Example Tree Risk Specification for Municipalities or Arborists

[Note: Annotations in blue indicate sections that need editing; the entire specification must be written specifically for the organizations (i.e. tree owner or controlling authority, and arborist or firm making the risk assessment) identified in section 93.1. Right margin numbers (e.g. [93.5] are a reference to the Standard section and may be removed if desired in your final specification.]

Urban Tree Risk Assessment Specifications [Title/Intent]

These specifications conform to ***ANSI A300 (Part 9)-2011 Tree Risk Assessment; a. Tree Structure Assessment***[1] standard and have been prepared by/for **<place municipality or arboricultural firm name here>**.

Purpose

These specifications define the context and scope of the urban tree risk assessments that **<place municipality or consulting firm name here>** is conducting under: **<add specific RFB, RFP, or contract here>**.

Definitions

This specification adopts the definitions of the ***ANSI A300 (Part 9)-2011 Tree Risk Assessment; a. Tree Structure Assessment*** standard and additionally:

DBH .....Diameter at Breast Height (4.5 feet above groundline) as commonly measured by arboricultural standards.

Improved property.....property that undergoes regular maintenance (i.e. infrastructure maintenance, tree and other landscape maintenance, e.g. mowing, brush/weed control).

Mitigation.....activities designed to reduce or eliminate risks to persons or property or to lessen the actual or potential effects or consequences of an incident[2].

Private tree(s) .....tree(s) growing on privately-owned parcels and legally maintained by the private land-owner.

Public tree(s) .....tree(s) growing on publicly-owned land and legally maintained by the controlling authority.

[1] See http://www.treecareindustry.org/standards/AboutANSI.htm or http://secure.isa-arbor.com/webstore/Standards-and-Practices-C21.aspx

[2] Modified from FEMA; http://training.fema.gov/EMIWEB/IS/ICSResource/ICSResCntr_Glossary.htm

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<definition> .....<add/delete definitions as needed>

Organizational context [93.1]

<place municipality name here> is an incorporated city/county in the state of **<state name>**. The municipality (i.e. controlling authority) is requesting professional tree risk assessments within a designated area **<should describe area or reference attached map in RFB, RFP, or contract>** to meet specific management objectives. **<should list specific objectives here>**

…or…

<place arboricultural firm name here> is a corporation in the state of **<state name>** and employees Certified Arborists that are specifically trained to assess urban tree risk for a variety of clients. This specification has been specifically written for **<place municipality name here>** to meet their risk management objectives outlined in: **<add specific RFB, RFP, or contract here>**.

Tree risk assessment objectives [93.1]

The objective of this urban tree risk assessment is to identify the risk that trees pose to people and property on publicly managed land (i.e. parks, rights-of-way, public buildings, etc) in areas designated by the controlling authority (i.e. municipal arborist, urban forester, etc), and to make professional recommendations to mitigate that risk.

Professional credentials [93.2]

The **<place municipality name here>** requires that arborists assessing tree structure and failure potential shall hold the designation Certified Arborist[4] and have completed tree risk training through a hands-on workshop or other form of continuing education via webinar, interactive CD courseware, or

[3] Numbers in brackets on the right-hand side of the page refer to the section in the ANSI A300 (Part 9)-2011 Tree Risk Assessment; a. Tree Structure Assessment.
[4] International Society of Arborists, Champaign, Illinois

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other e-Learning course that earns ISA CEU credits. Arborists assessing tree risk shall be under the direct supervision of a Certified Arborist with tree risk training as indicated above plus have at least **<years>** of risk assessment field experience following that qualification. **[93.2.1]**

…or…

The **<place arboricultural firm name here>** employs arborists that hold the designation Certified Arborist and have completed tree risk training through a hands-on workshop or other form of continuing education via webinar, interactive CD courseware, or other e-Learning course that earns ISA CEU credits. These urban tree risk assessment arborists are under the direct supervision of a Certified Arborist with tree risk training as indicated above and also has **<years>** of risk assessment field experience following that qualification. **[93.2.1]**

Scope of work **[93.3]**

The arborist(s) shall perform tree risk assessments only on those trees specifically identified in this scope of work.

Tree risk assessments shall be conducted on trees that: **[93.3.1]**

- are within the boundaries designated by the controlling authority **<attach map>**,
- on improved public property, **OR** on the rights-of-way adjacent to that improved public property. **OR** where defective trees can potentially impact the improved public property,
- and, represent a risk to that improved, public property.
- **<add additional description as needed>**

To help the controlling authority prioritize mitigation efforts, the arborist shall use an assessment protocol as described by Matheny and Clark (1994) **<or use other assessment protocol>** that includes:

- identification of the likelihood of potential targets as infrequent (1), occasional (2), frequent (3), and constant (4), [Note: can also be none (0)]

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- classification of the size of the part of the tree that is likely to fail into four size classes as 2 to 2.9 inches diameter (1), 3 to 5.9 inches diameter (2), 6 to 15.9 inches diameter (3), or greater than or equal to 16 inches diameter (4), **<replace with your requirements>**
- evaluation of the probability of failure of that part as low (1), possible (2), likely (3), or imminent (4).

The arborist shall make mitigation recommendations based on these observations. **[93.3.2]**

Levels of tree risk assessment <only list those levels required for this specific RFB, RFP, or contract > **[93.4]**

Two levels of risk assessments will be used by the arborist, depending on the tree.

Level 1: **[93.4.2.1]**

For trees on public or private property that **can not** be accessed legally and/or safely and that have obvious defects, a Level 1 inspection may be done:

- only on that portion of the tree's stem and crown that is easily visible from the ground,
- only on that portion that is easily visible from safe and legal vantage points,
- using the assessment methodology as outlined in Scope of Work.

Because of the limited ability in viewing all portions of the damaged-tree using level 1 assessments, risk ratings may not reflect the true risk associated with the tree.

Level 2: **[93.4.2.2]**

For trees on public or private property that **can** be accessed legally **and** safely, a level 2 inspection shall be required that includes:

- ground-based visual inspection
- a 360-degree inspection
- inspection of the tree crown, trunk, trunk flare, above-ground roots, and site conditions around the tree to identify broken or damaged limbs, split trunk, damaged crown,

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disturbed root plate, and/or other visible tree defect known to be associated with failure,

- lean assessment (single point in time),
- evaluation of target risk (see section **93.5**),
- identifying defects that could potentially impact people, physical assets (e.g. vehicles, buildings), or infrastructure (e.g. sidewalks, pavement) on public or private property.
- using the assessment methodology as outlined in Scope of Work.

No additional tools shall be required for Level 1 or Level 2 inspections; however, optional tools may be used. The arborist shall not be required to perform a higher level of assessment than what is specified by the scope of work.

Level 3: **[93.4.2.2]**

For trees on public or private property that **can** be accessed legally **and** safely, and **<add clarification here for trees assessed with this method if both Level 2 and 3 are defined in your speciation>** a level 3 inspection shall be required that includes:

- ground-based visual inspection
- a 360-degree inspection
- inspection of the tree crown, trunk, trunk flare, above-ground roots, and site conditions around the tree to identify broken or damaged limbs, split trunk, damaged crown, disturbed root plate, and/or other visible tree defect known to be associated with failure,

  One or more of the following assessment methods shall also be used by the inspecting arborist:

  - drilling with a small diameter bit with sufficient length (e.g. 12”) to detect interior decay in structural roots and lower trunk,

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- lean assessment (single point in time or over an extended period if deemed necessary),
- evaluation of target risk, (see section **93.5**)
- probing into open cavities to determine extent of decay,
- sounding of structural roots and lower trunk to detect decay, cavities, or loose bark.

- identifying defects that could potentially impact people, physical assets (e.g. vehicles, buildings), or infrastructure (e.g. sidewalks, pavement) on public or private property.
- using the assessment methodology as outlined in Scope of Work.

Target identification **[93.5]**

Because the arborist only assesses trees as outlined in the Scope of Work above, it is assumed that all trees assessed will have a target. The arborist shall determine the type of target (i.e. infrequent, occasional, frequent, or constant) within the likely striking distance of the specified tree or tree part.

Risk analysis and reporting **[93.6]**

The assessment data shall include the tree species or genus, diameter at breast height, latitude and longitude, cumulative risk rating score for each tree based on target, size of part, and probability of failure, and risk mitigation recommendation. **[93.6.1]**

Written report **[93.6.2]**

A written report shall be provided by the **<place arboricultural firm name here>** (i.e. arborist) to the controlling authority (i.e. client) that will include a description of the methods used, identification and location of each tree inspected within the scope of work, the tree risk assessment data, the cumulative risk rating score based on those data, and risk mitigation recommendations.

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Risk advisories **[93.6.2.1.1]**

Regardless of tree care action recommended or taken (except removal), some residual tree risk will remain following mitigation. Only when the tree is removed will all potential structure and stability concerns associated with the tree be eliminated. **[93.6.2.1.2]**

Owner determination **[93.6.4]**

It shall be the responsibility of the controlling authority to schedule additional inspections as recommended by **<place arboricultural firm name here>**, determine other actions needed, and implement mitigation recommendations. **[93.6.4.1]**

Literature cited

ANSI A300 (Part 9)-2011 Tree Risk Assessment; a. Tree Structure Assessment, Tree Care Industry Association, Inc. As of July 6, 2011 <http://www.tcia.org/index.aspx>

Matheny, N.P. and Clark, J.R. (1994). A Photographic Guide to the Evaluation of Hazard Trees in Urban Areas (2nd Edition). International Society of Arboriculture, Champaign, IL, pp. 55-57.

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