

SUGGESTED MODIFICATIONS TO 2014 NFPA-780

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1. Section O.2.2.

ADD: IEEE 142, Grounding of Industrial and Commercial Power Systems, 2007.

2. Section O.2.3.

ADD: DoDM UFC -3-575-01, Lightning and Static Electricity Protection Systems, 2012.

ADD: Army PAM 385-64, Lightning Protection, 2011.

3. Section O.1.2.3.

ADD: FAA STD 019e2, Lightning Protection Grounding, Bonding & Shielding Requirements for Facilities and Electronic Equipment, 2005.

4. ANNEX M.4.1.

ADD: *"...various smartphone "apps" may be useful..."*

5. Section I.1.7.

ADD: *"...wireless handsets/radios are safe to use..."*

6. ANNEX G.2.2.

REVISE: Question this since people safety IS NOT provided by masts or overhead ground wires.
Should ANNEX G have such a precautionary caveat?

7. ANNEX E.1.

ADD: This section requires a supplemental reference to NEC 250.53 Grounding Electrode Installation. Such testing is ONLY APPLICABLE to testing single ground rods per NEC above.

COMMENT: Does 780 want to add information about Clamp-On Ground Resistance Testers?

They are in widespread use for (again) testing single ground rods. See the booklet at www.aemc.com called "Understanding Ground Resistance Testing".

8. ANNEX D1.1.

ADD: *"New LPSs should be inspected by an independent and experienced authority not associated with the installer/vendor or the end user to assure objectivity."*

9. ANNEX A.8.7.5.

ADD: *Note: Iso containers do not meet the 3/16ths (4.8mm) requirement. Typically their corrugated sections are 14 gauge, 0.0781 inch, 2 mm in thickness.*

10. ANNEX A.4.6.2.1.

DELETE: This database is too small for conclusive information. Some persons may conclude Franklin Rod sharp points should be snipped off (example: Denver Airport).

11. CHAPTER 8.

8.10.7.6 ADD inclusion of Clamp-On Ground Resister Tester, commonly used for single ground rod.

8.10.7 CHANGE TO 12 MONTHS. Five years of 14 months will get soils temperature and moisture characteristics off normal average conditions. This will result in abnormal variations to the standard cycle.

8.7.2 Cranes. ADD as 8.7.3.4: *"Cranes spotters on the ground shall evacuate the area upon evaluation of a close-in lightning threat."*

8.5.4 ADD to the list "(5) Compression".

8.1.4 ADD: Add the word "grounding" to "bonding and SPDs".

12. CHAPTER 4.

4.20.3.1.2 CHANGE to at least 75kA, or three times typical 25kA strike. 20Ka is way too low. (NLSI consulting recommends 250kA for Mains; 125kA for Secondaries.)

MOVE cautionary language in A.4.20.3.1 into the 4.20 main section. Note in 4.20.3.1 "point of use" SPDs are rated in Joules, not kiloamperes. A Joules rating of at least 3500J is suggested for plug-in equipment.

4.6.4.2 DELETE copper from the list. It does not have the bearing strength, or the wind and ice loading so as to be satisfactory for catenary/overhead wire application.

4.1 or 4.6.1 General. ADD a cautionary statement that Strike Termination Devices are intended to mitigate damage from fires or physical damage to structures. They do not provide safety for people.

13. CHAPTER 3.

3.3.17 ADD: *"...ring (counterpoise) ground, concrete-encased ground, pipe or plate ground and others as described in section 4.13".*

14. OTHER - ADD:

Do not use aluminum LPS systems near salt water or other corrosive environments.