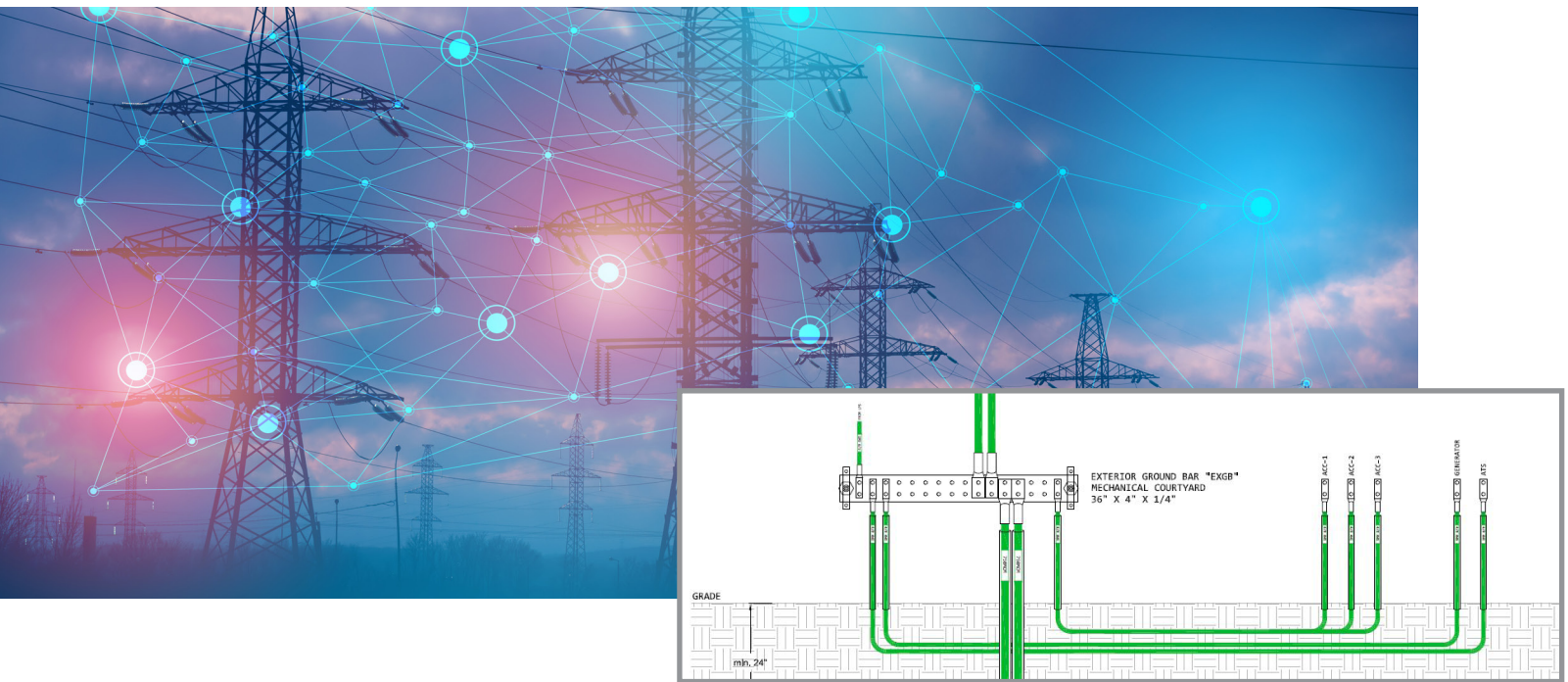


Engineering Design Services



The **COMPLETE SOLUTION**
Providing cost effective and innovative
solutions to grounding challenges.

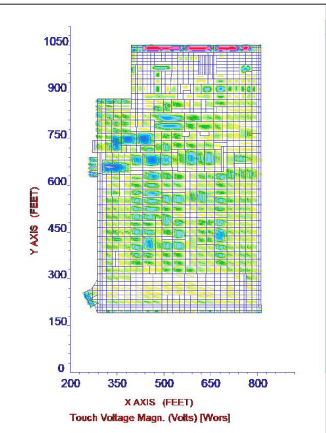
Professional Engineering Expertise



SAE Engineering Services

Since 1990, SAE Inc. has provided our global clients with effective and innovative solutions to grounding challenges. We offer a full range of Engineering services from soil resistivity measurements and grounding audits through to complete turnkey design, product installation and project management.

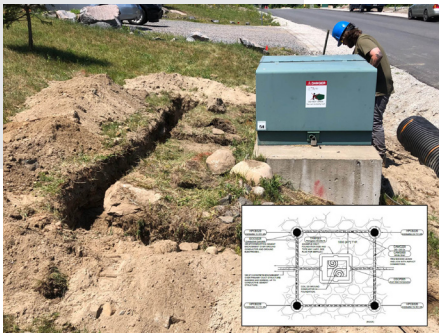
SAE provides comprehensive support including custom design and product development, installation and project management services. Our innovative grounding solutions are carefully engineered from detailed on-site soil resistivity data, analysis and computer modeling



Why Choose SAE Services?

- Gain knowledge from inspections of grounding and lightning protection systems to determine areas where risk exists
- Benefit from testing the soil resistivity and R-value of existing systems
- Significantly improve grounding and lightning protection performance with fully engineered SAE designs
- Optimize grounding designs to ensure the installation meets the specific local soil characteristics and site restrictions
- Ensure optimal grounding and lightning protection system installation and final testing results

Protect your assets!



Survey / Audit

- System conditions
- Soil and geological assessments
- “Soft dig” verification
- Best practice review
- New / existing / expansions



Grounding Design

- Interior / exterior
- Fault current / Step & Touch / GPR
- CDEGS advanced software simulation and modelling
- Full design package for construction bid



Grounding System Installation

- Horizontal and vertical solutions
- Product management
- Post construction ground resistance testing

Survey / Audit

SAE offers a comprehensive range of engineering support to ensure safe, reliable and cost effective operations.

Typical Service Options

- Grounding audits
- System resistance (R-value) testing
- Soil resistivity testing and measurement
- Feasibility studies
- GPR (Ground Potential Rise) studies
- Step & Touch studies

Grounding Design

SAE utilizes cutting edge advanced software modelling to design grounding systems that will perform both during normal operations and under fault conditions.

Principle Activities

- Lightning and fault management
- AC Mitigation in utility corridors
- Substation grid design and remediation
- Padmount transformer grounding
- Communication facility grounding systems
- Call center facility grounding systems
- Tower grounding systems

Grounding System Installation

SAE offers a complete project management and construction supervision service to ensure designs are installed safely and efficiently.

Deployment Activities

- Complete sub contract management
- Sub contract drilling and ground well installation
- Project management and on-site review
- Post construction ground resistance testing





Utility Substation Audit and Design

Optimal Grounding Designs

Our SAE Engineers perform exceptional field reviews and in depth risk assessments. SAE's forensic analysis and verification provide confidence and a solid footing for station upgrades and maintenance.

Telecom and Broadcast

Reliable System Protection

SAE has developed specific expertise in grounding sensitive telecommunications infrastructure. Utilizing a mix of computer aided modeling and deep practical experience, we have designed and installed full antenna and operations center grounding and lightning protection systems.



High Reliability Grounding System Design

Mission Critical Grounding Protection

From data centers to electrified rail centers, from hospitals to large solar farms, SAE's cost effective and specialized expertise results in a well-planned grounding system design that will protect the assets for years to come. Lightning protection, power systems, communications, we have you covered for all grounding systems. We deliver effective solutions for limited space and challenging installations when required.

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