

# UFER Grounding System

Revised November 2013

The **City of Des Moines** requires a UFER grounding system in all residential and commercial structures.

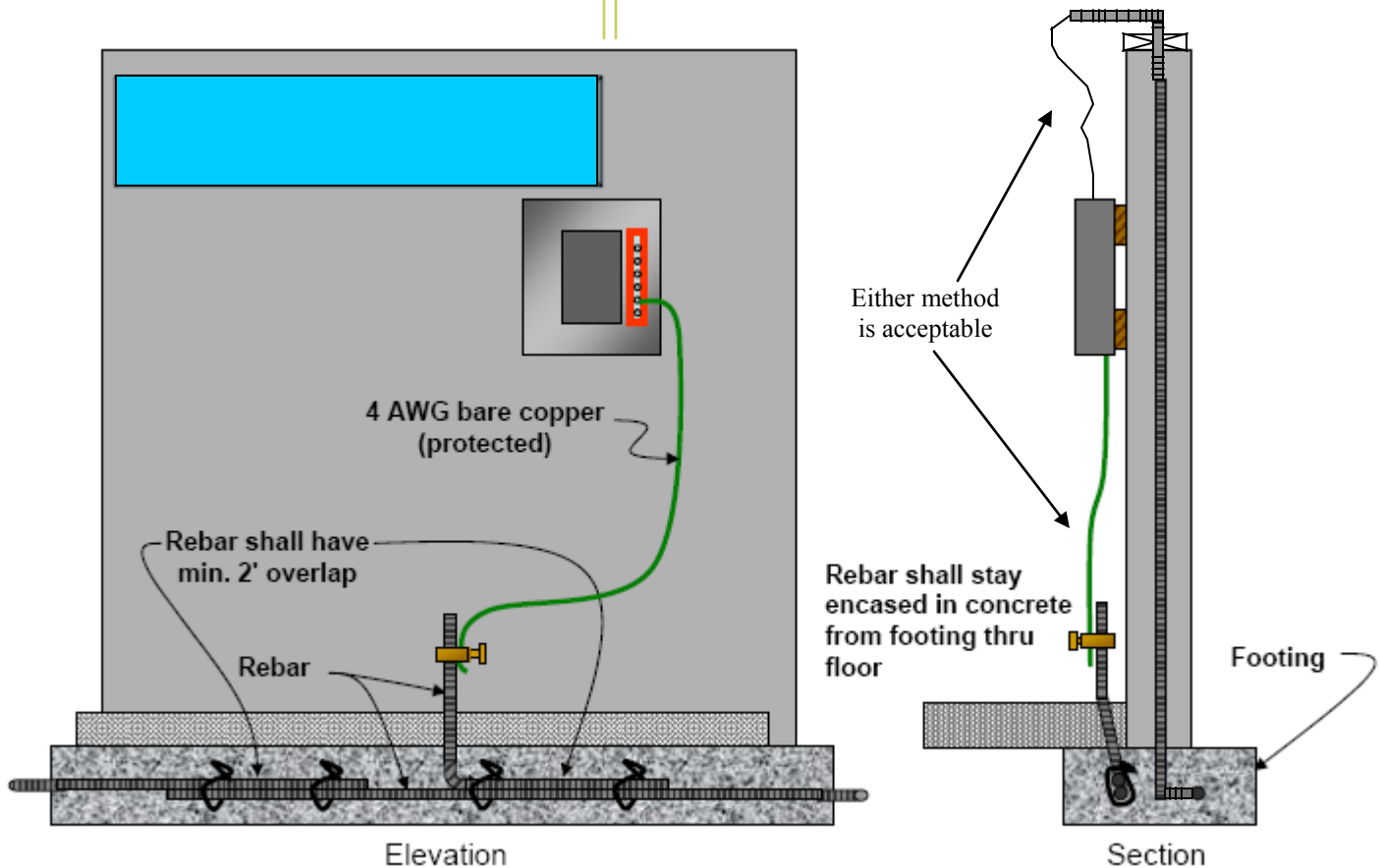
The UFER grounding system is in addition to all other electrodes within the building being bonded together to form the grounding electrode system.

The GEC shall be protected from physical damage.

The system is to be installed close to the temporary electrical service location.

## Concrete-Encased Electrode (NEC 2008, 250.52 (3))

An electrode encased by at least 50 mm (2 in.) of concrete, located horizontally near the bottom or vertically, and within the portion of a concrete foundation or footing that is in direct contact with the earth, consisting of at least 6.0 m (20 ft.) of one or more bare or zinc galvanized or other electrically conductive coated steel reinforcing bars or rods of not less than 13 mm (1/2 in.) in diameter, or consisting of at least 6.0 m (20 ft.) of bare copper conductor not smaller than 4 AWG. Reinforcing bars shall be permitted to be bonded together by the usual steel tie wires or other effective means. **Where multiple concrete encased electrodes are present at a building or structure, it shall be permissible to bond only one into the grounding system.**



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