



Delaware County

CODE COMPLIANCE

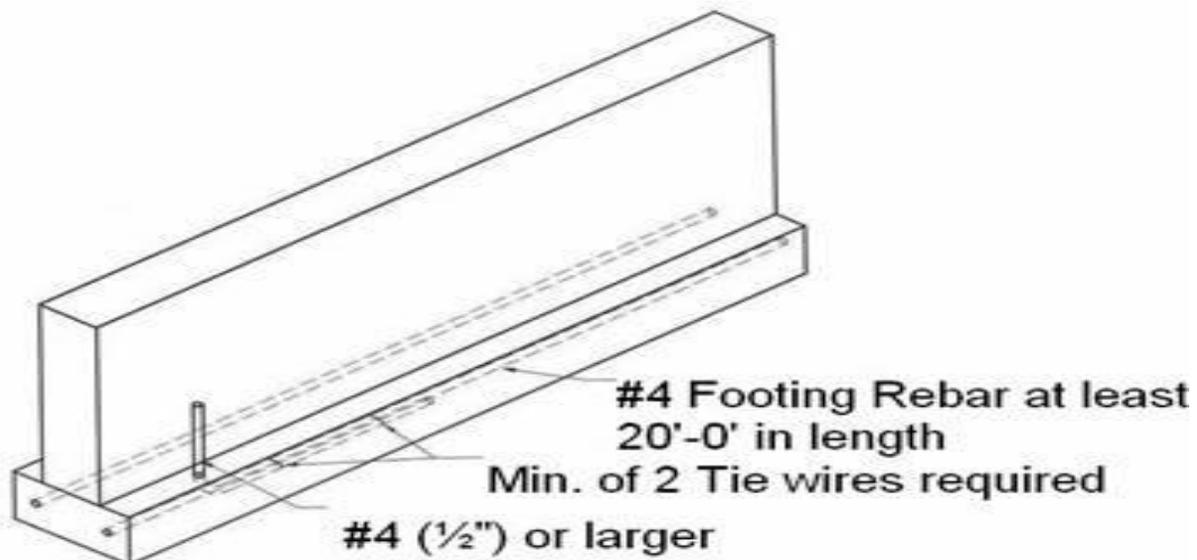
Building Regulations Floodplain Regulations Zoning Regulations

Concrete-Encased Electrode

The National Electrical Code (NEC) Section 250.52(A) (3) requires the electrical service to be grounded to the footer reinforcing steel. This electrode is also referred to as the Ufer Ground. This requirement only applies to footers having at least 20 feet continuous (#4) ½ inch diameter or larger reinforcing steel. This NEC requirement began January 1, 2005 for commercial buildings, and May 27, 2006 for residential buildings. Delaware County's Chief Building Official (CBO), has determined a method that will allow the building inspector to confirm the Ufer Ground at the time of the footer inspection.

To have the footers inspected by the building inspectors with the Ufer Ground, Delaware County will accept the following.

- 1) The contractor shall use a standard electrical ground rod or ½ inch or larger reinforcing steel rated for external use such as but not limited to (*galvanized rod*). Standard steel reinforcing rod wrapped with metallic tape will not be accepted. This ground rod or reinforcing steel shall be wire tied to the 20 ft of reinforcing steel in the footer with a minimum of two wire ties. This Ufer Ground can extend beyond the inside or the outside of the footer enough to make a future connection. The building inspectors shall mark the location of the Ufer Ground on the approved set of plans, and sign building card under UFER GROUND heading.



- a. *Delaware County's C.B.O. has determined the standard grade reinforcing steel buried below grade will rust, corrode and break away from the outside edge of the footer.*
- 2) Ufer Ground extensions installed toward the outside of the footer, but not installed to reach above final grade will require an electrical inspection prior to back filling,

However this option is not recommended because of several potential problems.

- 3) Ufer Ground extensions installed toward the inside of the footer shall be long enough to go above the finished floor.**

If the electrical contractor chooses to use other methods as described in the NEC 250.52(A)(3), which would require an electrical connection, an Electrical Safety Inspector (ESI) shall inspect the Ufer Ground connection prior to the footer inspection. The contractor installing the footer may experience delays in obtaining a footing inspection if an electrical inspection is required to be performed prior to a footer inspection. Delaware County inspectors will do their best to coordinate footer times, however, Delaware County will not guarantee that footer times requested by the contractors will be met. As a reminder to all contractors, you are strongly advised not to scheduled concrete to be on the job site at the same time the footer inspection has been scheduled.

If you have questions, comments or need additional information please call Joseph Amato at 740-272-1898, or Duane Matlack at 740-833-2217.

(Revised 9-25-13)