

Zone of Protection

National Fire Protection Association NFPA 780 is the United States lightning protection standard. The purpose of the document is to define a zone of protection that secures immunity for protected structures and items from direct lightning strikes. The zone of protection is defined in NFPA 780, 3.3.51 as the space adjacent to a lightning protection system that is substantially immune to direct lightning flashes.

The zone of protection is determined by one of three methods:

- (1) 4.8.1 (1) allows the placement or layout method. This is mostly applicable to buildings and other ordinary structures.
- (2) 4.8.1 (2) allows the use of the angle method, with one angle used from grade to 25' and another from 25' to 50'.
- (3) 4.8.1 (3) allows for use of the rolling sphere model. Normally, the radius of the sphere is 150'. However, if the protected structure contains or emits flammable vapors, flammable gases, or liquids that can give off flammable vapors, the radius of the sphere is reduced to 100' per 7.3.2, 8.2.1, and 10.3.1.1.