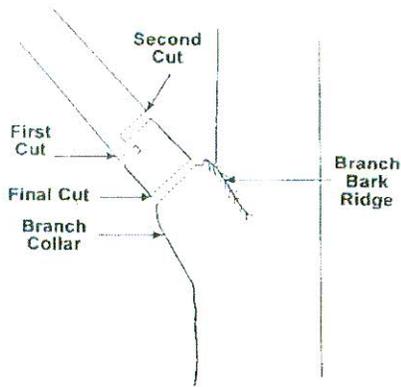


Figure 5.3.2. A cut that removes a branch at its point of origin. (See Annex A – Pruning cut guideline).

5.3.3 A pruning cut that reduces the length of a branch or parent stem shall be made at a slight downward angle relative to the remaining stem and not damage the remaining stem. Smaller cuts shall be preferred (see Fig. 5.3.3).

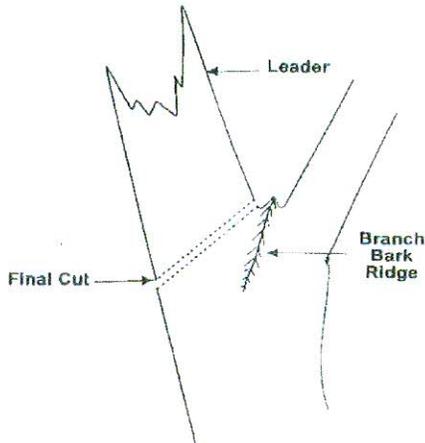


Figure 5.3.3. A cut that reduces the length of a branch or parent stem.

5.3.4 When pruning to a lateral, the remaining lateral branch should be large enough to assume the terminal role.

5.3.5 The final cut should result in a flat surface with adjacent bark firmly attached.

5.3.6 When removing a dead branch, the final cut shall be made just outside the collar of living tissue.

5.3.7 Tree branches shall be removed in such a manner so as to avoid damage to other parts of the tree or to other plants or property. Branches too large to support with one hand shall be precut to avoid splitting of the wood or tearing of the bark (see Figure 5.3.2). Where necessary, ropes or other equipment shall be used to lower large branches or portions of branches to the ground.

5.3.8 A cut that removes a branch with a narrow angle of attachment should be made from the outside of the branch to prevent damage to the parent branch (see Figure 5.3.8).

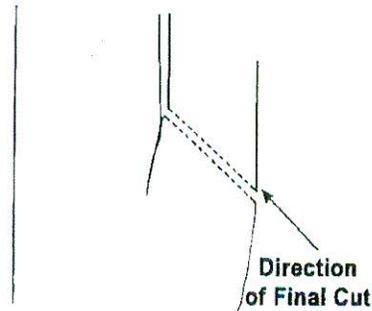


Figure 5.3.8. A cut that removes a branch with a narrow angle of attachment.

5.3.9 Severed branches shall be removed from the crown upon completion of the pruning, at times when the tree would be left unattended, or at the end of the workday.

5.4 Wound treatment

5.4.1 Wound treatments shall not be used to cover wounds or pruning cuts, except when necessary for disease, insect, mistletoe, or sprout control, or for cosmetic reasons.

5.4.2 Wound treatments that are damaging to tree tissues shall not be used.

5.4.3 When tracing wounds, only loose, damaged tissue shall be removed.

6 Pruning objectives

6.1 Pruning objectives shall be established prior to beginning any pruning operation.

6.1.1 Objectives should include, but are not limited to, one or more of the following:

- Risk reduction
- Manage health
- Clearance
- Structural improvement/correction
- View improvement/creation
- Aesthetic improvement
- Restoration

6.1.2 Established objectives should be specified in writing (See Annex B – *Specification writing guideline*).

6.1.3 To obtain the defined objective, the growth cycles, structure, species, and the extent of pruning to be performed shall be considered.

6.1.4 Not more than 25 percent of the foliage should be removed within an annual growing season. The percentage and distribution of foliage to be removed shall be adjusted according to the plant's species, age, health, and site.

6.1.5 When frequent excessive pruning is necessary for a tree to avoid conflicts with elements such as infrastructure, view, traffic, or utilities, removal or relocation of the tree shall be considered.

6.1.6 Pruning cuts should be made in accordance with section 5.3 *Pruning cuts*.

6.1.7 Topping and lion's tailing shall be considered unacceptable pruning practices for trees.

6.2 **Structural:** Structural pruning shall consist of selective pruning to improve tree and branch architecture primarily on young- and medium-aged trees.

6.2.1 Size and location of leaders or branches to be subordinated or removed should be specified.

6.2.2 Dominant leader(s) should be selected for development as appropriate.

6.2.3 Strong, properly spaced scaffold branch structure should be selected and maintained by reducing or removing others.

6.2.4 Temporary branches should be retained or reduced as appropriate.

6.2.5 Interfering, overextended, defective, weak, and poorly attached branches should be removed or reduced.

6.2.6 At planting, pruning should be limited to cleaning (7.2).

6.3 **Restoration:** Restoration shall consist of selective pruning to redevelop structure, form, and appearance of severely pruned, vandalized, or damaged trees.

6.3.1 Location in tree, size range of parts, and percentage of sprouts to be removed should be specified.

6.4 **Vista/view:** Vista/view pruning shall consist of the use of one or more pruning methods (types) to enhance a specific line of sight.

6.4.1 Pruning methods (types) shall be specified.

6.4.2 Size range of parts, location in tree, and percentage of foliage to be removed should be specified.

6.5 Espalier

6.5.1 Branches that extend outside the desired plane of growth shall be pruned or tied back.

6.5.2 Ties should be replaced as needed to prevent girdling the branches at the attachment site.

6.6 Pollarding

6.6.1 Consideration shall be given to the ability of the individual tree to respond to pollarding.

6.6.2 Management plans shall be made prior to the start of the pollarding process for routine removal of sprouts.

6.6.3 Heading cuts shall be made at specific locations to start the pollarding process. After the initial cuts are made, no additional heading cuts shall be made.

6.6.4 Sprouts growing from the cut ends of branches (knuckles) should be removed annually during the dormant season.

7 Pruning methods (types)

7.1 One or more of the following methods (types) shall be specified to achieve the objective.

7.2 **Clean:** Cleaning shall consist of pruning to remove one or more of the following non-beneficial parts: dead, diseased, and/or broken branches.

7.2.1 Location of parts to be removed shall be specified.

7.2.2 Size range of parts to be removed shall be specified.

7.3 **Raise:** Raising shall consist of pruning to provide vertical clearance.

7.3.1 Clearance distance shall be specified.

7.3.2 Location and size range of parts to be removed should be specified.

7.3.3 Live crown ratio should not be reduced to less than 50 percent.

7.4 **Reduce:** Reducing shall consist of pruning to decrease height and/or spread.

7.4.1 Consideration shall be given to the ability of a species to tolerate this type of pruning.

7.4.2 Location of parts to be removed or clearance requirements shall be specified.

7.4.3 Size of parts should be specified.

7.5 **Thin:** Thinning shall consist of selective pruning to reduce density of live branches.

7.5.1 Thinning should result in an even distribution of branches on individual branches and throughout the crown.

7.5.2 Not more than 25 percent of the crown should be removed within an annual growing season.

7.5.3 Location of parts to be removed shall be specified.

7.5.4 Percentage of foliage and size range of parts to be removed shall be specified.

8 Palm pruning

8.1 Palm pruning should be performed when fronds, fruit, or loose petioles may create a dangerous condition.

8.2 Live healthy fronds should not be removed.

8.3 Live, healthy fronds above horizontal shall not be removed. Exception: Palms encroaching on electric supply lines (see Fig. 8.3a and 8.3b).

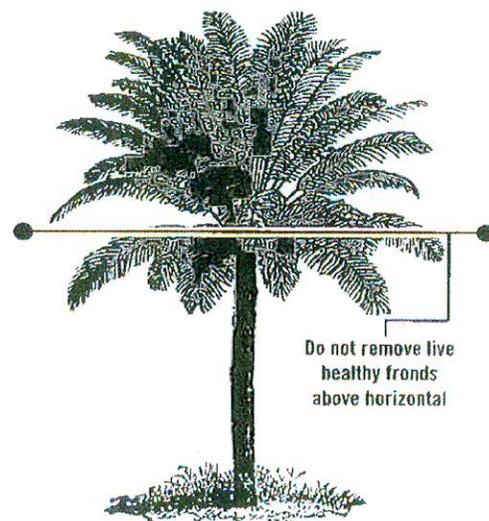


Figure 8.3a Frond removal location.

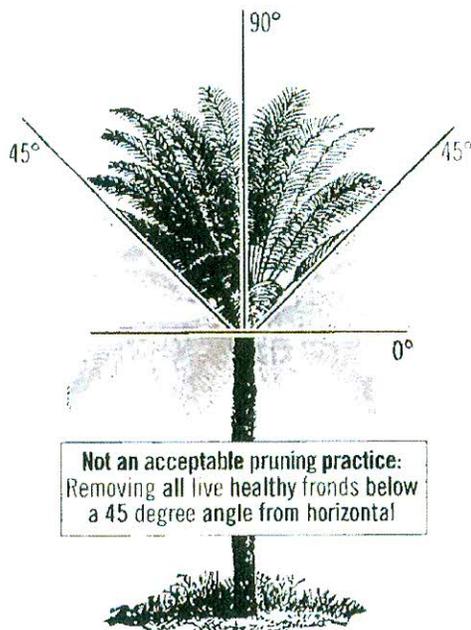


Figure 8.3b An overpruned palm (not an acceptable pruning practice).

8.4 Fronds removed should be severed close to the petiole base without damaging living trunk tissue.

8.5 Palm peeling (shaving) should consist of the removal of only the dead frond bases at the point they make contact with the trunk without damaging living trunk tissue.

9 Utility pruning

9.1 Purpose

The purpose of utility pruning is to prevent the loss of service, comply with mandated clearance laws, prevent damage to equipment, maintain access, and uphold the intended usage of the facility/utility space while adhering to accepted tree care performance standards.

9.2 General

9.2.1 Only a qualified line-clearance arborist or line-clearance arborist trainee shall be assigned to

line clearance work in accordance with ANSI Z133.1, 29 CFR 1910.331 – 335, 29 CFR 1910.268 or 29 CFR 1910.269.

9.2.2 Utility pruning operations are exempt from requirements in subclause 5.1, *Tree Inspection*, for conditions outside the utility pruning scope of work.

9.2.3 Job briefings shall be performed as outlined in ANSI Z133.1, subclause 3.1.4.

9.3 Utility crown reduction pruning

9.3.1 Urban/residential areas

9.3.1.1 Pruning cuts should be made in accordance with subclause 5.3, *Pruning cuts*. The following requirements and recommendations of 9.3.1.1 are repeated from subclause 5.3 *Pruning cuts*.

9.3.1.1.1 A pruning cut that removes a branch at its point of origin shall be made close to the trunk or parent branch, without cutting into the branch bark ridge or collar, or leaving a stub (see Figure 5.3.2).

9.3.1.1.2 A pruning cut that reduces the length of a branch or parent stem shall be made at a slight downward angle relative to the remaining stem and not damage the remaining stem. Smaller cuts shall be preferred (see Fig. 5.3.3).

9.3.1.1.3 The final cut shall result in a flat surface with adjacent bark firmly attached.

9.3.1.1.4 When removing a dead branch, the final cut shall be made just outside the collar of living tissue.

9.3.1.1.5 Tree branches shall be removed in such a manner so as not to cause damage to other parts of the tree or to other plants or property. Branches too large to support with one hand shall be precut to avoid splitting of the wood or tearing of the bark (see Figure 5.3.2). Where necessary, ropes or other equipment shall be used to lower large branches or portions of branches to the ground.

9.3.1.1.6 A cut that removes a branch with a narrow angle of attachment should be made from the outside of the branch to prevent damage to the parent branch (see Figure 5.3.8).

9.3.1.2 A minimum number of pruning cuts should be made to accomplish the purpose of facility/utility pruning. The structure and growth habit of the tree should be considered.

9.3.1.3 Trees directly under and growing into facility/utility spaces should be removed or pruned. Such pruning should be done by removing entire branches or leaders or by removing branches that have laterals growing into (or once pruned, will grow into) the facility/utility space.

9.3.1.4 Trees growing next to, and into or toward, facility/utility spaces should be pruned by reducing branches to laterals (5.3.3) to direct growth away from the utility space or by removing entire branches. Branches that, when cut, will produce sprouts that would grow into facilities and/or utility space should be removed.

9.3.1.5 Branches should be cut to laterals or the parent branch and not at a pre-established clearing limit. If clearance limits are established, pruning cuts should be made at laterals or parent branches outside the specified clearance zone.

9.3.2 Rural/remote locations – mechanical pruning

Cuts should be made close to the main stem, outside of the branch bark ridge and branch collar. Precautions should be taken to avoid stripping or tearing of bark or excessive wounding.

9.4 Emergency service restoration

During a utility-declared emergency, service must be restored as quickly as possible in accordance with ANSI Z133.1, 29 CFR 1910.331 – 335, 29 CFR 1910.268, or 29 CFR 1910.269. At such times, it may be necessary, because of safety and the urgency of service restoration, to deviate from the use of proper pruning techniques as defined in this standard. Following the emergency, corrective pruning should be done as necessary.

Annex A Pruning cut guideline

A-1 Three-cut method

Multiple cutting techniques exist for application of a three-cut method. A number of them may be used to implement an acceptable three-cut method.

A-1.1 The technique depicted in *Figure 5.3.2* demonstrates one example of a three-cut method that is common to hand-saw usage. It is not intended to depict all acceptable three-cut method techniques.

Annex B Specification writing guideline

A300 (Part 1)-2008 *Pruning* standards are performance standards, and shall not be used as job specifications. Job specifications should be clearly detailed and contain measurable criteria.

The words "should" and "shall" are both used when writing standards. The word "shall" is used when writing specifications.

Writing specifications can be simple or complex and can be written in a format that suits your company/the job. The specifications consist of two sections.

I. General:

This section contains all aspects of the work to be performed that needs to be documented, yet does not need to be detailed.

Saying under the General section that "all work shall be completed in compliance with A300 Standards" means the clauses covering safety, inspections, cuts, etc. will be adhered to. There is no need to write each and every clause into every job specification.

Other items that may be covered in the General section could be: work hours and dates, traffic issues, disposal criteria, etc.

The second section under Job Specifications would be:

II. Details:

This section provides the clear and measurable criteria; the deliverables to the client.

This section, to be written in compliance with A300 standards, shall contain the following information:

1. Objective – Clause 6

These objectives originate from/with the tree owner or manager. The arborist shall clearly state what is going to be done to achieve the objective(s).

Objectives can be written for the entire job or individual trees. Rarely can one or two words clearly convey an objective so that all parties involved (client, sales, crew, etc.) can visualize the outcome.

2. Method – Clause 7

Here the method(s) to be used to achieve the objective are stated. Again, depending on the type of job, this can be stated for the individual tree or a group of trees.

3. Location – Clause 7.2.1, 7.3.2, 7.4.2, 7.5.3

This is the location in the tree(s) that the work methods are to take place.

4. Density – Clause 7.3.1, 7.3.3, 7.5.1, 7.5.2, 7.5.4

This is the amount or volume of parts that are to be removed and can be stated exactly or in ranges.

5. Size – Clause 7.2.2, 7.3.2, 7.4.3, 7.5.4

This is the size or range of sizes of cut(s) utilized to remove the volume specified.

NOTE: Items # 4 & 5 are directly related to resource allocation, staffing and dollars.

SAMPLE PRUNING SPECIFICATIONS

#1. Scope: Large live oak on west side of pool

Objectives: Increase light penetration through east side of tree. Reduce risk potential of 1-inch-diameter branches falling.

Specifications: All broken branches and 1-inch-plus diameter dead branches shall be removed from the crown.

The three lowest 8-inch-plus diameter branches on the east side shall be thinned 25 percent with 1-inch- to 3-inch-diameter cuts.

NOTE: All work shall be completed in compliance with ANSI A300 and Z133.1 Standards.

Annex B Specification writing guideline

#2. **Scope:** 1 Arizona ash

Objective: Enhance structure/structural development.

Specifications: General:

All pruning shall be completed in compliance with A300 Standards.

Detail:

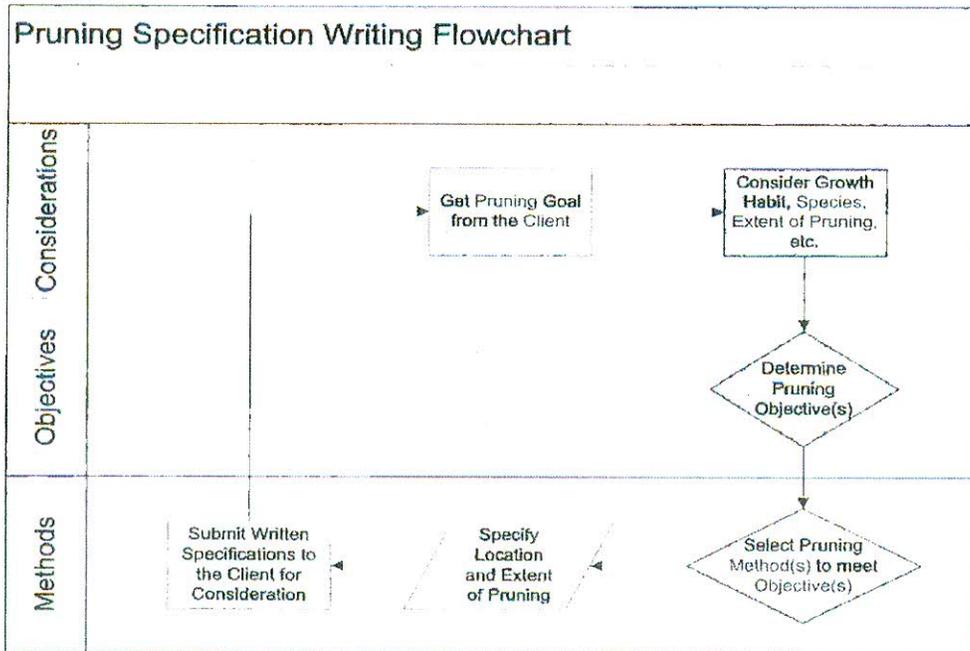
Thin crown 20-25 percent with 1-inch- to 4-inch-diameter cuts. Reduce west codominant leader by approximately 12 feet.

#3. **Scope:** Twenty-three newly installed evergreen elms

Objective: Maximize establishment – reduce nuisance while enhancing natural growth habit.

All work shall be completed in compliance with A300 Standards and the following specifications.

- Specifications:**
- Retain as much size as possible and 80-90 percent density of foliage.
 - Lowest permanent branch will be 6 feet above grade in four to five years.
 - Retain all sprout growth originating 18 inches above grade on trunk and 4 inches out from branch attachments throughout crown.
 - Remove weakest rubbing branches.
 - Remove dead branches.
 - Reduce broken branches or branches with dead ends back to live laterals or buds. Heading cuts can be used.
 - Maintain all growth originating between 1.5 feet(18 inches) and 6 feet 6 inches (78 inches) behind adjacent edge of walks. Heading cuts are OK.



Annex C

Applicable ANSI A300 interpretations

The following interpretations apply to Part 1 – *Pruning*:

C-1 Interpretation of "should" in ANSI A300 standards

"An advisory recommendation" is the common definition of "should" used in the standards development community and the common definition of "should" used in ANSI standards. An advisory notice is not a mandatory requirement. Advisory recommendations may not be followed when defensible reasons for non-compliance exist.

C-2 Interpretation of "shall" in ANSI A300 standards

"A mandatory requirement" is the common definition of "shall" used in the standards development community and the common definition of "shall" used in ANSI standards. A mandatory requirement is not optional and must be followed for ANSI A300 compliance.