

## LIGHTNING PROTECTION SYSTEMS

Inspection, testing, and maintenance of lightning protection systems shall be performed in accordance with the manufacturer's instructions and NFPA 780 (latest edition). The following list highlights minimum requirements for the essential care of lightning protection systems; however, this list is not meant to replace manufacturer's instructions and updated code requirements. Many system components tend to lose their effectiveness over the years because of corrosion factors, roof repairs, weather related damage, and damage caused by lightning strikes. The physical, as well as the electrical characteristics, of the lightning protection system must be maintained to prevent building damage. This data is based on the 2014 edition.

### Summary of Lightning Protection Systems Inspection, Testing, and Maintenance

ITEM	FREQUENCY	NFPA 25 REFERENCE
<u>Inspection</u>		
Surge suppression devices on communication and power lines entering the building	Semiannually	Appendix D
System is in good repair. Inspection of all conductors and system components	Annually, after lightning discharge, after roof repair	Appendix D
No loose connections	Annually, after lightning discharge, after roof repair	Appendix D
No part of the system has been weakened by lightning discharge, corrosion or vibration	Annually, after lightning discharge, after roof repair	Appendix D
Down conductors and ground terminals are intact	Annually, after lightning discharge	Appendix D
Conductors and system components are securely fastened to their mounting surfaces	Annually, after lightning discharge	Appendix D
Additions and alterations are protected	Annually	Appendix D
There has been no visual damage to surge suppression devices	Annually, after lightning discharge	Appendix D

**Testing**

Resistance tests of the ground termination system and its individual ground electrodes if adequate disconnecting means have been provided. Electrical resistance of ground terminals should be 5 ohms or less. <sup>1</sup>	Every 3 years	Appendix D
Continuity tests to determine if suitable equipotential bonding has been established for any new interior services or construction since last inspection	Every 3 years	Appendix D
Electrical resistance of lightning protection system (5 ohms or less)	Every 3 years	Appendix D

**Maintenance**

Testing of surge suppression devices to determine effectiveness compared with similar new devices	Every 3 years	Appendix D
Refastening/Tightening of all components, conductors, clamps and splicers	Annually	Appendix D

<sup>1</sup> These test results should be compared with previous or original results or current accepted values, or both, for the soil conditions involved.