

DIVISION 16 - ELECTRICAL

Section 16450 - Secondary Grounding

Introduction

This section shall cover all grounding from the secondary of the main supply transformer OR service entrance main disconnect and all wiring downstream of that point. All systems where the possibility of shock exists due to the lack of grounding shall be grounded.

ALL CONDUITS CONTAINING WIRING TO BE ENERGIZED AT OVER 90 VAC SHALL CONTAIN A SEPARATE GROUNDING CONDUCTOR SIZED PER NEC.

Part 1 - General

- As a minimum per NEC 250.
- Use grounding bond bushings for all feeder conduits at panelboards, switchboards, wireways, bus ducts, transformers, generators, transfer switches and any other distribution equipment.
- At panelboards only line conduits shall be required to be bonded. Load conduits for subfeed panels will also need to be bonded at each panel.
- Wherever grounding requirements are stated in specifications, consultant shall insert requirement that contractor shall submit variance requests in writing and receive approval prior to proceeding with the variance.
- Refer to Drawing 16450-D1 on page 3 of this Section.

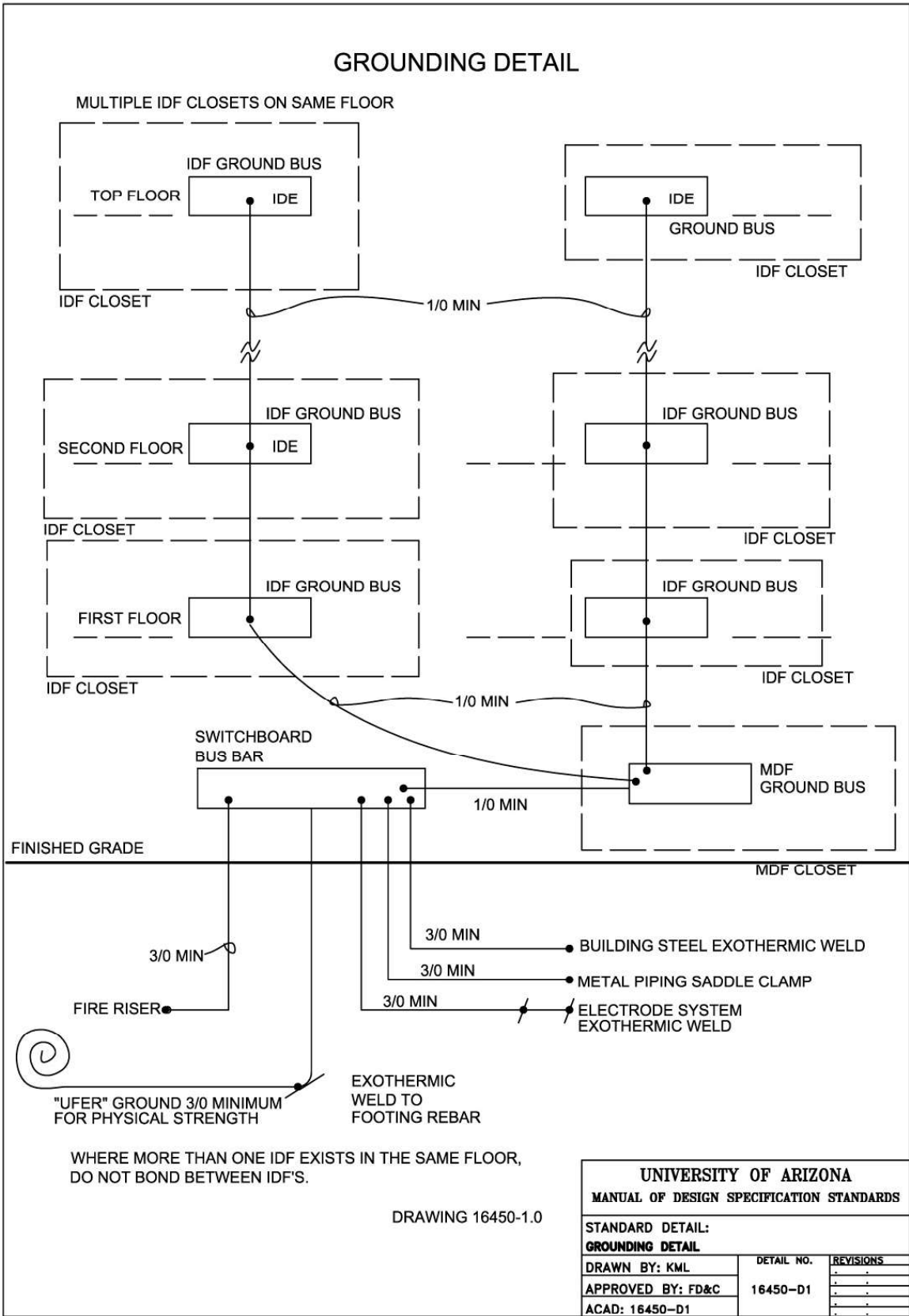
Part 2 - Products

- All grounding conductors shall be stranded insulated copper wire except factory tails.
- Minimum size ground conductor to be #12. Size to be as per NEC.
- All busducts shall contain a separate copper ground bus. This shall be bonded to the enclosure.
- Receptacle or switch bonding jumpers may be factory crimped stranded assemblies or field assembled with #12 insulated solid conductor.

Part 3 - Execution

- All grounding conductors shall be color coded green. This must be visible at all visible locations such as in panelboards, cabinets, enclosures, boxes, wireways, etc.
- Isolated grounding conductors shall be green with an orange or yellow tracer.
- All light fixtures shall be grounded via a ground screw in the body of the fixture. The ground screw shall not be attached to a removable entrance fitting.
- All enclosures shall be grounded.
- All j-boxes shall be grounded.
- All panelboards shall contain separate isolated neutral and ground busses. An additional isolated ground bus shall be provided where required.

- All enclosures shall be connected to the grounding conductor.
- All conduit systems shall be connected to the grounding conductor.
- Bond transformer neutral to ground at the secondary of the transformer. Do not bond at any other location. An additional ground from the building ground system shall be supplied with the size as per NEC.
- All cable tray shall be bonded to ground system and shall contain a #6 AWG throughout the length of the cable tray or cable tray shall be UL listed as a grounded conductor. Cable tray shall be bonded at each section.



End of Section 16450