



Nicholas Alexander

Electrical Engineer, Physical Substation Design

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SUMMARY

Electrical Engineer with two years of power delivery experience through September 2026, focused on **utility scale** high voltage **physical substation design**. EIT certified work includes equipment layouts, grounding and conduit details, engineering calculations, drawing production, design checks, and constructability coordination using AutoCAD and **Bentley MicroStation**. Completed assigned design packages under senior engineer supervision while managing scope, schedules, budgets, quality reviews, and technical documentation. Applied IEEE, ANSI, NESC, NEC, and **National Electrical Safety Code** concepts during design development and checking. Supported estimates, proposal inputs, scheduling, project controls, construction feedback, and stakeholder communication. Guided an entry level designer through drawing standards and quality checks. Ready to contribute sound engineering judgment, practical planning, and dependable design delivery within a collaborative utility engineering team.

EXPERIENCE

Electrical Engineer I, Substation Design

Redwood Grid Design 📅 October 2025 - September 2026 📍 Fort Worth, TX

Supported utility scale high voltage **physical substation design** packages from data gathering through internal issue milestones. Produced drawings, calculations, design checks, constructability coordination, schedule tracking, and quality documentation under senior engineer supervision. Guided an entry level designer and raised scope risks early.

- Produced **high voltage** substation layouts in AutoCAD and Bentley MicroStation, supporting clear **construction** packages.
- Completed routine electrical and dimensional calculations, documenting assumptions and **discrepancies** for senior engineer review.
- Checked drawing packages against **IEEE**, ANSI, NESC, NEC, and **National Electrical Safety Code** requirements.
- Coordinated civil and structural comments, resolving equipment layout conflicts before package advancement.
- Tracked engineering hours and deliverables against schedules, raising scope risks early for project leadership.
- Guided entry level design work through drawing standards and quality checks, improving package consistency.

Junior Electrical Engineer, Power Delivery

Prairie Line Engineering 📅 September 2024 - September 2025 📍 Oklahoma City, OK

Supported brownfield and greenfield utility projects under licensed engineer supervision, contributing site data correlation, physical design, estimating, **technical writing**, constructability reviews, and **quality checking**. Organized design records and translated construction feedback into practical design improvements.

- Supported **brownfield** and greenfield substation design under supervision of licensed electrical engineers.
- Correlated vendor data with site information, placing verified inputs into drawings and calculation files.
- Prepared proposal quantities and estimating inputs, giving project leads traceable **planning** assumptions.
- Organized design data and checking logs in **Microsoft Excel** for clearer review control.
- Prepared technical notes and review responses in **Microsoft Word**, clarifying decisions for project stakeholders.
- Applied peer review comments and self checks, resolving discrepancies before drawing release.

PROJECTS

Brownfield Substation Constructability Review 📅 2025

STRENGTHS

- ⚡ **Physical Design Delivery**
Built utility scale substation packages in AutoCAD and MicroStation. Senior reviewers relied on clear layouts and complete details.
- ✅ **Quality Checking**
Used standards reviews and self checks to catch discrepancies early. One careful review often saved a later revision cycle.
- 🔧 **Constructability Coordination**
Connected design details with field realities through civil and structural reviews. Construction feedback became practical drawing improvements.
- ♥️ **Technical Documentation**
Turned calculations, vendor data, and review comments into organized records. Clear notes helped project teams make decisions.
- 👥 **Developing Guidance**
Guided an entry level designer through standards and checks. Quick coaching created more consistent multi sheet packages.

SKILLS

High voltage substations

Physical substation design

Power delivery AutoCAD

Bentley MicroStation

EIT Certification Constructability

Project estimating Scheduling

Project controls Technical writing

Quality checking

Engineering judgment

Microsoft Word Microsoft Excel

LANGUAGES

English Native

Spanish Intermediate

MY CAREER



● Electrical Engineer I,
Substation Design at Redwood
Grid Design (11 Months)

● Junior Electrical Engineer,
Power Delivery at Prairie Line
Engineering (1 Years)

Reviewed equipment access, conduit routing, field constraints, and construction feedback for a brownfield utility substation design package. Documented practical revisions that supported clearer installation planning and reduced layout conflicts before later design stages.

Physical Substation Drawing Quality Package 📅 2026

Prepared coordinated AutoCAD and Bentley MicroStation drawings with calculation records, standards checks, and review responses. Organized package information for senior engineer approval, supporting reliable issue control across a utility scale design assignment.

LEADERSHIP & AWARDS

- EIT certification recognized in 2024 after completing electrical engineering education and beginning power delivery practice.
- Selected to guide entry level design work through drawing standards, package checks, and practical review habits.
- Trusted by project leads for traceable estimating inputs, organized checking logs, and clear technical responses.

EDUCATION

Bachelor of Science in Electrical Engineering

University of Oklahoma 🎓 GPA: 3.5 📅 2024 📍 Norman, OK

Coursework: Power systems, electrical circuits, engineering design, construction methods, engineering economics

CERTIFICATIONS

- Engineer in Training 📅 2024
- Professional Engineer Licensure Preparation 📅 2026

TECHNICAL SKILLS

- **Substation Design:** Equipment layouts, grounding details, conduit details
- **Design Software:** AutoCAD, Bentley MicroStation, drawing production
- **Engineering Standards:** IEEE, ANSI, NESC
- **Electrical Codes:** NEC, National Electrical Safety Code, code checking
- **Engineering Analysis:** Routine calculations, dimensional calculations, discrepancy analysis
- **Project Controls:** Budgets, schedules, engineering hours
- **Construction Support:** Constructability reviews, field constraints, installation planning
- **Estimating and Proposals:** Proposal writing, quantity takeoffs, estimating inputs
- **Microsoft Office:** Microsoft Word, Microsoft Excel, checking logs
- **Quality Management:** Self checks, peer reviews, drawing audits
- **Power Delivery:** Utility projects, brownfield substations, greenfield substations
- **Communication:** Technical writing, verbal communication, stakeholder coordination

PROFESSIONAL AFFILIATIONS

- Engineering team contributor supporting coordination among electrical, civil, structural, construction, and project controls stakeholders.
- Power delivery professional engaged in practical substation design reviews, constructability discussions, and shared quality improvement.

ADDITIONAL INFORMATION

Work Status : Authorized to work in United States. No sponsorship required.

REFERENCES

AVAILABLE ON REQUEST