

### EDUCATION

Pennsylvania State University Power and Lighting Design Courses

### EXPERIENCE

Mr. Ferree is presently a Senior Electrical Project Manager for Paragon Engineering Services, a Mechanical and Electrical Engineering Firm based in York, Pennsylvania. Paragon Engineering Services has a very diverse client base throughout the country. Mr. Ferree has over 34 years of experience working in the Electrical Design and Construction Field.



Mr. Ferree is responsible for assigning and supervising those projects involving the Electrical Engineering Group. His duties include: coordination of department design activities; staffing / manpower assignments; direct supervision of electrical engineering assignments; electrical system planning and evaluation. He also served as liaison between the various departments of the company as well as with outside clients. Mr. Ferree is responsible for providing electrical project review on assignments. His other duties included project management issues, budget control, and fiduciary responsibility, both to the company as well as our clients.

### GENERAL PROJECTS INCLUDE:

**Fleur De Lait** – Electrical design of a new 80,000 sq. ft. cream cheese factory located in Merrill, OR. The electrical design consisted of a 4000Amp – 277/480Volt – 3Phase – 4Wire power company service and distribution system. Production area lighting was provided by totally enclosed T5 HO fluorescent type fixtures approved for wash down with a night light circuit through out the building. The power distribution system design included provisions for the Owner to add a generator to supply back-up power for the operation of the entire plant during a power outage.

**Bakery De France** – Electrical design of a new 100,000 sq. ft. bakery located in Frederick, MD. The electrical design consisted of a 5000Amp – 277/480Volt – 3Phase – 4Wire power company service and distribution system. Production and Cooler area lighting was provided by T5 HO fluorescent high bay type fixtures with a night lighting circuit through out the building. The power distribution system design included the design for two(2) 625KVA generators to supply back-up power for operation of the production lines during a power outage.

**St. Anne Home-Columbia Pennsylvania** - Electrical design of renovations and additions to main nursing home building. Design consisted of upgrade of existing electrical service to feed not only the nursing home building but also the convent portion of the building. Design of a new nurse call system, emergency power backup and fire alarm upgrades. Design of new building addition to nursing home, including extension of existing electrical systems into the new building. Design of cottages on the site, including all power, lighting, nurse call system and power distribution within the buildings and on the site.

**York United Methodist Home, York, Pennsylvania** - Electrical design was for an entirely new facility consisting of assisted living units, nursing units, cottages and apartments. Design included all lighting,

power, emergency systems, fire alarm, nurse call and security systems. This project had a primary service.

**Pleasant Acres, York, Pennsylvania** - This was a nursing facility for York County Home. Electrical design included lighting, power, emergency power system, fire alarm and nurse call system

**Messiah Village, Mechanicsburg, Pennsylvania** - This project consisted of a number of different buildings. One building was an assisted living facility/office complex. One building was a commons building with retail spaces and a restaurant. One building was an Alzheimer's facility. Two buildings were multi-floor apartment buildings. Electrical design included power, lighting, emergency power systems, fire alarm, nurse call system, security and special lighting and patient security systems for the Alzheimer's wing.

**Rockhill Mennonite Home, Sellersville, Pennsylvania** - This project was done in several phases. The first phase consisted of updating all systems in the existing nursing home. The second phase was to build and entirely new 39 unit nursing facility. Once the new facility was operational, the existing facility was torn down to make room for a five story, 95 apartment building and a 96 unit assisted living facility. Electrical design included all power, lighting, emergency power systems, fire alarm, nurse call system throughout, security and primary service for all the buildings.

**AAA Motor Club, AAA Facility Renovation, York, Pennsylvania** - Exterior and interior building renovations to relocate corporate executive offices into larger quarters. Electrical systems included service, emergency lighting, card access, TV surveillance, fire alarm and security.

**Anne Arundel County Public Schools, Design for Relocation of Portable Classrooms for up to 10 Sites, Anne Arundel County, Maryland** - Planning, design, and bid phase services to relocate portable classrooms. Included foundations, ramps and stairs, skirting, detailed electrical design including security, and demolition at former sites.

**Baltimore County Department of Parks and Recreation, Honeygo Run Park Design Services, Baltimore County, Maryland** - Mapping, Design, Construction Document Preparation and Construction Administration services for 162-acre, multi-faceted athletic facility, including a 15,000-square-foot building, three lighted and irrigated baseball fields and multi-purpose recreation fields, parking for 300 cars, an inline hockey skating rink, picnic pavilions, a tot lot, landscaping, and a hard-surface trail loop around the developed portion of the park.

**Berg Electronics Valley Green Facility** – Designed and developed standards for the exterior electrical plans for the power, telephone, and grounding system. Designed interior electrical plans for power, telephone, lighting, grounding, emergency, fire and security systems.

**BH-GMBH - Kaiserlautern Utility Study** - Facility utilization surveys for three sites, including over 350 buildings and more than 3.9 million square feet. Development of a DBase III+ database (with Oracle interface) for tabulation of individual room square footage and compilation of overall gross and net area for individual buildings. The database was linked to graphical files (Microstation DGN format) showing the floor plan of each floor of each building with room name and associated square footage of each room. The database and drawing package was used to update the U.S. Army's Oracle-format Real Property Records

**PennDOT, District 8-0, Blue Mountain Interchange, Pennsylvania** - Final design for improvements to the Blue Mountain Interchange, including design of new utility building and toll plaza facilities, new water and wastewater treatment facilities, complete HVAC, electrical, and plumbing work, and new high mast and conventional lighting for toll plaza and interchange.

**Buchart-Horn, Inc./BASCO Associates' Corporate Headquarters, York, Pennsylvania** - Design and construction management for the adaptive reuse of a 1907 manufacturing plant into a 57,000 square foot office building which accommodates 230 employees. Design included boiler and emergency generator, mechanical systems, lighting, power, service, fire alarm, and card access systems.

**Pennsylvania DGS, Capital City Airport, New Cumberland, Pennsylvania** - Facilities master plan and construction documents for terminal upgrade, including ADA upgrades, HVAC, fire safety system and electrical system improvements, and environmental remediation services. Also, construction documents and construction phase services for re-roofing two hangars.

**Township of Derry, New Public Works Facility, Hershey, Pennsylvania** - Design and construction administration of Public Works Facility including office, storage, recycle, and maintenance facilities for the Township's Public Works staff and operations. Electrical design consisted of lighting, power, security, fuel dispensing, computer systems and emergency generator. Building was to be used as an emergency center in case of disaster.

**City of Dyersburg, Dyersburg Airport Lighting, Etc., Dyersburg, Tennessee** - Taxiway lighting, rotating beacon rehabilitation, PAPI's obstruction removal, runway pavement rehabilitation and runway safety area improvements for a busy general aviation airport.

**Fort Indiantown Gap National Guard Armory Design, Lebanon County, Pennsylvania** - Design and construction administration of a 128,000 square-foot, two-level, 800-man armory with central digital controls of systems.

**Milton S. Hershey Medical Center, Hershey, Pennsylvania** - Expansion design for existing parking facilities and children's rehabilitation play area. Work included service modifications for power, security lighting, landscape design and construction administration.

**Tennessee DOT, I-40/240 Interchange Reconstruction and Improvements, Memphis, Tennessee** - Preliminary and right-of-way design and construction plans for the reconstruction and improvement of the existing interchange into a four-level direct connection interchange.

**Kanawha County Judicial Annex Renovations, Charleston, West Virginia** - Architectural/Engineering services for comprehensive redesign of 7-story courtroom facility and office annex including new floor plans of 93,000 square feet of existing courtroom and office space with two new additions totaling 23,000 square feet. Modernization also includes accessible features, elevators, and technology and security systems. Electrical design also included new services, fire alarm modifications, new lighting, sound and power.

**Kellogg Company L & I Plans, Lancaster, Pennsylvania** - Kellogg Company, Dual Pack Design. Fast-track structural, architectural, mechanical, and electrical design services were provided. Developed phased layout plan showing impacted areas of construction/alteration for defining temporary and permanent facility modifications as necessary.

**Muncy State Correctional Institution for Women, Muncy, Pennsylvania** - Design consisted of renovation of existing coal-fired boilers and associated equipment; replacement of 7,500 feet of steam distribution piping; upgrade to the primary electrical equipment (to each building on campus); and construction of one 128-cell L4 (close custody security) housing unit of approximately 33,000 square feet.

**Quarterpath Park Gymnasium A/C, Williamsburg, Virginia** - Electrical and mechanical engineering services to design the gymnasium retrofit for air conditioning. Services included program definition and evaluation, design development and construction documents for competitive bidding and bidding/construction phase assistance to the City.

**Ragland & Hankle Oral & Maxillofacial Surgery Center Renovations, York, Pennsylvania** - Renovations which included examination lighting, x-ray equipment, x-ray developing lab, nurse call system and grounding. Provided engineering service as sub consultant to Slonaker-McCall.

**City of Dyersburg, Dyersburg Municipal Airport Runway Extension, Safety Improvements and SWPP Plan, Dyersburg, Tennessee** - A/E services to implement safety improvements: property and topographic surveys, Airport Layout Plan update, obstruction analysis, developing/complying with SWPP Plan, construction plans, specifications and bidding documents, and bid and construction phase services.

**Tobyhanna Army Depot Electrical Distribution System, Tobyhanna, Pennsylvania** - Assessment of the electrical distribution network from the transfer point of power at the utility company source (69 KV) through the 15 KV substation to the main distribution panel at each structure (building, pump house, antenna, etc.) within the Tobyhanna complex.

**United States Postal Service, Indefinite Quantity Architectural/ Engineering Services Contract, Annapolis Junction, Maryland** - Design phase services, survey investigation, solicitation administration, review of shop drawings, and construction administration for a new 2,000-square-foot post office.

**U.S. Postal Service, Design and Prepare Construction Drawings, Ellicott City Post Office Renovation and Addition, Ellicott City, Maryland** - Complete architectural/engineering services for the renovation and addition to Ellicott Post Office, including parking lot expansion, two storm water infiltration facilities, and an on-site storm drain system.

**West York Area School District, West York Middle School, York, Pennsylvania** -The scope of the Middle School included design of a new 157,600 square foot school for 900 6th through 8th grade students on the existing Junior High School site. The design separated the grade facilities and will accommodate future additions for 150 more students. Sustainable design practices were used, including site plans, energy efficiency, material systems, air and water, and waste reduction. The building itself helps demonstrate energy conservation and compatibility with the environment. With "Green Design" mission, core team members applied five fundamentals of sustainable design: site planning, energy efficiency, product properties, air and water, and waste reduction. These fundamentals became integral parts of the educational program. In addition to an analysis of heat loss/heat gain, energy loads and natural light, the final site plan created the most efficient use of the site for physical education and athletic needs, including rearranging the fields to gain an additional physical education space. A comparative analysis evaluated all systems and products according to thirty-two specific design criteria, including energy efficiency, maintenance cost, operating cost, ease of operation, environmental impact both during construction and during operation and use, code compliance, and impact upon other systems.