

# PARAGON

**Peter E. Beddia, PE**

Engineering Services, Inc.

*Director of Electrical Engineering*

## EDUCATION

Pennsylvania State University,  
B.S. Electrical Engineering Technology - 1989

## FIELD OF SPECIALIZATION:

Water/Wastewater Treatment  
Industrial  
Commercial

## REGISTRATIONS

PA - 2001      MD - 2002      NJ - 2003



## EXPERIENCE

Mr. Beddia is presently a Director of Electrical Engineering at Paragon Engineering Services, a Mechanical, Electrical and Plumbing Engineering Firm base in York, Pennsylvania. Paragon Engineering Services has a very diverse client base throughout the country. Mr. Beddia is responsible for managing a multi-disciplinary team; which includes providing leadership in the development of new ideas, products, processes, and techniques. His responsibilities also include: QA/QC manager for designs from technical staff, design and drafting support, prospecting new accounts and making key business decisions.

While working for another employer, Mr. Beddia served as Director of Commercial/Environmental/Industrial; responsible for Total Quality Management within this department, supervising design and specifications, studies and reports.

## Municipal Projects Include:

### **Highspire Waste Water Treatment Plant Electrical Upgrade, Highspire, PA**

Served as Electrical Engineer responsible for power system design to upgrade a failing power distribution system, add an emergency generator and automate an existing outdated manual process control system. The design included the replacement of an existing cable and conduit ductbank system, installation of an additional emergency backup generator, replacement of existing controls and motor control center, instrumentation and design of an automated PLC control system.

### **Manheim Borough Authority Water Treatment Facility Improvements, Lancaster, PA**

Served as Electrical Engineer responsible for design of the water treatment facility improvements which included a new building addition, air stripping tower and renovations to the existing process to accommodate the new diatomaceous earth filtration system. Design included electrical service relocation, secondary power distribution, lighting, instrumentation and control.

### **Orchard Road Water Main Extension, Manheim, PA**

Served as Electrical Engineer responsible for design of the electrical system and controls for a duplex water booster pumping station. Design included design of the complete power distribution system, instrumentation and control system with emergency generator backup power.

### **Derry Township Municipal Authority, Hershey, PA**

Provided consulting engineering services for construction of an ultraviolet disinfection system for the Clearwater Road Wastewater Treatment Plant. Served as Electrical Engineer who provided support for electrical design of a UV system including survey of existing conditions, power distribution, and instrumentation and control.

### **Borough of Chambersburg Wastewater Treatment Plant, Chambersburg, PA**

Served as Electrical Engineer responsible for power system design to add a second 15kV electric service and new double-ended main switchgear to provide backup power. Project involved design and construction for upgrade and expansion of a 5.2 mgd trickling filter facility to a 6.8-mgd activated sludge process facility. Integrated two existing diesel-powered standby generators into the new main electric service switchboard for additional backup capabilities including new generator output paralleling switchgear and load shedding controls via the new process control computer system. Process loads and support building utility loads separated into groups with priority rating dependent upon the availability of one or both main power company services and one or both backup diesel generators. Process control system design consisted of redundant PLCs, UPS and integration of third-party process controllers into the main process control system.

**Emergency Repairs to the West Portal Building of the Tuscarora Mountain Tunnel, The Pennsylvania Turnpike Commission, Franklin and Huntingdon Counties, PA.** Project Manager and Structural Project Engineer for the emergency inspection and accelerated repairs to the tunnel's West Portal Building following a truck accident on April 26, 2002 (less than one month after the initiation of the main inspection contract). The accident resulted in the complete destruction of the emergency generator room, the loss of electrical power to the ventilation and lighting for the western half of both tunnels, damage to the brick facade and structural framing elements in the vicinity of the collision, and smoke and soot damage throughout the portal building. Though not at the site at the time of the accident, Buchart-Horn's structural and electrical personnel immediately responded to the Commission's request to assess the integrity of the tunnel and portal structures, and to determine what was required to return the tunnel back to operation as soon as possible (a large portion of the turnpike had already been closed to traffic in both directions). The structural assessment resulted in temporary shoring of the exterior brick facade, otherwise, the main structure was deemed sound. The electrical inspection concluded that the tunnel's transformers had not been damaged, and emergency repairs to the wiring system resulted in the tunnel being opened to traffic within 12 hours after the accident. Subsequent tasks included additional, in-depth inspections of all affected systems, and the development of a comprehensive accident report (submitted less than two weeks after the accident) which included findings, recommendations, and repair cost estimates.

### **Healthcare and Assisted Living Projects:**

**York United Methodist Home, York, PA.** New facility including 77 cottages, 60-bed personal care unit and 60-bed nursing facility on 20-acre site (184,000 square feet). Electrical design included primary service, emergency backup, fire alarm, and nurse-call systems. Mr. Beddia was the Electrical Engineer responsible for design of electrical system and lighting for apartment developments within retirement communities. Design included residential wiring and site lighting.

**St. John's Herr Estate Retirement Community, Columbia, Pennsylvania.** Developed master plan of 39-acre site and design of multi-story personal care facility. Electrical design of multi-story personal care facility included primary service, emergency backup, fire alarm, and nurse-call systems. Electrical Engineer responsible for design of electrical system and lighting for two apartment developments within retirement communities. Design included residential wiring and site lighting.

**St. John's Herr Estate Cottages, Columbia, PA. Development of 43 cottage units.** Electrical Engineer responsible for design of electrical system and lighting for two apartment developments within retirement communities. Design included residential wiring and site lighting.

**United Methodist Home, York, PA. Design of a 319-unit retirement village on a 45-acre site.**

Electrical Engineer responsible for design of electrical system and lighting for apartment developments within retirement communities. Design included residential wiring and site lighting.

**Milton S. Hershey Medical Center, Hershey, PA.** 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. Electrical Engineer responsible for design of electrical system and site lighting layout for Hershey Medical Center. The design included lighting of two parking lots with automatic gate controls.

**Military and Government Projects Include:**

**Tobyhanna Army Depot Electrical Distribution System, Tobyhanna, PA.** 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. Electrical Engineer responsible for survey of numerous building electrical services and electrical overhead distribution system at the Tobyhanna Army Depot, to prepare a report of existing conditions and recommendations to correct existing deficiencies.

**York County Prison Expansion, 1998 Addition, York, PA.** Design services for the expansion of York County Prison to accommodate an additional 544 medium- and minimum-security prisoners, including illegal alien detainees, for the Immigration and Naturalization Service (INS).

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

**Patuxent Naval Air Station Surveys, Patuxent, MD.** Field surveys of seven taxiways and preparation of 20 base drawings on CADD for the Naval Air Station.

**School Projects Include:**

**West York High School Renovation and Additions, York, PA.** Extensive renovations and additions to high school, including replacement of mechanical and air conditioning systems, upgrade of auditorium, expansion of library, and improvements for handicap accessibility. Electrical Engineer responsible for design of the building security system, card access and fire alarm system.

**West York Area School District Additions and Renovations, York, PA.** \$51,000,000 district-wide facilities improvement program including design of facility upgrades for four elementary schools, a high school, a warehouse, and a new middle school.

**Industrial Projects Include:**

**Capital City Airport, New Cumberland, PA.** 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.

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**Harrisburg International Airport ADA Upgrades, PA.** ADA upgrades for Buildings 28, 34, 135, 142 and 515. Electrical Designer responsible for electrical design.

**Harrisburg International Airport Environmental Remediation, PA.** Construction documents and construction phase services for environmental remediation and demolition of 16 buildings totaling 800,000 square feet. Electrical Engineer responsible for design of electrical system, control system and overhead power distribution system for a groundwater remediation system.

**Golub Corporation Truck Maintenance Facility, NY.** Buchart-Horn provided the design and contract documents for a 9,000-square-foot addition and a 13,500-square-foot renovation of a truck maintenance facility.

### Commercial Projects Include:

**Candleman Store Power Distribution, York, PA.** Power distribution for retail space in shopping center for a new leaser.

**Coopers and Lybrand Office Center, Harrisburg, PA.** Pre-design and construction services for a programming analysis to determine projected growth of 21,000-square-foot office center.