

STEVE BAKIN, P.E., CFEI

Vice President



Summary

Steve is a professional engineer and board certified fire and explosion investigator with 25 years of experience in engineering, forensics and litigation. His primary area of expertise is electrical engineering, supplemented by a good understanding of mechanical, civil and structural engineering, architecture and lighting design. His understanding of multiple disciplines and roles within the construction industry including financial, scheduling, legal and contractual aspects of projects allows an integrated approach to projects. Steve has served as engineer of record for various project types, including many high-rise and multi-building campus projects. His experience includes design of generators, renewable energy, fuel cell, battery storage, utility power, elevator, central plant and fire pump systems as well as design of architectural lighting systems for several landmark and historical buildings. He has also taught classes for students at UCLA and USC and given several AIA-accredited seminars. Steve has served as the lead investigator for various types of electrical failures, fires, damage assessments and construction claims.

Areas of Technical Expertise

- Electrical System Forensic Investigations
- Fire and Explosion Investigations
- Building Systems Loss & Damage Evaluation
- Normal, Emergency & Renewable Power Systems Engineering

Education

- M.Eng. Architectural, 1996, University of Leeds
- Architectural Engineering Exchange Program, 1995, Pennsylvania State University

Registrations

- Licensed Professional Electrical Engineer in AZ, CA, CO, DC, FL, NC, NV, SC, TN, TX, VA and WA

Professional Activities

- National Association of Fire Investigators, Member
- IEEE (Institute of Electrical & Electronics Engineers), Member
- NSPE (National Society of Professional Engineers), Member
- NAFE (National Academy of Forensic Engineers) Member

Select Project Experience

Forensic Investigation

Altadena Vistas Wildfire Damage, Altadena, CA. Performed investigation of damage caused by the LA wildfires in 2025 to a 22-unit multi-family residential complex in Altadena, CA. Investigation included studies of the electrical system for potential fire damage and survey of rooms to determine extent of damage and functionality of the electrical system. The study also included study of mechanical and structural systems.

Airbus Americas, Merritt Island, FL. Performed forensic failure analysis on the electrical system following a structural roof damage incident and related water leak. Investigation included analysis of the uninterruptible power supply to the satellite testing area, which included a flywheel system.

Fiberon Factory Explosion, New London, NC. Performed forensic investigation into an explosion that occurred causing major damage to multiple systems. The electrical system included multiple utility services to the site and was evaluated for damage and design of changes to facilitate future protection.

Avanath City View Apartments, Orlando, FL. Performed a review and analysis of electrical system damaged by flooding which occurred due to a HVAC unit leak. The investigation and report included review of all affected and unaffected systems for potential damage and code requirements.

*Denotes work performed with previous employer.

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Educational Facility Design

Environmental Nature Center, Newport Beach, CA * Electrical Engineer of Record for a pre-school completed in 2023. The school is certified LEED Platinum and was the third building in California to receive the Petal Certification by the Living Building Challenge. The building features net zero energy and water, bioswales and green walls. The building also features passive and active design in natural ventilation, solar, abundant daylighting, EV charging, radiant slab heating and is a monument to environmental education and sustainable design.

Capistrano Unified School District, Rancho Mission Viejo, CA * Electrical Engineer of Record for a new K-8 school, which completed construction and occupancy in 2024. Included multiple buildings totaling 79,000 square feet and electrical infrastructure master planning for future buildings at the site. The solar system allowed this project to achieve net zero energy usage.

Agnews Middle and High School, Santa Clara, CA * Electrical Engineer of Record for this 81-acre multi-building project with a construction cost exceeding \$100M total. The project was built in 2022 and including three 480-Volt electrical services.

Civic Building Design

West Hollywood Park, Los Angeles, CA * Electrical Engineer of Record for a 5-story sports facility including basketball courts, rooftop swimming pool, fitness center and office areas. Included coordination of tight spaces in a populated city block leading to a vehicle road through the building at ground level. Included a stacked parking system generator and indoor utility vault.

Orange County Civic Center. Santa Ana, CA * Engineer of Record for two high-rise buildings with medium voltage service to indoor unit substations. The construction was completed in 2024. Spaces within the building include offices, courtrooms and cafeteria. Electrical design included two diesel generators.

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Multifamily Residential Design

1201 Connecticut Residences, Washington, DC * Electrical Engineer of Record for the conversion of a 13-floor, 217,000 gross square foot high-rise office building into a multifamily residential condominium. Scope included a complete renovation of the building's interior and the replacement of most of the existing electrical distribution system. Options for reuse was evaluated based on capacity, condition, and changes in electrical load. Additionally, the project included the installation of a new roof-mounted emergency and standby generator.

Overlake Square, Redmond, WA * Electrical Engineer of Record for a new 711,000-gross-square-foot apartment project consisting of two buildings. Building one has seven floors, while building two has two floors. Includes multiple electrical utility services and was permitted in 2024, with construction currently ongoing in 2025. Additional features of the project include retail spaces, interior and exterior amenity areas, and a 182,000-square-foot parking.

Texas Christian University Housing, Fort Worth, TX * Electrical Engineer of Record for a 613,000-gross-square-foot, 669 residential unit multi-building campus style project. The project was inherited during the design development phase and included an aggressive schedule of design completion during the first half of 2025.

Residences at Bal Harbour, Bal Harbour FL * Electrical Engineer of Record for this 24-story, 512,000 square foot high-rise condominium building in South Florida. The project was submitted for permit in late 2025. The building also includes a 122,000 square foot parking structure and a central plant.

Corporate and Lab Building Design

Edwards Lifesciences, Irvine, CA * Served as Engineer of Record for five buildings totaling approximately 1,000,000 square feet at this campus in Irvine, CA. Scope included outdoor spaces and site electrical distribution and utility coordination of multiple electrical services, generators, solar and power systems for each building. The buildings constructed in 2018 to 2024 and included office and laboratory spaces, a cafeteria building and a visitor center. Multiple emergency and standby generators were included, up to sizes of 2,500 kilowatts to ensure continuous operation of the laboratory functions.

Uber World Headquarters, San Francisco, CA * Engineer of Record for this 500,000 square foot project that included two high-rise buildings located in San Francisco, CA. The buildings were designed in 2015 to 2017 and construction completed in 2021. The electrical design included fuel cell systems which provide continuous power to the data center functions within the buildings, emergency generators and a solar system.

Litigation Support

The Westerly, Winter Garden, FL. Worked with the Building owner, property manager, and plaintiff's legal counsel to evaluate this existing multi-building apartment complex which had experienced damage to electrical systems during lighting strikes. Performed non-destructive testing and full inspection and hired an electrical contractor for destructive testing and underground inspection based on our criteria. Was able to determine the cause of damage, assess current safety issues and define options for corrective action.

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Litigation Support Continued

Pentecostal Tabernacle, Miami, FL .Involved investigation and evaluation of damage to solar power system resulting from a fire in the building. Analysis included fire modeling and heat transfer calculations and thermal imaging. Scope included full fire analysis and specification of replacement system as required due to fire damage. Detailed report was provided following the investigation.

Provident Financial Group v. Futures Electric, claims of defective construction and installation of electrical systems. An expert witness report was compiled based on testing and inspection of the installed systems and review of the engineering construction documents. The building is a mixed-use retail and office complex located in Winter Garden, FL.

Garden Homes at Esplanade Palmer Ranch, worked with the defendant's legal team to respond to defective construction claims at the above property. Conducted a site investigation, code analysis and testing of the electrical system as well as a detailed review of the engineering drawings to determine deficiencies related to engineering and construction. The case was settled following our investigation.

Niles Bolton Associates v. Proficient Engineering, worked with the defendant's legal team on a 149-unit multifamily residential project known as The Reserve at Fairhope, to evaluate a claim for design negligence and provide an expert witness report. The claim included evaluation of the design of the electrical distribution system, emergency power, elevator, and fire pump design.

Coach Homes v. Edmonson Electric, worked with the plaintiff's legal team to evaluate a claim for damages due to errors and omissions in the design. This case is currently ongoing and included detailed review of related engineering drawings and specifications and development of events sequence for expert witness testimony.

Trevi Isles Homeowners Association v. 5 Star Developers v. Comet Electric, involving claims of negligent installation of systems by the general and electrical contractors, provided expert witness reporting based on our evaluation of the project documents and evidence. This is a multi-building residential condominium complex located in Palm Beach Gardens, FL.

CONTACT

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