



# Electrical Ground Inspection Checklist Residential Inspections

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This checklist is provided as a reference tool, and it is not intended to be exhaustive of all possible requirements. Please refer to the latest adopted International Building Code (IBC), International Residential Code (IRC), International Energy Conservation Code (IECC), International Swimming Pool and Spa Code (ISPSA), Uniform Plumbing Code (UPC), Uniform Mechanical Code (UMC), National Electric Code (NEC), Local Amendments (LA), Austin Energy Design Criteria (AE Design), City of Austin Building Criteria Manual (BCM) and City of Austin Land Development Code (LDC) for code sections listed below. Items without a code reference are included for advisory purposes or based on departmental policy.

- International Codes <https://codes.iccsafe.org/public/collections/I-Codes>
- Uniform Codes <http://www.iapmo.org/>
- NEC <https://www.nfpa.org/>
- Local Amendments, AE Design, BCM, LDC <https://library.municode.com/TX/Austin>

**Please verify the following before scheduling the inspection:**

## 300 Grounding (Requested and Passed prior to Installation of Concrete for Foundations; Must Pass to Receive Power)

### GENERAL REQUIREMENTS

- Intersystem terminal bar or buss is present at the service disconnect. *NEC 250.94*
- Intersystem terminal bar or buss is present at detached buildings disconnect. *NEC 250.94*
- Electrode conductor is connected to the service disconnect grounded terminal buss. *NEC 250.24(A)*
- Electrode conductor is connected to the detached buildings disconnect grounding terminal buss. *NEC 250.32*
- Aluminum/copper-clad aluminum electrode conductors are protected against corrosion. *NEC 250.64(A)*
- Electrode conductor is protected from physical damage. *NEC 250.64(B)*
- Metal gas piping is bonded to the grounding electrode conductor where required. *UPC 1211.0*
- All grounding electrodes present are bonded together to form the grounding electrode system. *NEC 250.50*
- Main bonding jumper and supply-side bonding jumpers for service entrance equipment are installed and sized appropriately. *NEC 250.24(B); 250.28; 250.92; 250.102*

### CONCRETE ENCASED ELECTRODES

- Minimum 20-linear feet of ½-inch rebar or #4 AWG bare copper conductor are installed within the footing or pier. *NEC 250.52(A)(3)*
- Minimum 2-inch clearance exists around securely supported electrode. *NEC 250.52(A)(3)*
- Footing or pier is absent of plastic or other insulating material at electrode location. *NEC 250.52(A)(3) I-Note*
- Electrode is installed at or near the electric service location. *NEC 250.4; 250.64*
- Fittings are listed for concrete encasement where present. *NEC 110.3*
- Electrode is protected by non-metallic sleeve as it passes through the foundation. *NEC 250.64(B)*

### GROUND RODS

- Minimum (2) listed rod or pipe electrodes are present at or near the electric service location. *NEC 250.4; 250.52(A)(5); 250.53(A)*
- Minimum 6-foot spacing exists between rods or pipe electrodes. *NEC 250.53(B)*
- Electrodes are fully driven flush or below grade. *NEC 250.53(A)(4)*
- Driving angle of rods or pipes does not exceed 45 degrees. *NEC 250.53(A)(4)*
- Fittings are listed for direct burial where present. *NEC 110.3*
- Conductor connections to the rods or pipes are secure. *NEC 110.14(A)*
- Minimum #6 AWG copper connects both electrodes. *NEC 250.53(E); 250.66(A)*

## **GROUND PLATES**

- Minimum (2) listed grounding plates are present at or near the electric service. *NEC 250.4; 250.52(A)(7); 250.53(A)*
- Minimum 6-foot spacing exists between plates. *NEC 250.53(B)*
- Electrodes are in contact with minimum 2-square-foot of soil buried at a depth of 30 inches. *NEC 250.52(A)(7); 250.53(A)(4)*
- Fittings are listed for direct burial, where present. *NEC 110.3*
- Conductor connections to the plates are secure. *NEC 110.14(A)*
- Minimum #6 AWG copper connects both electrodes. *NEC 250.53(E); 250.66(A)*

## **METAL WATER PIPING SYSTEMS**

- Bonding jumpers are sized appropriately. *NEC 250.104(A)*
- Fittings are listed for use and are accessible. *NEC 110.3; 250.104(A)*