



Electrical Consulting Services:

- **Electrical Power System Studies**
 - ⚡ Arc Flash Hazard Analysis
 - ⚡ Short Circuit Studies
 - ⚡ Coordination Studies
 - ⚡ Load Flow & Motor Starting
 - ⚡ Power Factor Correction / Harmonic Analysis
 - * We utilize ESA EasyPower Software or SKM Software.

 - **Estimating / Opinions of Probable Cost**
 - ⚡ Construction Cost Estimating
 - ⚡ Bill of Materials
 - ⚡ Scheduling & Project Management

 - **Bid Package Preparation**
 - ⚡ Scope of Work
 - ⚡ Specifications
 - ⚡ Boiler Plate
 - ⚡ Contractor walk-throughs and evaluation
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Electrical Engineering Services:

- **Electrical Design Drawing Creation using AutoCAD**
 - ⚡ Electrical Power System One-Line Diagrams
 - ⚡ 480 Volt Motor Control Centers
 - ⚡ Motor Control Schematics
 - ⚡ PLC I/O Wiring Diagrams
 - ⚡ Instrumentation Wiring Diagrams
 - ⚡ I/O & Control Panel Layouts & B.O.M.
 - ⚡ Lighting Panel Schedules
 - ⚡ Lighting & Receptacle Layouts
 - ⚡ Conduit/Raceway Schedules

- **Specification Writing (CSI Format)**
 - ⚡ Electrical Installation Specifications
 - ⚡ Electrical Equipment Purchase Specifications



Industrial Automation & Control Systems:

- **PLC/HMI Programming Services**
 - ⌚ Allen-Bradley / Rockwell Software – All Platforms, All Software
 - ⌚ Wonderware – All Platforms, All Software
 - ⌚ Intellution FIX SCADA

 - **Industrial Database Admin & Programming**
 - ⌚ Microsoft SQL Server 2000 Admin and T-SQL programming
 - ⌚ Microsoft Access Database programming
 - ⌚ Integration of PLC Control System with Database and MES
 - ⌚ Visual Basic Front Ends
 - ⌚ Visual Studio.Net programming

 - **Process Control Programming**
 - ⌚ Functional Description Creation
 - ⌚ Batching/Weighing Systems
 - ⌚ Blending and Proportioning Systems
 - ⌚ PID Closed-Loop Control
 - ⌚ Sequential Control
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Industrial & Office IT/Network Services:

- **Ethernet TCP/IP Network Design**
 - ⌚ Installation/Purchase Specifications
 - ⌚ Industrial / Redundant media/hardware
 - ⌚ Redundant Fiber Optic backbones
 - ⌚ Network Cabinet Layout Drawings & B.O.M.
 - ⌚ Patch Panel Schedules

- **Wireless Network Design**
 - ⌚ Hardware Specifications
 - ⌚ Wireless Router Configuration
 - ⌚ Security Configuration
 - ⌚ Firewall Setup/Configuration

- **Windows 2000 Server Domain Administration**

- **Remote Access Solutions**



On-Site Services:

- **Inspections / Surveys**
 - ⚙ Existing Site Electrical Equipment Review
 - ⚙ Arc Flash Data Collection Services

 - **Troubleshooting**
 - ⚙ Control System Troubleshooting
 - ⚙ Network Hardware Troubleshooting
 - ⚙ Field Device & Wiring Testing/Troubleshooting

 - **Commissioning**
 - ⚙ PLC/HMI Software download and debug
 - ⚙ Field Device & Field Wiring Checkout
 - ⚙ Instrumentation Calibration
 - ⚙ PID Loop Tuning
 - ⚙ Variable Frequency Drive Commissioning
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Remote Phone Support Services:

- **Troubleshooting**
 - ⚙ Phone Dial-up Support or Internet VPN Support
 - ⚙ Remote Network Administration
 - ⚙ Control System Troubleshooting
 - ⚙ PLC/HMI Troubleshooting & Software Changes