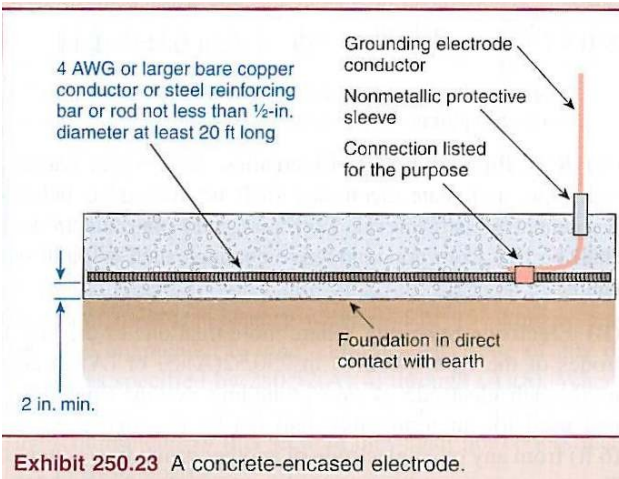


CONCRETE ENCASED ELECTRODE



To Contact Us

Phone

406.582.2375

Fax

406.582.2256

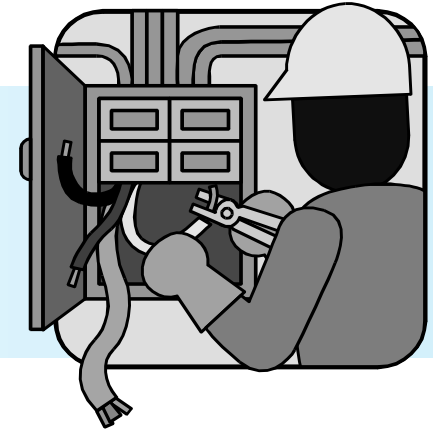
City of Bozeman



Building Division

20 E Olive St., STE 208
PO Box 1230
Bozeman MT 59771

Revised 3/5/2010



Concrete Encased Electrode (Ufer Ground)

Questions on the installation of underground metal pipe? Give us a call first.

City of Bozeman



Building Division

20 E Olive St., Ste 208
PO Box 1230
Bozeman MT 59771
406.582.2375

Answers to common questions asked about the installation of this electrical system grounding source.

What is the proper code to follow when installing Ufer?

Code Reference:

National Electrical Code (NEC) Section 250-52.

The NEC makes it clear that underground metal water pipe cannot be relied upon to assure a permanent and effective ground. Several different grounding electrodes are identified as acceptable in supplementing the underground metal water pipe. The City of Bozeman requires a concrete encased electrode (Ufer Ground) for all new construction where concrete footings are being constructed. The intent of this document is to answer questions that have been brought up on the installation of the electrical system grounding source.

What are the requirements for utilizing rebar?

- A UFER Ground consists of an electrode encased by at least 2 inches of concrete, located horizontally within that portion of a concrete foundation or footing that is in direct contact with the earth.
- The grounding electrode shall consist of at least 20 feet of one or more bare steel reinforcing bars or rods not less than 1/2 inch in diameter, or consisting of at least 20 feet of bare copper conductor not smaller than 4 AWG.
- The grounding electrode conductor connection to a rebar grounding electrode may be encased in concrete if

made with an approved clamp that is rated for direct burial.

- The grounding electrode conductor shall be installed in one continuous length without a splice. Exception: Splicing shall be permitted by irreversible compression type connectors listed as grounding and bonding equipment or by the exothermic welding process.
- A rebar grounding electrode may extend out of the slab or foundation in a dry location within the structure. Its connection to the grounding conductor must be accessible.

Please contact the Building Department if you have any questions about your grounding system.