

APPENDIX P

SAFE PRACTICES FOR ROPE ACCESS WORK

1. REFERENCES.

- a. Society of Professional Rope Access Technicians – Safe Practices for Rope Access Work.
- b. Determination of Rope Access and Work Positioning Techniques in Arboriculture.

2. DEFINITIONS.

- a. **Competent Person (CP) for Rope Access:** A person with the training, skills, experience and qualifications necessary to assume responsibility for the entire rope access work site, including management and guidance of other Rope Access Technicians on the worksite, who is capable of designing, analyzing, evaluating and specifying rope access systems, and who has the knowledge and experience to direct rescue operations from rope access systems, as well as the skills necessary to perform advanced rescue from rope access systems.
- b. **Rope Access Worker:** A person with the appropriate training, skills, and qualifications for performing, under the direct supervision of the CP for Rope Access Lead Technician or Supervisor, standard rope access operations and, at a minimum, has the skills necessary to perform limited rescue from rope access systems.

3. CLIMBING EQUIPMENT.

- a. Ropes: Used as working line and safety lines, shall be made of synthetic fiber with a nominal breaking strength of at least 5400 lbs when new. Additionally, elasticity (elongation) shall be limited to 7% with a load of 540 lbs applied.

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b. Carabineers and snap hooks: Carabineers and snap hooks used for climbing (life support) shall have at least two consecutive, deliberate actions to prepare the gate for opening and shall be rated at 5,000 lbs (22.2kN) and shall meet ANSI Z359.1 standard. Gates shall be rated at 3600 lbs (16kN). Rope snaps and snap hooks shall be self closing and self locking. The use of rope thimbles when attaching rope snaps is recommended to prevent rope fraying.

c. Pulleys/Rope Sleeves: Anti-friction devices are also recommended to prevent rope damage.

d. Rope Blocks/Brakes: Can be used to make the work safer and requires less hands to control heavy loads. When handling limb removal ropes, ground personnel should not wrap the rope around their hands or waist and keep the rope away from their feet to prevent entanglement.

e. Climbers PPE: Appropriate footwear (i.e., climbing boots with safety toes), long pants, work shirt with a minimum 4 in (10.2 cm) sleeve length, eye protection, face shield, hearing protection during chain saw usage, hard hat with chin strap or approved climbers helmet, and fingerless gloves such as mechanics gloves. When the air temperature exceeds 85 °F (29 °C), climbers shall carry a water supply with them.

f. All equipment shall be inspected prior to use and maintained and used in accordance with manufacturer instructions.

g. Employees shall be properly trained in the use of all equipment.

h. Climbing ropes shall not be used to lower limbs or raise equipment.

i. Sharp tools such as hand saws shall be sheathed when not in use.

j. Tools used for de-barking, cavity work, cabling, bark tracing, shall be carried in a bag or belt designed for such use, and not carried in pockets or placed in boots.

k. Climbers Saddle: Climbers belts/saddles are only meant to be used as suspension scaffold/equipment. In addition to saddle a fall arrest system is required. Belts shall be equipped with leg straps or seats to take pressure off climbers back.

l. Climbing ropes shall not be spliced to effect repair.

m. Ropes shall be coiled and piled, or shall be suspended, so that air can circulate through the coils to aid in drying.

n. Wet ropes shall not be used for electrical work.

o. Ropes shall be inspected before and after each use.

p. If descender devices are used, they shall allow controlled descent, considering weight of worker, length of descent, considerations for safety and need for stopping along working line for purpose of hands-free work.

4. GENERAL PRACTICES.

a. Safety, Secondary, Belay or Backup Line(s).

(1) Safety, Secondary, Belay or Backup line(s) or other appropriate fall arrest devices shall be used in addition to the main line unless the employer can demonstrate that the second line or other fall arrest devices would create a greater hazard or otherwise would not be feasible (See tree climbing exceptions in P.4.a.(2) below).

(2) Safety, Secondary, Belay or Backup line(s) shall not be used alone for tree climbing. The use of a secondary line may pose additional risks and increased difficulties. Careful consideration to the impact of secondary line use should be

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considered before making a decision on use in tree climbing operations.

(3) Where a safety line is used in conjunction with the main line, each line shall have its own separate anchor and shall be separately fixed to the worker's harness. This does not preclude both lines being attached to a single harness attachment point.

(4) The safety line shall be connected to the dorsal D-ring of the full body harness.

(5) When using safety line, the maximum free-fall distance shall not exceed 6 ft (1.8 m) and the maximum arrest force shall not exceed 1,800 lbs (8 kN).

b. Employer shall insure that anchors have been evaluated in order to ensure that overall system safety factors can be met.

c. Before adopting rope access techniques for a particular job, the contractor shall perform a risk assessment and develop a written AHA, and submit to GDA for acceptance. It would include consideration of the various rope access alternatives available and their respective access advantages and hazards. In particular, attention shall be given to the following aspects:

(1) Ability of the suspended person to safely use materials, equipment or tools necessary for the work and whether the reaction from any tool may place the person at risk;

(2) Whether the work may loosen material which could become a hazard to the worker or others;

(3) Whether the time required for the work at any one location will be such that there may be unacceptable levels of risk;

(4) Whether it would be possible to quickly rescue workers that are using rope access techniques from any position they could be expected to enter.

d. The contractor shall make provision for prompt rescue or self rescue and for emergency services.

e. The Rope Access Worker shall:

(1) Have a working understanding of the employer's rope access program and all applicable policy and procedures.

(2) Adjust, inspect, maintain, care for, and properly store rope access equipment.

(3) Inspect and verify the integrity of anchor systems and components.

(4) Recognize worksite hazards and notify the Rope Access Supervisor of any such hazards.

(5) Be capable of identifying work zones and job hazard analyses.

(6) Understand and communicate any written or verbal warnings.

(7) Be familiar with rescue procedures and systems used by the employer, and assist in the performance of rescue from rope access systems.

(8) Utilize appropriate personal protective equipment as designated by the Rope Access Supervisor.

(9) Follow the CP for Rope Access or, where appropriate pursuant to the requirements of the Safe Practices Document, the Rope Access Lead Technician's directions regarding the work to be performed.

(10) Notify the CP for Rope Access if assigned a task or responsibility beyond the Rope Access Worker's training, skills, qualifications, or experience.

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