



Forest Fire Lookout Association - New York Division

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Electrical Grounding of a Steel Fire Tower

On page two of this bulletin is an Engineering drawing providing guidelines on the electrical grounding a steel fire tower from the New York State Department of Environmental Conservation.

These guidelines I find to be a sound method of providing electrical protection for a steel fire tower in the event of a lightning strike and to be in compliance with the National Electric Code (NEC). Keep in mind that the NEC is merely a national standard, but may be superseded by local codes, local inspector or an Engineer as “The Authority Having Jurisdiction”.

Grounding rods do not need to be driven straight down into the ground, but having direct contact with the Earth (Soil) is essential. In areas with a thin top soil surface laying a grounding rod into a trench is also an acceptable means of providing Earth contact in soil.

Rock and stone is a very poor conductor of electricity and placing a grounding rod in a rock crevice should be avoided at all costs. Extending the length of the grounding conductor in order to place the grounding rod in contact with the soil is recommended. For lengths beyond 20 feet increasing the conductor (wire) size to wire gauge size 0 or 2/0 is advised. Grounding conductors are usually a non-insulated wire.

