

**Professional Resume of  
LUKE M. EDMONDSON, P.E.**

February 2025

**I. General Information**

Project Engineer - Electrical  
Schaefer Engineering, Inc.  
Wentzville, Missouri

**II. Professional Summary**

**A. Education:**

Master of Business Administration - 2021  
Decision Science Emphasis  
Western Illinois University  
Moline, Illinois

Bachelor of Science – 2017  
General Engineering  
Western Illinois University  
Moline, Illinois

**B. Experience:**

November 2024 to Present  
Position: Project Engineer - Electrical  
Schaefer Engineering, Inc.  
Wentzville, Missouri

Responsible for electrical engineering projects including failure analysis of electrical components and systems of structures and vehicles, analysis of electrical equipment and appliances to determine their role in an incident, evaluation of electrical shock and electrocution incidents, and investigation of damage to electrical equipment from lightning or water-related issues.

August 2023 to October 2024  
Position: Electric Distribution Engineer  
Stanley Consultants  
Muscatine, Iowa

Surveyed, staked, and designed dozens of miles of rural electric distribution facilities for Rural Electric Cooperative (REC) clients. Read manufacturer's cut sheets for distribution equipment, identified most relevant performance characteristics, and discussed their applications with clients. Used selected

**Experience (continued):**

equipment as basis of design for <15 kV electric distribution projects. Managed expectations of a variety of stakeholders such as REC clients, 3rd party utilities (gas, electric, fiber, drainage, sewer, water), county representatives, city representatives, DOT employees, electric customers, and management at Stanley. Held meetings, sent follow-up emails to document what was discussed, and uploaded them into central filing location. Improved quality of project deliverables by ensuring client feedback was addressed. Maintained company surveying gear and tested new equipment. Trained Engineers in Training in electrical engineering topics such as fuse sizing, metering, power quality, professional ethics, and exam preparation.

January 2023 to August 2023

Position: Electrical Engineer  
MODUS  
Iowa City, Iowa

Selected sizes of various electrical (e.g. circuit breakers, panels, generators, EV chargers) and low voltage devices. Evaluated client needs and available technologies to select appropriate brands as basis of design. Read manufacturers' electrical and mechanical cut sheets to evaluate FLA, MCA, and MOCP. Added disconnects to design to feed equipment when not integral. Contacted utilities and verified expectations for installation of conduits, current transformers, voltage transformers (or VT packs), metering, utility provided transformer bases, customer provided transformer bases, and overhead service attachments. Interpreted utility (Alliant Energy, MidAmerican Energy) service manuals. Provided utility coordination feedback on senior team members' projects (voltages available, easements, overhead vs. underground). Rewrote utility specifications section for MODUS by applying previous experience, OSHA rules, and NESC Code. Educated staff on where to find gas and electric service territory maps. Imported aerial imagery into AGI as well as Revit to clarify construction prints and analyze lighting. Performed electric service, demand calculations. Analyzed electrical systems with Revit.

June 2020 to December 2022

Position: Distribution Engineering Lead  
Leidos  
Indianapolis, IN

Hired to be a lead within the DOT relocation department for Duke Energy. Provided constructability reviews and staking support for high priority projects assigned to new designers. Took photos and measurements of staked projects to show compliance with NESC requirements. Created mitigation plans when constructed projects were not in compliance. Cradle to grave project management of <35 kV distribution line relocations. Created structural models, materials lists, CAD prints, and other project deliverables to support relocations. Coordinated projects across interdisciplinary teams including communication companies, engineering departments, operations personnel, contractors of the client as well as various municipalities, and INDOT employees. Developed procedures for work group, provided technical expertise on others' projects. Performed managerial duties: QAQC, upheld contract requirements, project oversight, leadership.

**Experience (continued):**

June 2017 to June 2020

Position: Distribution Engineer  
MidAmerican Energy Company  
Various, Iowa

Several roles with increasing responsibility working for an investor-owned utility. Performed failure analysis of <15 kV underground electric distribution lines. Queried Intergraph database to find the oldest underground facilities, verified age of old facilities in manholes, designed the replacement projects with the assistance of tradesmen and operations, and project management during construction. Provided field support for interconnection studies of Distributed Energy Resources (DER). Verified utility equipment was adequately sized for proposed distributed generation equipment, inspected distributed generation setups, tested equipment to verify compliance with MEC requirements, and approved constructed designs for bi-directional meter installation. Customer service for the entire process. Performed fault current studies, load balancing studies, protective device coordination studies, materials forecasting, and guy wire tension calculations to assist coworkers' projects.

February 2017 to June 2017

Position: CAD Technician  
MidAmerican Energy Company  
Rock Island, Illinois

Drafted gas lines in compliance with MidAmerican Energy standards. Corrected record discrepancies with the help of field staff. Queried Microsoft Access database to review all existing gas service records before drafting complicated lines that had been damaged several times.

May 2016 to February 2017

Position: Civil Engineering Intern  
City of Rock Island  
Rock Island, Illinois

Designed a culvert as my college senior design project. I analyzed the hydrological and structural elements of the culvert, created CAD drawings, created materials lists and schedule of quantities, created cost estimates, presented the design, got it approved, and saved the City \$5000. Inspected asphalt, sidewalks, and concrete installations, took punch list measurements, inspected every outfall in the City of Rock Island, took concrete samples to lab, and assisted survey crew update benchmarks throughout the City of Rock Island.

**III. Professional Registration**

Registered Professional Engineer in the State of Iowa, License Number P29048.

Federal Aviation Administration, Airman Certificate, Remote Pilot, Small Unmanned Aircraft System, Certificate No. 4167842.

**IV. Professional Affiliations**

National Fire Protection Association (NFPA)  
National Association of Fire Investigators (NAFI)  
International Association of Arson Investigators (IAAI)  
Institute of Electrical and Electronics Engineers (IEEE)  
Central Illinois Fire Investigation Association (CIFIA)

**V. Continuing Education**

2024 – The Scientific Method for Fire and Explosion Investigation, CFITrainer.net  
2024 – Electrical Safety, CFITrainer.net  
2024 – Residential Electrical Systems, CFITrainer.net  
2024 – Introduction to Evidence, CFITrainer.net  
2024 – Fundamentals of Residential Building Construction, CFITrainer.net  
2024 – Documenting the Event, CFITrainer.net  
2024 – Basic Electricity, CFITrainer.net  
2024 – Arc Mapping Basics, CFITrainer.net  
2024 – ALC-677 (Part 107 Small UAS Recurrent), Federal Aviation Administration  
2024 – IS-1000 Public Assistance Program and Eligibility, Federal Emergency Management Agency  
2024 – IS-1001 The Public Assistance Delivery Model Orientation, Federal Emergency Management Agency  
2024 – IS-1002 FEMA Grants Portal-Transparency at Every Step, Federal Emergency Management Agency  
2024 – IS-1004 The FEMA Site Inspection Process, Federal Emergency Management Agency  
2024 – IS-1018 Determination Memorandums and Appeals, Federal Emergency Management Agency  
2024 – PolyWater Lubricant Seminar, Max Potter, Evans Lipka & Associates, Muscatine Iowa  
2023 – OSHA 10, Vector Solutions, Vector Solutions  
2023 – Cyber Security in Lighting, IES, IES, Des Moines Iowa  
2023 – Power Design Pro Software Seminar, Generac, MODUS, Iowa City Iowa  
2022 – BOUD Applications (Bentley Open Utilities Designer), Duke Energy, Carmel Indiana  
2021 – Maximo Applications Training, Duke Energy, Carmel Indiana  
2020 – AMR Metering Applications, Itron, DistribuTECH, San Antonio Texas  
2019 – MidAmerican Distribution Engineer Training Conference, Nick Nation, MidAmerican Energy Company, Des Moines Iowa  
2019 – Application of S&C Automatic Switchgear, Dan Coate, S&C, Chicago Illinois  
2019 – Applying the 2017 National Electric Safety Code (NESC) to Day-To-Day Utility Work, David J. Marne P.E., Marne and Associates Inc, Sioux City Iowa  
2018 – MidAmerican Distribution Engineer Training Conference, Nick Nation, MidAmerican Energy Company, Des Moines Iowa  
2018 – Sag10 training seminar, Jeff Thomas, MidAmerican Energy, Davenport Iowa  
2018 – CYME 16-hour training seminar, Peter Pietramala P.E., Eaton, Davenport Iowa  
2018 – Federal Aviation Administration Part 107 (unmanned aircraft) Training Course, Brian Knights, MidAmerican Energy Company, Des Moines Iowa  
2017 – Fire Safety Awareness Training, Electric Standards Department, MidAmerican Energy Company, Fort Dodge Iowa

**V. Courses Taught**

Electric Distribution Engineering: a Career with Breadth – Western Illinois University, April 2024, Moline Illinois

Programming a Drone to Recognize a Target – Western Illinois University Undergraduate Research Conference, November 2016, Moline Illinois

Corn Kernel Separation and Data Collection – Western Illinois University Undergraduate Research Conference, May 2016, Moline Illinois

Shadow Alarm Circuit – Western Illinois University Undergraduate Research Conference, November 2015, Moline Illinois