



Highlights of the New ANSI A300 (Part 4) Standard for Lightning Protection Systems for Trees

Lightning protection systems and standards for tree lightning protection have been in existence since the early 1900's. Up until recently, the Tree Care Industry Association (formerly NAA) has published their own standard for system installation. Their most recent standard has been in effect since 1987 and is based on standards issued by the Lightning Protection Institute and the National Fire Protection Association.

In August 2002, TCIA adopted the American National Standards Institute (ANSI) A300 standard (Part 4). A complete copy of the standard is available for purchase by contacting the TCIA office at 800-733-2622.

Following are some of the major differences between the former standard of TCIA and the newly adopted ANSI A300 standard. IPC offers both options to you when tree systems are estimated.

Former TCIA (NAA) Standards Based on LPI/NFPA Standards	IPC Part #	New TCIA Adoption ANSI A300 Standards	IPC Part #
Cable for Main Runs Minimum of 32 Strands of 17 Gauge	32S	Cable for Main Runs Minimum of 14 Strands of 17 Gauge	22
Secondary Runs Minimum of 14 Strands of 17 Gauge	22	Secondary Runs Minimum of 14 Strands of 17 Gauge	22
Cable Fasteners Minimum of one every 3 feet	190/190A	Cable Fasteners Minimum of one every 6 feet	190A
Canopy Coverage Minimum on 3 or more main branches to 7 or 8 on larger trees		Canopy Coverage So that no aerial portion of the tree is farther than 35 feet from a conductor	
Grounding <ul style="list-style-type: none"> • Trees Under 36" dbh <ul style="list-style-type: none"> - Minimum of one main downlead cable and one ground rod • Trees Over 36" dbh <ul style="list-style-type: none"> - Minimum of two main downlead cables and two ground rods 		Grounding <ul style="list-style-type: none"> • Trees Under or Over 36" dbh <ul style="list-style-type: none"> - Minimum of one main downlead cable and one ground rod 	
Ground Rod Locations Outside the drip line of the tree		Ground Rod Locations Minimum of 10 feet from the trunk	
Common Grounding to Metallic Pipes Within 25' of metallic pipes including water service, well casings, gas lines, etc.		Common Grounding to Metallic Pipes No Requirements	