

**Position Title:** Electrical Engineer  
**Reports to:** Studio Manager  
**FLSA Status:** Exempt

### Summary:

Design Collaborative's Electrical Engineer certainly possess the pragmatic skills and abilities needed to analyze and develop electrical systems for construction projects, but their role in building design doesn't end there. While providing the technical excellence necessary to bring architectural and engineering concepts to life, DC's Electrical Engineers push the envelope in the more conceptual, aesthetic world that is lighting design. Whether it is measuring the ergonomic effects of a lighting scheme or researching the latest concepts in energy management, their ability to see beyond presented information and get to the best solution sets them apart.

### Education and Experience:

- BSEE graduate in Electrical Engineering or BSArchE, ABET Accredited Program
- Pursuing an Engineer in Training (EIT) professional registration a plus
- Familiarity with the Building Design Industry preferred

### Knowledge, Skills, and Abilities:

- Aptitude towards design
- Exercises sound time management and organizational skills
- Demonstrates strong written and verbal communication
- Ensures an attention to detail when handling projects
- Ability to meet deadlines and prioritize multiple projects

### Responsibilities:

The following items are the essential functions of this position. Other duties may be assigned as needed.

- **Entry-Electrical Engineer:**
  - Familiarity with using and adhering to production standards and protocols
  - Familiarity with various contracts, delivery methods and bidding process.
  - Areas of concentration include building power distribution systems, and lighting and low voltage auxiliary systems including fire alarm, security, data networking, and audio-visual equipment
  - Perform lighting calculations - hand calcs, ElumTools and Visual
  - Knows how to do code research, how requirements affect a project
  - Familiarity with cost estimating. Understand system and equipment costs from a high level.
  - Ability to research and document an existing building system or a system that is unfamiliar to them
  - Ability to meet deadlines and prioritize multiple tasks with little oversight
  - Involvement in field surveys of existing systems, and review and monitoring of installation and construction of above-mentioned systems
  - Go to jobsites with experienced engineers to understand installations of systems
  - Assist in the review and markup of shop drawing submittals.
  - Familiarity with CA administration including addendums, PRs, and ASIs.
  - Conduct on-site observations and document site reviews

- Participation in client and project team meetings bringing creative solutions to the table
- Participate in conversation relating to design intent and identify ways to incorporate into documents.
- Responsible for design and drawing preparation related to the commercial and institutional building construction industry under the guidance of professional engineers related to the design of electrical, lighting, data, security, and A/V systems.
- Provides input on design and process improvements.
- Researches code requirements (IBC, NFPA, ASHRAE 90.1)
- Coordinates new service with utility company
- Coordinates electrical requirements with other disciplines – routing of conduits, depth of equipment, space requirements, code clearances, etc
- Energy modeling of multiple Electrical Systems
- **Mid-Electrical Engineer:**
  - Same as above
  - 5+ years of applicable experience in the Building Design Industry preferred
  - Registered or actively pursuing an Engineer in Training (EIT) professional registration a plus
  - Mastery of production tools such as Revit and Excel required.
  - Understands and adheres to production standards and protocols
  - Follow process identified by Design Collaborative
  - Recommend ways to improve process, quality and coordination efforts.
  - Evaluate an existing building systems
  - Performs a building assessment and writes a report
  - Performs short circuit studies
  - Critiques lighting calculations and designs
  - Conduct checkset reviews on others engineers work
  - Establish preliminary project scope, budget, and schedule along with guidance from Project Manager
  - Evaluate and compare alternative systems
  - Research and evaluate an existing building system or a system that is unfamiliar to them
  - Act independently during CA at job site meetings, providing on-site observations, and assisting in field reports
  - Inspect installation of systems on jobsites
  - Represent DC at job site visits and communicate with contractors / subs / owners effectively.
  - Responsible for the review and markup of shop drawing submittals.
  - Proven success working in a “cooperative team setting” with common goals.
  - Clearly understand and articulate systems and be a “proactive forward looking” individual to potential construction pitfalls and articulate them to the team to allow an early shift of focus to remedy these pitfalls.
  - Meet deadlines and prioritize multiple projects with little oversight
  - Perform code searches (IBC, NFPA, ASHRAE 90.1) and comply with code requirements.
  - Capable of independent evaluation, selection and application of standard engineering techniques and procedures with minimal guidance for unusual problems or unfamiliar systems
  - Create flow and control schematic drawings, specify control systems, and author sequences of operations for building and utility control systems.

- Work start to finish on projects with little assistance.
  - Use sound judgment when making minor adaptations and modifications
  - Supervise and direct other electrical engineer design efforts.
  - Assess what work needs done and communicate plans with team to meet schedules.
  - Write design narratives & engineering analysis.
  - Evaluate and compare alternative lighting, controls, and electrical systems
  - Works directly with clients effectively speaking/presenting on design
  - Has established strong working relationships with contractors and vendors
- **Senior-Electrical Engineer:**
    - Same as above
    - 10+ years of applicable experience in the Building Design Industry
    - Registration required
    - Opportunities for specialization
    - Experience with the full project lifecycle, through post-occupancy
    - Review design for compliance with engineering principles, codes, company standards, customer contract requirements, and related specifications.
    - Extensive knowledge of engineering principles/practices
    - Make decisions on system use / detail with understanding on cost impact to project
    - Work directly with larger clients and put together fees and deliver quotes for services
    - Solo review of scope, budget, and schedule of entire project with general understanding of all disciplines.
    - Reviews and manages design budgets and schedules.
    - Handles complex projects of large magnitude
    - Manages workload on multiple complex projects independently.
    - A primary in training and mentoring team members and other Electrical Engineers
    - Leads teams through all phases of design including competitions
    - Regularly makes decisions on system use / detail with understanding on cost impact to project
    - Work with an “architectural mindset” to seamlessly blend their equipment and systems into the background that is being envisioned by the Architect for truly pleasing appearance along with mechanical serviceability.
    - Direct and oversee multiple teammates on their projects
- **Optional Aptitudes**
    - Advanced knowledge or accreditation of Energy Efficiency & High-Performance design
    - Sustainable and energy responsive system selection and coordination with other disciplines for building conceptual design.
    - Extensive knowledge specific to markets – Healthcare, Higher Ed, etc.
    - ASHRAE certifications

**Signatures:**

Employee signature below constitutes employee's understanding of the requirements, essential functions and duties of the position.

Employee \_\_\_\_\_ Date \_\_\_\_\_

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