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Computing Electrical Demands for Farms

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Computing Electrical Demands for Farms

Corresponds to Article 220-Part IV of the National Electrical Code, NFPA 70-2002, published by the National Fire Protection Association, and approved by the American National Standards Institute August 2, 2001. This document was developed by the ASAE Farm Wiring Committee; approved by the Electric Power and Processing Division Standards Committee; adopted by ASAE December 1965; reconfirmed with editorial changes December 1970; revised editorially January 1972, December 1975; reconfirmed December 1980; reconfirmed with editorial changes December 1985; revised July 1988; revised editorially September 1993; reaffirmed December 1993, December 1998; revised September 2003; reaffirmed February 2009, December 2013.

Keywords: Electrical, Energy

1 Purpose and Scope

1.1 This Engineering Practice provides formulas for computing the minimum capacity of feeders supplying farm buildings and the minimum capacity of service conductors and service equipment at the in point of delivery to farms.

1.2 This Engineering Practice was developed by the Farm Wiring Committee for inclusion in the National Electrical Code, the recognized authority on electrical wiring safety. It was approved by the National Fire Protection Association on May 20, 1965, and appears in Article 220-Part IV, NFPA 70-2002.

1.3 Farm wiring systems meeting the requirements of this Engineering Practice is considered necessary for safety. Compliance therewith and proper maintenance will result in an installation that is essentially free from hazard but not necessarily efficient, convenient or adequate for good service or future expansion of electrical use. Detailed suggestions for farmstead wiring design are contained in the Agricultural Wiring Handbook published by the National Food and Energy Council and the Farm Buildings Wiring Handbook.

2 Normative References

The following standard contains provisions which, through reference in this text, constitute provisions of this Engineering Practice. At the time of publication, the edition indicated was valid. All standards are subject to revision, and parties to agreements based on this Engineering Practice are encouraged to investigate the possibility of applying the most recent edition of this standard indicated below. Standards organizations maintain registers of currently valid standards.

ANSI/NFPA 70-2002, *National Electrical Code*

3 Farm Loads — Buildings and Other Loads

3.1 Dwellings. The feeder or service load of a farm dwelling shall be computed in accordance with the provisions for dwellings in Part II or III, of Article 220, NFPA 70. Where the dwelling has electric heat and the farm has grain drying systems, Part III of Article 220, NFPA 70 shall not be used to compute the dwelling load where the dwelling and farm load are supplied by a common service.

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