ROBERT CURRIE, PE

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Profile

My electrical engineering experience exhibits a range of expertise that includes complex power system design of mission critical and emergency power systems, power system analysis including short circuit, coordination, and arc flash reporting, lighting design and analysis, and construction administration. I first worked at a lighting design studio in Chicago followed by nearly 10 years working in electrical engineering at a premier AE firm in Philadelphia. I performed the role of lead electrical engineer on projects in the hospital, laboratory, and higher education industries. I have worked with clients such as Yale University, Johns Hopkins University, Merck, University of Maryland, University of Pennsylvania, Children's Hospital of Philadelphia, Grand View Hospital and Tower Health.

Experience

Project Engineer, Ballinger AE; Philadelphia PA — 2015-2024

Ballinger afforded me the opportunity to learn from experienced mentors and make personal connections that I value greatly. I started as an entry level electrical designer, became an EIT and finally PE in 2021. Below is a comprehensive list of projects I worked on with specific areas of responsibility indicated.

Children's Hospital of Philadelphia; King of Prussia Hospital - 2021-2022
King of Prussia, PA

- Developed power system study for the new and existing hospital buildings including short circuit, protective device coordination, equipment evaluation, and arc flash evaluation using SKM Power Tools software.
- Produced report indicating study results, methodology and deficiencies
- Procured arc flash labels printed in accordance with NFPA 70E to be installed.

Children's Hospital of Philadelphia; Colket Translational Research Building 9, 10 and 11th Floor Renovations - 2020-2021
Philadelphia, PA

- Produced power system study with associated report and labels (same scope as described above).

Hospital of the University of Pennsylvania (HUP); Arc Flash Evaluation - 2016-2017

- Surveyed existing equipment in all (8) buildings of HUP.

- Developed power system study for (3) of the buildings including short circuit, protective device coordination, equipment evaluation, and arc flash evaluation using SKM Power Tools software.
- Produced report indicating study results and arc flash labels printed in accordance with NFPA 70E to be installed.

Yale University; Science Hill Development Projects - 2021-2024
New Haven, CT

- Acted as lead electrical engineer on new Chemical Safety Building (30k sqft) including hazardous classified locations and legally required standby HVAC systems. Produced power system study report that included short circuit, protective device coordination, equipment evaluation, and arc flash evaluation.
- Acted as lead electrical engineer on new Wright Lab Addition, Phase 1 (80k sqft) building and partial renovation of existing Wright Lab. The project included emergency standby systems for research equipment and complex integration with existing building systems. This project introduced a design for a generator back-feed into the existing building normal switchgear at 480V. UPS, fire alarm, lighting controls, and grounding design were also included in electrical engineer scope. Provided short circuit study, protective device coordination, equipment evaluation, and arc flash evaluation for design purposes.
- Acted as lead electrical engineer on Science Hill Campus Utility Work, Phase 1. The project included 13.8kV feeder design through campus underground utility infrastructure. New duct bank, manholes, and MV equipment were designed to connect to new and future buildings on Science Hill portion of campus. Provided short circuit study, protective device coordination, equipment evaluation, and arc flash evaluation for design purposes.

Grand View Hospital; Campus Generator Plant / The Pavilion - 2018-2023
Sellersville, PA

- Acted as lead electrical engineer on Pavilion (200k sqft) building which included emergency department, 10 operating rooms, radiology department with CT's, MRI and other imaging, 3 patient floors, mechanical penthouse and helipad. Designed UPS, fire alarm, lighting controls, and grounding. Provided short circuit study, protective device coordination, equipment evaluation, and arc flash evaluation for design purposes. Designed electrical scope for large portions of existing building renovation.
- Designed diesel generator plant with (3) 2000kW, 13.8kV, generator sets connected to MV paralleling gear, with feeds to new and existing emergency 480V substations throughout campus. Designed existing ATS re-feeds from new system for 20+ switches in existing hospital. Provided short circuit study, protective device coordination, equipment evaluation, and arc flash evaluation for design purposes.

Johns Hopkins School of Public Health; Wolfe Street Building Renovations & Infrastructure Upgrade and Emergency Generator Concept Study - 2017-2023
Baltimore, MD

- Designed and documented replacement of two existing 480V substations in the basement of a 9 floor building built in the 1920's with re-feeds to all existing building electrical loads. Designed (2) 650kW, 480V natural gas optional standby generators installed on the roof connecting to new paralleling gear and transfer switches in the penthouse. Designed electrical scope for replacement of (2) large AHUs and (4) exhaust fans on roof. Complex sequence of construction and phasing was required. Provided short circuit study, protective device coordination, equipment evaluation, and arc flash evaluation for design purposes.
- Conducted emergency generator concept study looking at existing building loads and methods to replace aging generator without disruption to building power.

University of Pennsylvania; Pennovation Lab Emergency Power Upgrades - 2020-2022
Philadelphia, PA

- Acted as lead electrical engineer adding an optional standby power riser fed from an ATS to the existing building with branch breaker level tenant energy monitoring.

University of Rhode Island; Bliss Hall - 2016-2019
Kingston, PA

- Designed and documented Bliss Hall (40k sqft) academic building gut renovation and fit out. Designed connection to campus MV utility system. Designed lighting controls with daylight adaptive dimming. Provided short circuit study, protective device coordination, and equipment evaluation for design purposes.

Tower Health; Jennersville Hospital Pharmacy, Pottstown Hospital Pharmacy, Brandywine Hospital Pharmacy - 2017-2018
Reading, PA

- Acted as lead electrical engineer on three pharmacy renovations. Jennersville hospital project included installation of new life safety emergency branch of the emergency power supply system. Included short circuit study and coordination study for design purposes.

Tower Health; Reading Hospital Radiology Dept. Renovation - 2016
Reading, PA

- Designed and documented new (2) CTs and (1) MRI suite in existing building.

Merck & Co.; Customer Care Center Renovation, B37, and Auditorium Renovation - 2016
West Point, PA

Merck & Co.; Aviation Center Arc Flash Evaluation- 2018
Trenton, NJ

- Assisted in producing arc flash evaluation as part of a power system study including short circuit, protective device coordination, equipment evaluation, and arc flash evaluation using SKM Power Tools software.

Johnson & Johnson; 410 George Street Lobby Renovation - 2018
New Brunswick, NJ

City of Philadelphia; Providence Mutual Life Insurance Building Study - 2015-2016
Philadelphia, PA

Lehigh University; Packard Lab Feasibility Study - 2016
Bethlehem, PA

Intern, Schuler Shook: Theatre Planners and Lighting Designers; Chicago, IL - 2013

As an intern, I learned best practices of lighting design, photometric calculations, product selection, LEED compliance strategies, lighting control application, and energy code compliance. I worked on a variety of commercial projects in downtown Chicago. I participated in many site surveys and industry events where I met local professionals who were formative in my growth at an important time in my life.

PE Registrations

DE
(PA, NJ, CA, NY coming soon)

Education

The Pennsylvania State University — Bachelor of Architectural Engineering, 2014
University Park, PA

Skills

Proficiency in the following software applications:

SKM System Analysis Inc. - Power Tools
Autodesk - Revit
Autodesk - CAD
Lighting Analysts - AGi-32
Acuity - Visual Lighting
Microsoft - Office Suite

References

I will provide upon request.

Thank You!