

## ELECTRICAL DESIGN

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Rensch Engineering provides electrical design for commercial, residential, and industrial buildings. In addition, we provide fire alarm design for buildings.

Design Services are as follows:

- Power service load calculations and coordination with power utilities for new and upgraded services
- Energy compliance consultation for lighting and power systems
- Lighting design and photometric analysis for lighting ordinance compliance (see separate Lighting Design section on the website)
- Fire Alarm performance specifications or full design plans can be provided
- Communication services coordination
- Commissioning for Electrical and Lighting systems and state energy compliance

Electrical, Lighting, Fire Alarm, and Communication Systems we frequently design are:

- Power connections to all types of equipment
- Generators for both standby power and emergency power systems
- Power design for 480 volt systems and less within buildings
- Power design for medium voltage systems greater than 600 volts outside the building.
- Design and code compliance for electrical systems based on use and area including hazardous classifications
- Low voltage systems including audio/video, security, speakers, and PA systems
- Data systems including server room design, cable distribution throughout the building, and data outlet types
- Fire alarm systems including addressable and conventional fire alarm panels as well as emergency voice alarm systems
- Solar photovoltaic systems, both grid connected and battery connected, and other interconnected power sources that parallel building power
- Uninterrupted Power Systems (UPS) and inverter systems
- Fault current study, arc flash calculations, selective coordination, & power loads