

**For Tree Care Operations -
Tree, Shrub, and Other Woody Plant Maintenance
Standard Practices**

***(Management of trees and shrubs during site planning, site
development, and construction)***

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Foreword (This foreword will not be part of American National Standard A300 Part 5-200x)

An industry-consensus standard must have the input of the industry that it is intended to affect. The Accredited Standards Committee A300 was approved June 28, 1991. The committee includes representatives from the residential and commercial tree care industry, the utility, municipal, and federal sectors, the landscape and nursery industries, and other interested organizations. Representatives from varied geographic areas with broad knowledge and technical expertise contributed.

The A300 standards can be best placed in proper context if one reads the Scope, Purpose, and Application. If approved after the public comment period, this document will present performance standards for the care and maintenance of trees, shrubs, and other woody plants. If approved after the public comment period, this document will be used as a guide in the drafting of maintenance specifications for federal, state, municipal, and private authorities including property owners, property managers, and utilities.

The A300 standards stipulate that specifications for tree work should be written and administered by a professional possessing the technical competence to provide for, or supervise, the management of woody landscape plants. Users of these standards must first interpret wording, then apply their knowledge of growth habits of certain plant species in a given environment. In this manner, the users ultimately develop their own specifications for plant maintenance.

When approved, ANSI A300 Part 5 – *Management*, will be used in conjunction with the rest of the A300 standards when writing specifications for tree care operations.

There will be at least one public review period, scheduled for Summer 2003, after which the Part 5 draft may be submitted to ANSI by Accredited Standards Committee on Tree, Shrub, and Other Woody Plant Maintenance Operations - Standard Practices A300 (ASC A300). Committee approval of the standard will not necessarily imply that all committee members voted for its approval. At the time it distributed this draft, the ASC A300 had the following members:

Tim Johnson, Chair
(Artistic Arborist, Inc.)

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

Organizations Represented	Name of Representative
American Nursery and Landscape Association	Craig J. Regelbrugge
American Society of Consulting Arborists.....	Tom Mugridge
.....	Donald Zimar (Alt.)

<i>American Society of Landscape Architects</i>	<i>Ron Leighton</i>
<i>Asplundh Tree Expert Company</i>	<i>Geoff Kempter</i>
.....	<i>Peter Fengler (Alt.)</i>
<i>Associated Landscape Contractors of America</i>	<i>Preston Leyshon</i>
.....	<i>Debra Holder (Alt.)</i>
<i>Bartlett Tree Expert Company</i>	<i>Peter Becker</i>
.....	<i>Dr. Thomas Smiley (Alt.)</i>
<i>Davey Tree Expert Company</i>	<i>Joseph Tommasi</i>
.....	<i>Dick Jones (Alt.)</i>
<i>International Society of Arboriculture</i>	<i>Ed Brennan</i>
.....	<i>John Ball (Alt.)</i>
<i>National Park Service</i>	<i>Robert DeFeo</i>
.....	<i>Dr. James Sherald (Alt.)</i>
<i>Professional Grounds Management Society</i>	<i>Jennifer Gulick</i>
<i>Society of Municipal Arborists</i>	<i>Andrew Hillman</i>
.....	<i>Mike Dirksen (Alt.)</i>
<i>Tree Care Industry Association</i>	<i>James McGuire (Alt.)</i>
<i>U.S. Forest Service</i>	<i>Ed Macie</i>
.....	<i>Lisa Burban (Alt.)</i>
<i>Utility Arborist Association</i>	<i>Matthew Simons</i>

Additional organizations and individuals:

- American Forests (Observer)*
- Beth Palys (Observer)*
- Fred Deneke (Observer)*
- Peter Gerstenberger (Observer)*
- Professor Charles Moore (NFPA-780 Liaison)*
- Richard Rathjens (Observer)*
- Sharon Lilly (Observer)*

Clause 1 excerpted from ANSI A300 (Part 1)-2001 Pruning.

1 ANSI A300 standards

1.1 Scope

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

1.2 Purpose

ANSI A300 standards are intended as guides for federal, state, municipal and private authorities including property owners, property managers, and utilities in the drafting of their maintenance specifications.

1.3 Application

ANSI A300 standards shall apply to any person or entity engaged in the business, trade, or performance of repairing, maintaining, or preserving trees, shrubs, or other woody plants.

1.4 Implementation

Specifications for tree maintenance should be written and administered by an arborist.

50 Part 5 – Management of trees and shrubs during site planning, site development, and construction standards

50.1 Purpose

The purpose of this clause is to provide standards for developing specifications for the management of trees and shrubs during site planning, site development, and construction.

50.2 Reasons for management of trees and shrubs during site planning, site development, and construction

Trees are preserved during site planning and property development for a variety of reasons. Motivations for preserving trees are influenced by economic, social, environmental, and cultural factors. Trees are preserved for individuals or communities wishing to make the best use of their tree resources to further their ends. Managing trees during site planning, site development, and construction should maximize the benefits of trees.

50.3 Safety

50.3.1 Tree maintenance shall be performed only by arborists or arborist trainees.

50.3.2 Arborists working on construction sites shall follow appropriate safe work practices.

50.3.3 This standard shall not take precedence over arboricultural safe work practices.

50.3.4 Operations shall comply with applicable Occupational Safety and Health Administration (OSHA) standards, ANSI Z133.1, as well as state and local regulations.

51 Normative references

The following standards contain provisions that, through reference in this text, constitute provisions of this American National Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this American National Standard are encouraged to investigate the possibility of applying the most recent edition of the standards indicated below.

ANSI Z133.1, *for Arboricultural Operations – Pruning, Trimming, Repairing, Maintaining, and Removing Trees, and Cutting Brush – 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⁾

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

52 Definitions

52.1 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 ornamentals.

52.2 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 woody ornamentals. Such trainees shall be under the direct supervision of an arborist.

52.3 conservation (retention): The deliberate holding and protecting of existing forests, trees, shrubs, or plants during the development process

52.4 critical root zone: The minimum area of retained roots necessary for maintenance of tree health.

52.5 development impacts: Site development and building construction related actions that damage trees directly, such as severing roots and branches, or indirectly, such as soil compaction.

52.6 dripline: A boundary on the soil surface delineated by the branch spread of a single plant or group of plants.

52.7 root zone: The soil volume surrounding a plant containing the roots.

52.8 site survey: A map showing relevant, existing site features and vegetation on a site proposed for development.

52.9 suitability for conservation: A rating system that combines tree health and structure with species tolerance to development impacts.

52.10 tree:

52.11 tree inventory: A comprehensive list of individual trees providing descriptive information on all or a portion of the project area.

52.12 tree protection zone: An area to be retained and protected to maintain tree health.

52.13 tree protection zone barriers: Devices such as fencing, berms, or signage installed to limit access to tree protection zones.

52.14 tree removal (demolition): The cutting or removing of trees.

52.15 tree resource evaluation: A document or site plan describing the tree resources on the site, with information provided from an inventory or survey such as: tree species, size, location, condition, plant community, structure, health, and population estimate.

52.16 tree survey: A description of trees within all or a portion of the project area based on defined criteria, such as representative sampling or tree size.

53 Management of trees and shrubs during site planning, site development, and construction practices

53.1 Management of trees and shrubs during site planning, site development, and construction objectives

The objective of tree management is to conserve tree and shrub resources during site planning, construction, and post-construction maintenance phases of development so that these resources integrate with site development.

53.2 General

53.2.1 Tree maintenance should be performed by an arborist.

53.2.2 Tree management plans shall be in compliance with applicable ordinances, rules, and regulations.

53.3 Planning phase

A site survey should be made showing all relevant features. The site survey should include a tree resource evaluation.

53.3.1 Tree resource evaluation scope

53.3.1.1 An arborist or other qualified person shall complete the tree resource evaluation.

53.3.1.2 The scope of the tree resource evaluation shall be established.

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

53.3.2 Suitability for conservation

Suitability ratings should be assigned (See **Annex A**).

53.4 Design phase

53.4.1 A tree management report should be developed.

53.4.2 The tree management report should include an evaluation of impacts on trees and shrubs from proposed site development and construction (See **Annex A**).

53.4.3 Implementation of tree conservation recommendations

53.4.3.1 Tree maintenance should be performed by an arborist.

53.4.3.2 Tree conservation plans should be documented in the site development plans. Documentation should include:

- A.** all trees to be preserved denoted by inventory/survey number or symbol;
- B.** tree protection zone of trees to be preserved (not represented by generic circle);
- C.** tree protection zone barrier location;
- D.** location of soil erosion control practices;
- E.** location of staging areas for demolition and grading equipment, field offices, material storage, and debris processing;
- F.** location of underground utilities; and,
- G.** other on-site activities and specific factors that potentially impact tree protection zones.

53.4.3.3 The tree conservation recommendations should be implemented. Consequences for non-compliance should be specified.

53.4.3.4 Demolition plans should detail all relevant site features.

53.4.3.5 Demolition plans should denote all trees to be preserved and removed.

53.5 On site pre-construction phase

53.5.1 Tree protection specifications and goals shall be communicated to those implementing the plans.

53.5.2 Tree protection zone barrier(s) should be installed prior to site work.

53.5.3 The tree removal contractor should not damage trees scheduled for conservation.

53.6 On-site construction phase

53.6.1 Implementation of the recommendations should be monitored by an arborist.

53.6.2 Compliance should be documented and reported.

53.6.3 In the event of damage to barriers and/or trees, remedial measures should be recommended.

53.6.4 Tree health should be monitored.

53.7 Post-construction phase

53.7.1 Tree conservation recommendations should be revised if the construction activity has significantly altered tree health and maintenance needs.

53.7.2 Tree health should be monitored.

53.7.3 Long-term tree maintenance specifications should be implemented.

Annex A – Management information

A-1 Some factors to consider when evaluating suitability for conservation:

A-1.1 Tree health

Healthy, vigorous trees are better able to tolerate impacts such as root injury, demolition of existing structures, changes in soil grade and moisture, and soil compaction than are non-vigorous trees.

A-1.2 Structural integrity

Trees with significant amounts of wood decay and other structural defects that cannot be corrected are likely to fail. Such trees should not be preserved in areas where damage to people or property is likely.

A-1.3 Species response

There is a wide variation in the response of individual species to construction impacts and changes in the environment. In our experience, for example, walnuts are sensitive to construction impacts, while coast live oak is tolerant of site disturbance.

A-1.4 Tree age and longevity

Old trees, while having significant emotional and aesthetic appeal, have limited physiological capacity to adjust to an altered environment. Young trees are better able to generate new tissue and respond to change. *Example: The potential longevity of the Monterey pine is low because of the mature age and infection with pitch canker.*

A-2 Example of suitability ratings

A-2.1 Good: These are trees with good health and structural stability that have the potential for longevity at the site.

A-2.2 Moderate: Trees in this category have fair health and/or structural defects that may be abated with treatment. Trees in this category require more intense management and monitoring, and may have shorter life-spans than those in the “good” category.

A-2.3 Poor: Trees in this category are in poor health or have significant defects in structure that cannot be abated with treatment. These trees can be expected to decline regardless of management. The species or individual tree may possess either characteristics that are undesirable in landscape settings or be unsuited for use areas.

A-3: The tree management report should include:

- A.** tree locations shown on the land survey;

- B.** description of the applicable tree population (for example, species and condition distribution);
- C.** suitability for conservation ratings (Good, Moderate, Poor);
- D.** limits of construction, including demolition, grading and drainage, site and utility construction and landscape plan;
- E.** evaluation of effects to trees;
- F.** notes on the proximity of trees to existing and proposed structures, roads, utilities, etc.;
- G.** recommendations for retention/removal (see 53.4.2);
- H.** recommendations for design changes (see 53.4.2);
- I.** tree conservation recommendations and specifications (see 53.4.2); and,
- J.** post-construction recommendations and specifications.