Electrical Engineering

J.L.Richards
ENGINEERS · ARCHITECTS · PLANNERS

For close to 70 years, J.L. Richards has been providing our clients with comprehensive electrical engineering support that keep their systems running safely and smoothly.

Our extensive electrical team has delivered successful designs for standard and specialized applications across several diverse sectors. Our approach is focused on logically designed sequenced systems that are affordable to create, economical to maintain, and flexible to expand. Safety, reliability, and energy efficiency are key considerations for every electrical project we engage in.

With our expertise in power distribution, innovative energy, energy storage, instrumentation and controls, lighting, communications systems, life safety systems, security systems, back-up power, and specialty studies, our team is eager to bring your projects to a successful completion.

Talk to our Electrical Engineering team about our hands-on design experience in any of these key areas of expertise.

Automation & Controls Systems

- Automation and control system design
- PLC and DCS programming
- Human-machine interface programming
- Commissioning assistance

Communications Systems

- IT Infrastructure, wired and wireless
- Fibre and copper

Innovative Energy

- Net-zero energy and carbon design
- Solar photovoltaics
- Energy storage
- Energy audits

Instrumentation & Controls

- Functional descriptions and control narratives
- Piping and instrumentation diagrams
- Control panel design
- Instrumentation and Valve Controls
- Plant networks
- Motor controls

Life Safety Systems

- Fire alarm systems and suppression systems
- Aspirating smoke detection
- Emergency lighting and wayfinding
- Building code reviews

Lighting

- Interior and exterior building lighting
- Right-of-way lighting
- Advanced lighting controls

Power Distribution

- Electrical distribution design, including ungrounded 44 kV
- Overhead and underground power line design
- Impedance and solidly grounded system
- Substation safety design and GPR studies
- Short circuit, coordination and arc flash studies
- Power factor and load flow studies
- Power harmonic studies
- Lightning protection
- Designs for power quality improvement

Power System Technologies

- Portable, standby, and prime power generating systems, including CSA C282 life safety generators
- Battery energy storage systems
- Co-generation, combined heat and power
- Microgrid systems that combine batteries, diesel, and renewable energy with advanced control, with or without a grid connection

Security Systems

- Intrusion detection and access controls
- CCTV (IP based)
- Site vehicular and pedestrian access control
- Site security lighting

Software Design

- Software development
- Databases
- Platforms

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Architecture
Civil Engineering
Electrical Engineering
Energy Systems Engineering
Environmental Engineering
Mechanical Engineering
Planning
Project Management
Structural Engineering

Talk to us today

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Connect with us