The Purpose of J-STD-607-A

This standard specifies a uniform telecommunications grounding and bonding infrastructure that shall be followed within commercial buildings. Following the AT&T divestiture of 1984, the end user became responsible for all premises cabling for voice and data. Advancements in voice communications and the convergence of voice and data communications led to increasingly complex interactive systems owned and maintained by the end user. These systems require a reliable electrical ground-reference potential. Grounding by attachment to the nearest piece of iron pipe is no longer satisfactory to provide ground-reference for sophisticated active electronics systems.
Design Considerations

Solid copper grounding busbars (1/4" thick x 4" high x variable length) are installed with insulated standoffs in entrance facilities and the equipment room, as well as each telecommunications room (1/4" thick x 2" high x variable length is sufficient here). Each busbar is drilled with rows of holes according to NEMA standards, for attachment of bolted compression fittings.

Telecommunications equipment, frames, cabinets and voltage protectors are typically grounded to these busbars. Busbars are connected by a backbone of insulated, solid copper cable between all closets and rooms (minimum 6 AWG, 3/0 AWG recommended). This backbone is connected to a main grounding busbar in the telecommunications entrance facility, to an earth ground in the electrical entrance facility and to structural steel on each floor. Bonding conductor cabling must be colored green or labeled appropriately.

Terms

- Telecommunications Main Grounding Busbar (TMGB)
- Telecommunications Bonding Backbone (TBB)
- Telecommunications Grounding Busbar (TGB)
- Telecommunications Bonding Backbone Interconnecting Bonding Conductor (TBBIBC)

(See schematic of grounding/bonding network on page 63.)