



December 19, 2013

West Virginia Division of Juvenile Services  
Stephanie Bond, Acting Director  
1200 Quarrier Street  
Charleston, WV 25301

RFQ Number: DJS140002

Dear Ms. Bond:

On behalf of Omni Associates – Architects, I would like to thank you for the opportunity to submit our team's proposal for professional architectural and engineering services.

As a West Virginia firm, we understand that our success is based on our commitment to being responsive. We have specifically selected our engineering consultants based upon the requirements of your request for qualifications. **Omni Associates** will provide architectural services and serve as the lead firm and coordinator of architectural and engineering services. **H.F. Lenz Company** will perform structural, mechanical, electrical, and plumbing engineering services and **Terradon Corporation** shall provide civil engineering services. We are a proven team that listens and produces a quality product on time and within budget.

Our professional architects, engineers, and planners possess the dedication, expertise, and project experience to ensure that your project goals are realized. As a team with a long history of successful collaboration, we can offer your projects the following benefits:

- Innovative cost-saving design to minimize construction costs.
- Sustainable energy efficient systems to minimize operational costs.
- Flexible building design to address current and future needs.
- Realistic design and construction schedules to meet your needs.

Omni's approach to design allows us to avoid the confines of specialization and affords us the opportunity to create a diverse body of work. I am confident that our original design concepts, coupled with our extensive project experience, which includes recurrent clients such as the West Virginia Army National Guard, CDC/NIOSH, West Virginia University, the West Virginia High Technology Consortium Foundation, Fairmont State University, and Mylan Pharmaceuticals, will assure the success of your unique projects.

We would greatly enjoy the opportunity to meet with you and the selection committee to discuss in greater detail how our professional experience can benefit the Division of Juvenile Services. I invite you to visit any of Omni's projects that may be of interest to you. If we may be of any assistance in making arrangements for personal tours, please do not hesitate to contact us.

Sincerely,

OMNI ASSOCIATES-ARCHITECTS, INC.

Edward A. Luthy, AIA NCARB  
Principal

12/18/13 11:26:19AM  
West Virginia Purchasing Division



## West Virginia Division of Juvenile Services

### Statement of Qualifications

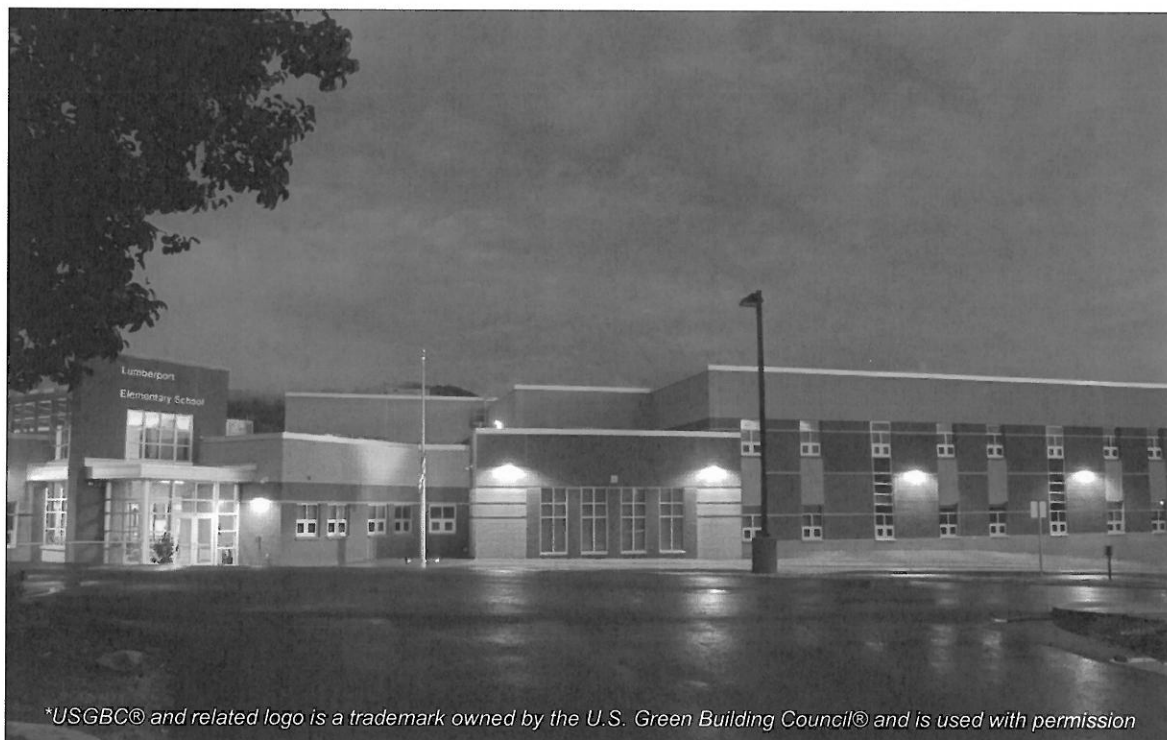
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## General Qualifications

OMNI ASSOCIATES - ARCHITECTS is an award-winning architectural firm located in Fairmont, West Virginia. Our excellent reputation and superior work product are a direct result of mutual respect and effective communication with our clients and consultants, which enables our staff to provide outstanding architectural and engineering design services for our clients.

Since our inception in 1980, OMNI has earned recognition in the programming, planning, and design of a variety of facility types, including K-12 schools, higher education facilities, office buildings, recreational facilities, religious facilities, health care, military, and multipurpose facilities.

Our approach to design has allowed us to avoid the confines of specialization and afforded us the opportunity to create a diverse body of work. Each project is a unique undertaking that begins with analyzing the needs and desires of the client and interpreting them into a distinctive design that meets specific needs and exceeds expectations.

Omni has a successful history of designing intimately with each client and working out collaborative solutions that meet the goals of the project, resulting in an impressive record of customer satisfaction. We are a proven team that listens, provides professionalism and attention to detail, and produces a quality product. These are qualities that draw our clients back, resulting in lasting relationships. That's why we enjoy a repeat client rate of more than 90% - a source of considerable pride.

Omni Associates - Architects' design team has developed designs for numerous projects which must comply with State and Federal regulations. Such projects include working with the following Agencies: Federal General Services Administration (GSA); WV General Services Administration; Corps of Engineers; National Guard Bureau; Federal Aviation Administration; Department of the Navy, Federal EDA; WV EDA; HUD, and the WV School Building Authority (SBA).

Our work has involved a variety of funding sources including the WV Development Office - Small Cities Block Grants, State Revolving Fund Loan, Rural Economic and Community Development Administration (Farmers Home Administration), WV Division of Environmental Protection - Construction Grants Branch, US Department of Commerce-Economic Development Administration, Water Development Authority, West Virginia Infrastructure and Jobs Development Council, and Appalachian Regional Commission, either individually or in combination.

Omni Associates provides clients with the results they value most: innovative designs consistent with the building program, cost effective designs which meet the budget, and efficient project management to provide on-time deliverables. We're confident in our expertise, and our clients are confident in our reputation for superior services.



### **Omni Associates—Architects, Inc.**

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www.omniassociates.com

#### **OWNERSHIP**

Professional Corporation

#### **HISTORY**

Established in 1980

#### **SENIOR PERSONNEL**

Stephen A. Barnum AIA, NCARB  
Senior Principal

Richard T. Forren AIA, NCARB  
Principal

John R. Sausen AIA, NCARB, LEED AP  
Principal

David A. Stephenson  
Principal

Edward A. Luthy AIA, NCARB  
Principal

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Omni Associates - Architects provides comprehensive, in-depth professional architectural services for new construction, renovation, addition, and adaptive reuse utilizing a variety of delivery methods to best serve our clients' needs.

### **Design-Bid-Build Delivery Method**

Omni has performed private and public projects of every building type using this traditional method of project delivery. We organize your entire project in advance of bidding and work extensively with you to achieve alternates to program goals. Construction documents are prepared and bid to multiple general contractors to achieve competitive pricing. Omni has successfully negotiated with contractors to maintain changes and costs to a minimum and still achieve the initial time schedule.

Omni has also worked on "fast-track" and "multiple-prime" contract projects to achieve an accelerated building construction time schedule. As a variation of the traditional design-bid-build delivery, the negotiated select team approach allows for selection of a contractor early in the design process. We prepare construction drawings in stages and bid these "parts" of the total building program so construction can be ongoing as the next phase is programmed and designed. We have worked with General Contractors, Construction Managers and multiple prime subcontractors to successfully complete this type of project delivery.

### **Design-Build Delivery Method**

More and more owners and developers are seeking a simpler delivery style with a single point of responsibility for both design and construction. Under design-build, a consolidated entity provides both design and construction services to the owner. A single contract is established between the owner and the architect-contractor or design-builder. Omni has experience with both scenarios and has contracted with owners and with general contractors to achieve this streamlined method of project delivery.

### **Construction Administration**

Omni has worked on projects for only the construction phase of the total building life. This would include projects designed by another firm who needs local supervision or a "pre-designed" project from a national restaurant or store, which requires local implementation. Omni has also performed bank or financing inspections to determine the completion status of the project for periodic applications for payment.



### **Omni Associates—Architects**

Conceptual Design & Planning  
Master Planning  
Program Development  
Renderings  
Cost Estimation  
Schematic Design  
Design Development  
Construction Document Development  
Bidding & Negotiating  
Construction Administration  
Post-Contract Services  
Facility Management Services  
Feasibility Studies  
Legal Consultation  
Historical Restoration

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## Technical Expertise

### BIM: Building Information Modeling

Omni is committed to continually upgrading existing technology and driving the evolution of design tools. This commitment springs from the firm belief that the responsible use of technology facilitates innovative design, results in economic benefits for our clients, and assists in efficient communication with clients and consultants.

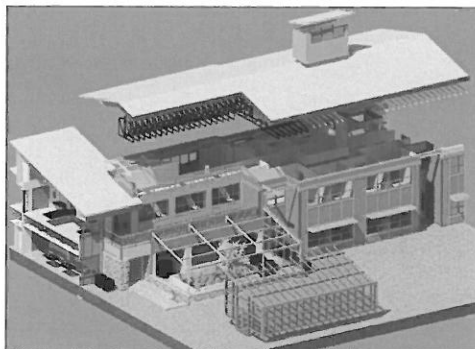
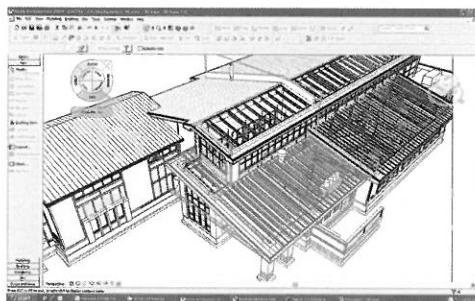
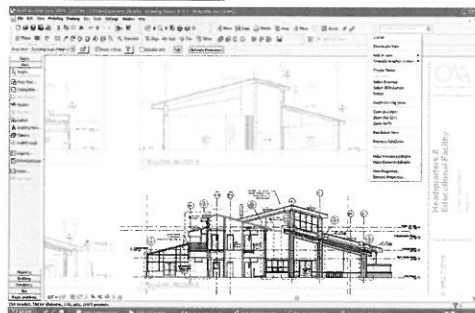
In 2006, Omni Associates began the transition from traditional CAD software to Autodesk® Revit® Building Information Modeling (BIM). We immediately recognized the basic benefits to both designers and owners: more efficient, cost-effective project delivery and an accurate building model that can later assist in energy analysis and building management.

Omni implemented the use of BIM as our primary software platform for all projects in 2006. In utilizing BIM, we discovered the real depth of its value:

- With a virtual model of the building, clients can clearly see the design intent as the project progresses and design options can be explored with greater ease than ever before.
- Sharing the model among all disciplines as the design progresses allows early input from all of the design professionals involved, resulting in efficient designs.
- Creating a building in the virtual world before constructing it in the "real" world allows the design team to anticipate conflicts and objections before they arise, eliminating many issues which could result in project change orders or Requests For Information from the contractor.

Omni is proud to show that we don't just use Revit software, but we are adept at using it and can provide skilled support as needed. Omni staff member Reuben Losh is now an Autodesk Revit Architecture 2011 Certified Associate. Mr. Losh plans to test soon for the next level of certification, Autodesk Revit Architecture 2011 Certified Professional.

Obviously, using the latest computer software does not guarantee good design. Good design is built upon having a complete understanding of the client's needs and the knowledge & experience to create a space which addresses those needs in an elegant and practical manner. We see BIM as an advanced tool in making that goal a reality for each project that we undertake.



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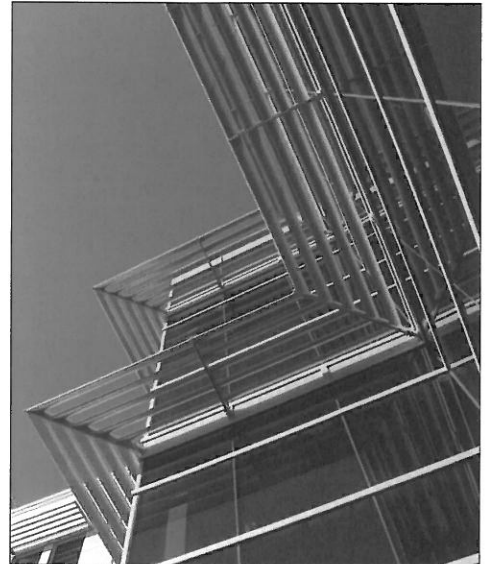




### Electronic Submission of Project Documents

Since 2007, Omni has utilized a web-based solution for secure file storage and project team collaboration. The site employs a simple and intuitive interface, similar to social networking sites, that is much easier to navigate than an FTP site. This encourages communication among team members while leveraging the security of data encryption and controlled access.

This tool supports building information modeling (BIM) workflows and can be used throughout all phases of a project for such tasks as file storage, RFI and Shop Drawing management, and project milestone tracking. Since these processes are electronic, the time it would take to mail or fax documents is eliminated and project information is centralized. Project information is hosted on secure third-party servers, which means that it is available to team members from wherever they have internet access. The Owner and Architect work together to determine to whom and to what extent site access is given.



### Case Study

Prior to its merger with First Energy, Allegheny Energy selected Omni Associates – Architects via a competitive selection process to provide all Architectural and Engineering services for its new transmission operations headquarters in Fairmont, West Virginia. Close communication was a critical part of this fast-track project with an aggressive design and construction schedule. Midway through the design process, the design team learned that the specialized technology for the building had advanced, prompting quick redesign work. The necessary changes could have greatly slowed progress, but because the design team was already utilizing collaborative tools such as building information modeling (BIM), electronic submission of project documents, and virtual meetings, impact on the project timeline was minimal.

### Time and Budget

Omni has always provided timely performance on many aggressive schedules as well as funding constraints. We have successfully negotiated with contractors to keep change orders and costs at a minimum and achieve the initial time schedule.

All of our clients, whether public or private, are constrained by tight, fixed budgets, vulnerable to escalating construction costs and restricted by challenging schedules. Successful value engineering does not occur at the end of the project, but is integrated throughout the design phases. We avoid change orders during construction by value engineering from the inception of the project to make sure that our client's expectations are met and that budget, program and design are all reconciled with one another. Our team will employ flexible cost management techniques that include five essential components:

- Continuous value engineering in each stage of design and beginning with the earliest phases of planning.
- Preparation of formal independent construction cost estimates prepared by a professional estimator and/or by a construction manager.
- Reconciliation of design, program and budget based on the estimates before proceeding to the next project phase.
- Quality control and coordination of architecture with engineering and other disciplines to reduce the amount of changes required during construction.
- Application of appropriate contingences and allowances during design to facilitate design evolution with each phase and in construction to cover inevitable unforeseen circumstances.

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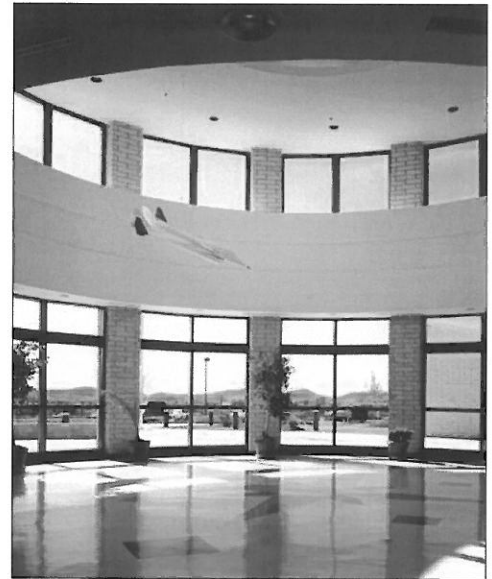


### Cost Estimating

We take pride in our approach to solving our client's aesthetic goals while meeting budgetary constraints. Omni utilizes several methods of cost estimating to provide reliable cost of construction estimates for various construction types.

- Historical data from previous projects
- Construction-estimating periodicals such as *Means Square Foot Costs*
- Consultation with leading construction firms in the project region
- Professional cost estimators who evaluate a set of specifications and/or progress prints provided by our firm to determine estimated construction costs based on the project's specific location. For this project, cost estimation will be performed by **Blundall Associates**, a construction cost consulting firm with whom we've established a very successful working relationship over the past few years.

The combination of these resources provides reliable costs of construction for various building types.



<u>Project</u>	<u>Budget</u>	<u>Bid</u>
WV Army National Guard Armed Forces Readiness Center Fairmont, WV	\$23,210,000.00	\$22,800,000.00
Lumberport Elementary School Harrison County, WV	\$10,000,000.00	\$8,600,000.00
Mon Power Regional Headquarters Fairmont, WV	\$35,000,000.00	\$33,000,000.00
Canaan Valley Institute Headquarters Davis, WV	\$5,900,000.00	\$5,154,000.00
WVU Child Learning Center Morgantown, WV	\$5,700,000.00	\$5,485,000.00
WV High Technology Consortium 5000 NASA Boulevard Fairmont, WV	\$18,339,281.00	\$16,331,589.91
WVU Hospitals North and Northeast Towers Morgantown, WV	\$36,000,000.00	\$35,000,000.00

### Occupancy, Commissioning, Permits and Plan Approvals

West Virginia codes have a major influence on the design of any building. A good working relationship with local and state building agencies is critical for a successful project. Omni has extensive experience with code compliance and we have enjoyed an exceptionally compatible working relationship with The West Virginia State Fire Marshal's office for over 30 years. Omni has made it a practice to have face-to-face reviews with the WVFSM, which provide valuable feedback and result in many hours saved during design and production.

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## LEED™ (Leadership in Energy and Environmental Design)

The LEED Green Building Rating System provides standards for environmentally sustainable construction. LEED Accredited Professionals demonstrate a thorough understanding of green building practices and principles and familiarity with LEED requirements, resources, and processes. Omni Associates currently has three LEED Accredited Professionals.

A new headquarters for Canaan Valley Institute (CVI) in Davis, West Virginia completed construction in 2010. In accordance with CVI's mission, the Omni design team planned a "green" building that demonstrates environmentally friendly systems to visitors. The team utilized a number of "green" technologies and achieved its goal of LEED Silver certification.

Omni was also the Architect for the Mon Power Regional Headquarters in Fairmont, West Virginia. Completed in 2011, this project also incorporated LEED design features and is LEED Certified.

### Recently Certified:

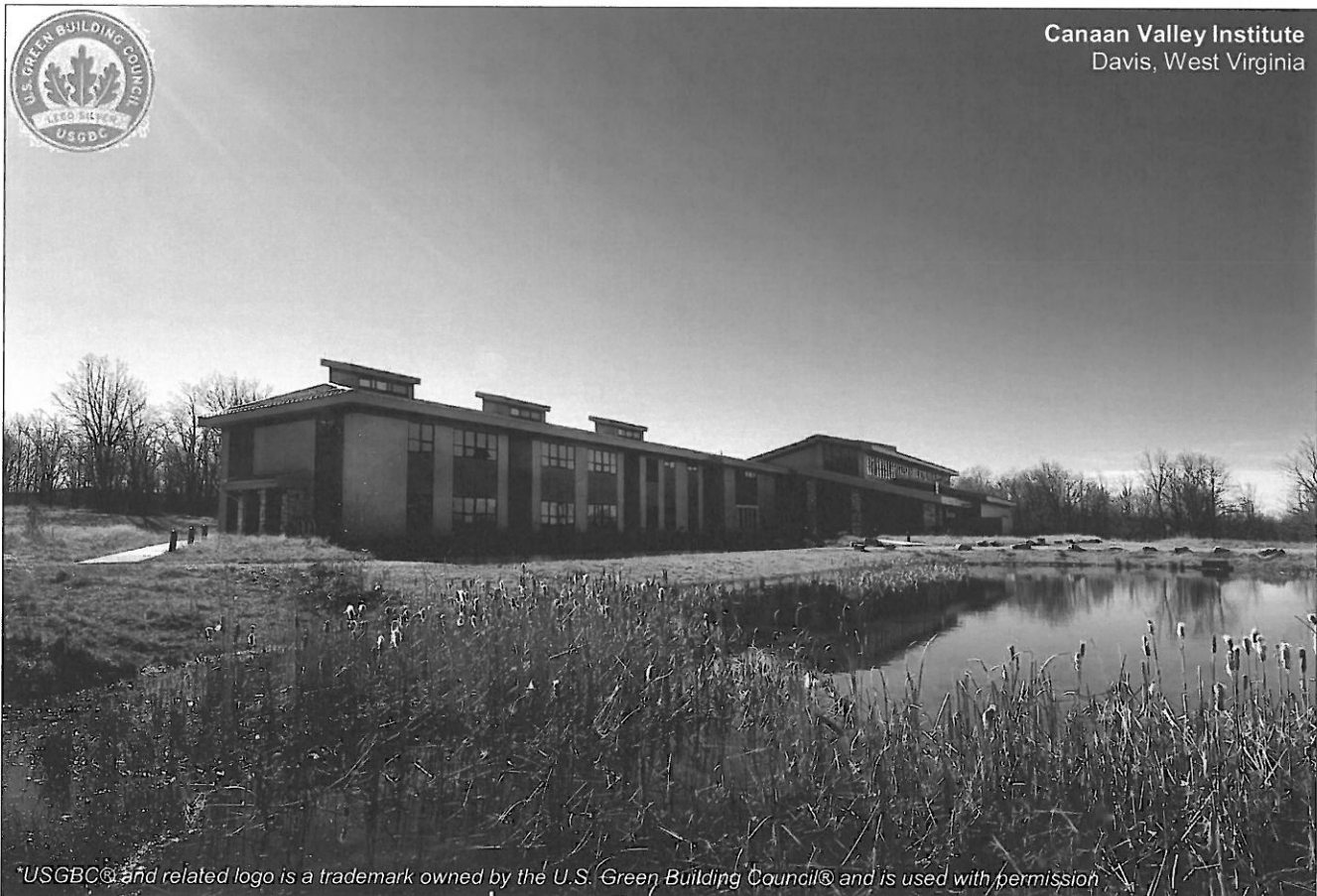
- Charleston Professional Building—LEED Silver

### Current LEED Projects:

- WVARNG Fairmont Armed Forces Readiness Center—Following LEED standards but will "self-certify".
- GSA Fairmont Office Complex—Seeking Certification under LEEDv3
- WVARNG Buckhannon Armed Forces Readiness Center—Seeking Silver certification under LEEDv3



Canaan Valley Institute  
Davis, West Virginia



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## Background and Experience

Omni Associates provided Architectural Management Assistance for **Federal Correction Institution Gilmer**, a mid-rise campus located in Glenville, West Virginia, consisting of medium security facility housing male offenders with an adjacent satellite prison camp housing minimum security male inmates with a total of 1,712 beds. The \$105 Million project included 602,474 gross square feet. Omni also provided site environment permit requirements and review, construction documents/quality control review, and construction administration.

Omni's experience with the **West Virginia Army National Guard** includes the design and construction of three readiness centers and one maintenance facility. These projects have provided us with extensive experience in the design and construction of projects with highly specialized operational, security, and functional requirements, including mechanical and electrical equipments with emergency power generator backup. These facilities require detailed security plans and the installation of all physical security structures and electronic security equipment.

**Edward A. Luthy AIA, NCARB**  
*Principal and Project Architect*

With Mr. Luthy's unique experience for a West Virginia architect, Omni Associates- Architects hopes to provide the professional services required by the State of West Virginia and the West Virginia Regional Jail Authority.

"Ned" Luthy's correctional experience started with the design and construction of the **United States Penitentiary, Administrative Maximum Facility (ADX)** for the Federal Bureau of Prisons in Florence, Colorado. Providing Design, Documentation and Construction Administration for this Design-Bid-Build \$60 million project, Ned was involved day to day with the design, construction documents and construction administration of the first federal institution specifically designed to house the most dangerous, violent, and escape-prone inmates.

The design team was challenged to present an image appropriate and conducive to the local architecture while meeting the extensive program and highest security parameters set by the Federal Bureau of Prisons. The 575 bed facility was divided into six varying levels of security. Support services such as visitation, administration, health services, educational program areas, chapel, and a gymnasium as well as personal services of the commissary are accessible based on the inmates' security classifications.

Mr. Luthy subsequently worked with the Corrections Corporation of America (CCA), a leader in partnership corrections with the design and construction of the **Central Arizona Detention Facility** in Florence, Arizona and the **Southern Nevada Women's Correctional Center** in North Las Vegas, Nevada.

- The Central Arizona Detention Project was an existing facility that saw additions of (5) 256 bed housing pods, administrative detention and segregation cell ranges, kitchen, infrastructure improvements, vehicular sally ports, and the addition of various storage facilities. Projects were delivered in a design - build format and the facility was under constant addition and renovation for 3 years. As Project Manager and Construction Administrator, Mr. Luthy maintained project control and information flow with weekly site inspection reports, RFI responses, and coordination with local review agencies.
- The Southern Nevada Women's Correctional Center (renamed Florence McClure) was a new facility that opened in 1997 with a capacity of 950 beds. The facility was designed as a lease to own facility and was therefore required to meet the requirements of the State Department of Corrections. Construction of the facility included the installation of a 5 mile, 36-inch water main. As Project Manager and Architect, Mr. Luthy directed in-house staff and coordinated consultants and document production. Familiarity with the building type proved an invaluable asset as the local trades did not possess the advantage of experience. Close scrutiny of all building systems at all phases of construction was crucial.

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## Understanding of Unique Requirements

The primary mission of the WVRJA is to provide effective, beneficial services to youth in the Juvenile Justice System while preserving community safety. Podular design provides maximum security with minimum staffing through the use of correctional technologies including electronic security controls with provisions for central control of areas in the event of an emergency.

Efficiency is paramount in all design issues associated with correctional design and construction. In facilities with multiple security classifications, efficiency is increased through the sharing of services. Podular design can accommodate variable housing assignments related to inmate population's pre-trial or sentences status, security classification, or gender. Emergency preparedness is enhanced by having additional resources within close proximity.

Line of sight is the most important design parameter in correctional projects. Control rooms in the pods need to maintain visual connections with all areas of each dayroom, housing range and restroom facility. Outdoor recreation areas need to maintain 100% visual observation. With well preserved line-of-sight arrangements, staff efficiency and security can be maintained.

The secondary mission is to promote positive development and accountability and sustain a work environment predicated upon principles of professionalism, dignity, and respect. In order to do so, accommodations must be made and maintained for the following:

- Work and educational programs;
- Resource and Reading Libraries;
- Multipurpose spaces that can serve as indoor recreations space as well as emergency holding areas;
- Contact and non-contact visitation areas.

The design team must also consider the following:

- Movement within an existing facility is slow and can put staff, residents, and the design professionals at risk. Study of existing conditions must be done thoroughly and efficiently from the onset of the effort.
- The needs of correctional officers, administrative and support staff, medical care, food service, counselors, educational personnel, taking into account the 24 hour nature of the facility.
- Public dollars are stretched as the public mandate for programs, the need for staff and resident safety, and the aging infrastructure grows each year. The architectural firm that provides the designs for these type projects must understand the mission critical nature of all programs.



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## Understanding of MEP Requirements

The design of effective, efficient mechanical and electrical systems has become increasingly complex and demanding. With so many systems from which to choose, all with distinct advantages and disadvantages, selecting the best possible system can be quite daunting. The design team must carefully consider how system alternatives best meet the immediate and long-term needs of the Owner and building occupants, as well as regulatory agencies. Inappropriate, outdated, or misapplied systems result in comfort complaints, indoor air quality issues, control problems, and exorbitant utility costs.

### **Planning**

The goal of the Planning Phase of any project is to identify the MEP/FP scope of work for the project. For renovation projects, our evaluation involves the visual inspection of existing conditions by a team of engineers. An assessment report, including a description of the present systems, evaluation of existing conditions and defects, recommendations, and an estimate of budget/cost implications is provided to assist in the decision-making process. We then develop a list of applicable options that can be considered.

For WVRJA, infrastructure needs must be identified from the programming stage to maintain cost control and inform design decisions. Additional beds mean water, sewer, electrical, HVAC and life safety equipment extension, or additions. These are not unique to correctional facilities but their impact on budget is generally more significant than other projects.

In the Schematic Phase, coordinated discussions of all building disciplines allow for the exploration of all potential solutions in a parallel manner instead of a linear basis where a decision made without input from other disciplines is allowed to affect all future discussions and decisions. We facilitate these discussions by developing a "shortlist" of applicable options prior to the initial meetings.

### **Design and Development**

Following determination of the project's scope of work, our experienced engineers and designers perform design calculations, review applicable codes and prepare construction drawings and specifications to allow the project to be competitively bid. The construction documents must be consistent with the project program, the construction budget, and the project schedule. Each site will have a large component of engineering issues and an architect that can lead the engineering team is what you will find with Omni Associates – Architects.

### **Construction**

Omni Associates performs construction administration including shop drawing review and site visits to observe electrical systems compliance with drawings and specifications. We believe the involvement of the design engineer during this phase allows for verification that the designed systems are installed as specified, thereby reducing occupant complaints and improving energy efficiency.





## Management and Staffing Capabilities

Omni Associates - Architects firmly believes that the best gauge in determining our performance and abilities is the quality of the personnel of which we are comprised. Omni's greatest resource is our professional staff of dedicated, experienced, and creative individuals.

Our skilled team includes **7 registered architects**, intern architects, project managers, computer-aided design specialists, an interior designer and knowledgeable administrative support staff. Their quality, expertise, and dedication integrate to produce the solid foundation upon which Omni has built its reputation.

OMNI organizes its staff into several teams or "studios." A specific project team is established for each commission. Studio resources are combined for larger projects. Younger staff members bring a fresh perspective and gain valuable knowledge under the guidance of more experienced staff. Utilizing this approach, we are able provide the human resources required for all types of projects, including large and complex projects.

The project team, including the principal-in-charge, actively participates in the project from start to finish. The same professionals who develop an understanding of your needs in programming generate design alternatives, oversee the production of construction documents, and implement the concepts during construction. The consistency afforded by this approach is a benefit to OMNI and you.

In reality, the OMNI project team goes beyond our in-house staff. It includes consultants, client representatives, owners, and a construction manager, as required. It is the mutual respect of each team member's skills and perspectives that enables the design process to conclude with a successful project of which we all can be proud.

Throughout our years of experience, we have worked with a variety of consultants specializing in structural engineering, civil engineering, mechanical and electrical engineering, and other disciplines as each project dictated. You can be assured that the consultants we select for your project are selected for their particular and relevant expertise as well as their superior work ethic. In short, we carefully staff the design team, including in-house professionals and outside consultants, with the type of personnel we would want working for us to work for you

Your "Request for Proposal" could not have come at a more opportune time. The majority of our design work is coming to fruition as several major projects have commenced construction. Observing the materialization of a design is immensely satisfying, but our team is eager to begin a new project and would be especially excited to assist the West Virginia Division of Juvenile Services in constructing, equipping, and furnishing its upcoming projects.



**Omni Associates -Architects, Inc.**

Omni Associates has successful project experience throughout the East Coast of the United States. Our architects are licensed in the following states:

Florida  
Kentucky  
Maryland  
New Jersey  
New York  
North Carolina  
Ohio  
Pennsylvania  
South Carolina  
Virginia  
West Virginia

### Firm Memberships:

American Institute of Architects  
U.S. Green Building Council  
West Virginia High Technology Consortium  
Marion County Chamber of Commerce

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## Proposed Project Team

Omni Associates – Architects carefully selects its project team based on each member's ability to add directly-related experience, ensuring our ability to meet the specific challenges and goals of each client. Our dedicated and experienced staff brings a unique level of ingenuity to every project. Omni has created a team of professionals who provide services for the specific needs of this project.

It is these sensitivities that have dictated the creation of this team to include **Omni Associates - Architects, H.F. Lenz Company, and Terradon Corporation.**

### Omni Associates – Architects, Inc.

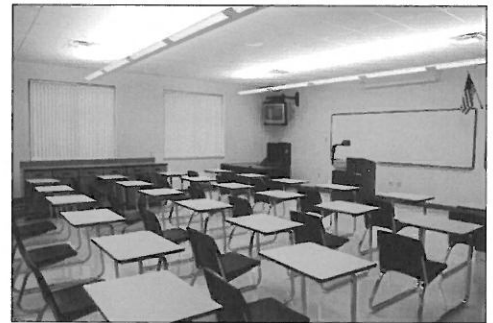
Omni Associates – Architects, Inc. has had a successful history of designing intimately with each client and working out collaborative solutions that meet the goals of the project. Omni will serve as the lead firm and coordinator of architectural and engineering services. We will provide the link to all communications with regard to interdisciplinary reviews, sub-consultant and contractor coordination, and state agency review and inspections, and will act as the control point to ensure that the Owner's goals and requirements are met. This is critical as project goals evolve throughout the design and construction process as new information is gained. It further ensures that operation and maintenance issues are incorporated into the design documents.

We believe that our variety of work, which includes a number of facilities studies and master plans, sets us apart as the best qualified architectural firm for your project.

### **Edward A. Luthy AIA, NCARB** **Principal and Project Architect**

Edward "Ned" Luthy is a Principal Architect at Omni Associates. With over 25 years spent in the practice of architecture, his career includes has eight years of direct experience with correctional projects as Project Architect and Project Manager while employed with a nationally recognized specialty architecture firm.

Mr. Luthy received his Bachelor of Architecture degree from the University of Arizona in 1986. He spent 12 years working in Arizona with The DLR Group, a nationwide architectural firm, and taught AutoCAD at Blue Mountain Community College. After relocating to Oregon, Ned spent over 7 years in a sole proprietor firm with a staff of five that provided him with opportunities to perform all duties associated with architectural practice. After moving to and practicing in Idaho for a brief period of time, Ned came to West Virginia in April 2008 and joined Omni Associates – Architects. Ned is currently registered in West Virginia and is NCARB Certified.



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As a Principal-in-Charge and Project Architect, Mr. Luthy's primary responsibility is to develop the overall concept of design by performing technical tasks which include: Project space programming; Schematic layout of functional spaces; Aesthetic design and development; Concept and coordination of building systems such as mechanical, electrical, plumbing and fire protection; Preparation of bidding documents and material specifications; Project management and Construction administration. These tasks are performed for a wide range of commercial projects that include master planning, land development, building construction and tenant build-out.

**Terradon Corporation**  
Civil Engineering

Terradon is regarded as one of the region's leading land and infrastructure planning and design firms. The firm has built its reputation by providing cost effective design solutions and maintaining the highest level of customer service. The company was formed in 1989, and its staff includes engineers, landscape architects, surveyors, planners, real estate specialists, environmental scientists, designers, and technicians. Terradon offers a wide range of engineering and environmental services and is particularly suited to land and infrastructure design and development in the mountainous areas of West Virginia

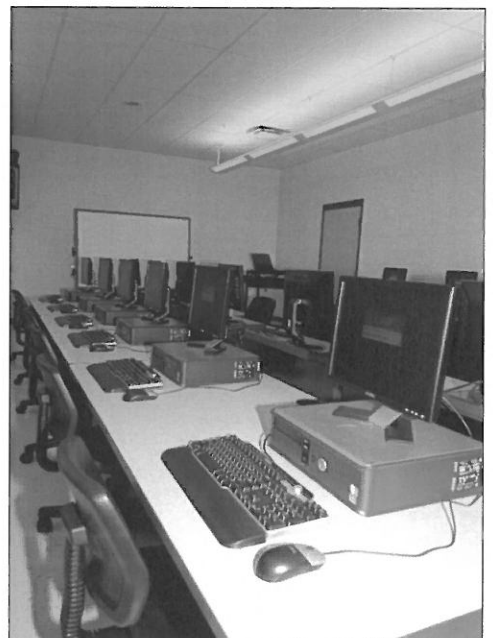
**Gregory D. Fox, ASLA, LEED AP**  
**Department Head—Land Development**

Mr. Fox manages Terradon's Landscape Development services and has grown Terradon's Land Development group into a premier design and consulting group throughout West Virginia and its surrounding states. Mr. Fox has been responsible for a number of notable site development projects since joining Terradon in February of 2000. His group earned 2001 and 2002 Engineering Excellence Awards from the West Virginia Association of Consulting Engineers. In 2005, their design of the West Virginia Division of Environmental Protection Headquarters Building received the Gold Award from the American Council of Engineering Companies.

Mr. Fox holds a B.S. Landscape Architecture degree as well as a B.A. Geography and Planning degree, both from West Virginia University.



*More information about our consultants, including resumes and project examples, can be found in the tabbed sections following this proposal.*



omni associates—architects, inc. 304.367.1417 www.omniassociates.com

Scan the 2-D code with your smart-phone for additional





### **H.F. Lenz Company**

Structural Engineering

Mechanical, Electrical and Plumbing Engineering

H.F. Lenz Company is a Pennsylvania-based firm offering a full range of engineering services for building systems, infrastructure, and industry. Their projects span the nation, with the heaviest construction in the Northeast, and exceed \$300 million in MEP construction annually. Each market sector—corporate, government, health care, education, and industry—is served by a team of specialists who understand the unique needs of the client.

H.F. Lenz Company is organized into several multi-discipline design teams that are dedicated to specific market types or project types. Our leadership and management philosophy provides control of all design and administrative activities by the Principal-in-Charge (PIC), whose talents and experience are matched to the needs of the Client. The PIC provides leadership and client contact, and commits the resources required for excellence in the project. Each team has the necessary resources and multi-discipline staff—HVAC, electrical, plumbing, and fire protection/life safety—to successfully complete both small and large projects. Our clients benefit from this approach since the team is focused, experienced, and dedicated to one type of project — **the client's project.**

We believe the most successful projects are those in which the Owner, Construction Manager, Contractor, Architect, Engineer, and other Project Consultants recognize each other's assets. This collaborative environment draws upon the collective intelligence of the entire project team, while supporting the Owner's values and corporate culture.

The H.F. Lenz Company currently employs 175 people between our three office locations, this includes 44 Professional Engineers registered in a total of all 50 states and the District of Columbia, and 19 LEED® Accredited Professionals.

Scan the 2-D code with your  
smart-phone for additional





## Edward "Ned" Luthy AIA, NCARB

### PROJECT ASSIGNMENT

Principal  
Project Architect

### EDUCATION

Bachelor of Architecture  
University of Arizona, 1986

### REGISTRATION / PROFESSIONAL AFFILIATIONS

American Institute of Architects, Member  
American Institute of Architects—West Virginia, Member  
National Council Architectural Registration Board,  
Certified in WV  
U.S. Green Building Council, Firm Membership  
Fairmont Community Development Partnership, President  
Associated Builders and Contractors Inc., Firm Membership

### GENERAL EXPERIENCE

- Architect with over 20 years experience in developing long term relationships with clients, consultants, and the construction industry.
- An effective team member with a strong contract document background combined with construction administration capabilities and experience in many project delivery formats.
- Adept as a Project Manager and flexible in performing as a designer, drafter, specifier, estimator, and administrator.
- Strong design focus on schools and detention centers.

### RELATED EXPERIENCE

- Ned's past experience includes several years spent with a sole proprietor architectural firm, which provided him with opportunities to perform all duties associated with an architectural practice.
- Supervised the master plan, interview, design documents and construction for the Stafford Hansell Government Center for Umatilla County, Oregon. The project spanned a seven year period and Ned considers it the signature building of his career.
- 12 years experience with a large, nationwide architectural/engineering firm allowed Ned to acquire progressive responsibilities and achieve promotions from intern through senior associate.
- Former adjunct professor teaching AutoCAD at Blue Mountain Community College in Pendleton, Oregon.

### Select Project Experience for Mr. Luthy

#### Omni Associates-Architects

- Mon Power Regional Headquarters  
Fairmont, WV
- State of West Virginia New Office  
Building, Fairmont, WV
- Canaan Valley Institute  
Davis, WV
- Shaft Drillers International HQ
- Kanawha Valley Community and  
Technical College Renovations

#### With Alderson Karst & Mitro Architects, Idaho Falls, Idaho:

- New Teton Toyota Dealership
- Office Buildings at Snake River Landing

#### With Sargent Architects, Hermiston, Oregon:

- Stafford Hansell Government Center
- East Oregonian Newspaper
- Our Lady of Angels Catholic Church
- New City Hall and Library
- New Intermediate School
- Cove High School Classroom Additions  
and Renovation
- Windy River Elementary School Classroom  
Additions
- Professional/Technical Education Building
- Umatilla County Public Health Building
- Eastern Oregon University, Addition to  
Quinn Coliseum
- Umatilla County Courthouse Masterplan  
and Renovation
- Pendleton Round-Up Stadium Renovation  
Masterplan

Scan the 2-D code with your  
smart-phone for additional





## References

Omni Associates realizes that our relationships with our clients are a vital component in the success of realizing their goals and needs. We encourage you to contact any of the following references.

**State of West Virginia**  
1900 Kanawha Blvd, East  
Building 1, Room MB-60  
Charleston, WV 25305

**Mr. Robert Kilpatrick**  
304.558.0250

**First Energy**  
Toledo Edison  
6099 Angola Road  
Holland, OH 43528

**Ms. Linda Moss**  
President  
800-447-3333

**First Energy**  
Mon Power Regional Headquarters  
5001 NASA Boulevard  
Fairmont, WV 26554

**Mr. Bob Hellman**  
Supervisor, Facilities Management  
304-534-7955

**Robert C. Byrd**  
United States Senate

**Harrison County Schools**  
408 E.B. Saunders Way  
Clarksburg, WV 26554

**Ms. Susan Lee Collins**  
Superintendent  
304.326.7490

**Marion County Schools**  
200 Gaston Avenue  
Fairmont, WV 26554

**Mr. Gary Santy**  
Clerk of the Works  
304-367.2167

**WV HighTechnology Foundation**  
1000 Technology Drive, Suite 1000  
Fairmont, WV 26554

**Mr. Brad Calandrelli**  
Facility and Property Program Mgr  
304.366.2577 ext. 233

"...this (West Virginia High Technology Consortium) is indeed an important economic development project for West Virginia, and I wish to thank Omni Associates for the predominant role that they played in making this endeavor, as well as many other significant projects across the state, a reality..."

"Omni has been an integral part of this entire process. The architects worked quickly to assess our needs and develop the frame work for this building and worked closely with us to ensure the final product would be efficient as well as beautiful. The team environment encouraged a collaborative effort to meet our specific needs."

**Linda Moss**  
Director, Ops Support  
and Project Manager  
First Energy

"In appreciation of all of your hard work, dedication, and technical support to the Eleanor Maintenance Complex, West Virginia Army National Guard. Your expertise has helped create one of the finest Maintenance Shops in the United States."

**Robert D. Davis, CPT, OD,**  
WVARNG CSMS Superintendent  
Warren T. Huxley, LTC, EN,  
WVARNG,  
Surface Maintenance Manager



Scan the 2-D code with your  
smart-phone for additional





WEST VIRGINIA ARMY NATIONAL GUARD  
CONSTRUCTION AND FACILITY MANAGEMENT OFFICE  
1705 COONSKIN DRIVE  
CHARLESTON, WEST VIRGINIA 25311-1085

26 March 2013

SUBJECT: Recommendation for Omni Associates - Architects, Inc.

To whom it may concern,

It is my pleasure to highly recommend Omni Associates - Architects, Inc. for design projects of any scale. I have had the privilege to work with Omni Associates on several projects in the past totaling over \$100M and we are currently in construction with two Readiness Centers designed by Omni. My office has found them to be extremely responsive to any owner needs and concerns and always as the best interest of the government in mind. Their quality assurance and dedication to success distinguishes them from other firms.

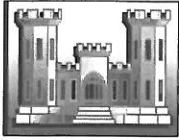
I have been very impressed with the team relationship between my office and Omni Associates. Of particular note, the principle Mr Dick Forren has over thirty years of military service as an engineer officer. As a result his firm is extremely knowledgeable about military units, equipment, and terms. Additionally, Omni Associates is very knowledgeable of the requirements for security and force protection. They have experience with numerous building types with the West Virginia Army National Guard and utilize 3D modeling design system that can be utilized for facilities maintenance.

Again, it is my pleasure to highly recommend The Omni Associates – Architects, Inc for your next design project as we will undoubtedly use them for future projects. Please feel free to contact me at 304/541-6539 if I can be of any further assistance.

Sincerely,

A handwritten signature in black ink, appearing to read "David P. Shafer", is written over a horizontal line.

DAVID P. SHAFER  
LTC, EN, WVARNG  
Construction & Facility Management Officer



West Virginia Army National Guard  
**CONSTRUCTION & FACILITIES MANAGEMENT OFFICE**  
1703 Coonskin Drive  
Charleston, West Virginia, 25311-1085  
(P) 304-561-6446 (F) 304-561-6458 (DSN) 623-6446

10 April 2000

The OMNI Associates Architects  
1543 Fairmont Avenue, Suite 201  
Fairmont, West Virginia 26554

Attn: Mr. Richard Forren, A.I.A.

Mr. Forren

The West Virginia Army National Guard, Construction and Facilities Management Office, has been working with your firm, and related consultants, for little over two years. During that time OMNI has been most receptive and responsive to the difficult design processes encountered for the Eleanor Complex. Your availability and professional administration have been a decided benefit to the projects. Considering both represent over 240,000 square feet and approximately \$30 million dollars, OMNI and its consultants have performed above our expectations.

It has been a pleasure working with you on these projects, and we look forward to their completion with your firm.

Should OMNI Associates wish to provide professional services for our many future projects, the C&FMO would not hesitate in working with you again.

Melvin L. Burch  
COL, EN, WV-ARNG  
Construction and Facilities Management Officer

**Administration**

COL Melvin L. Burch  
COL Donald R. Beightol, R.P.F.  
Mr. Samuel W. Peal  
Ms. Nancy Casto  
Ms. Charis Ellis

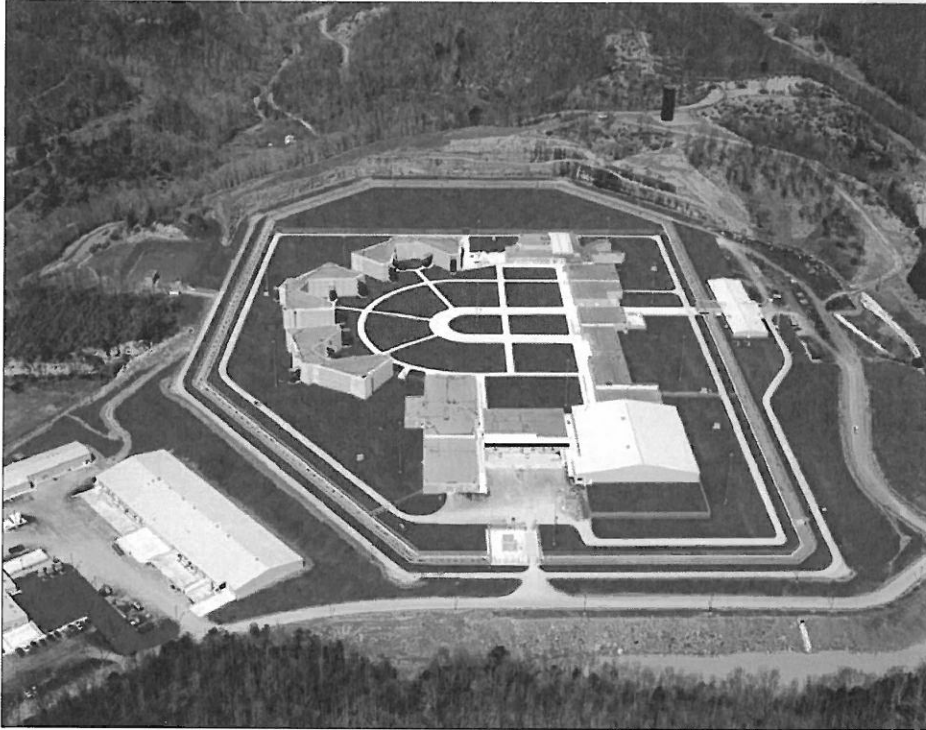
**Planning & Construction**

CPT Garrett B. Cottrell, P.E.  
Mr. Todd E. Tingler, A.I.A.  
Mrs. Debbie E. Saunders  
2LT Jennifer E. Pingley

**Environmental**

LTC Gary A. Blackhurst  
Mr. Philip P. Emmerth  
Mrs. Rita L. Meneses  
Mr. David P. Shafer

## Federal Correctional Institution Gilmer



Total Project: \$105 Million  
Delivery Method: Design/Build  
602,474 Gross Square Feet  
1,712 beds

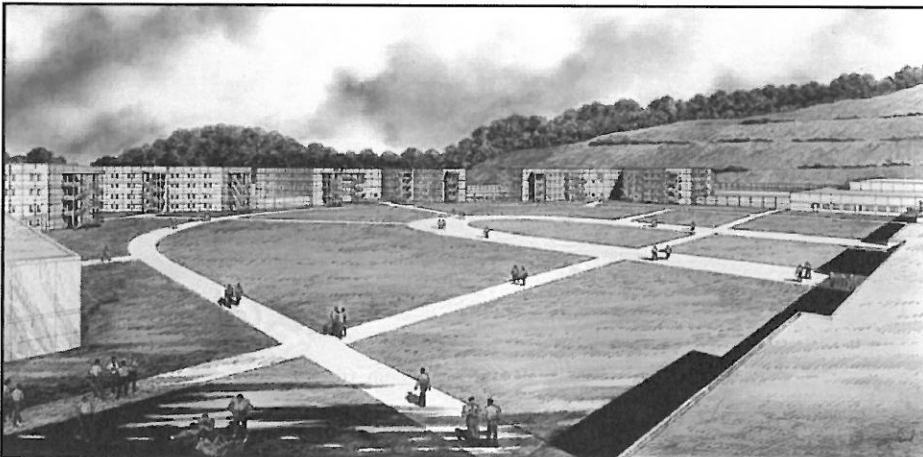
Project Team:  
KMD / OMNI: Architect  
BELL: Construction Manager

### **Federal Correctional Institution Gilmer** *Glenville, West Virginia*

Mid-rise Federal Bureau of Prisons campus consisting of medium security facility housing male offenders with an adjacent satellite prison camp housing minimum security male inmates

#### Services Provided by Omni:

- Architectural Management Assistance
- Site Environment Permit Requirements & Review
- Construction Documents / Quality Control Review
- Construction Administration



## Genesis Youth Crisis Center



Genesis Youth Crisis Center, Inc. provides a temporary safe haven and nutritional, educational, and supportive services for children who have been removed from their homes as a result of domestic violence, abuse, neglect, or have run away or are homeless.

Genesis selected Omni Associates – Architects via a competitive selection process in 2000. Omni worked with the client for several years developing numerous programs and schematic layouts for all of its facilities, including Genesis Youth Center and Alta Vista Shelter, until a piece of property was purchased in Harrison County for a new 14,400 square foot Youth Center.

The program requirements created an opportunity for the architect to design a residential structure that would also house the crisis center, administrative offices, classrooms, kitchen and gymnasium. Two wings of the building house the residential board and care unit. They include 8 single occupancy bedrooms of approximately 110 square feet and 4 double occupancy bedrooms of approximately 165 square feet. The bedrooms are connected by a lounge and clerestory recreation area. Four residential style bathrooms are provided along with staff offices and a laundry room. The service wing houses the classroom and cafeteria with occupancy for 20 people. The business wing is located at the front of the building with its only connection via a common secured entrance. The business wing consists of eight offices, a break room and a conference /training room.

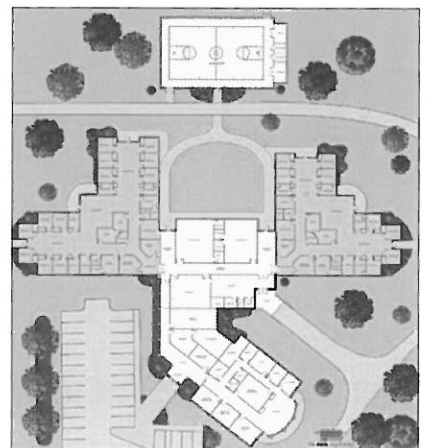
The new campus will nearly double the number of beds provided by Genesis Youth Center and Alta Vista Shelter combined in the hopes that no child will be turned away for lack of room.



**Genesis Youth Center**  
Clarksburg, West Virginia

Estimated Construction Cost: \$6 Million  
Project Status: Fund Raising

Main Facility: 23,173 Square Feet  
Gymnasium: 4,588 Square Feet  
Total Project: 27,761 Square Feet



## Charleston Professional Building



The 19,427 SF two story building is located in the central business district of Charleston, West Virginia. The project was completed utilizing design/build delivery.



**Charleston Professional Building**  
Charleston, West Virginia

19,427 square feet  
\$6 Million

Client: Glenmark Holding  
Contact: Nick Colasante  
304-599-3369

Completed in 2012

The facility was designed to house FBI offices, including service bays to modify surveillance vehicles, forensic evidence labs, and investigators' work and technology spaces. The one acre site has a security perimeter fencing system and the exterior of the building is designed to resist high pressure intrusion as well as radio frequency shielding.

The basic shell of the building is a pre-engineered structure with a mixture of metal panels and masonry veneer materials that create an image of a standard office structure to fit into the business environment.

The project was designed as a LEED Silver rated project with much of the landscape around the building being restored to natural plantings that retain the storm water, energy efficient mechanical and electrical systems, and close proximities to city services.



## West Fairmont Middle School



The Marion County Board of Education (MCBOE) selected The Omni Associates – Architects to provide full-service architectural and engineering services. After seeking input and suggestions from the citizens of Marion County, WV, the MCBOE set a priority on construction of a new middle school to replace the existing Dunbar Middle and Miller Junior High Schools which were built in the 1920's. Both schools enrolled approximately 350 students. This project was very important on several fronts. A new facility would replace outdated and unusable facilities. The project could be a redevelopment catalyst for a neglected community within the city of Fairmont and perhaps, equally important, regain the trust of the citizens of Marion County. Several prior projects that the County undertook were met with project delays, setbacks and cost overruns that resulted in a long history of ill feelings between the Marion County population and the MCBOE.

As planned, the new school is acting as a catalyst in an area of Fairmont that has been earmarked for development, "The Beltline Area". Along with the MCBOE, the city and county government have desired to develop this Beltline Area into a viable mixed-use neighborhood for several years. Upon the completion of this school those plans have been set into motion.

Omni recommended that the project be completed in phases in order to best present this new school to the community in a timely manner and to take advantage of the different types of construction involved. Phase I – Site Demolition and Utility Relocation, Phase II – Site Preparation, Phase III – Building Construction and Phase IV – Loose Furnishing. While work was being completed on the site Omni pushed forward with the design of the building.

Realizing the value of the end user, Omni suggested adding the administrators and teachers from the existing schools to the team. Omni met with these people based upon grade level and discipline to discuss and evaluate their needs and desires. During this process Omni met with the Superintendent and MCBOE to keep them updated and consult upon the results of those meetings. Once the initial design was established Omni presented it to the entire team through various meetings. Through

### **West Fairmont Middle School** Marion County Board of Education Fairmont, West Virginia

Total Project: \$15 Million  
SBA Funded: \$3 Million  
Proposed County Bond: \$12 Million

800 Students  
117,700 S.F.



## West Fairmont Middle School

these meetings and information from the West Virginia School Building Authority (WVSBA) Guidelines, Omni was able to finalize the design and establish a budget.

Omni continued to meet with the Superintendent, MCBOE and WVSBA to come up with a building that would provide for the community's needs, meet the requirements of the WVSBA and meet within a tight budget. Since the school would be located in the Technology Corridor the community desired a school that was at the forefront of technology. The WVSBA guidelines are very specific about student usage and facilities. The Owner desired a safe building based upon the rising security issues in schools across the country. As the project proceeded, construction costs were skyrocketing due to unforeseen incidents throughout the country. Omni guided the team through this difficult time from funding to actual building construction while delivering a building that still met everyone's needs, desires and budget.

Since the school has been occupied there have been many positive comments, an increase in enrollment and many students changing schedules because of the additions to the curriculum made available by the new building's layout and technology. The layout of the building also enabled the MCBOE to move to a true middle school curriculum which helps to separate the students at these difficult age levels and also requires less change in their lives for a period of four years. This layout of the building also provided for separate Dunbar and Miller wings in order to preserve and respect the history of this community's education system.

Upon completion Omni delivered a project that was completed on time and under the project budget.

**"The template for the twenty  
-first century school"**

**Dr. James B. Phares**

Superintendent - Marion County,  
WV

**"...you (Omni) have done a  
wonderful job working  
through these issues  
throughout this project and I  
wish that all architects  
would take the same ap-  
proach on other jobs."**

**Scott Raines**

Assistant Director of  
Architectural Services  
School Building Authority  
of West Virginia

**"State of the Art, that's an  
understatement"**

The Reverend James Saunders  
Marion County  
Board of Education Member



## Lumberport Elementary School

Omni Associates—Architects was selected by the Harrison County Board of Education to design and provide construction administration for a new elementary school in Lumberport, West Virginia.

The existing elementary school had been built in 1921 and was no longer able to meet ADA requirements. Other health and safety issues included the lack of an elevator, insufficient restrooms, and ground water problems in the basement classrooms. A temporary modular classroom adjacent to the school was being used to supplement the inadequate space of the main building. Twelve students had been transferred to another school due to the lack of space and ADA requirements. School enrollment was at 300 students, and the facility was 90% utilized. Recommended building utilization is 85%.

Lumberport, West Virginia

Total Project: 40,000 Sq Ft  
Construction Cost: \$8.5 Million

Services Provided:  
Full Architectural and  
Engineering

Owner:  
Harrison County Schools

Owner's Representative:  
Neil Quinn



It was determined that a new school would be built on the existing school property. The existing school remained in operation during construction, and access to the school for buses, students, and deliveries had to be coordinated during that period. A separate gymnasium was added to the project to be built after the existing school was demolished. It was sized for Middle School Athletic Activities and will be shared between the elementary and middle schools.

In accordance with the West Virginia Department of Education "Handbook on Planning School Facilities" and the "SBA Guidelines and Procedures Handbook", Omni Associates designed a 40,000 square foot building that nearly doubled the space of the existing school. The facility consists of a one-story main building with a two-story classroom wing.

Construction bids for the project came in under budget, and the project was delivered utilizing multiple prime contracts. The school opened on time for the 2011-2012 school year.



## West Virginia Army National Guard (WVARNG) Buckhannon Readiness Center

### **Buckhannon Readiness Center**

West Virginia Army National Guard  
Buckhannon, West Virginia

\$13,150,000.00  
37,000 sf



The Buckhannon Army National Guard Readiness Center is a dual-use building funded by a combination of Federal, State, and local money. The 37,000 sf facility will house three units of the West Virginia Army National Guard (WVARNG) as well as serve the public sector of Upshur County with a multi-purpose conference center. These dual purposes are reflected in the basic design.



The two functional areas are located in separate wings spanning east and west from the main lobby entrance with clear distinctions between public and private spaces. The west wing is a public conference center, which, through the use of operable partitions, can be configured any number of ways to allow for educational, business, community, and private events. The two-story east wing houses the WVARNG units: 601st Horizontal Engineer Company, 1935th Contingency Contracting Team and the 229th Engineer Survey and Design Team. It includes office space, a classroom, storage, sleeping rooms, fitness room, and locker rooms.

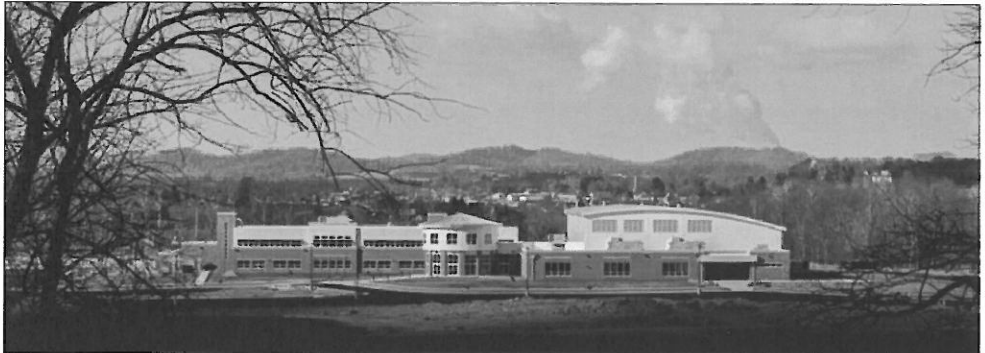
The building structure shall be steel with the exterior consisting mainly of brick veneer with some upper story metal panels and storefront glazing. A 3,200 sf unheated pre-manufactured metal storage building shall be erected adjacent to the main building. Outside supporting facilities include military and privately-owned vehicle parking, fencing, sidewalks, exterior fire protection, outside lighting, access roads, detached facility sign, wash platforms, fuel storage and dispensing systems and flagpoles. Physical security measurements include maximum feasible standoff distance from roads, parking areas, and vehicle unloading areas, berms, heavy landscaping, and bollards to prevent access when standoff distance cannot be maintained. This project is designed and shall be constructed to achieve LEED® Silver certification. Cost effective energy conserving features include energy management control systems and high efficiency motors, lighting, and HVAC systems.



## West Virginia Army National Guard (WVARNG) Fairmont Readiness Center



The specially designed AFRC is permanent masonry type construction with standing seam roof, concrete floors, and mechanical and electrical equipments with emergency power generator backup. This 150 member training facility includes administrative, educational, assembly, library, learning center, vault, weapons simulator and physical fitness areas for one each WVARNG and USAR units. The maintenance shop will provide work bays and maintenance administrative support. The project will also provide adequate parking space for all military and privately owned vehicles.



**Fairmont Readiness Center**  
West Virginia Army National Guard  
Fairmont, West Virginia

This project has been coordinated with the installation physical security plan, and all physical security measures are included. All required antiterrorism protection measures are included. Sustainable principles will be integrated into the design, development, and construction of the project in accordance with Executive Order 13123.

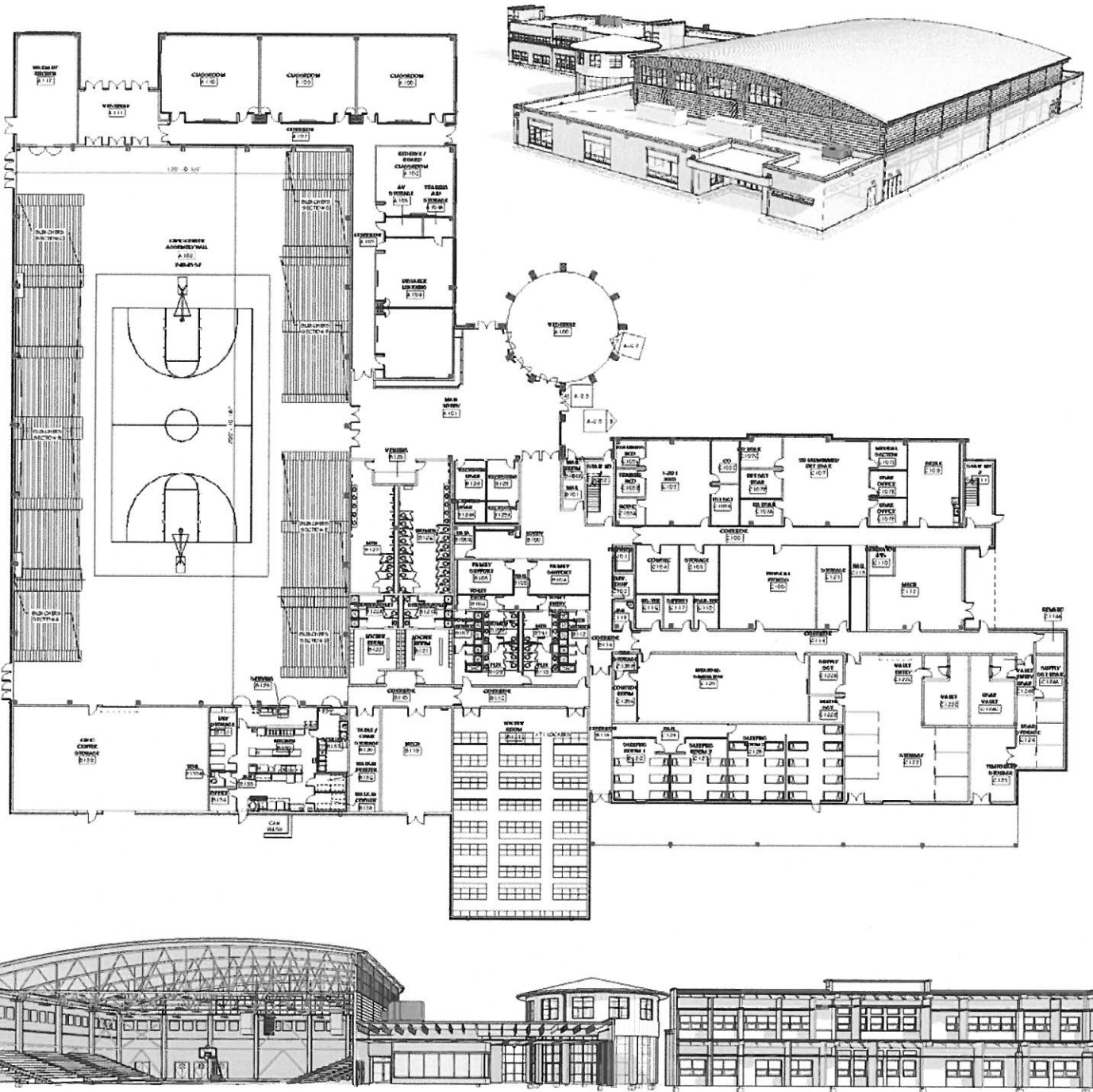
Supporting facilities will include weapons cleaning, maintenance, issue, turn-in sheds, access roads, security fencing and dark motor pool lighting, vehicle wash system and pump house, fuel storage and dispensing systems, loading ramp, flammable materials storage building, controlled waste handling facility, and sidewalks. Extension of gas, electric, sewer, water and communication utilities to the building site is included. Physical security measures include maximum feasible standoff distance from roads, parking areas, and vehicle unloading areas, beams, heavy landscaping and bollards to prevent access when standoff distance cannot be maintained. Cost effective energy conserving features are incorporated into design.

\$ 25 Million  
91,500 sf

Contact:  
COL David Shaffer, CFMO  
1707 Coonskin Drive  
Charleston, WV 25311  
304-541-6539



# West Virginia Army National Guard (WVARNG) Fairmont Readiness Center



## West Virginia Army National Guard (WVARNG) Eleanor Maintenance Facility



### **Eleanor Maintenance Facility**

West Virginia Army National Guard  
Eleanor, West Virginia  
132,000 Square Feet

*"In appreciation of all of your hard work, dedication, and technical support to the Eleanor Maintenance Complex, West Virginia Army National Guard. Your expertise has helped create one of the finest Maintenance Shops in the United States."*

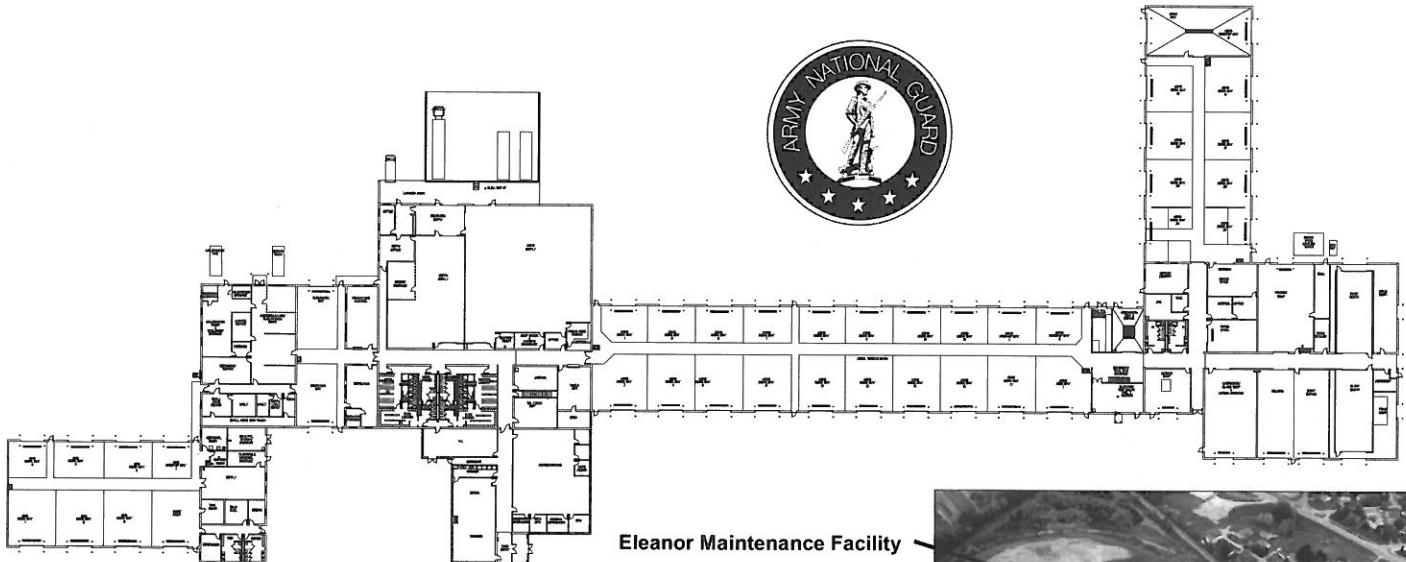
**Robert D. Davis, CPT, OD,  
WVARNG  
CSMS Superintendent**

**Warren T. Huxley, LTC, EN,  
WVARNG  
Surface Maintenance  
Manager**

The new Eleanor Maintenance Complex, in Eleanor, WV, is a 132,000 square foot state-of-the-art repair and maintenance facility for the West Virginia Army National Guard (WVARNG). This specially designed Army "Combined Logistic Support Facility" will house the Combined Support Maintenance Shop (CSMS), an Organizational Maintenance Shop (OMS) and United States Property and Fiscal Office (USPFO) parts storage warehouse.

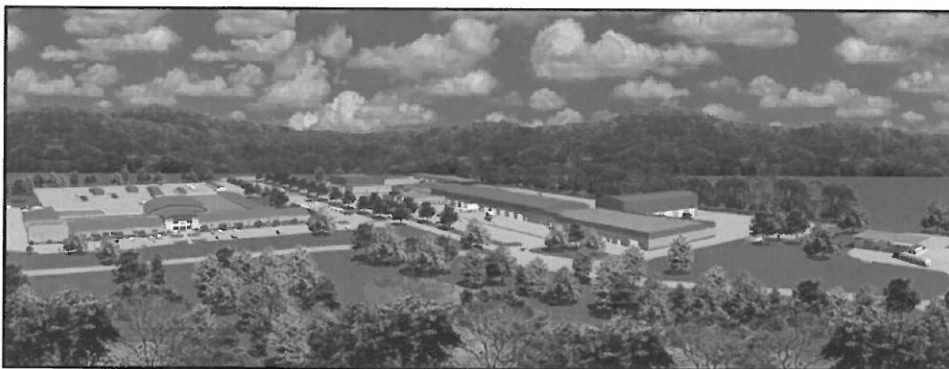
The design of the facility is based upon the functional concept of a straightforward flow in and around the facility. This focuses on a logical and efficient flow of work for the maintenance and repair of vehicles as well as the progression of components parts from delivery to installation. This flow also required controlling the movement of vehicles themselves as all vehicles arriving and leaving the complex are required to undergo pre and post inspections.

# West Virginia Army National Guard (WVARNG) Eleanor Maintenance Facility



The facility provides a full range of maintenance support for all WVARNG military vehicles throughout the state. It includes 28 maintenance work bays with overhead bridge cranes, an engine rebuild shop, a body shop with blast and paint booths, a carpentry shop, a machine shop, a canvas shop, a small arms repair shop and an electrical / communications repair shop. The facility also has specialized testing capabilities in the form of an engine and transmission dynamometer.

These capabilities truly make the Eleanor Maintenance Complex a state-of-the-art facility for the West Virginia Army National Guard.



## West Virginia Army National Guard (WVARNG) Eleanor Readiness Center



The new Armory facility in Eleanor, West Virginia is a single-story, brick masonry and steel structure enclosing approximately 88,200 Net square feet. The building is located adjacent to the new Maintenance Facility on the site, with the main entrance facing east toward the main access to the site. The orientation of the building takes advantage of views of the wetland area and the Kanawha River. The Armory houses units of the state Army National Guard and one unit of the Navy.

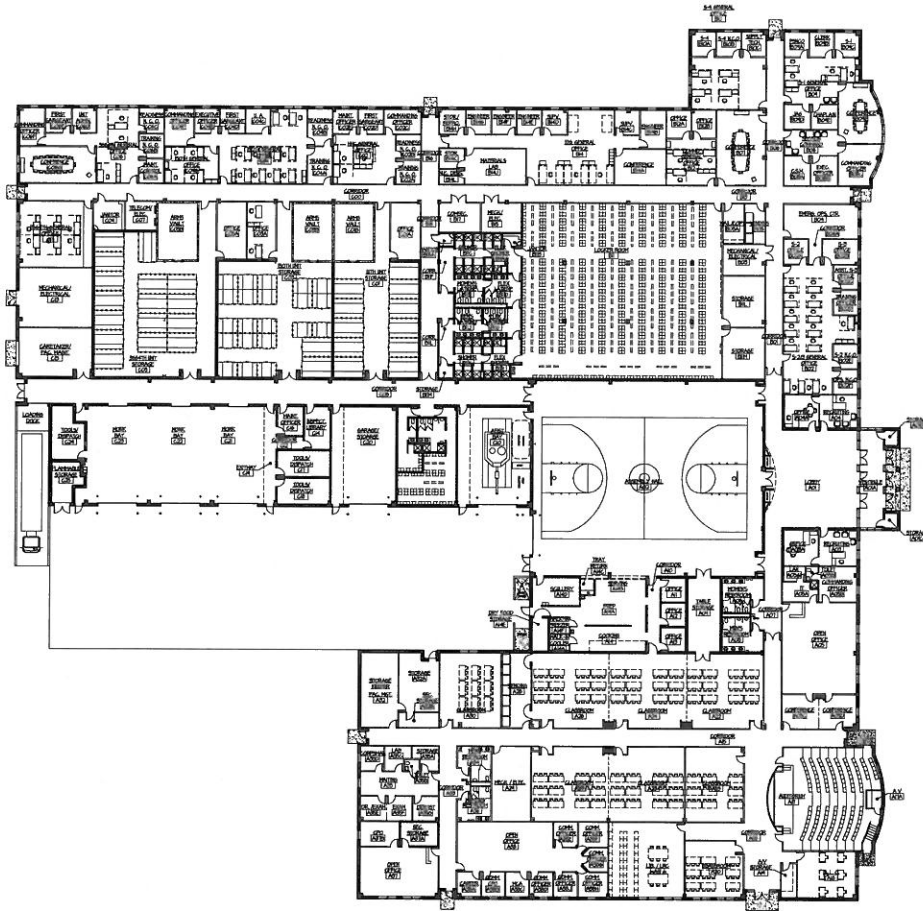
The aesthetics of the new structure will have a similar character and appearance as the Maintenance Facility, incorporating banding of a contrasting color, barrel-vaulted roofing, and similar doors and windows.

The plan configuration is a result of meetings with each of the units and commanders, and consolidates areas under the responsibility of individual units to minimize travel. The separation of public versus unit specific spaces is dictated by the need for logical and efficient circulation as well as the direct relationship of spaces within those areas.



**Eleanor Readiness Center**  
West Virginia Army National Guard  
Eleanor, West Virginia  
83,900 Square Feet

## West Virginia Army National Guard (WVARNG) Eleanor Readiness Center



The relationship of the unit office areas to the unit storage areas is critical to the efficient workflow of the individual units. The unit storage areas are located adjacent to the loading dock at the rear of the building in order to provide access to military vehicles.

The Maintenance Work Bays and AFIST bay are located at the rear of the building for accessibility of military vehicles, as well as shielding the function of the areas from the entrance and the public. The AFIST bay is located adjacent to the Assembly Hall for the purpose of large group instruction within the hall and individual instruction within the bay area.

The location of the Assembly Hall is central to all spaces and adjacent to the main entrance due to its use for public and military functions. The hall is utilized by the military for drill training and dining, and by the public for gatherings such as banquets and dances. The Kitchen is located adjacent to the Assembly Hall to expedite meals to both civilians and the military.

A single story structure of this size requires a lot of area dedicated to circulation. However, when possible, large open areas such as the Assembly Hall were utilized for circulation.



## West Virginia State Office Complex



70,480 square feet  
Estimated Construction Cost: \$17 Million  
Estimated Completion: February 2015

Omni Associates—Architects was selected by the West Virginia General Services Division to provide all architectural and engineering services for a new state office building located in downtown Fairmont.

It is important that the new building fit within the context of the downtown area's historical buildings while reflecting an era of progress and new growth. To that end, the building's exterior features traditional brick and cast stone masonry integrated with insulated formed metal panels and an aluminum curtainwall.

The building will be occupied by eight state agencies and include offices for the Secretary of State. Programming services included interviews of the individual agencies to determine the specific requirements of each. Interior fitouts include a variety of user-specific spaces including training rooms, interview rooms, waiting areas, individual offices, large open offices, break rooms, and kitchenettes.

Omni also provided all necessary surveying of the site, and all existing infrastructure systems and material to determine appropriateness for construction. Pre-construction services also included the verification, coordination, and documentation of extensions, tie-ins, and relocations of all utilities as well as an extensive demolition package released prior to the new construction package.

In addition to compliance with all applicable local, State, and Federal regulations as well as ADA requirements, the Owner requested that the building be designed with the goal of achieving LEED™ Silver certification. Current calculations suggest the project could achieve LEED Gold.

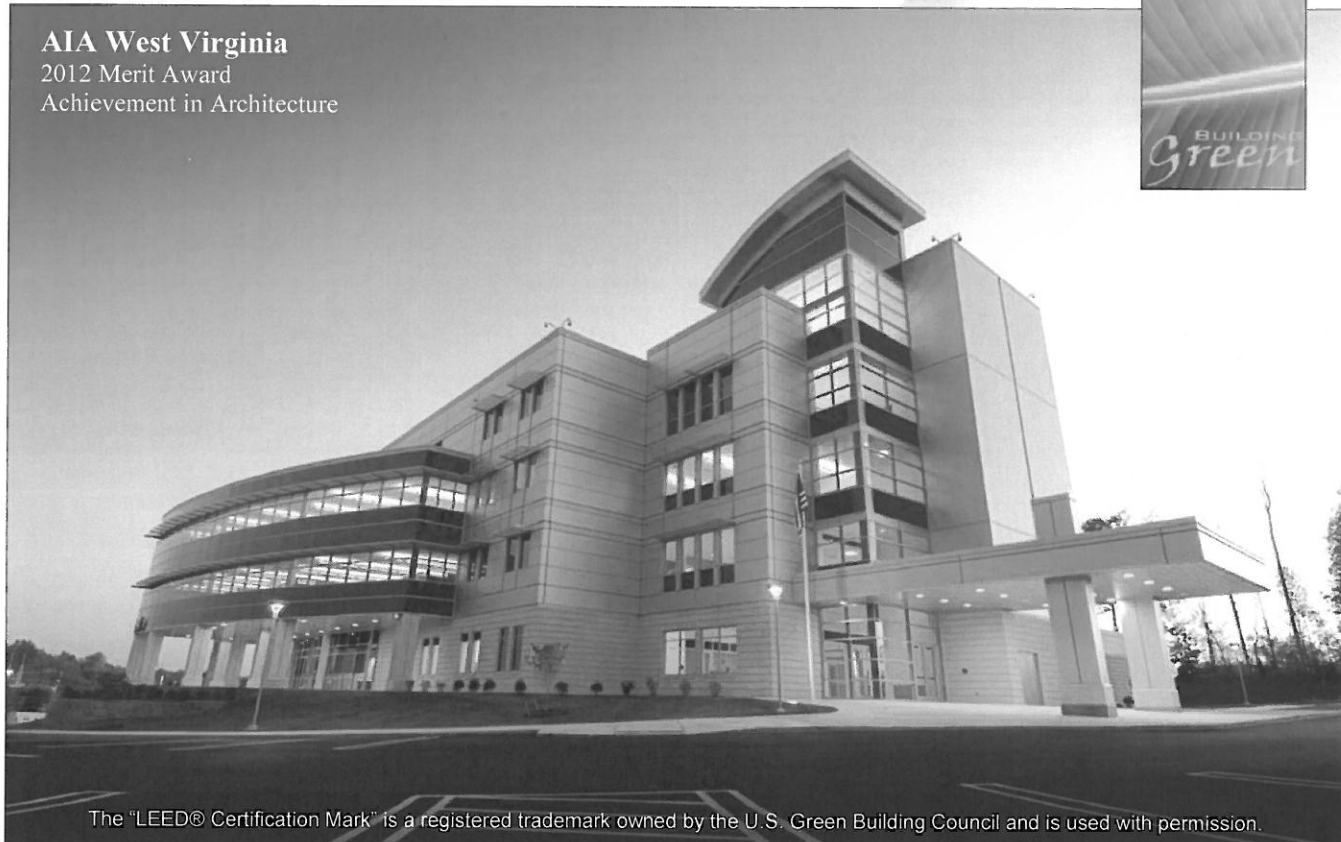
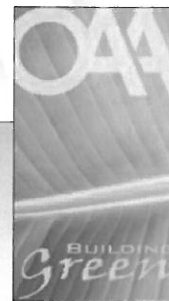
### West Virginia State Office Complex Fairmont, West Virginia

Contact:  
Mr. Robert P. Krause, PE, AIA  
West Virginia General Services Division  
1900 Kanawha Blvd. East  
Building 1 Room MB-60  
Charleston, WV 25305  
304-558-9018



## Mon Power Regional Headquarters

AIA West Virginia  
2012 Merit Award  
Achievement in Architecture



The "LEED® Certification Mark" is a registered trademark owned by the U.S. Green Building Council and is used with permission.

Prior to its merger with First Energy, Allegheny Energy selected Omni Associates – Architects via a competitive selection process to provide all Architectural and Engineering services for its new transmission operations headquarters in Fairmont, West Virginia. Now the Mon Power Regional Headquarters, the environmentally friendly facility is located on a 9-acre parcel of land in the I-79 Technology Park.

Completed in September 2010, the state-of-the-art facility serves as the center for multi-state energy transmission functions, including around-the-clock management of the electric grid. The building houses the Transmission Operations Control Center, a Data Center, Class A commercial office space, and all associated electrical, mechanical, and support facilities. The Transmission Operations Control Center and Data Center was constructed to meet a site infrastructure performance rating of Tier III. The new construction project is LEED® (Leadership in Energy and Environmental Design) Certified.

Services provided by Omni include site selection assistance and development services, architectural design services, civil, structural, mechanical, and electrical engineering services, bid document development, construction contract administration services, and post contract administrative services. According to Allegheny Energy's Linda Moss, Director, Ops Support and Project Manager for the building, "Omni has been an integral part of this entire process. The architects worked quickly to assess our needs and develop the frame work for this building and worked closely with us to ensure the final product would be efficient as well as beautiful. The team environment encouraged a collaborative effort to meet our specific needs."



**Mon Power Regional  
Headquarters**  
Fairmont, West Virginia

Construction Cost: If required, construction cost can be obtained by contacting owner's representative as listed below.  
Delivery Method: Design-Build

148,000 Square Feet  
- Transmission Operations Control Center  
- Data Center  
- Class A commercial office space

Contacts:  
Ms. Linda L. Moss, Project Manager  
Current President of Toledo Edison  
6099 Angola Road  
Holland, OH 43528  
800-447-3333

Mr. Bob Hellman  
Supervisor, Facilities Management  
Mon Power Regional Headquarters  
5001 NASA Boulevard  
Fairmont, WV 26554  
304-534-7955





**H.F. LENZ  
COMPANY**

***H.F. Lenz Company***

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1407 Scalp Avenue  
Johnstown, PA 15904  
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Fax: 814-269-9301  
www.hflenzenz.com

**Pittsburgh Office**  
1051 Brinton Road  
Pittsburgh, PA 15221  
Phone: 412-371-9073  
Fax: 412-371-9076

**Ohio Office**  
322 State Street,  
Conneaut, OH 44030  
Phone: 440-599-7800  
Fax: 440-599-7801

Currently in its 67th year, the H.F. Lenz Company is a Pennsylvania-based firm offering a full range of engineering services for building systems, infrastructure, and industry. Our projects span the nation, with the heaviest concentration in the Northeast, and exceed \$530 million in MEP, Civil and Structural construction annually. A remarkable 85 percent of our work consists of repeat commissions from clients who appreciate our responsive, value-added service. ***Our 47 Professional Engineers are licensed in a total of all 50 states and DC. We currently have 13 Engineers licensed in West Virginia.*** Our in-house services include:



- Mechanical Engineering
- Electrical Engineering
- Plumbing Engineering
- Life Safety / Fire Protection Engineering
- Communications Engineering
- Energy Management
- Civil Engineering
- Structural Engineering
- Industrial Engineering
- Surveying
- Construction Phase Services
- Commissioning
- LEED™ Design Services

#### **CORRECTIONAL FACILITY DESIGN**

H.F. Lenz Company is a nationally recognized engineering firm with extensive experience in criminal justice facilities. We understand the issues involved in designing building systems for this type of facility and we are thoroughly familiar with recent correctional trends. Mechanical and electrical systems design in facilities dealing with incarceration differs from the design of conventional buildings in many ways. These systems must address items such as the confined occupant, the correctional facility staff interface, security, and life safety. In addition to our correctional facility experience, our portfolio includes extensive DoD experience, including more than 20 years of service for the U.S. Army Corps of Engineers through six consecutive term contracts as well as on various reserve centers and training facilities design, and vast experience with federal, state and local government clients, mission-critical facilities and health care facilities.



We will work closely with the client and the design team to develop the solutions that best meet our client's unique needs.

Mechanical and electrical systems design in facilities dealing with incarceration differs from the design of conventional buildings in many ways. These systems must address items such as the confined occupant, the correctional facility staff interface, security, and life safety. Items of major concern include:



- Secure equipment to prevent damage, hidden contraband, suicide, or weapon manufacture
- Centralized control of lighting
- Ventilation air
- Specialized fire hose systems for riot control



**H.F. LENZ  
COMPANY**

- Non-secure access paths to mechanical equipment for maintenance considerations
- Centralized or non-secure locations for valves, mechanical, and electrical equipment
- Electronic plumbing systems for close control of individual cells, dayroom water management, and entire facility
- Humidity control to maintain ventilation in non-secure air conditioned areas
- Acoustic analysis to prevent excessive equipment noise

Our project team for this project is the same team that successfully worked together on the new 700,000 sq.ft. Forest County State Correctional Institute (SCI) (L5 facility) in Pennsylvania, completed in 2002. This team also recently completed engineering services for the bridging documents for new 128-bed additions to the Pine Grove, Coal Township, and Cambridge Springs State Correctional Institutions (L3 facilities), and the 96-bed addition to the Forest County SCI. Our recent SCI experience also includes the electrical engineering services for the new 629,573 sq.ft. SCI Benner Facility, replacement of the steam lines and the repair of the main steam tunnel at SCI Camp Hill and the replacement of heating and cooling lines at SCI Fayette, all located in Pennsylvania.



#### **RECENT CORRECTIONAL FACILITY EXPERIENCE**

##### **State Correctional Institution, Pine Grove (Juvenile Facility)**

MEP engineering services for bridging documents for a new 128 cell (L3) addition. This project was one of the first two housing units being developed through the use of the design/build construction process which necessitated the development and refinement of the design/build process in close cooperation with DGS and DOC. \$11,466,000 Under Construction

##### **State Correctional Institution, Benner Township, Centre County**

Electrical engineering services for the design of a new 2,000 inmate correctional institution. The facility is designed to attain LEED Certification. \$179 million Completed in 2013

##### **State Correctional Institution, Marienville, Forest County**

MEP and civil/site engineering services for a new 700,000 sq.ft. correctional facility to house up to 2,000 inmates. The maximum security restricted housing unit contains 96 cells, and there are nine general population housing units each with 128 cells. The support services building includes a visiting room, health care, kitchen/dining, commissary, maintenance and correctional industries. The chapel, education and recreation services are part of the program services building. \$115 million Completed in 2004

##### **State Correctional Institution, Coal Township**

MEP engineering services for bridging documents for a new 128 cell (L3) addition. This project was one of the first two housing units being developed through the use of the design/build construction process which necessitated the development and refinement of the design/build process in close cooperation with DGS and DOC. \$11,911,000 Under Construction

##### **State Correctional Institution, Cambridge Springs**

MEP engineering services for bridging documents for a new 128 cell (L3) addition. \$11,350,000 Construction Contract has been awarded



## H.F. LENZ COMPANY

### **State Correctional Institution, Forest County**

MEP engineering services for bridging documents for a new 96 cell (L5) addition. \$21,900,000 To be re-bid

### **State Correctional Institution, Camp Hill**

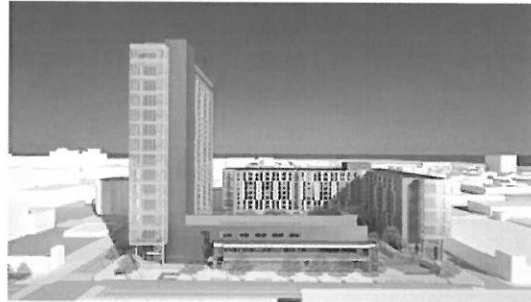
MEP and structural engineering services for the replacement of the steam lines and the repair of the main steam tunnel. \$8,750,000 Currently under construction

### **State Correctional Institution, Fayette**

MEP engineering services for the replacement of the HTHW heating lines serving the facility, which involved nearly 2.75 miles of piping. \$7,350,000 Completed in 2011

### **ADDITIONAL HOUSING RELATED EXPERIENCE**

H.F. Lenz Company has provided engineering services for more than 100 student housing facilities throughout the Northeastern United States. In the past 10 years we have provided engineering services for over 2,722,800 sq.ft. of new student housing, totaling over \$550 million in construction costs, and design services for approximately 1,642,137 sq.ft. of renovations totaling over \$105.6 million in construction costs. In addition, our team has worked together on the design of over 4,000 rooms of hotels and condominiums including a pre-certified LEED® hotel prototype for Marriott International, Inc., which is designed to reduce a hotel's energy and water consumption by up to 25%, and save owners approximately \$100,000 in annual total operating cost.



### **EDUCATIONAL FACILITIES**

Over the past 67 years our firm has provided engineering services for literally hundreds of educational facilities throughout Pennsylvania, West Virginia, and Ohio. Typical projects include master planning and feasibility studies, all types of building renovations, building additions, infrastructure upgrades including telecommunications, energy audits and retrofits, site planning and development, commissioning and construction monitoring services. We have extensive experience in West Virginia, in fact, H.F. Lenz Company has been serving WVU for 15 years and has held term contracts with the University since 1996. We have also provided design services for the new 54,600 sq.ft. Brotherton Hall at the **University of Charleston** and the new 1,500 student **Washington High School** in Charles Town, West Virginia.



### **LEED® AND SUSTAINABLE DESIGN**

H.F. Lenz Company was recently ranked in the "Top 100 Green Design Firms" in the Country, for the fourth year, by ENR Magazine. We have been a member of the United States Green Building Council since 2000 and currently have 20 LEED® Accredited Professionals on staff. At present, we have designed over 10 million sq.ft. of facilities utilizing LEED principles including 70+ projects that have attained various levels of LEED Certification, and 40+ projects pending LEED Certification.



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## *State Correctional Institution (SCI) Benner Benner Township, Pennsylvania*

### NEW CORRECTIONAL FACILITY

The new SCI Benner Township Facility accommodates a housing capacity of 2,400 inmate beds and is located in close proximity to the existing SCI Rockview complex in Bellefonte, Pennsylvania. The 629,573 sq.ft. facility consists of 27 individual buildings strategically placed on an 88-acre site and functions as the central transportation hub of all of the Commonwealth's correctional facilities.

The "campus" plan consists of 11 inmate housing units (Units A-K) at 32,008 sq.ft. each except for Housing Units J and K which are 40,671 and 15,307 sq.ft. respectively. Also included in the design:

- 23,255 sq.ft. outside administration facility
- 18,890 sq.ft. security administrative building
- 24,570 sq.ft. health services facility that included Patient Isolation Rooms, Treatment Rooms, Exam Rooms, Physical Therapy, Psychiatric Ward, Digital X-Ray, Trauma Room, Dental Suite, Pharmacy and Triage.
- 24,273 sq.ft. dietary services facility
- 49,810 sq.ft. laundry facility
- 31,200 sq.ft. maintenance shop
- 67,261 sq.ft. multi-use (education, religious, recreation) building.
- 13,693 sq.ft. central plant
- Field houses
- Warehouse
- Transportation Hub building

H.F. Lenz Company provided the electrical engineering services for the design/build project. The project is designed to attain LEED Certification.

Construction on the \$179 million facility was completed in 2013.





H.F. LENZ  
COMPANY

## **State Correctional Institution** **Marienville, Pennsylvania**

### **NEW PRISON FACILITY**

H.F. Lenz Company provided HVAC, electrical, plumbing, fire protection, and civil/site design services for the **700,000-square-foot prison facility** situated on a 200 acre site in Forest County, Pennsylvania.

The new facility provides programming, support services and infrastructure for approximately 2,000 inmates. The maximum security restricted housing unit contains 96 cells, and there are nine general population housing units which each have 128 cells. The support services building includes a visiting room, health care, kitchen/dining, commissary, maintenance and correctional industries. The chapel, education and recreation services are part of the program services building.

The **mechanical piping systems** for the prison facility included:

- 1800 BHP high temperature hot water boilers and central distribution piping including 4,800 LF of underground piping
- 1200 ton chilled water plant with central distribution piping (4,800 LF underground)
- Hot water convertors and building hot water heating piping
- Dietary steam boiler and steam and condensate piping system for food service equipment

The **electrical services** for the prison facility included:

- 12.47 KV main-tie-main service entrance with campus-wide dual loop feed underground distribution systems
- Dual 2000KW diesel generation emergency power plant; 100% backup of entire facility
- Campus-wide metering/monitoring system with PLC control of remote circuit breakers featuring touch-screen human interface
- Campus-wide fire alarm system with fiber optic backbone
- Integrated low-voltage lighting control

The **plumbing and fire protection systems** for the prison facility included:

- A 5,000 LF underground domestic water distribution service main loops the perimeter of the site
- Domestic hot and cold water distribution piping supplies fixtures and equipment in each building;



a hot water return circulation piping system is designed to adequately provide hot water to remote fixtures

- Natural gas distribution system, service pressure regulation, and equipment connections throughout the facility
- Sanitary sewer and storm water collection systems for each building and site
- Standard and penal/security plumbing fixtures were specified and located throughout the facility as required
- Special design considerations were required to identify the location, route, and accessibility of distribution supply lines, maintenance valves, and fittings for tamper resistant and security measures
- One million gallon elevated water storage tank system
- Fire suppression system including 2,500 gallon per hour fire pump and 5,000 LF of underground eight inch fire water distribution loop
- Fully sprinklered fire suppression for each building

The **civil/site design** for the prison facility included the following services:

- Preparation of a site grading plan involving the excavation of 750,000 cubic yards of embankment
- Storm drainage collection system with a detention pond having a capacity of 3.2 million gallons of storage
- Sanitary sewer system, with a pretreatment facility, with 850 gallon per minute pumps; the sewer system was designed to convey 400,000 gallons per day
- Design of a 1,000,000 gallon elevated water storage tank system
- Preparation of highway construction plans for the addition of turning lanes on SR0066; services included 2,100 LF of roadway widening, drainage system, and erosion control facilities



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**State Correctional Institute**  
**Camp Hill, Pennsylvania**

**MAIN STEAM TUNNEL RENOVATIONS**

The H.F. Lenz Company provided mechanical, electrical, and structural engineering, and construction monitoring services for the replacement of the steam lines and the repair of the main steam tunnel at Camp Hill State Correctional Institute (SCI). Steam is distributed to most buildings at SCI by an underground tunnel system which was originally installed in circa 1938. There have been several modifications and repairs since then; however, the tunnel itself and much of the piping were original when the project began. One of the major requirements of this project was that the steam system remained in service to the entire institution throughout the construction with the exception of some shutdowns which will be minimized in duration. Due to the nature of the facility, security issues were also a main priority. In order to properly size the steam piping, we first performed an analysis of the steam loads for each of the buildings. This analysis was based on available reference drawings, connected equipment loads, and building area calculations.

The HVAC portion of this project consisted of replacing portions of the steam lines within the existing tunnel which contained a 16" low-pressure steam line, a 6" high-pressure steam line, a 6" low-pressure return, a 6" high-pressure return, and a 4" pumped condensate line. The majority of the buildings were fed with high-pressure steam; however, a few were fed with both high-pressure steam and low-pressure steam. Buildings that were served with high-pressure steam were typically provided with pressure reducing stations.

In order to reduce the amount of piping within the tunnel, the low-pressure line was eliminated completely. All buildings were supplied with high-pressure steam. Buildings which had been utilizing low-pressure steam were provided with new pressure reducing stations.

In order to maintain steam service throughout the course of construction, the new steam lines were routed on the opposite side of the tunnel as they were loaded originally. This allowed the new lines to be installed and tested prior to a relatively short shutdown in which the new lines were energized and the old lines disconnected.

Existing expansion loops were replaced with slip-type expansion joints. This was due to the piping being routed along the opposite walls from the existing loops.

The scope of the electrical work for the project consisted of removing the existing lighting and service receptacles from the steam tunnel. High abuse fluorescent lighting fixtures are located on 40' centers the length of the tunnel. GFI service outlets were provided on 120' centers the length of the tunnel.

The project is currently under construction.

<b>Estimated Completion Date:</b>	2014
<b>Estimated Construction Cost:</b>	\$4,500,000



**Federal Correctional Institution  
Loretto, Pennsylvania**

- Mechanical, electrical, and plumbing design for five buildings
- Increased security level from Minimum Level 1 to Medium Level 3
- Reconstruction of outdoor recreation area
- New perimeter roadway
- Security fencing and lighting
- Perimeter detection system and security hardware
- Topographic and utility surveys

**Forest County State Correctional Institution  
Marienville, Pennsylvania**

- Mechanical, electrical, plumbing, fire protection, and civil/site design services for a 700,000 sq.ft. 2,000-inmate prison facility

**Pine Grove and Coal Township State  
Correctional Institutions, Pennsylvania**

- Bridging documents for new 128 cell additions to each L-3 facility

**Cambridge Springs State Correctional  
Institution, Pennsylvania**

- Bridging documents for new 128 cell addition to an L-3 facility

**Forest County State Correctional Institution  
Marienville, Pennsylvania**

- Bridging documents for new 96 cell addition to an L-5 facility

**Fayette State Correctional Institution  
Labelle, Pennsylvania**

- Replacement of the high temperature hot water heating lines

**City of Suffolk Jail  
Suffolk, Virginia**

- Complete mechanical, electrical, and fire protection design for a new 50,000 sq.ft. jail to house 350 inmates



*The Federal Correctional Institution in Loretto houses 550 inmates.*

**Cambria County Jail  
Ebensburg, Pennsylvania**

- Development of a phased improvement program to correct mechanical and electrical deficiencies

**Cambria County Juvenile Detention Home  
Ebensburg, Pennsylvania**

- Deficiency evaluation and energy conservation improvement study of the existing 12-cell facility
- Construction documents for converting the second floor to a four-room sheltered care center for county use

**Alderson Federal Correctional Institution  
Alderson, West Virginia**

- Complete HVAC, electrical, and fire protection design for conversion of training rooms to production areas

**Garrett County Courthouse and Jail  
Garrett County, Maryland**

- Renovations to existing buildings
- New minimum, medium, and maximum security area
- New kitchen and exercise areas
- New parking garage

**Westmoreland County  
Correctional Institution  
Greensburg, Pennsylvania**

- New mechanical, electrical, and plumbing systems



**Westmoreland Juvenile Detention Center  
Greensburg, Pennsylvania**

- Mechanical, electrical, and plumbing systems for new facility

**Indiana County Jail  
Indiana, Pennsylvania**

- Evaluation and design of mechanical, electrical, and plumbing systems for a new jail structure

**Camp Hill State Correctional Institution  
Camp Hill, Pennsylvania**

- Mechanical, electrical, and structural engineering, and construction monitoring services for the replacement of the steam lines and the repair of the main steam tunnel

**U.S. Marshal's Service Facilities**

H.F. Lenz Company has provided engineering services for numerous courthouses and federal buildings which have housed U.S. Marshal's Service Facilities. Below is an overview of some of these facilities.

**U.S. Courthouse  
Harrisonburg, Virginia**

- Renovation for U.S. Marshal's Service space, prisoner holding cells, and secure elevator
- Second floor renovations including district magistrate courtroom, judges' chambers, conference rooms, clerks' rooms, and jury suite
- New building-wide fire alarm system

**William J. Nealon Federal Building and U.S. Courthouse  
Scranton, Pennsylvania**

- U.S. Marshal's Service space
- New \$36 million courthouse annex and repair and alteration of existing federal building

**Federal Building and Courthouse  
Williamsport, Pennsylvania**

- U.S. Marshal's Service: sallyport, holding cells, secure elevators, administrative areas, and judges' parking

- Probation fit-out, Clerk of Courts, jury assembly areas, and new public, restricted, and prisoner circulation areas

**Federal Courthouse Complex  
Erie, Pennsylvania**

- U.S. Marshal's Service Space
- New \$24 million courthouse annex and renovation to three existing historic buildings
- Building evaluation report
- Feasibility study for expansion options
- Prospectus development study

**Federal Office Building and Courthouse  
Wheeling, West Virginia**

- \$8 million renovation and additions to this historic structure including: new sallyport; prisoners' elevator; judges' elevator; holding cells; and new public, judges', and prisoners' circulation areas
- Boiler replacement study and design
- Study and rehabilitation of deteriorated parapet wall
- Fourth floor courtroom renovation

**Lynchburg Courthouse  
Lynchburg, Virginia**

- Mechanical, electrical, and plumbing/fire protection engineering services for the design of a new 65,000 sq.ft., five-story courthouse building and renovation of an existing three-story, 25,000 sq.ft. historic schoolhouse
- U.S. Marshal's Service Space

**Somerset County Courthouse  
Somerset, Pennsylvania**

- Mechanical, electrical, and plumbing/fire protection services for the historical renovation of the Somerset County Courthouse
- U.S. Marshal's Service Space
- New 911 Center
- New boiler serving police station



H.F. LENZ  
COMPANY

## *Washington High School Charles Town, West Virginia*

### **NEW HIGH SCHOOL**

H.F. Lenz Company provided mechanical, electrical, technology, plumbing and fire protection engineering services for the new 1,500 student Washington High School.

The new High School houses academic wings, administration area, and common facilities for use by all students. Common facilities such as the Learning Resource Center, dining, physical education, and creative arts are accessible from the main corridors. School administrative offices and Student Services are located near the main entrance to the School.

Perhaps the most unique aspect of this new school is the Science and Technology Center. Partially funded by a separate grant, this portion of the building includes the School's Science Department along with various technology oriented subject areas such as technology training labs, technology education, engineering, agricultural technology, and video conferencing. During the day, the center supports the academic curriculum. After normal school hours, the facilities will be available for continuing education classes open to the community at large. The Science and Technology Center will serve a practical as well as academic role. Subjects offered here will equip students with skills having immediate application in specific, local, technology-dependent industries as well as general relevance to advanced academic education.

The School District plans to make the Learning Resource Center and computer facilities available to the community after normal school hours as well. Thus the community at large will have access to up-to-date facilities for instruction, research, and application that are not currently available in the School District.

In addition to the school building, the new site accommodates athletic facilities, that feature vehicular circulation, along with daily and event parking for students, staff, and visitors plus service and delivery to the building. Athletic facilities include a field house with team locker rooms and equipment storage, concession and public restroom buildings, track and field facilities for competition, a football/soccer stadium with bleacher seating, a press box and lighting for night games, baseball and softball fields. Practice fields for use by athletic teams and marching bands, and hard courts for basketball and tennis were also provided.





H.F. LENZ  
COMPANY

***Williamsport School District***  
***Williamsport, Pennsylvania***

**WILLIAMSPORT AREA HIGH SCHOOL RENOVATION AND NEW VO-TECH ADDITION**

This project included a new HVAC system for the high school auditorium and a new Vo-Tech addition to the school.

The new Vo-Tech addition was able to be connected to the three existing hot water boilers and two existing chillers. New air handling units, unit ventilators, cabinet unit heaters, horizontal unit heaters and saw dust collector system were installed. The existing building pneumatic control system remained and was extended to the equipment in the new addition. A compressed air system was installed to operate equipment in the new shops.

The welding shop was fitted out with welding exhaust systems and smoke eater units. The wood shop included a dust collector and air cleaners. The greenhouse was served with gas fired heating units with deflatable duct-sox for air distribution.

New hot and cold water piping, sanitary piping, new water conserving toilet fixtures with battery operated automatic faucets, flush valves, and water coolers were installed in the new addition. A new water heater was also installed.

A new power center including a main disconnect, a 12,470 volt transformer, and a 277/480 volt distribution section were installed to provide power to the new addition, as well as to provide additional power to the existing shop areas. A two compartment surface mounted raceway for computers was installed in the classrooms of the new addition, as well as for the classrooms being renovated.

New fluorescent fixtures with energy saving electronic ballasts, T-8 fluorescent lamps and parabolic lenses were installed in classrooms. Shop areas were illuminated with pendant mounted industrial type fluorescent fixtures.

A new fire alarm panel was installed to connect all the fire alarm devices in the new addition and renovated areas.

Television outlets were installed in all classrooms for complete reception and classroom origination. The television distribution system was also connected to the two existing satellite dishes on the roof. A data network was installed for the new addition and the renovated areas of the building. The network included category five outlets in each educational space.

The Auditorium HVAC upgrade provided a challenge because the air handling systems had previously been too noisy for performances in the Auditorium. The solution was to mount the new air handling units on the roof of the new Vo-tech wing, remote from the Auditorium. Ductwork, sized large to cut down the noise producing air velocity, was run from those roof top units utilizing multiple elbows to further minimize air and unit noise. A further enhancement to make the Auditorium quiet was to circuit the small HVAC equipment adjacent to the Auditorium, such as cabinet unit heaters, through a contactor. A Hand Operated Mechanical Equipment Relay switch (HOMER) was installed to activate the contactor and shut down that equipment during a performance.



H.F. LENZ  
COMPANY

## ***Cumberland Perry Area Vocational Technical School*** ***Mechanicsburg, Pennsylvania***

### **VO-TECH RENOVATION**

Cumberland Perry Vo-Tech is a vocational technical school located in Mechanicsburg Pennsylvania. The school provides vocational education to the Big Spring, Camp Hill, Cumberland Valley, East Pennsboro, Greenwood, Mechanicsburg, Newport, Northern York County, South Middleton, Susquehanna, Upper Adams, West Perry and West Shore school Districts.



The facility has a multitude of programs including auto body/painting, welding, diesel technology, machinist technology, masonry, concrete, wood shop, HVAC, electronics, police training, cosmetology, culinary, and a greenhouse for agriculture.

H.F. Lenz Company's role in the building was to improve the facility with a limited budget. Approximately 65,000 sq.ft. of the facility was renovated.

The HVAC work included new boilers and new chillers. Within the shop areas the HVAC systems were upgraded with new air cleaners in the various shops to improve air quality, re-routing of return duct work along with incorporation of air filtration, new exhaust systems for the full size auto painting spray booth, exhaust systems for the welding booths, and exhaust systems for the culinary and the cosmetology spaces.

The plumbing work included upgrading the plumbing fixtures, as well as upgrading and adding floor drains. The new drainage systems were incorporated to solve issues of clogging that the facility dealt with often in the shop areas. In addition, a fire protection system was added to the shop areas.

The electrical work included new lighting in various areas, new panelboards to supplement the existing. These helped resolve issues with overloaded circuits, and the lack of circuits in all areas of the building.

### **ADDITIONAL VOCATIONAL TECHNICAL SCHOOL EXPERIENCE INCLUDES:**

**Greater Johnstown Career and Technology Center**  
**Johnstown, Pennsylvania**  
Renovations

**Jefferson County Vocational-Technical School**  
**Reynoldsville, Pennsylvania**  
Heating/cooling system renovations

**Greater Altoona Career and Technology Center**  
**Altoona, Pennsylvania**  
Renovations

**Indiana County Technology Center**  
**Indiana, Pennsylvania**  
Renovations

**Somerset Area High School Vo-Tech**  
**Somerset, Pennsylvania**  
Addition and renovations totaling 80,000 sq.ft.

**Warren County Career Center**  
**Warren, Pennsylvania**  
Weld room exhaust and renovations



**H.F. LENZ  
COMPANY**

***John R. Boderocco, P.E.***  
***Principal-in-Charge of Engineering***

Mr. Boderocco is responsible for the engineering design and master planning of correctional facilities, colleges and universities, schools, laboratories, health care facilities, commercial office buildings, and industrial facilities for private, public, and governmental clients. His projects have involved mechanical/electrical systems design for new buildings, HVAC and electrical systems retrofit, building energy conservation, institutional heating plant designs, and civil and municipal engineering. As Principal-in-Charge, he is responsible for client contact; contract development and negotiation; establishing the project scope, timetable, and overall system concepts; preparing reports and cost estimates; monitoring design to ensure quality and coordination; construction management; and other project management functions. His projects include:

Forest County State Correctional Institution  
Marienville, Pennsylvania  
*New 700,000 sq.ft. minimum, medium, and maximum security facility to house 2,000 inmates that consists of 19 buildings on a 76 acre site; includes facility administration and security administration buildings*

Benner Township State Correctional Institution,  
Centre County, Pennsylvania  
*Electrical engineering services for the design of a new 2,000 inmate correctional institution. Designed to attain LEED Certification*

Pine Grove and Coal Township State  
Correctional Institutions  
Pennsylvania  
*Bridging documents for new 128 cell additions to each L-3 facility*

Cambridge Springs State Correctional  
Institution  
Pennsylvania  
*Bridging documents for new 128 cell addition to an L-3 facility*

Forest County State Correctional Institution  
Marienville, Pennsylvania  
*Bridging documents for new 96 cell addition to an L-5 facility*

Fayette State Correctional Institution  
Labelle, Pennsylvania  
*Replacement of the high temperature hot water heating lines*

City of Suffolk Jail  
Suffolk, Virginia  
*New 350-bed facility*

Heritage Health System, The Medical Center  
Beaver, Pennsylvania  
*Psychiatric, neuropsychiatric, and adolescent psychiatric units*

Pennsylvania Soldiers and Sailors  
Erie, Pennsylvania  
*New 32-bed unit for patients with dementia or Alzheimer's disease*

Somerset Area High School Vo-Tech  
Somerset, Pennsylvania  
*Addition and renovations totaling 80,000 sq.ft.*

Jefferson County Vocational-Technical School  
Reynoldsville, Pennsylvania  
*Heating/cooling system renovations*

Latrobe Senior High School  
Latrobe, Pennsylvania  
*Addition to and renovation of existing facility totaling 300,000 sq.ft.*

#### **Education**

Bachelor of Science, Environmental Engineering, 1978 Pennsylvania State University

#### **Experience**

H.F. Lenz Company 1978 - Present  
Pennsylvania State University 1978

#### **Professional Registration / Certification**

Licensed Professional Engineer in Pennsylvania

#### **Professional Affiliations**

National Society of Professional Engineers • Pennsylvania Society of Professional Engineers • American Hospital Association • American Society of Heating, Refrigerating and Air-Conditioning Engineers • American Water Works Association • International Society for Pharmaceutical Engineering



H.F. LENZ  
COMPANY

**Robert F. Stano, P.E.**  
**Principal/Quality Control**

Mr. Stano is responsible for the engineering design of all trades, the supervision of senior designers, the preparation of reports to determine optimal systems and/or equipment selections, and the coordination and checking of contract documents for completeness and quality. He is responsible for coordination with the client, the architect, regulatory agencies, and the engineering staff; project scheduling; and other project management functions. He is experienced in the design of building systems including air and water heating/cooling systems, automatic temperature control systems, boiler plant systems, central chilled water plants, fire detection and suppression systems, energy management systems, building lighting and power distribution systems. He has been responsible for mechanical design and/or project management of the following projects:

State Correctional Institution\*  
Camp Hill, Pennsylvania

*Replacement of the steam lines and repair of the main steam tunnel*

Bucks County Justice Center  
Doylestown, Pennsylvania

*New 265,000 sq.ft. justice center with holding cells, sheriff's offices and sally port - Designed to attain LEED Silver*

U.S. Post Office and Courthouse  
Erie, Pennsylvania

*Renovation of a federal building including holding cells, and construction of a new 50,000 sq.ft. connecting structure*

U.S. Post Office and Courthouse  
Scranton, Pennsylvania

*Renovation of a 150,000 sq.ft. historic building including holding cells, and a new 120,000 sq.ft. annex*

U.S. Post Office and Courthouse  
Wheeling, West Virginia

*Renovation including holding cells, and new 90,000 sq.ft. addition*

U.S. Courthouse and Federal Building  
Williamsport, Pennsylvania

*U.S. Marshal Service renovations and additions*

U.S. Post Office and Courthouse  
Lynchburg, Virginia

*Design of a new 65,000 sq.ft., five-story courthouse building and renovation of an existing three-story, 25,000 sq.ft. historic schoolhouse including holding cells*

University of Pennsylvania  
Philadelphia, Pennsylvania

*Renovation of Hamilton Village, a tri-tower, high-rise student housing complex*

Temple University  
Philadelphia, Pennsylvania

*New South Gateway 1,500 student high-rise residence halls with dining pavilion*

Carnegie Mellon University  
Pittsburgh, Pennsylvania

*New first year residence hall, LEED™ Silver*

University of Charleston  
Charleston, West Virginia

*New 55,000 sq.ft., student residence hall*

Federal Office Building  
Huntington, West Virginia

*Complete electrical system renovation*

#### **Education**

Bachelor of Science, Architectural Engineering, 1982, Pennsylvania State University

#### **Experience**

H.F. Lenz Company 1982 - 1985 and 1988 - Present

James Posey Associates, Inc. 1985 - 1988

#### **Professional Certification**

Licensed Professional Engineer in Pennsylvania • Maryland • New Jersey • Ohio • West Virginia

#### **Professional Affiliations**

National Society of Professional Engineers • American Society of Heating, Refrigerating, and Air-Conditioning Engineers • International Society for Pharmaceutical Engineering



**H.F. LENZ  
COMPANY**

**Robert G. Mickle, P.E.**  
**Electrical Engineer**

Mr. Mickle is responsible for the design of complete electrical systems for facilities. Mr. Mickle's key responsibilities include: coordination of building electrical, telephone and cable television services with respective utility companies; lighting design; power system design; fire alarm system design; sound system design; clock system design; stage lighting design; nurse call system design; emergency power system and lighting system design; electrical connection of HVAC, plumbing, and other miscellaneous equipment; writing of specifications; design of 5 KV and 12 KV underground electrical distribution systems; design of electrical systems for health care facilities; design of roadway lighting systems; design of electrical systems for military facilities; checking of plans and specifications for quality control; project management, building study and evaluation. His project experience includes (\*indicates previous experience):

State Correctional Institution  
Benner Township, Pennsylvania  
*Electrical engineering services for the design of a new 2,000 inmate correctional institution. The facility is designed to attain LEED Certification*

Forest County State Correctional Institution  
Marienville, Pennsylvania  
*Electrical Engineer for a new 700,000 sq.ft. prison consisting of 19 buildings to house 2,000 inmates. The project included design of 1800 BHP high temperature hot water boilers and 4,800 LF of underground high temperature hot water distribution piping*

Pine Grove and Coal Township State  
Correctional Institutions, Pennsylvania  
*Electrical Engineer for the bridging documents for new 128 cell additions to each L-3 facility*

Pine Grove State Correctional Institute\*  
Pennsylvania  
*Design of the facility's campus medium voltage electrical distribution system. Project included two 2.0 MW emergency generators, medium voltage paralleling switchgear, and SCADA (Supervisory Control And Data Acquisition) system*

Cambridge Springs and Forest County, State  
Correctional Institutions, Pennsylvania  
*Electrical Engineer for the bridging documents for new 128 cell addition to an L-3 facility (Cambridge); and new 96 cell addition to an L-5 facility (Forest County)*

Smithfield State Correctional Institute\*  
Smithfield Twp, Huntingdon, Pennsylvania  
*Replacement of the facility's existing 1.0 MW, 4.16 kV emergency generator that served the prison campus with a new 1.5 MW, 4.16 kV emergency generator. Due to the critical nature of the facility, the design required that temporary emergency service be maintained to the facility throughout the project. Project also included the upgrade of the facilities 5 kV primary service entrance switchgear*

Greensburg State Correction Institute\*  
Greensburg, Pennsylvania  
*Campus electrical upgrade project*

Huntingdon State Correctional Institute\*  
Huntingdon, Pennsylvania  
*Various renovation projects*

**Education**

Bachelor of Science, Electrical Engineering, 1987, University of Pittsburgh at Johnstown

**Experience**

H.F. Lenz Company 2001 - Present  
The EADS Group, Inc. 1991 - 2001  
Brinjac Kanbic & Associates 1988 - 1991

**Professional Registration / Certification**

Licensed Professional Engineer in Pennsylvania, Arizona, Delaware, Maryland, North Carolina, Texas, Virginia and West Virginia

**Professional Achievements and Affiliations**

Institute of Electrical and Electronics Engineers (IEEE)



H.F. LENZ  
COMPANY

**Steven P. Mulhollen, P.E.**  
**Electrical Engineer**

Mr. Mulhollen is experienced in the design of power distribution systems, control systems, emergency power systems, lighting and emergency lighting systems, fire alarm systems, security, sound, and telecommunications systems for correctional, educational, institutional, industrial, health care, and commercial facilities. Mr. Mulhollen's project experience includes (\* indicates prior experience):

State Correctional Institution\*  
Camp Hill, Pennsylvania  
*Replacement of the steam lines and repair of the main steam tunnel*

State Correctional Institution\*  
Camp Hill, Pennsylvania  
– *Electrical distribution upgrade and boiler plant upgrade. The electrical distribution was upgraded from 2400V to 12.47KV. Existing medium voltage equipment was replaced completing the upgrade to the entire distribution system.*  
– *Electrical distribution upgrade and Gate House. Project involved upgrading the existing 2400V distribution system to a 12.47KV distribution system with automatic transfer between two utility sources.*

West Virginia Department of Corrections\*  
Neola, West Virginia  
*New Anthony Correctional Center and the renovation of four additional support facilities. New electrical service was distributed around the site via underground ductbanks. New exterior lighting.*

Erie County Jail\*  
Erie, Pennsylvania  
*Electrical design of correctional facility*

University of Pennsylvania  
Philadelphia, Pennsylvania  
*Renovation of Hamilton Village, a tri-tower, high-rise student housing complex*

Temple University  
Philadelphia, Pennsylvania  
*New South Gateway 1,500 student high-rise residence halls, major dining pavilion and retail complex*

Carnegie Mellon University  
Pittsburgh, Pennsylvania  
*New \$10M first year residence hall, LEED™ Silver*

University of Charleston  
Charleston, West Virginia  
*New 55,000 sq.ft., student residence hall*

U.S. Post Office and Courthouse  
Lynchburg, Virginia  
*Design of a new 65,000 sq.ft., five-story courthouse building and renovation of an existing three-story, 25,000 sq.ft. historic schoolhouse*

Department of Treasury\*  
Trenton, New Jersey  
*New 90,000 sq. ft. Troop "C" headquarters including police barracks with training areas, administration areas, car maintenance area, dispatch area, and holding cells*

Naval Surface Warfare Center\*  
West Bethesda, Maryland  
*Building 5, electrical distribution upgrade totaling \$300,000*

#### **Education**

Bachelor of Science, Electrical Engineering, 1988, The Pennsylvania State University

#### **Experience**

H.F. Lenz Company 1999 - Present  
L. Robert Kimball & Associates 1996 - 1999  
Leach Wallace Associates, Inc. 1990 - 1996  
E.A. Mueller, Inc. 1988 - 1990

#### **Professional Registration / Certification**

Licensed Professional Engineer in Pennsylvania • Alabama • California • Florida • Maryland • Missouri • New Jersey • Nevada • New Mexico • North Carolina • Ohio • Tennessee

#### **Professional Affiliations**

Institute of Electrical and Electronics Engineers, Inc.



H.F. LENZ  
COMPANY

**David F. Bacci, P.E.**  
**Mechanical Engineer**

Mr. Bacci is experienced in the design of mechanical equipment rooms involving the installation of gas- and oil-fired steam and hot water boiler systems. He is also experienced in the design of heating, ventilating, and air conditioning systems including steam, hot water, chilled water, refrigeration, and air distribution systems. Mr. Bacci's involvement has encompassed field survey of existing conditions, engineering analyses, systems design, and the preparation of cost estimates. He has been involved in several energy conservation studies. Mr. Bacci also is a responsible Project Engineer. He performs project scheduling duties, coordination and supervision of project design teams, prepares reports and cost estimates, and other project management functions. His projects include (\*indicates prior experience):

Forest County State Correctional Institution  
Marienville, Pennsylvania  
*New 700,000 sq.ft. minimum, medium, and maximum security facility to house 2,000 inmates that consists of 19 buildings on a 76 acre site; includes facility administration and security administration buildings*

Pine Grove and Coal Township State  
Correctional Institutions, Pennsylvania  
*Bridging documents for new 128 cell additions to each L-3 facility*

Cambridge Springs and Forest County, State  
Correctional Institutions, Pennsylvania  
*Bridging documents for new 128 cell addition to an L-3 facility (Cambridge); and new 96 cell addition to an L-5 facility (Forest County)*

Fayette State Correctional Institution,  
Pennsylvania  
*Replacement of the HTHW heating lines to remove failing underground piping and to route it overhead. The design included the mechanical and structural repairs which required the facility to remain in operation and fully occupied. The facility is a 2000 bed correctional facility originally constructed in 2000 and includes eight L-5, eight L-3/L-4 and*

#### **Education**

Bachelor of Science, Mechanical Engineering Technology, 1986, University of Pittsburgh at Johnstown

#### **Experience**

H.F. Lenz Company 1997 - Present

Glassman and Associates 1989 - 1997 • Gauthier Alvarado and Associates 1986 - 1989

#### **Professional Registration / Certification**

Licensed Professional Engineer in Pennsylvania, Maryland, North Carolina, Texas, Virginia and West Virginia

#### **Professional Affiliations**

American Society of Heating, Refrigerating and Air-Conditioning Engineers • International Society of Pharmaceutical Engineers • Past President, Johnstown Chapter - Pennsylvania Society of Professional Engineers

*one L-1 along with the various support buildings*

Good Samaritan Hospital  
Johnstown, Pennsylvania  
*Psychiatric Suite*

Conemaugh Memorial Medical Center  
Johnstown, Pennsylvania  
*60+ renovation and/or addition projects including a new six-story, 220,000 sq.ft. clinical addition*

Altoona Hospital  
Altoona, Pennsylvania  
*50+ renovation and/or addition projects*

Laurel Crest Manor  
Cresson, Pennsylvania  
*Renovations to a 370-bed County nursing home*

Winston Churchill High School\*  
Montgomery County, Maryland  
*Project and Mechanical Engineer for the addition to the existing high school. The project included a 12,000 sq.ft. addition of a gymnasium, and offices, and renovation of the locker room facility.*



H.F. LENZ  
COMPANY

**Jeffrey A. McKendree, C.E.T.**

**Fire Protection Designer**

**NICET Level III Automatic Sprinkler System Layout**

Mr. McKendree is a graduate of Eastern Kentucky University's Fire and Safety Engineering program, a program of distinction in the Commonwealth of Kentucky as certified by the Commonwealth of Kentucky Board of Higher Education. Mr. McKendree's experience prior includes conducting site inspections for emergency incident planning in Lower Paxton Township in suburban Harrisburg, Pennsylvania. Typical sites included educational, industrial, manufacturing, and mercantile properties. These plans have been utilized to protect lives and property from the effects of fire through the use of NFPA and local standards for safety.

He is fully knowledgeable of NFPA standards and is experienced in the design of wet, dry, preaction, deluge, and special application fire protection systems. He is responsible for sprinkler system design, layout, and calculations; selection and sizing of fire protection equipment; cost estimates; and site survey work. Mr. McKendree coordinates with other trades, municipal fire protection authorities, utility companies, and with the Project Engineer and project Architect. Mr. McKendree has been involved in the design of fire protection systems for the following projects:

Forest County State Correctional Institution  
Marienville, Pennsylvania  
*New 700,000 sq.ft. minimum, medium, and maximum security facility to house 2,000 inmates that consists of 19 buildings on a 76 acre site; includes facility administration and security administration buildings*

Pine Grove and Coal Township State  
Correctional Institutions  
Pennsylvania  
*Bridging documents for new 128 cell additions to each L-3 facility*

Cambridge Springs State Correctional  
Institution  
Pennsylvania  
*Bridging documents for new 128 cell addition to an L-3 facility*

Forest County State Correctional Institution  
Marienville, Pennsylvania  
*Bridging documents for new 96 cell addition to an L-5 facility*

Westminster College  
New Wilmington, Pennsylvania  
*Fire protection designer for the fire alarm system upgrade for nine residence halls totaling approximately 300,000 sq.ft.*

LaRoche College  
Pittsburgh, Pennsylvania  
*Fire protection designer for the expansion of Bold Hall dormitories and the College Center*

West Virginia University  
Ruby Memorial Hospital  
Morgantown, West Virginia  
*New six story addition and renovation to existing hospital*

Morgantown High School  
Morgantown, West Virginia  
*Electrical renovations*

Ridgedale Elementary School  
Morgantown, West Virginia  
– Addition  
– Gymnasium addition

#### **Education**

Bachelor of Science Degree, Fire and Safety Engineering, 1999, Eastern Kentucky University  
Associate of Arts Degree, Fire Science Technology, 1997, Harrisburg Area Community College

#### **Experience**

H.F. Lenz Company June 1999 – present  
Paxtonia Fire Company incident preplanning committee August 1995 - August 1997

#### **Professional Registration / Certification**

NICET Level III in Fire Protection Engineering Technology / Automatic Sprinkler System Layout

# **TERRADON** CORPORATION

*Engineering Planning Surveying*

## **LAND DEVELOPMENT/ SITE DESIGN EXPERIENCE**

Secure Design Elements, Civic/Public Buildings,  
Residential Facilities



**Charleston, WV**  
**Headquarters Office**  
P.O. Box 519  
Nitro, WV 25143

**Lewisburg, WV**  
425 North Jefferson Street  
P.O. Box 1635  
Lewisburg, WV 24901

**Columbus, OH**  
167 South State Street Suite 250  
Westerville, OH 43081

**ALL LOCATIONS Phone: 304.755.8291 Fax: 304.755.2636**  
**[terraddon.com](http://terraddon.com)**

# **TERRADON** CORPORATION

Engineering Planning Surveying

TERRADON Corporation offers a multi-faceted approach to design engineering and consulting services. For more than 20 years TERRADON staff have provided a wealth of engineering solutions blanketing West Virginia and the Appalachian region with successful projects. The company built its reputation on expert personnel and quality, time-sensitive service. Those same founding principles hold true today.

Staff includes engineers, landscape architects, surveyors, planners, environmental scientists, designers, technicians and LEED Accredited Professionals. Seven departments work cohesively to provide turn-key solutions that strive to exceed client expectations.

## LOCATIONS

TERRADON Corporation's headquarters office is located near Charleston, WV. From this location, TERRADON's engineering reach easily extends throughout the region in regard to physical drive times, making projects in the surrounding area accessible in just a matter of hours. TERRADON also maintains satellite offices in Lewisburg, WV and Westerville (Columbus Area), Ohio.

## ABOUT TERRADON

The family-owned business has built its strong reputation by providing flexible, cost effective design solutions and maintaining the highest level of customer service. The firm has been recognized through numerous awards from professional organizations and agencies for excellence in engineering.

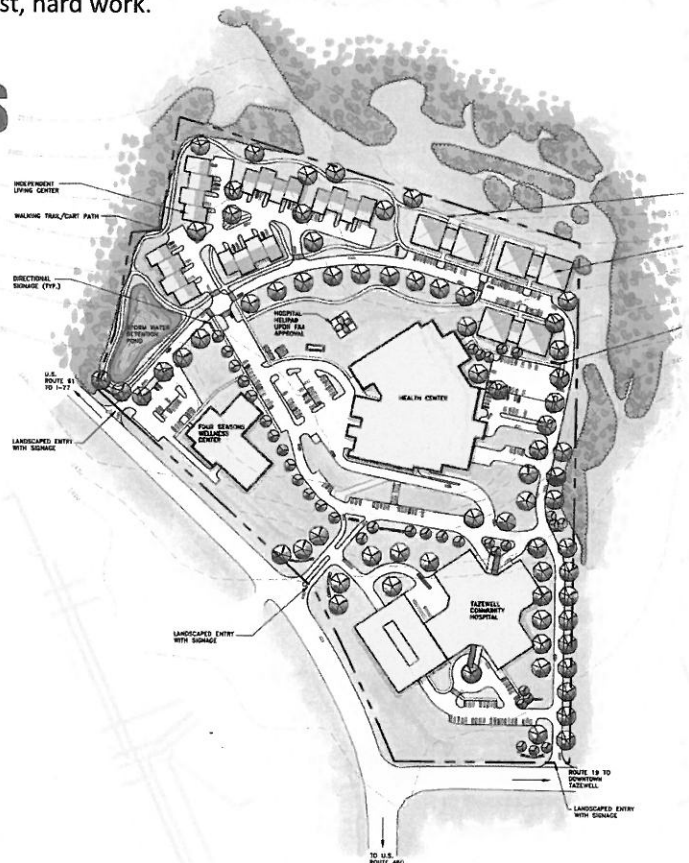
TERRADON's corporate culture promotes innovation and progressive thinking. Project leaders strive to sustain customers through a wide-range of engineering offerings. TERRADON employees understand the purpose behind their services and work to cultivate lasting relationships with clients through honest, hard work.

## LAND DEVELOPMENT SERVICES

- Master Planning
- Presentation Drawings/Renderings
- Site Feasibility Studies
- Schematic Design
- Layout Plans
- Grading Plans
- Stormwater Management Plans
- Erosion Control Plans
- Planting Plans
- Construction Observation

## LAND DEVELOPMENT MARKETS

TERRADON's Land Development Group works in a variety of markets including: Civic/Public, Parks/Recreation, K-12 Education, Higher Education, Commercial/Industrial and Medical.

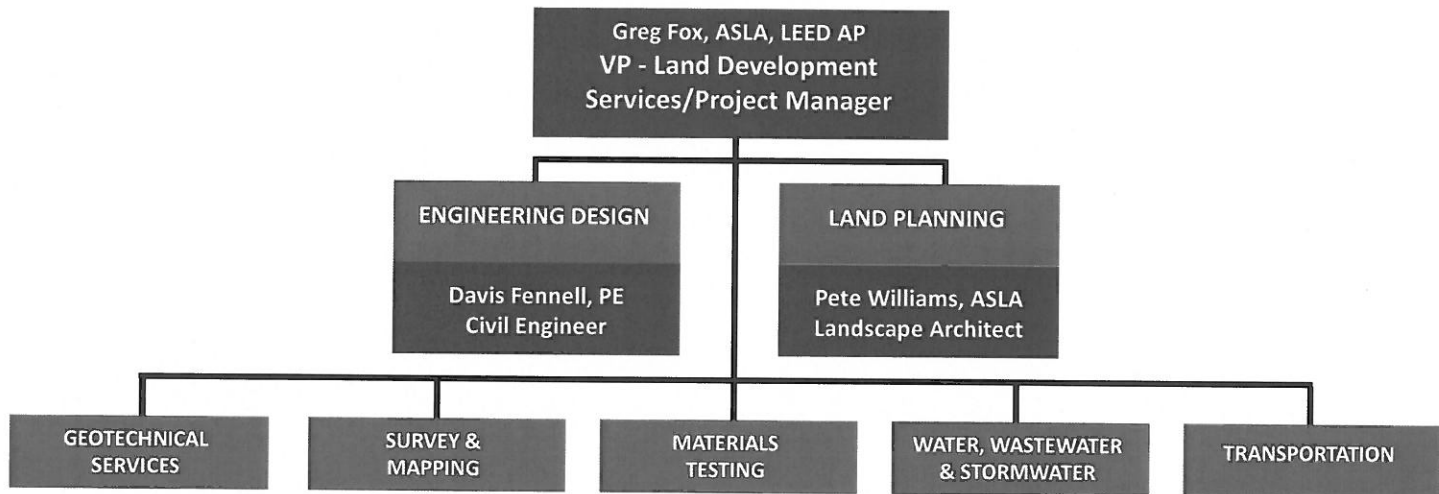


# STATEMENT OF QUALIFICATIONS

Land Development covers a broad swath of TERRADON's service offerings and sees a large percentage of its annual revenue from repeat clients or referrals. The group is comprised mainly of Landscape Architects and CAD designers who frequently team with every other department within the company. TERRADON's Land Development department collaborates with public and private entities and has a strong presence in the public/civil, educational, recreation and commercial development sectors.

TERRADON is recognized as a leader in providing site design and land planning services. The firm's professional engineers work closely with the client from the project's initial phase through a schematic design, construction documents and project delivery. TERRADON's Landscape Development Group remains on the forefront of sustainable design, providing LEED Accredited Professionals to clients. Projects utilizing sustainable design best practices aid clients in significantly reducing energy costs on projects.

## PROFESSIONAL QUALIFICATIONS



**Greg Fox, ASLA, LEED AP  
VP - Land Development  
Services**

Greg Fox has overseen the Land Development Department at TERRADON since its inception in 2000. He offers more than 25 years of industry experience, providing engineering services to a variety of markets. Under his guidance, the group has been the recipient of Engineering Excellence awards from the West Virginia Association of Consulting Engineers, and the Gold Award for Engineering Excellence from the American Council of Engineering Companies. Additionally, the Land Development Group has been recognized numerous times for Merit Awards by the West Virginia Chapter of American Society of Landscape Architects.

During his tenure, the Land Development Group has completed more than one hundred K-12 Educational projects and dozens of Higher Education projects.

Fox is a registered Landscape Architect in West Virginia, Ohio, North Carolina, South Carolina, Pennsylvania and Virginia. He is an active member of the American Society of Landscape Architects. Fox received degrees in Landscape Architecture and Planning from West Virginia University.

# EXPERIENCE OF STAFF



**Davis Fennell, PE**

## **Project Engineer**

Davis Fennell serves as a Project Engineer at TERRADON, where he is the Principal Engineer for Land Development. Fennell oversees projects in the education, commercial, civic, and recreational markets. Fennell has 18 years of civil and environmental engineering industry experience. Prior to joining TERRADON, Fennell spent 13 years as an engineering consultant in Southeast North Carolina. He provided services to private and public sectors including master planning, roadway design, wastewater, water, storm, erosion and sediment control, permitting, construction administration and compliance monitoring.

Fennell is a registered Professional Engineer in West Virginia, North Carolina, and South Carolina. He is a member of the National Society of Professional Engineers and the American Society of Civil Engineers. Fennell received degrees in Civil Engineering and Environmental Engineering from North Carolina State University.



**Peter J. Williams, ASLA**

## **Landscape Architect**

"Pete" Williams is a graduate of West Virginia University with a Bachelor of Science in Landscape Architecture. His responsibilities include landscape architectural design, grading and storm water drainage design, the design of pedestrian circulation systems and related amenities, roadway design, site planning, and quality control. Mr. Williams is registered as a professional Landscape Architect in West Virginia with more than 13 years of experience at TERRADON and more than 22 years of overall experience.



**Robert Thaw, PS**

## **Vice President of Survey and Mapping**

Robert Thaw, Vice President of Survey and Mapping, oversees all TERRADON Survey services. TERRADON's survey group serves a diverse range of projects in support of seven TERRADON service groups in addition to managing survey-specific clients. Thaw manages a staff of Professional Surveyors and Computer Aided Drafting (CAD) designers who provide mapping, construction layout, ALTA survey, topographic survey and boundary survey services.

Thaw's leadership has been instrumental in TERRADON's prioritization of the use of modern technology, ensuring clients the most efficient and accurate results. Additionally, he is responsible for in-house design of commercial property sites, parking and utility easements, and review of project plans and base mapping creation. Thaw's group also provides as-built surveys, utility identification surveys and deformation monitoring of design features such as retaining walls and dams.



**Bill Hunt, PG, LRS**

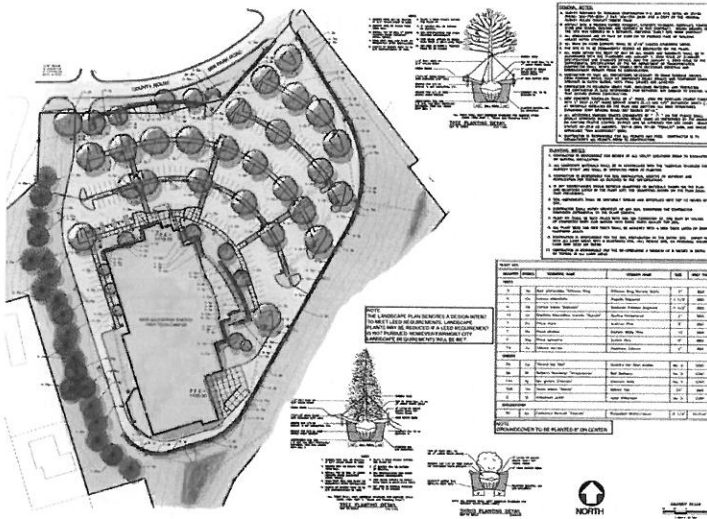
## **Vice President Geotechnical, Environmental, Materials Testing and Inspection**

Bill Hunt is a Licensed Remediation Specialist and serves as Vice President of Geo-Environmental at TERRADON Corporation. Hunt offers relevant experience in environmental documentation, investigations, and coordination with federal, state, and local agencies. He prepares Environmental Impact Statements, Environmental Assessments, Section 4(f) Evaluations, and other environmental technical documents. He supervises and participates in work plan development, field surveys, on-site monitoring, data collection, impact analysis, subconsultant management, public meeting organization and group presentations.

# AWARD WINNING DESIGN

- West Virginia AIA Merit Design Award, Project Team Winner for Mon Power Regional Headquarters
- West Virginia AIA Award, Project Team Winner, Mingo Central High School
- ACEEC, ASLA, West Virginia Department of Environmental Protection Headquarters
- EEA/WVACE, ASLA, Merit Design Award, City of Fairmont Riverfront Master Plan

## Mon Power Regional Headquarters



TERRADON, as a subconsultant, provided site design engineering for the Mon Power Regional Headquarters located in the I-79 Technology Park. The project team was as a Merit Design Award winner by the West Virginia AIA in 2012. TERRADON provided conceptual planning, layout and grading, and survey for the project. The Mon Power project is one of several TERRADON designed sites in the I-79 Technology park.

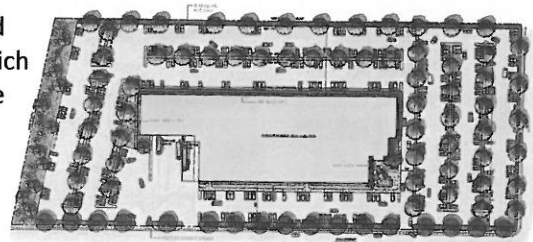


# LEED-CERTIFIED DESIGN

- WV Department of Environmental Protection HQ Building, Kanawha City, WV
- Marshall University Arthur Weisberg Applied Sciences Building, Huntington, WV
- Eastwood Elementary, Morgantown, WV
- First Energy Operations Center, Fairmont, WV

## West Virginia Department of Environmental Protection Headquarters Building

TERRADON, as a subconsultant, provided site design engineering services for the LEED-Certified West Virginia Department of Environmental Protection Headquarters Building in Kanawha City, WV. Design elements that led to LEED certification included first-floor landscaping burns, which provided thermodynamics to the wall. The building's stormwater connection system was also designed to recharge the groundwater table and only permitting discharge overflow to enter the municipal system.



# PROJECT EXAMPLES

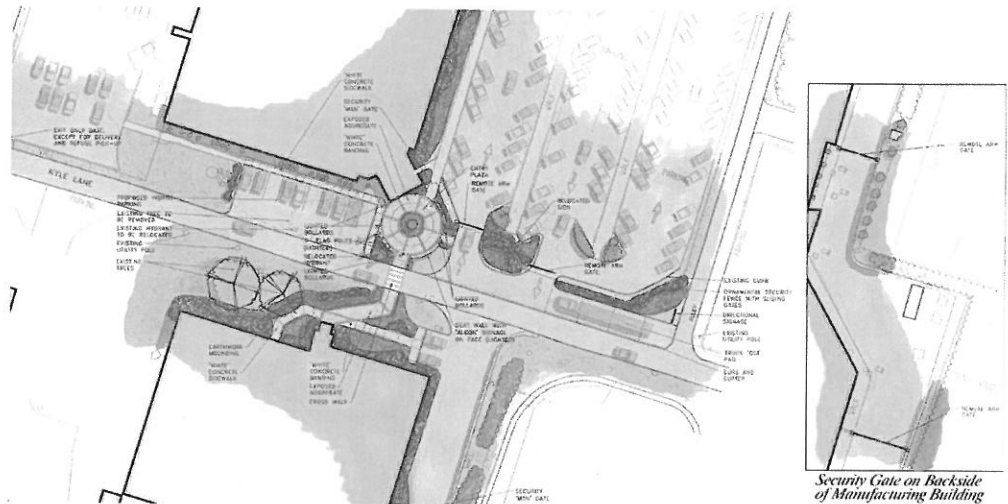
TERRADON Corporation has provided site civil design services that include security design for many commercial, civic/public, educational and other markets. Engineers and landscape architects analyze existing landscape elements or features such as plantings, access roads, paths, rain gardens, water features, lighting, grading and other topographic elements to develop designs that are not only aesthetically pleasing, but also incorporate safety and security into design.

## Alcon Manufacturing LTD. - Entrance Site Plan with Security Gate

**TERRADON, as a subconsultant, completed engineering and landscape design services, including an electronic security gate, for a large manufacturing company in Huntington, WV.**

**TERRADON services included:**

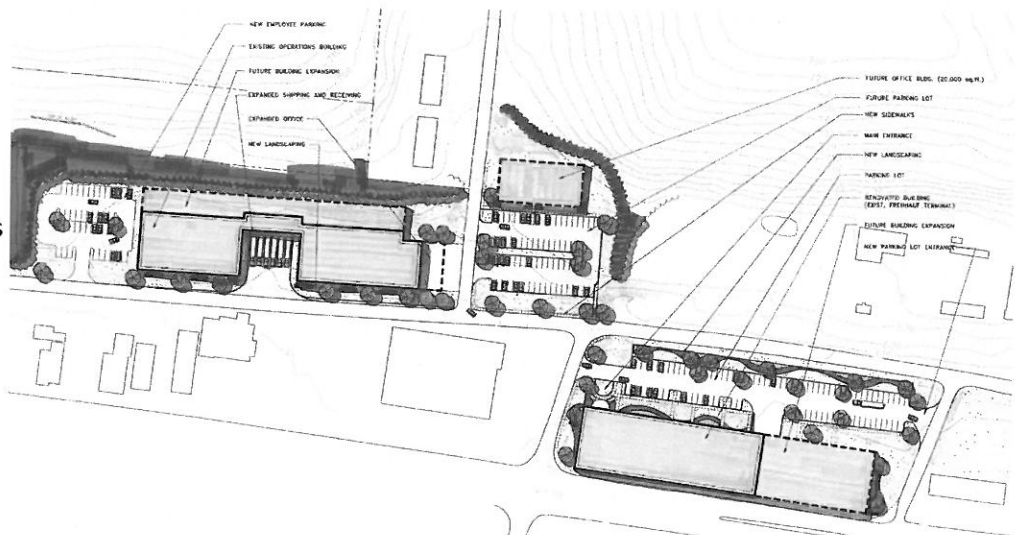
- Civil Engineering
- Land Development
- Full Construction Documents
- Layout
- Grading
- Landscaping



# Syscan

**TERRADON, as a subconsultant,  
services included:**

- Civil Engineering
- Land Development
- Full Construction Documents
- Layout
- Grading
- Landscaping



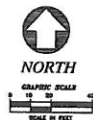
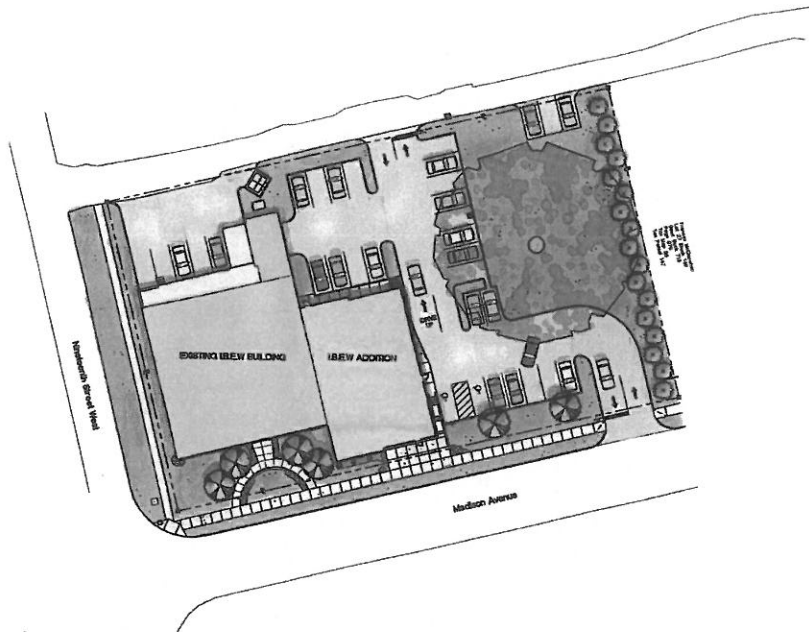
# PROJECT EXAMPLES

## IBEW 317 New Union Hall

TERRADON, as a subconsultant, completed engineering and landscape design services, including a site plan, for the International Brotherhood of Electrical Workers Local 317 Union Hall in Huntington, WV.

TERRADON services included:

- Civil Engineering
- Land Development
- Full Construction Documents
- Layout
- Grading
- Landscaping



### SITE PLAN

INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS LOCAL #317  
NEW UNION HALL

1850 MADISON AVENUE HUNTINGTON, WV 25701

## Schwann's

TERRADON, as a subconsultant, completed engineering and landscape design services for a large building in Eleanor, WV.

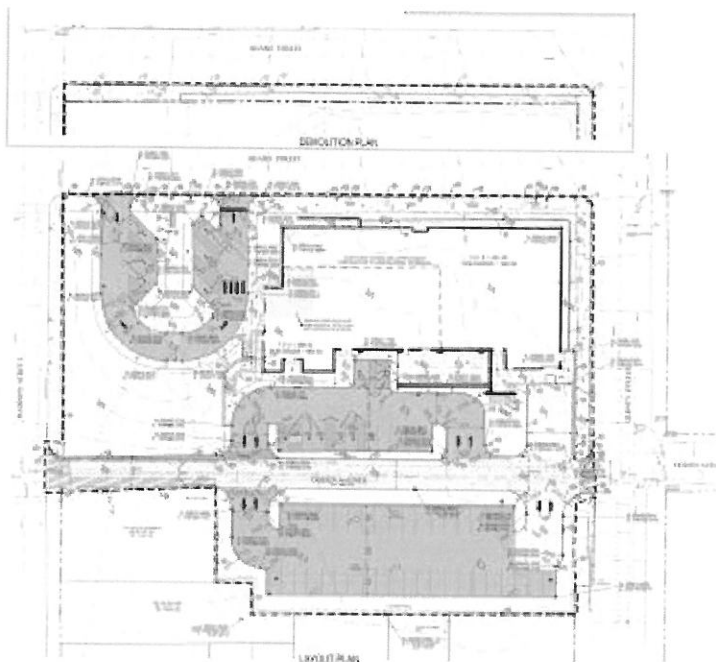
TERRADON services included:

- Civil Engineering
- Land Development
- Full Construction Documents
- Layout
- Grading
- Landscaping



# PROJECT EXAMPLES

## WV Department of Administration State Office Building, Fairmont, WV



TERRADON Corporation, as a subconsultant, is the Site/Civil consultant to the architect and also provided Environmental, Geotechnical and Survey services to West Virginia Department of Administration for the State Office Building located in Fairmont, West Virginia.

TERRADON Environmental team provided phase 1 and phase 2 Environmental site assessments (ESA) for the site, phase 2 ESA consisted of: soil and ground water sampling and pesticide wipe sampling. The team also conducted asbestos survey and lead-paint survey. For the project, TERRADON prepared quantities for bid documents and provided over sight for demolition and abandonment.

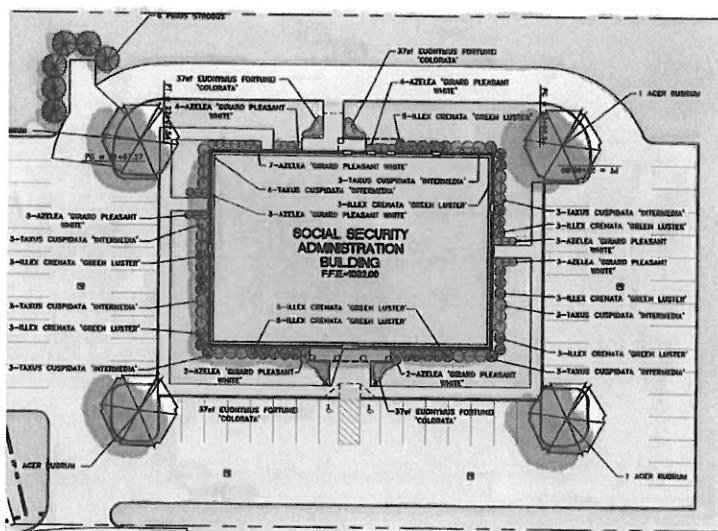
TERRADON Geotechnical experts conducted investigation of existing filled basements and foundation investigation and design of the Fairmont building site.

## Social Security Administration Building, Logan, WV

TERRADON, as a subconsultant, Corporation provided site civil engineering design for the Social Security Administration Building in Logan, WV.

TERRADON services included:

- Design and Boundary Survey
- Full Site Engineering Drawings
- Layout
- Grading
- Drainage and Erosion Control



# PROJECT EXAMPLES

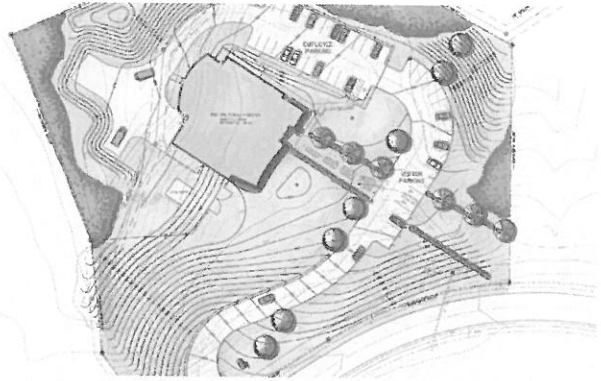
## Kanawha County Metro 911

TERRADON Corporation, as a subconsultant, provided site civil engineering design for the Kanawha County Commission 911 Call Center.

TERRADON services included:

- Design and Boundary Survey
- Full Site Engineering Drawings
- Layout
- Grading
- Drainage and Erosion Control

TERRADON performed engineering services as a subconsultant to the architect. TERRADON engineers considering site layout options in order to maximize land use while minimizing earthwork and utility installations, resulting in an end savings to the owner. TERRADON also designed parking, access, landscapes and hardscapes for the project. The Kanawha County Metro 911 Center is a central emergency hub



## Lincoln County 911 Call Center

TERRADON Corporation, as a subconsultant, provided site civil engineering design for the Lincoln County Commission for the Lincoln County 911 Call Center. TERRADON performed engineering services as a subconsultant to the architect. TERRADON engineers considering site layout options in order to maximize land use while minimizing earthwork and utility installations. TERRADON provided landscape and hardscape design as well.



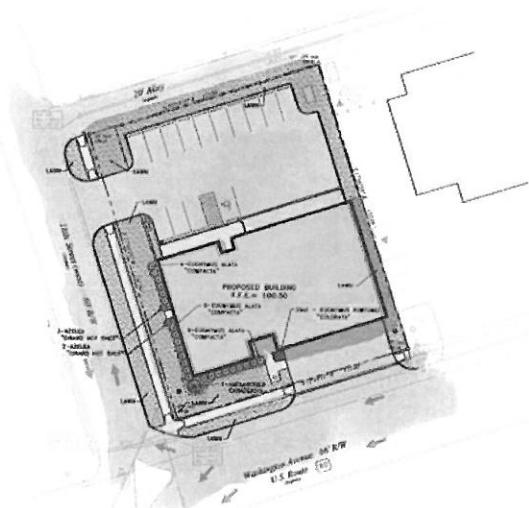
TERRADON services included:

- Design and Boundary Survey
- Full Site Engineering Drawings
- Layout
- Grading
- Drainage and Erosion Control

## Cabell County EMS Stations

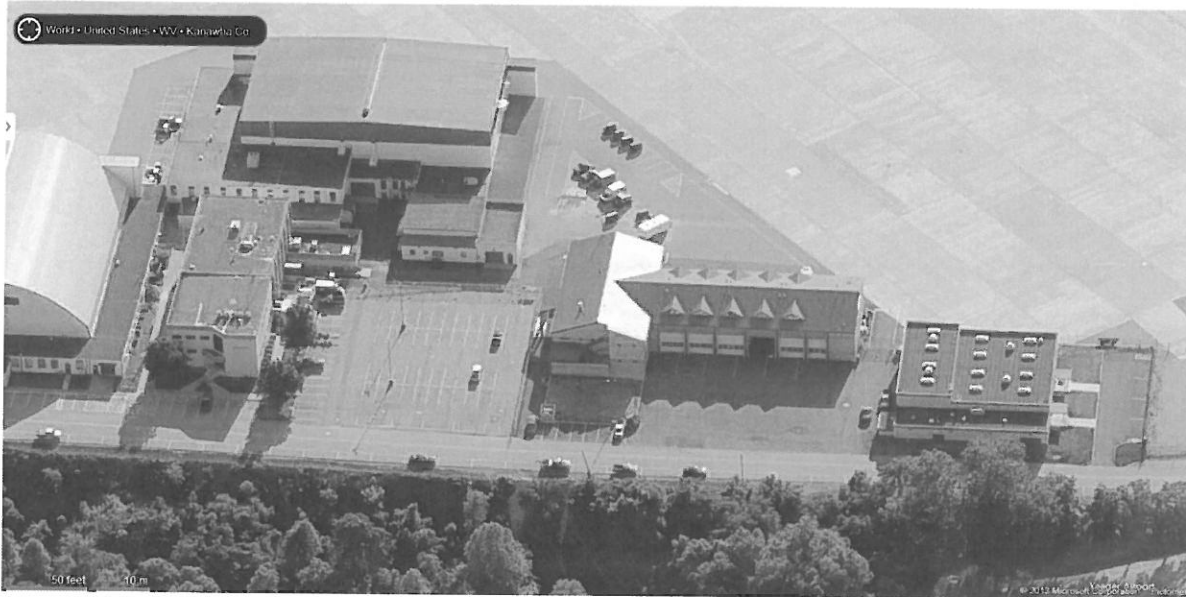
TERRADON Corporation, as a subconsultant, performed Site Civil Engineering Services for two Cabell County EMS Stations—one on Norway Avenue and the other in Westmoreland. TERRADON'S services included site civil engineering design for the following:

- Layout
- Grading
- Drainage
- Utilities
- Erosion and sediment control



# PROJECT EXAMPLES

## Yeager Airport Fire/Crash/Rescue Station, Charleston, WV



TERRADON Corporation, as a subconsultant, provided site civil engineering design for the Yeager Airport Fire/Crash/Rescue Station in Charleston, WV.

TERRADON was a part of the design/build team and created civil engineered plans & specifications for the siting of this large 6-bay 'drive thru' design station. The team worked with tight existing conditions and infrastructure to make the design work economically.

## Fairmont Public Safety Building & Fire Station, Fairmont, WV

TERRADON Corporation, as a subconsultant, provided site civil engineering design for the Fairmont Public Safety Building in Fairmont, WV. The Public Safety Building houses the Fairmont Public Works Department, the Fire Department and the Police Department.

TERRADON services included: Geotechnical Engineering; Design and Boundary Survey, Full Site Engineering Drawings, Layout, Grading, and Drainage and Erosion Control. TERRADON performed engineering services as a subconsultant to the architect. TERRADON engineers considering site layout options in order to maximize land use while minimizing earthwork and utility installations. TERRADON provided landscape and hardscape design as well.



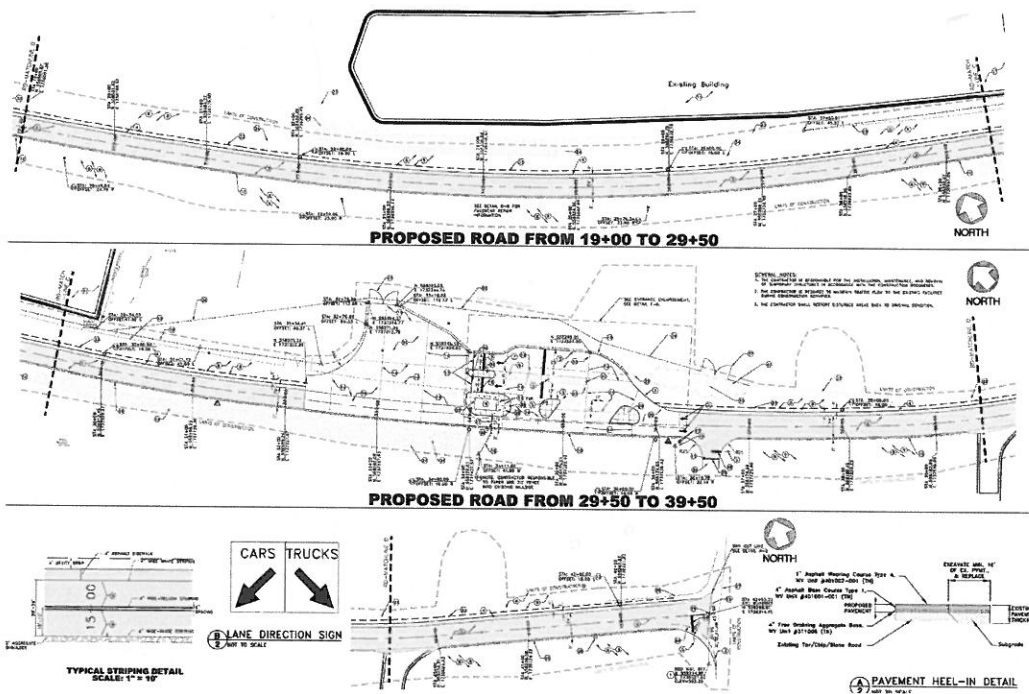
# PROJECT EXAMPLES

## National Guard Facility

TERRADON, as a subconsultant, completed engineering and landscape design services, including a secure road way, for the National Guard facility in Eleanor, WV.

TERRADON services included:

- Civil Engineering
- Land Development
- Full Construction Documents
- Layout
- Grading
- Landscaping



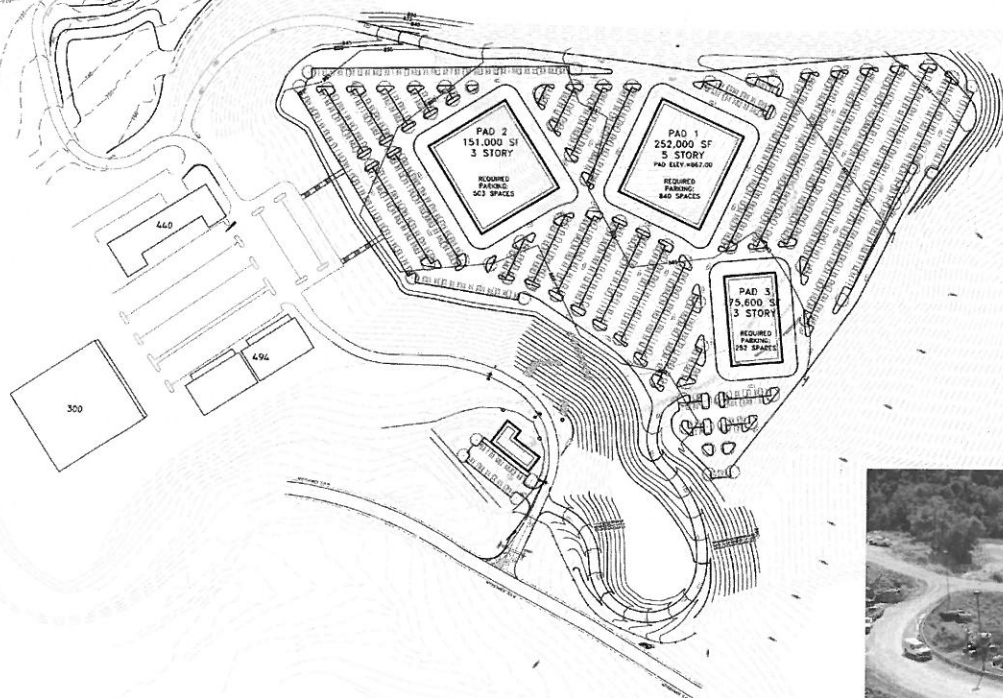
## Rocket Center

-TOTAL PROPOSED BUILDING SQUARE FOOTAGE: 478,600 SF  
-TOTAL PROPOSED PARKING: 1607 SPACES  
SURFACE: 1577 SPACES  
VISITOR CENTER: 30 SPACES

TERRADON, as a subconsultant, completed engineering and landscape design services for several proposed buildings at Rocket Center, Hampshire County, WV.

TERRADON services included:

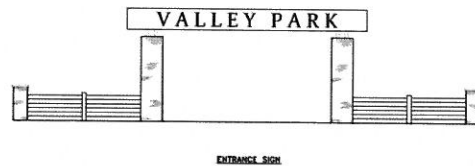
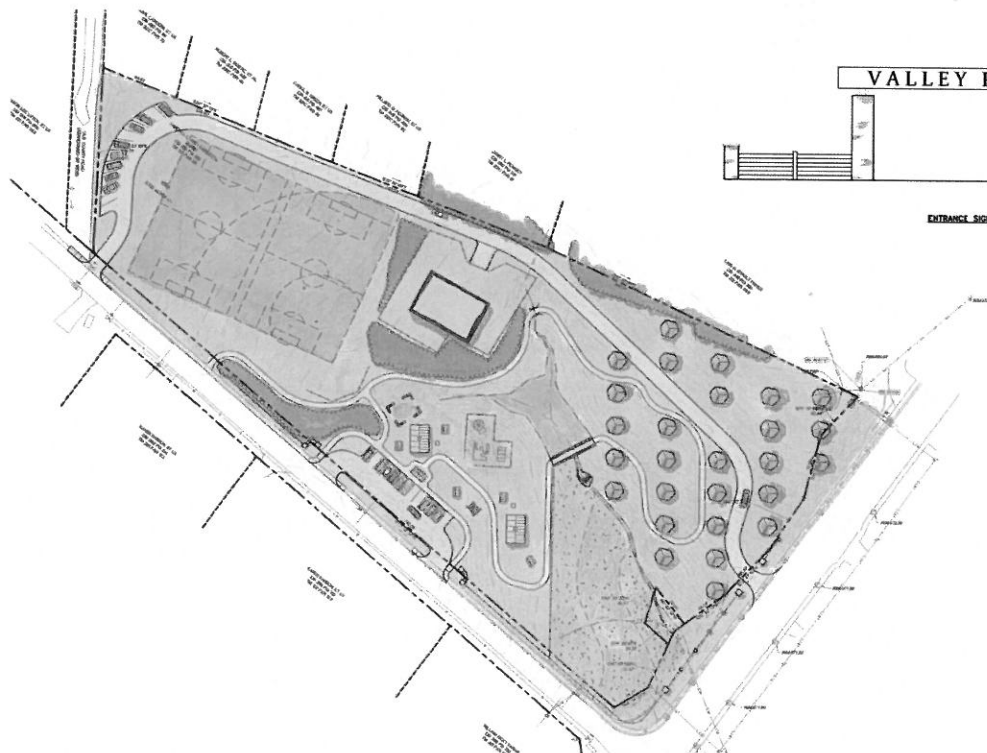
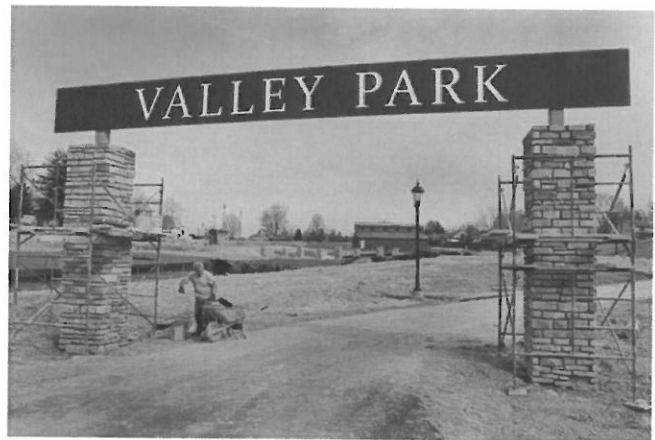
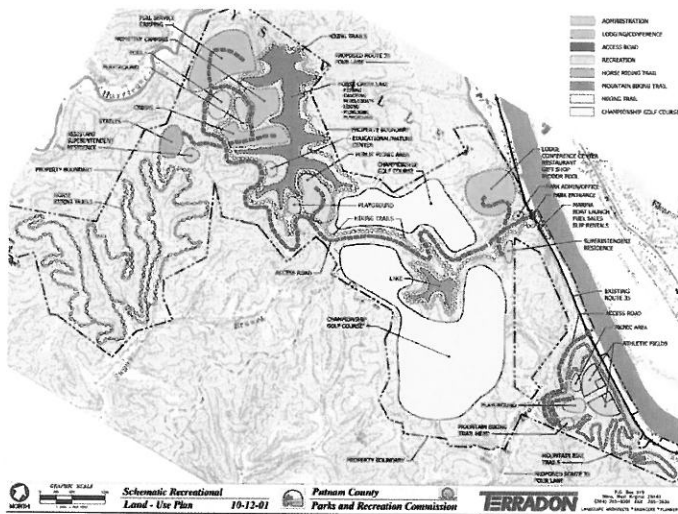
- Civil Engineering
- Land Development
- Full Construction Documents
- Layout
- Grading
- Landscaping



# PROJECT EXAMPLES

## Putnam County Commission - Master Planning & Valley Park Expansion

TERRADON Corporation provided Master Planning and site civil design services for the expanding Valley Park in Putnam County, WV. This work was part of a nearly \$2 Million expansion and added an additional 5.5 acres to the park. The project included planning for a metal barn, secure entrance gate, athletic fields and greenspace, but also incorporated a walking trail that ties into existing park trails. The plan was produced in coordination with the WVDOT to determine roadway/walkway ingress/egress and designed in accordance with local, state and federal regulations.



*CONCEPTUAL MASTER PLAN*  
**VALLEY PARK** Hurricane, West Virginia

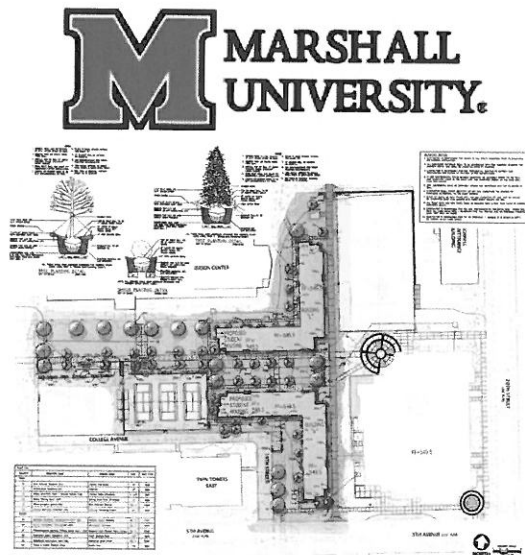
August, 1 2011  
**TERRADON**  
TERRADON CORPORATION  
1000 West 10th Street  
Hurricane, WV 25933  
(304) 526-1000

# PROJECT EXAMPLES

## Residence Halls and Corridors

TERRADON Corporation, as a subconsultant, provided land development services for the Marshall University Housing project located along 5th Avenue on the Huntington, WV campus. The facilities and grounds of this area have become a focal point for the University based on the location of the high-traffic intersection of 5th Avenue and 20th Street and their proximity to the Wellness Center and University Football Stadium.

TERRADON's designs incorporated ADA compliant walk ways through campus corridors connecting housing, the wellness center, and recreation field to the rest of existing campus. TERRADON provided site survey, hardscaping, layout and design, landscape planning and design, site visits during construction and field reporting.



## Residence Halls and Additional Design

TERRADON Corporation has provided engineering design and planning services on numerous projects throughout the West Virginia State University campus.

- **New Student Housing**

TERRADON, as a subconsultant, is currently providing site civil engineering services on a New Student Housing complex at the Institute, WV campus. Upon completion, the four-story housing complex is anticipated to consist of approximately 90,000 square feet and 300 beds.

- **Education and Storage Facility**

TERRADON completed site civil engineering services on an education and storage facility at the Institute, WV campus. The project involved the creation of a 7200 square foot facility near the existing administration building. TERRADON provided site planning and design to engineer the connection of telephone and electric into a utility extension network TERRADON designed previously.

- **Parking Site Design**

TERRADON provided parking site design at the ACEOP building on campus. The project included demolition plans for an existing garage, site design, including drainage and full construction drawings.

- **Campus Physical Inventory Survey**

TERRADON also has completed Phase I of a Campus Physical Inventory Survey, updating the existing inventory of newly constructed buildings and creating a new inventory of space available for future constructibility. The Inventory Survey provided detailed descriptions of updated, modernized or renovated spaces. TERRADON expects to begin Phase II in the coming months.

- **Environmental Services**

WVSU also relied on TERRADON for environmental services in 2011. Environmental engineers looked into a leaking underground storage tank on property adjacent to WVSU property. TERRADON reviewed facility records and provided a report on the situation.

- **Utility Corridor Design**

TERRADON completed Utility Corridor Design services for a small section of a corridor on the University's Institute Campus.



# PROJECT EXAMPLES

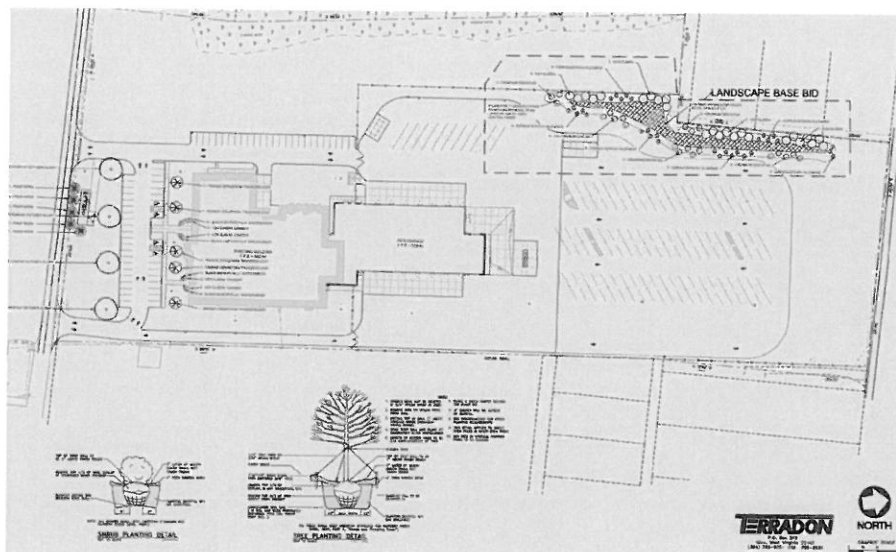
## Cabell County Bus Garage

Construction began in April 2013 on the new Cabell County Schools bus garage located in Lesage, WV.

TERRADON Corporation, as a subconsultant, provided site civil design services for this major renovation project, which will house approximately 85 of Cabell County Schools' 120 buses and modernize its transportation operations by offering better access to eastern and central schools in the county. The new facility includes storage space for the large fleet of buses, service and maintenance equipment and wash bays that meet new EPA standards.

TERRADON services included:

- Civil Engineering
- Land Development
- Full Construction Documents
- Layout
- Grading
- Landscaping



## Jefferson County Bus Garage

TERRADON Corporation, as a subconsultant, provided site civil design services for the Jefferson County Bus Garage. When construction begins, this facility will provide parking for more than 200 buses and more than 200 cars. A fueling island, wash bay and new facility building also comprise the location.

TERRADON services included:

- Civil Engineering
- Land Development
- Full Construction Documents
- Layout
- Grading
- Landscaping

