

GROUNDING STUDY

*The part of your electrical system you can't see — **and can't afford to ignore.***

Grounding is the part of your electrical system that **only gets attention** when something goes wrong — a shock, a fire, a lightning strike, or equipment that keeps tripping for no obvious reason.

By then, it's an emergency instead of a fix. A Grounding Study tests your system now, while it's still a choice rather than a crisis — and gives you a clear, prioritized plan to close any gaps.

What's at Risk Without It

- A poorly grounded system can't safely dissipate a fault or a lightning strike — putting people near equipment at real risk.
- Bad grounding causes **electrical "noise"** and ground loops that scramble, PLC and VFD signals, leading to nuisance trips that are **hard to diagnose**.
- Insurance carriers, **OSHA**, and **NEC auditors** expect documented grounding — gaps discovered after an incident are far costlier and harder to defend than gaps found before one.
- Fixing grounding proactively is **consistently cheaper** than replacing damaged equipment, absorbing downtime, or dealing with an injury after the fact.

HOW THE STUDY WORKS

Phase		What We Do	Why it Matters to You
1	Records & History Review	We review your electrical drawings, one-line diagrams, and any prior grounding records, and ask about recurring issues like nuisance trips or static complaints.	We start with your specific problems in view — not a generic checklist.
2	Soil Testing	We measure how well the soil around your facility conducts electricity, at multiple points and depths.	Soil condition sets the baseline every grounding system has to work within — you can't fix grounding without knowing this first.
3	Ground Resistance Testing	We test your existing grounding system — rods, grid, building steel — and compare the results to code requirements and industry targets.	A definitive answer on whether your current system meets code and is actually doing its job.
4	Grid & Bonding Inspection	We physically inspect wires and connections for corrosion or damage, and verify that sensitive equipment like PLCs and VFDs is properly bonded.	Corroded or missing bonds are a common, hidden cause of equipment glitches and shock hazards — easy to miss without a hands-on inspection.
5	Findings & Action Plan	We document every deficiency found, prioritize it by risk and cost, and deliver a remediation plan with specific corrective actions.	A clear, ranked punch list you can act on — not a stack of raw test data. Each earth ground is tagged with an equipment number for that correlates to the test results. If plant desires, we can convert a site layout into a grounding map.

The Value at a Glance

Safety

- Lowers the risk of electric shock from faults or lightning strikes
- Protects people standing near equipment during a fault
- Supports NEC, NFPA 70E, and OSHA compliance

Lightning & Surge Protection

- Confirms lightning energy has a safe path to dissipate
- Supports proper coordination of your surge protection devices

Equipment Protection

- Helps faults clear fast, limiting damage to your equipment
- Reduces electrical "noise" that disrupts PLCs and VFDs
- Lowers static discharge risk near flammables or combustible dust

Compliance & Risk Management

- We document baseline conditions for insurance, audits as well as NFPA 70B compliance
- Reduces liability by catching hazards before they cause harm

Reliability & Uptime

- Uncovers grounding problems behind unexplained trips
- Helps prevent one fault from cascading into a bigger outage

Financial

- Avoids costly downtime and equipment replacement
- Far cheaper to fix proactively than after an incident

The Bottom Line

A Grounding Study replaces uncertainty about a system you can't see with a ranked list of fixes — sized by risk and cost, so you know exactly where to start.

Most customers find it's far cheaper to act on these findings now than to discover the same gaps after a fault, an injury, or an audit.