

ATTACHMENT 1 - TAMPA ELECTRIC COMPANY

TRANSMISSION AND DISTRIBUTION LINE CLEARANCE WORK SPECIFICATIONS

REVISION 04/04/2017

1.0 SCOPE

- 1.1 These specifications address the line clearance activities utilized in managing vegetation over, under and adjacent to Tampa Electric's distribution and transmission facilities ("Facilities").
- 1.2 In instances where the distribution facilities have overbuilt transmission facilities, Contractor shall also trim the transmission facilities, to the extent that the vegetation can be reached with a conventional aerial lift used in the distribution maintenance.

2.0 GENERAL OPERATING SPECIFICATIONS

- 2.1 Tampa Electric shall designate a line clearance (LC) arborist, who shall be available to address day-to-day aspects of coordinating the overall line clearance operation.
- 2.2 Contractor understands that transmission and distribution circuits are intended to continue normal operations at all times, and Contractor shall carefully guard against interfering with the normal operation of each circuit.
- 2.3 Contractor shall designate a solely dedicated single point of contact Account Manager to oversee the Work as well as General Foreman training and performance. Contractor shall designate a General Foreman who is to be readily available for crew inspections, progress updates, and problem resolution.
- 2.4 Contractor shall be available to support crew call-out requests made by Tampa Electric in support of power restoration or related activities. This will require periodic mandatory overtime conditions during periods of inclement weather.
- 2.5 Contractor shall be responsible for assuring that all line clearance activities are performed on the correct circuits.
- 2.6 Contractor shall be required to provide twenty-four (24) hour written advance notice to Tampa Electric prior to conducting activities unrelated to the Work when conducted during billable business hours. Activities include, but are not limited to, equipment assessments, management and safety inspections, and training exercises.

3.0 GENERAL NOTIFICATION GUIDELINES

- 3.1 Tampa Electric shall provide door hangers for the purpose of notification of customers of the intent to perform line clearance maintenance activities.
- 3.2 Notification shall be by direct customer contact or by leaving a notification card/door hanger.
- 3.3 Notification is the responsibility of the General Foreman.
- 3.4 In conjunction with placement of the door hanger, the following information is to be recorded on the notification log.

A. The address where the door hanger was placed.

B. The date the door hanger was placed.

- C. The Work required to be completed at that address, including the number and species of trees to be trimmed or removed.
- 3.5 On properties where only trimming is needed to clear Facilities, this notification shall serve as notice of Tampa Electric's intent to perform the trimming.
- 3.6 On properties where tree and/or brush removal is required to complete the maintenance activity, Contractor shall be required to secure the necessary permission of the property owners or their authorized agents prior to removing and/or chemically treating any trees or brush, unless such consent has been obtained by Tampa Electric and furnished to Contractor in writing.
- 3.7 Contractor shall reconcile any and all customer complaints and/or concerns from property owners, their agents or public agents in a reasonable period of time while meeting Tampa Electric and customer expectations. Each event shall be documented and submitted to Tampa Electric.
- 3.8 Prior to beginning Work on any property, Contractor shall attempt to make contact with the property owner to provide notification that the crew is there to complete the required line clearance maintenance activity. Should the property owner not be home the crew shall nevertheless complete the Work as noted on the notification log.
- 3.9 Upon completion of the Work, Contractor shall complete the notification log noting the date worked and the description of the Work completed, including the number and species of trees trimmed and/or removed.
- 3.10 Upon completion of the circuit the completed notification log shall be submitted to Tampa Electric along with all other documentation associated with the line clearance maintenance activities performed on that circuit.
- 4.0 TREE TRIMMING AND REMOVAL SPECIFICATIONS
- 4.1 The Work shall be performed so as to be in compliance with all Occupational Safety and Health Act ("OSHA") standards and American National Standards Institute ("ANSI") standards governing the Work described within these specifications. These include but are not limited to: National Electric Safety Code ("NESC") Section 21 Part 2 Rule 218, ANSI pruning standards A300 Part 1, Part 7 & Z-133 as well as the special companion publication, Best Management Practices - Utility Pruning of Trees.
- 4.2 The Contractor shall remain in compliance with all other Federal, State and Municipal rules, regulations, and ordinances governing the Work described within these specifications.
- 4.3 Every effort shall be made to eliminate all weak, diseased, or dead limbs which may fall onto or be blown into power lines.
- 4.4 Every effort shall be made to remove hazard trees, which is defined as a dead, damaged, or diseased trees which may fall onto or be blown into power lines.
- 4.5 All hangers and severed limbs that interfere with power lines, or are a result of trimming, shall be removed from trees.
- 4.6 Vines growing on Facilities shall be cut at ground level and as high up the pole as can practically and safely be reached; after which they shall be chemically treated to prevent re-growth. Vines should not be cut at conductor level.
- 4.7 Every effort shall be made to regain and/or improve the quality of clearance obtained from the last time the Facilities were trimmed

- A. Recommended clearance, immediately following trimming, for 69kV lines should be approximately 15 feet from being beneath or adjacent to transmission conductors.
 - B. Recommended clearance, immediately following trimming, for 138kV lines should be approximately 25 feet from being beneath or adjacent to transmission conductors.
 - C. Recommended clearance, immediately following trimming, for 230kV lines should be approximately 30 feet for off-road facilities and 25 feet for roadside facilities from beneath and adjacent to transmission conductors, except in areas where this specification cannot be achieved due to restricting factors such as easement rights, railroad rights-of-way, road rights-of-way, governmental ordinances, or height of conductors. Any such areas are to be cleared to the maximum possible. In all areas where the previous clearance distance exceeds the above specification, all efforts should be made to "clear to the established transmission right-of-way edge." The goal is to maintain a minimum of three years of effective clearance on transmission facilities. Clearance is dependent upon tree species, tree health, and tree location in relation to conductors, soil type and the cooperation of the property owner.
 - D. Recommended clearance, immediately following trimming for distribution primary lines should be approximately 10 feet from beneath and adjacent to conductors.
 - E. Recommended clearance, immediately following trimming for open secondary lines should be approximately 6 feet from beneath and adjacent to conductors.
 - F. Recommended clearance, immediately following trimming for cabled secondary lines, service lines, light wires, span guys, and miscellaneous attachments should be approximately 3 feet. This clearance is to be determined on site by Contractor Supervision while considering the mechanical strain on the lines or equipment involved.
 - G. All overhang shall be removed from above transmission lines. Recommended clearance, immediately following trimming for distribution primary overhang, should be approximately 15 feet. Exceptions may be made as approved in writing by Tampa Electric.
- 4.8 When trimming or removal involves black cherry, every precaution shall be taken to eliminate the possibility of livestock being poisoned by eating such brush or leaves.
 - 4.9 Brush and debris shall be handled in such a manner as to avoid obstructing roads, sidewalks, trails, driveways, or waterways.
 - 4.10 Branches, brush, and debris resulting from the trimming shall be collected and disposed of in suitable disposal areas. The premises of the property owner shall be left as neat as they were before the Work started.
 - 4.11 No wood or chips are to be left within jurisdictional wetland areas, where such action could constitute a dredge and fill violation.
 - 4.12 Trees not trimmed or removed in accordance with these specifications shall be properly trimmed, at the Contractor's expense within fourteen (14) calendar days of receiving written notice from Tampa Electric's LC arborist.
 - 4.13 For purposes of this Specification, a tree shall be identified as having a minimum diameter at breast height ("d.b.h.") (diameter 4.5 feet above ground) of 4 inches. Vegetation smaller than this shall be referred to as "brush" and shall be quantified in increments of one linear foot, twenty feet wide.

- 4.14 Citrus and mangrove shall be trimmed and debris disposed of in accordance with current regulations governing such activities.
- 4.15 Unless otherwise specified in writing by Tampa Electric, Contractor shall make every reasonable effort to remove trees and brush, falling within the following categories:
- A. All trees less than 10 inches d.b.h. within 10 feet of the vertical plane of the outside conductors.
 - B. All brush less than 4 inches d.b.h. within 10 feet of the vertical plane of the outside conductors.
 - C. Dead, damaged, or diseased trees ("hazard trees") which constitute a hazard to the conductors.
 - D. Trees that are unsightly as a result of necessary trimming and have no potential for future development into a viable, mature tree.
 - E. Fast growing, softwood or "weed" species that have no aesthetic value or are located within the boundaries.
- 4.16 All stumps shall be cut within 2 inches of the existing ground line, except where alternative written instructions are given by the property owner or Tampa Electric.
- 4.17 All cut stumps are to be treated with an approved cut stump treatment, to inhibit sprouting.
- 4.18 All mechanically operated electrical devices shall be cleared of vegetation from ground to sky to ensure personnel can safely operate the device from the ground position. Mechanically operated electrical devices include, but are not limited to, transformers, fuses, switches, capacitor banks, oil circuit reclosers (OCRs) and automatic circuit reclosers (ACRs), etc.
- 4.19 Every effort shall be made to clear poles of any and all vegetation for a distance of five (5) feet.
- 5.0 CHEMICAL APPLICATION SPECIFICATIONS
- 5.1 Contractor shall furnish, handle, store, and apply all chemicals and shall secure only branded products from reliable manufacturers.
- 5.2 Contractor shall mix and apply all chemicals in accordance with the recommendations of the manufacturer label.
- 5.3 Contractor shall not be obligated to apply any chemical on a property or right-of-way where damage to crops, groves, ornamental plants or trees adjacent to the right-of-way may result from chemical drift or run-off.
- 5.4 Contractor shall be licensed in the State of Florida and shall be capable of training employees in the safe storage, handling, and use of any and all types of industrial herbicides.