# EXPRESSION OF INTEREST

# Maintenance Complex for Coonskin Park

**DEFK11026**

***Submitted to:***

**State of West Virginia**
**Division of Engineering & Facilities**
**Armory Board Section**

***Submitted by:***


Gannett Fleming
Your Trusted Advisor Since 1915

ISO 9001:2008 CERTIFIED

Federal I.D. No. 25-1613591

Suite 203
34 Commerce Drive
Morgantown, WV 26501

Phone: 304-296-6492
Fax: 304-296-6495




**March 03,2011**

**GANNETT FLEMING, INC.**
Suite 203
34 Commerce Drive
Morgantown, WV 26501-3858

**Office: (304) 296-6492**
Fax: (304) 296-6495

www.gannettfleming.com

March 02, 2011

PURCHASING DIVISION
2019 WASHINGTON STREET, EAST
P.O. BOX 50130
CHARLESTON, WV 25305-0130

RE: EXPRESSION OF INTEREST (EOI)
DIVISION OF ENGINEERING AND FACILITIES, ARMORY BOARD SECTION
RFQ NUMBER: DEFK11026

Gannett Fleming, Inc. is pleased to submit for your consideration this Expression of Interest (EOI) for Architectural and Engineering Services related to the design of a new maintenance complex for Coonskin Park, #DEFK11026.

As the Manager of WV Operations, I will personally ensure that this project meets the expectations of the WV Army National Guard. We have assembled a team of highly qualified individuals in response to your advertisement. Our team consists of multiple Gannett Fleming personnel in key disciplines and office locations (primarily Morgantown, WV, Pittsburgh and Harrisburg, PA) supplemented by one sub-consultant: DRS Architects from Pittsburgh, PA. Our project team has the appropriate staff immediately available to meet your project schedule.

We look forward to your favorable review of our qualifications. We would also welcome the opportunity to present our credentials to you and look forward to the chance to discuss our capabilities with the selection committee. Please contact me at 304-296-6492 if you have any questions or if I can provide any clarifications regarding our qualifications.

Sincerely,

GANNETT FLEMING, INC.

Samer

Samer H. Petro, P.E.
Manager – WV Operations

Enclosure

## *Table of Contents*

State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

# Request for Quotation

| RFQ NUMBER | PAGE |
|---|---|
| DEFK11026 | 1 |

ADDRESS CORRESPONDENCE TO ATTENTION OF:
TARA LYLE
304-558-2544

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE

SHIP TO
DIV ENGINEERING & FACILITIES
ARMORY BOARD SECTION

1707 COONSKIN DRIVE
CHARLESTON, WV
25311-1099 304-341-6368

| DATE PRINTED | TERMS OF SALE | SHIP VIA | F.O.B. | FREIGHT TERMS |
|---|---|---|---|---|
| 01/12/2011 | | | | |

BID OPENING DATE: 02/24/2011 BID OPENING TIME 01:30PM

| LINE | QUANTITY | UOP | CAT. NO. | ITEM NUMBER | UNIT PRICE | AMOUNT |
|---|---|---|---|---|---|---|
| 0001 | 1 | JB | | 906-00-00-001 | | |

ARCHITECT/ENGINEERING SERVICES, PROFESSIONAL

EXPRESSION OF INTEREST (EOI)

THE WEST VIRGINIA PURCHASING DIVISION FOR THE AGENCY, DIVISION OF ENGINEERING & FACILITIES, WV ARMY NATIONAL GUARD, IS SOLICITING EXPRESSIONS OF INTEREST FOR PROFESSIONAL ARCHITECTURAL ENGINEERING DESIGN SERVICES FOR A MAINTENANCE COMPLEX FOR THE COONSKIN PARK AREA AT THE CHARLESTON ARMORY COMPLEX, PER THE FOLLOWING BID REQUIREMENTS AND ATTACHED SPECIFICATIONS.

TECHNICAL QUESTIONS CONCERNING THIS SOLICITATION MUST BE SUBMITTED IN WRITING TO TARA LYLE VIA MAIL AT THE ADDRESS SHOWN IN THE BODY OF THIS EOI, VIA FAX AT 304-558-4115, OR VIA EMAIL AT TARA.L.LYLE@WV.GOV.

DEADLINE FOR ALL TECHNICAL QUESTIONS IS 02/07/2011 AT THE CLOSE OF BUSINESS. ANY TECHNICAL QUESTIONS RECEIVED WILL BE ANSWERED BY FORMAL ADDENDUM ISSUED BY THE PURCHASING DIVISION AFTER THE DEADLINE HAS LAPSED.

CANCELLATION: THE DIRECTOR OF PURCHASING RESERVES THE RIGHT TO CANCEL THIS CONTRACT IMMEDIATELY UPON WRITTEN NOTICE TO THE VENDOR IF THE COMMODITIES AND/OR SERVICE

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

| SIGNATURE | TELEPHONE | DATE |
|---|---|---|
| [signature] | 304-296-6492 | 3/2/2011 |

| TITLE | FEIN | ADDRESS CHANGES TO BE NOTED ABOVE |
|---|---|---|
| OFFICE MANAGER | 25-161 3591 | |

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

# GENERAL TERMS & CONDITIONS
# REQUEST FOR QUOTATION (RFQ) AND REQUEST FOR PROPOSAL (RFP)

**1.** Awards will be made in the best interest of the State of West Virginia.

**2.** The State may accept or reject in part, or in whole, any bid.

**3.** Prior to any award, the apparent successful vendor must be properly registered with the Purchasing Division and have paid the required $125 fee.

**4.** All services performed or goods delivered under State Purchase Order/Contracts are to be continued for the term of the Purchase Order/Contracts, contingent upon funds being appropriated by the Legislature or otherwise being made available. In the event funds are not appropriated or otherwise available for these services or goods this Purchase Order/Contract becomes void and of no effect after June 30.

**5.** Payment may only be made after the delivery and acceptance of goods or services.

**6.** Interest may be paid for late payment in accordance with the ***West Virginia Code***.

**7.** Vendor preference will be granted upon written request in accordance with the ***West Virginia Code***.

**8.** The State of West Virginia is exempt from federal and state taxes and will not pay or reimburse such taxes.

**9.** The Director of Purchasing may cancel any Purchase Order/Contract upon 30 days written notice to the seller.

**10.** The laws of the State of West Virginia and the ***Legislative Rules*** of the Purchasing Division shall govern the purchasing process.

**11.** Any reference to automatic renewal is hereby deleted. The Contract may be renewed only upon mutual written agreement of the parties.

**12. BANKRUPTCY:** In the event the vendor/contractor files for bankruptcy protection, the State may deem this contract null and void, and terminate such contract without further order.

**13. HIPAA BUSINESS ASSOCIATE ADDENDUM:** The West Virginia State Government HIPAA Business Associate Addendum (BAA), approved by the Attorney General, is available online at **www.state.wv.us/admin/purchase/vrc/hipaa.htm** and is hereby made part of the agreement. Provided that the Agency meets the definition of a Cover Entity (45 CFR §160.103) and will be disclosing Protected Health Information (45 CFR §160.103) to the vendor.

**14. CONFIDENTIALITY:** The vendor agrees that he or she will not disclose to anyone, directly or indirectly, any such personally identifiable information or other confidential information gained from the agency, unless the individual who is the subject of the information consents to the disclosure in writing or the disclosure is made pursuant to the agency's policies, procedures, and rules. Vendor further agrees to comply with the Confidentiality Policies and Information Security Accountability Requirements, set forth in http://www.state.wv.us/admin/purchase/privacy/noticeConfidentiality.pdf.

**15. LICENSING:** Vendors must be licensed and in good standing in accordance with any and all state and local laws and requirements by any state or local agency of West Virginia, including, but not limited to, the West Virginia Secretary of State's Office, the West Virginia Tax Department, and the West Virginia Insurance Commission. The vendor must provide all necessary releases to obtain information to enable the director or spending unit to verify that the vendor is licensed and in good standing with the above entities.

**16. ANTITRUST:** In submitting a bid to any agency for the State of West Virginia, the bidder offers and agrees that if the bid is accepted the bidder will convey, sell, assign or transfer to the State of West Virginia all rights, title and interest in and to all causes of action it may now or hereafter acquire under the antitrust laws of the United States and the State of West Virginia for price fixing and/or unreasonable restraints of trade relating to the particular commodities or services purchased or acquired by the State of West Virginia. Such assignment shall be made and become effective at the time the purchasing agency tenders the initial payment to the bidder.

I certify that this bid is made without prior understanding, agreement, or connection with any corporation, firm, limited liability company, partnership, or person or entity submitting a bid for the same material, supplies, equipment or services and is in all respects fair and without collusion or Fraud. I further certify that I am authorized to sign the certification on behalf of the bidder or this bid.

## INSTRUCTIONS TO BIDDERS

**1.** Use the quotation forms provided by the Purchasing Division. Complete all sections of the quotation form.

**2.** Items offered must be in compliance with the specifications. Any deviation from the specifications must be clearly indicated by the bidder. Alternates offered by the bidder as **EQUAL** to the specifications must be clearly defined. A bidder offering an alternate should attach complete specifications and literature to the bid. The Purchasing Division may waive minor deviations to specifications.

**3.** Unit prices shall prevail in case of discrepancy. All quotations are considered F.O.B. destination unless alternate shipping terms are clearly identified in the quotation.

**4.** All quotations must be delivered by the bidder to the office listed below prior to the date and time of the bid opening. Failure of the bidder to deliver the quotations on time will result in bid disqualifications: Department of Administration, Purchasing Division, 2019 Washington Street East, P.O. Box 50130, Charleston, WV 25305-0130

**5.** Communication during the solicitation, bid, evaluation or award periods, except through the Purchasing Division, is strictly prohibited (W.Va. C.S.R. §148-1-6.6).

State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

# Request for Quotation

| RFQ NUMBER | PAGE |
|---|---|
| DEFK11026 | 2 |

ADDRESS CORRESPONDENCE TO ATTENTION OF:
TARA LYLE
304-558-2544

VENDOR
RFQ COPY
TYPE NAME/ADDRESS HERE

SHIP TO
DIV ENGINEERING & FACILITIES
ARMORY BOARD SECTION

1707 COONSKIN DRIVE
CHARLESTON, WV
25311-1099 304-341-6368

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BID OPENING DATE: 02/24/2011 BID OPENING TIME 01:30PM

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|---|---|---|---|---|---|---|

VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.

[signature]
SIGNATURE

GANNETT FLEMING, INC.
COMPANY

3/2/2011
DATE

NOTE: THIS ADDENDUM ACKNOWLEDGEMENT SHOULD BE SUBMITTED WITH THE BID.

REV. 09/21/2009

END OF ADDENDUM NO. 1

| | | | | | | |
|---|---|---|---|---|---|---|
| 0001 | 1 | JB | | 906-00-00-001 | | |

ARCHITECT/ENGINEERING SERVICES, PROFESSIONAL

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

| SIGNATURE | TELEPHONE | DATE |
|---|---|---|
| [signature] | 304-296-6492 | 3/2/2011 |

| TITLE | FEIN | ADDRESS CHANGES TO BE NOTED ABOVE |
|---|---|---|
| OFFICE MANAGER | 25-1613591 | |

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

State of West Virginia
Department of Administration
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|---|---|---|---|---|---|---|

ADDENDUM NO. 1

1. QUESTIONS AND ANSWERS ARE ATTACHED.
2. ADDENDUM ACKNOWLEDGEMENT IS ATTACHED. THIS DOCUMENT SHOULD BE SIGNED AND RETURNED WITH YOUR BID. FAILURE TO SIGN AND RETURN MAY RESULT IN DISQUALIFICATION OF YOUR BID.

EXHIBIT 10

REQUISITION NO.: DEFK11026

ADDENDUM ACKNOWLEDGEMENT

I HEREBY ACKNOWLEDGE RECEIPT OF THE FOLLOWING CHECKED ADDENDUM(S) AND HAVE MADE THE NECESSARY REVISIONS TO MY PROPOSAL, PLANS AND/OR SPECIFICATION, ETC.

ADDENDUM NO.'S:

NO. 1 ..... X

NO. 2 ..... X

NO. 3 .....

NO. 4 .....

NO. 5 .....

I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS.

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

| SIGNATURE | TELEPHONE | DATE |
|---|---|---|
| [signature] | 304-296-6492 | 3/2/2011 |

| TITLE | FEIN | ADDRESS CHANGES TO BE NOTED ABOVE |
|---|---|---|
| OFFICE MANAGER | 25-1613591 | |

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|---|---|---|---|---|
| 02/23/2011 | | | | |

BID OPENING DATE: 03/03/2011 BID OPENING TIME 01:30PM

| LINE | QUANTITY | UOP | CAT. NO. | ITEM NUMBER | UNIT PRICE | AMOUNT |
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| | | | | | | |

ADDENDUM NO: 2

1. TO MOVE THE BID OPENING DATE FROM 02/24/2011 TO 03/03/2011.
2. ADDENDUM ACKNOWLEDGEMENT IS ATTACHED. THIS DOCUMENT SHOULD BE SIGNED AND RETURNED WITH YOUR BID. FAILURE TO SIGN AND RETURN MAY RESULT IN DISQUALIFICATION OF YOUR BID.

END OF ADDENDUM NO. 2

| | | | | | | |
|---|---|---|---|---|---|---|
| 0001 | 1 | JB | | 906-00-00-001 | | |

ARCHITECT/ENGINEERING SERVICES, PROFESSIONAL

****** THIS IS THE END OF RFQ DEFK11026 ****** TOTAL:

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

SIGNATURE [signature] TELEPHONE 304-296-6492 DATE 3/2/2011

TITLE Office MANAGER FEIN 25-1613591 ADDRESS CHANGES TO BE NOTED ABOVE

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

EXHIBIT 10

REQUISITION NO.: DEEK 11026

ADDENDUM ACKNOWLEDGEMENT

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ADDENDUM NO.'S:

NO. 1 ..X..

NO. 2 ..X..

NO. 3 .....

NO. 4 .....

NO. 5 .....

I UNDERSTAND THAT FAILURE TO CONFIRM THE RECEIPT OF THE ADDENDUM(S) MAY BE CAUSE FOR REJECTION OF BIDS. VENDOR MUST CLEARLY UNDERSTAND THAT ANY VERBAL REPRESENTATION MADE OR ASSUMED TO BE MADE DURING ANY ORAL DISCUSSION HELD BETWEEN VENDOR'S REPRESENTATIVES AND ANY STATE PERSONNEL IS NOT BINDING. ONLY THE INFORMATION ISSUED IN WRITING AND ADDED TO THE SPECIFICATIONS BY AN OFFICIAL ADDENDUM IS BINDING.

.....
SIGNATURE

GANNETT FLEMING, INC.
COMPANY

3/2/2011
DATE

REV. 11/96

State of West Virginia
Department of Administration
Purchasing Division
2019 Washington Street East
Post Office Box 50130
Charleston, WV 25305-0130

# Request for Quotation

| RFQ NUMBER | PAGE |
|---|---|
| DEFK11026 | 3 |

ADDRESS CORRESPONDENCE TO ATTENTION OF:
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304-558-2544

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BID OPENING DATE: 02/24/2011 BID OPENING TIME 01:30PM

| LINE | QUANTITY | UOP | CAT NO. | ITEM NUMBER | UNIT PRICE | AMOUNT |
|---|---|---|---|---|---|---|

PLEASE PROVIDE A FAX NUMBER IN CASE IT IS NECESSARY TO CONTACT YOU REGARDING YOUR BID:

304-296-6495

CONTACT PERSON (PLEASE PRINT CLEARLY):

SAMER PETRO, P.E.

****** THIS IS THE END OF RFQ DEFK11026 ****** TOTAL:

SEE REVERSE SIDE FOR TERMS AND CONDITIONS

| SIGNATURE | TELEPHONE | DATE |
|---|---|---|
| Samer | 304-296-6492 | 3/2/2011 |
| TITLE: OFFICE MANAGER | FEIN: 25-1613591 | ADDRESS CHANGES TO BE NOTED ABOVE |

WHEN RESPONDING TO RFQ, INSERT NAME AND ADDRESS IN SPACE ABOVE LABELED 'VENDOR'

RFQ No. DEFK11016

STATE OF WEST VIRGINIA
Purchasing Division

# PURCHASING AFFIDAVIT

**West Virginia Code §5A-3-10a states:** No contract or renewal of any contract may be awarded by the state or any of its political subdivisions to any vendor or prospective vendor when the vendor or prospective vendor or a related party to the vendor or prospective vendor is a debtor and the debt owed is an amount greater than one thousand dollars in the aggregate.

**DEFINITIONS:**
"Debt" means any assessment, premium, penalty, fine, tax or other amount of money owed to the state or any of its political subdivisions because of a judgment, fine, permit violation, license assessment, defaulted workers' compensation premium, penalty or other assessment presently delinquent or due and required to be paid to the state or any of its political subdivisions, including any interest or additional penalties accrued thereon.

"Debtor" means any individual, corporation, partnership, association, limited liability company or any other form or business association owing a debt to the state or any of its political subdivisions. "Political subdivision" means any county commission; municipality; county board of education; any instrumentality established by a county or municipality; any separate corporation or instrumentality established by one or more counties or municipalities, as permitted by law; or any public body charged by law with the performance of a government function or whose jurisdiction is coextensive with one or more counties or municipalities. "Related party" means a party, whether an individual, corporation, partnership, association, limited liability company or any other form or business association or other entity whatsoever, related to any vendor by blood, marriage, ownership or contract through which the party has a relationship of ownership or other interest with the vendor so that the party will actually or by effect receive or control a portion of the benefit, profit or other consideration from performance of a vendor contract with the party receiving an amount that meets or exceed five percent of the total contract amount.

**EXCEPTION:** The prohibition of this section does not apply where a vendor has contested any tax administered pursuant to chapter eleven of this code, workers' compensation premium, permit fee or environmental fee or assessment and the matter has not become final or where the vendor has entered into a payment plan or agreement and the vendor is not in default of any of the provisions of such plan or agreement.

Under penalty of law for false swearing (***West Virginia Code*** §61-5-3), it is hereby certified that the vendor affirms and acknowledges the information in this affidavit and is in compliance with the requirements as stated.

**WITNESS THE FOLLOWING SIGNATURE**

Vendor's Name: GANNETT FLEMING, INC.

Authorized Signature: _____ Date: 3/2/2011

State of West Virginia

County of Monongalia, to-wit:

Taken, subscribed, and sworn to before me this 2 day of March, 2011.

My Commission expires Jan. 2, 2012.

**AFFIX SEAL HERE**

OFFICIAL SEAL
NOTARY PUBLIC
STATE OF WEST VIRGINIA
DONNA JONES
3106 LITTLE INDIAN CREEK ROAD
CORE, WV 26529
My commission expires January 2, 2012

**NOTARY PUBLIC** _____

## INTRODUCTION

The Gannett Fleming team is pleased to submit this Expression of Interest for the West Virginia Army National Guard, Construction and Facilities Management Office (CFMO) to provide architectural/engineering services for the design of a maintenance complex including prefabricated metal buildings and site design for Coonskin Park.

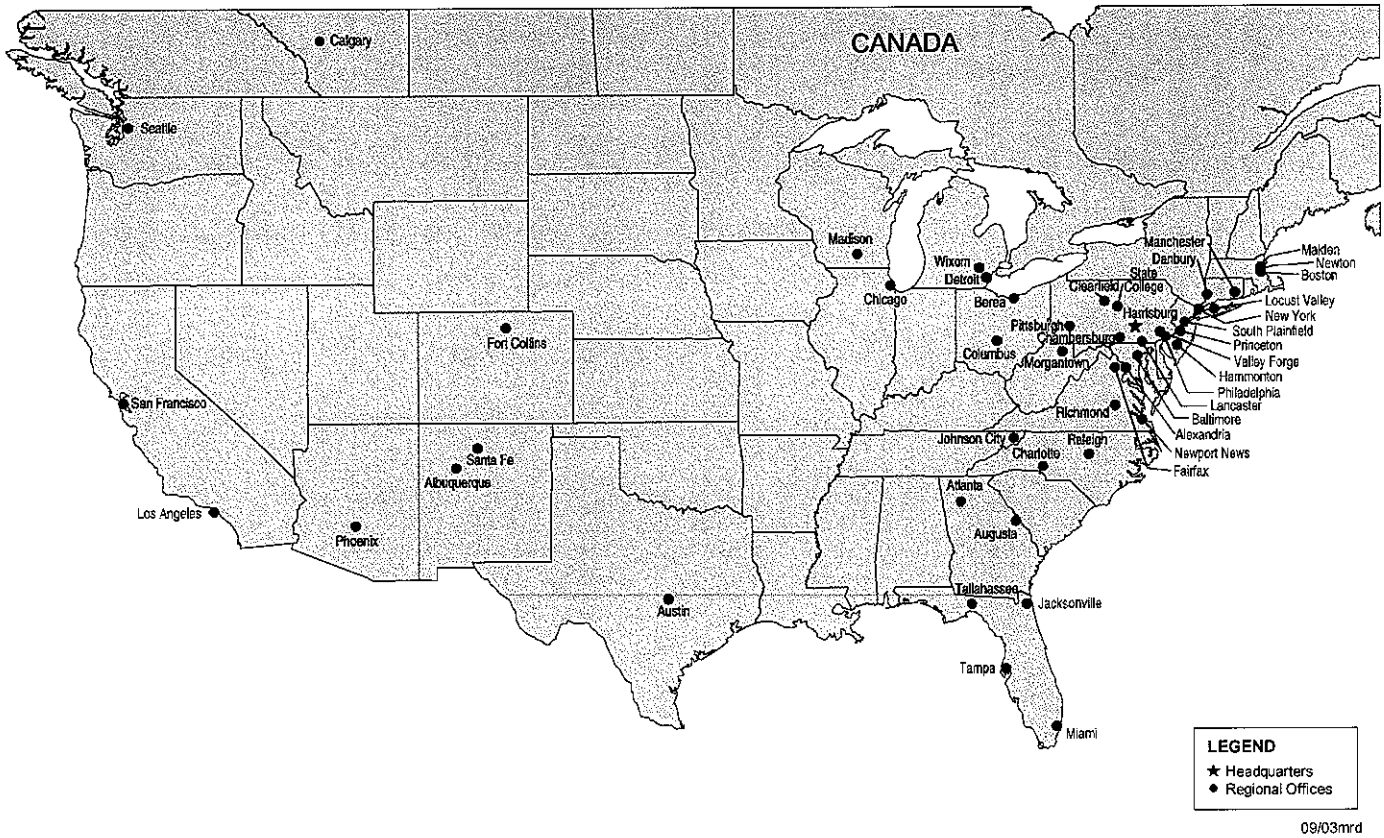
The Gannett Fleming Team represents two outstanding firms with a state-wide and regional reputation for excellence in working with the Army National Guard and agencies that manage and operate parks throughout the country. Our clients have included the Army National Guard, National Park Service, the Natural Resources Conservation Service, the PA Department of Conservation and Natural Resources, the U.S. Forest Service, and many others.

The Gannett Team consists of multiple Gannett Fleming personnel in key disciplines and office locations (Morgantown, WV and Pittsburgh and Harrisburg, PA) supplemented by DRS Architects from Pittsburgh, Pennsylvania.

The following information addresses the experience and qualifications of our firm and also touches on specific evaluation criteria identified in the announcement, offering clear evidence of the experience and capabilities that uniquely qualify Gannett Fleming, Inc to provide the West Virginia Army National Guard CFMO with professional, timely, and cost-effective services.

- *Ranked among Top 50 Engineering Firms in the United States*
- *Providing multi-disciplined Engineering Services for 95 Years*
- *Some clients served for 40+ years*

Gannett Fleming (Gannett Fleming) is an international consulting engineering company active in almost every phase of consulting engineering since its establishment in 1915. Over the years, the company has performed more than 30,000 assignments in 50 states and in 20 countries. Gannett Fleming has expertise in bridge engineering, dam engineering, geotechnical engineering, water resources, environmental, transportation, and industrial services. We provide planning, plan development, construction engineering and management, and specialized services including: economic investigations; environmental analysis; land use planning; architectural, water resources, dams, flood control, structural and transportation design; geotechnical, geophysical and hydrogeologic engineering; mechanical/electrical design, computer-aided design, management information systems, and geographic information systems. The company and its wholly-owned subsidiaries employ nearly 2,000 persons with expertise in numerous disciplines. Gannett Fleming is listed among the nation's most prestigious engineering firms. *Engineering News-Record* (ENR) recently ranked Gannett Fleming as 47th among the 500 leading United States consulting firms and 16th out of the top 20 in transportation based on 2009 annual billings.




09/03mrd

Gannett Fleming offers the specialized experiences necessary to successfully perform all of the required services in-house. The firm has extensive experience and professional staffing with expertise in the following activities:

- Surveys and mapping
- Geologic investigations
- Hydrologic and hydraulic modeling
- Water supply engineering
- Diversion of water design
- Seismic assessments
- Construction cost estimates
- Permit applications
- GIS services
- Site/Civil services
- Subsurface site exploration
- Laboratory testing
- Geotechnical services
- Dam seepage analysis/grouting design
- Electrical engineering services
- Plans and specifications
- Design reports
- Landscape design
- Structural design
- Roadway design

Our office in Morgantown, WV is staffed with qualified and talented engineers and technicians. In addition to strong highway/site/civil engineering capabilities, we offer in-house structural and geotechnical services.

**Our Commitment to Quality is centered on Project Management**

Gannett Fleming has extensive experience with state contracting, including successful management of A/E contracts. We understand the importance of quality, timeliness, and cost control, and have proven records of success in balancing these often-competing realities—even within today's fluctuating construction materials markets.

Gannett Fleming invests considerably in Project Manager training, and provides the latest tools to assist in keeping all assignments, large and small, on schedule and on budget.

Our Project Manager for this contract, Samer H. Petro, P.E. has participated on numerous architectural and engineering contracts for more than 20 years. He will bring the right people to each assignment, including niche subconsultants, through close coordination with our seasoned Task Managers.

The strength of the proposed project team includes:

- An organizational structure with key personnel with prior state and other applicable management and design involvement using established design and quality guidelines.
- A project team consisting of multiple Gannett Fleming personnel in key disciplines and office locations (Morgantown, WV and Pittsburgh, PA) supplemented by one sub-consultant: DRS Architects – Architectural Services

**DRS Architects (DRS), (SB)**

*Architects/Planners/Interior Designers*

DRS is one of the leading architectural, planning and interior design firms in this region for over 50 years. DRS is a small business. The firm enjoys a long standing reputation in the management of the design process, in control of project costs and schedules, and design excellence.

DRS offers a broad range of traditional planning/design services which include architectural design, facilities analysis, feasibility studies, master planning, site planning, space programming and interior design. The firm utilizes the services of outside engineering consultants selected for their experience with the particular building type. The engineering consultants are fully integrated into the Project Team through the entire design/construction process.

Over the last fifteen years, DRS has completed ten reserve centers/ readiness centers with maintenance facilities for the U. S. Army Reserve and Pennsylvania National Guard. Most recent relevant projects include the $19 M Stryker Brigade Readiness Center and Organization Maintenance Shop and the $4 M Operational Maintenance Shop for the PA Army National Guard. DRS has also completed buildings for the FBI, DEA, and local municipal buildings including police departments. DRS has completed two major maintenance facilities for the Port Authority of Allegheny County. These include the renovations and additions to the Ross & West Mifflin Division Garage and renovations to the Collier Division Garage.

DRS also completed two vehicle maintenance facilities for the U. S. Postal Service in Warrendale and the North Side of Pittsburgh. A privately owned maintenance facility was completed for the Mellon Family at Rolling Rock Farms in Laughlintown, Pennsylvania. DRS has extensive experience in providing professional services to many Government Agencies. These include the City of Pittsburgh, County of Allegheny, Baltimore Corps of Engineers, Department of Energy, U. S. Postal Service, PA DGS, GSA, and VA. The Firm has consistently been ranked "above average" by these various Governmental Agencies.

DRS engages engineering consultants and other specialists for each individual project and fully integrates them into our Project Team for the entire design/construction process.DRS recently completed an Indefinite Delivery Contract with the Baltimore Corps of Engineers. Projects included various engineering projects at Letterkenny; the design/build RFP for the $46M Advanced Chemistry Lab; the design/build RFP for the Lodging Facility at the Defense Distribution Depot Susquehanna, New Cumberland, Pennsylvania; and the field investigation/preconcept design for the Sample Receipt Facility.

The Firm is fully automated with several computer aided design drafting (CADD) systems including Microstation, Version 8 and AutoCAD 2009 and Revit . Members are currently utilizing building information modeling (BIM) on several projects.

These CAD programs are utilized in the preparation of design and construction documents as well as facility planning, programming and analysis. DRS has been using CADD since 1983 and has completed over $3 B in projects. DRS is fully networked and our project delivery and productivity is further enhanced by the use of the Internet for electronic construction document management. Further DRS project experience can be viewed at our website, www.drsarchitects.com. DRS has seven LEED Accredited Professionals on staff. As a team effort, DRS emphasizes strategies for sustainable design, site development, water savings, energy efficiency, materials selection and indoor environmental quality.

**Contract/Project Management**

Gannett Fleming has identified key project personnel in the *Key Personnel Section* of this submission to fill all roles required to successfully complete the project. The project will be managed from our Morgantown, WV office. Mr. Michael A. Neely, P.E. will serve as our Project Manager.

Project Manager- Samer H. Petro, P.E., WV Operations Manager and Senior Project Manager. Mr. Petro, a long- time Morgantown resident and a WVU graduate, has completed his BSCE in 1987 and his MSCE in 1993. His diverse background includes significant experience in both new construction and renovation of existing facilities, bridges, buildings, and civil infrastructure. He brings over 20 years of total relevant experience to this project. Mr. Petro is very familiar with the Canaan Valley Resort State Park and the Morgantown, WV Gannett Fleming office is located within a short driving distance from the site. He is ideal to manage the structural aspects of the maintenance facilities and coordination of this project and will be responsible for ensuring that the requirements for each task are completed in a satisfactory manner and that the schedule is achieved. He will communicate regularly with the project team to ensure that the final products meet all the expectations of the WV Army National Guard CFMO.

Quality Assurance/Quality Control (QA/QC) – Bradley A. Diffenbaugh, P.E., Senior Project Manager. Mr. Diffenbaugh has extensive experience in the inspection, design, and rehabilitation of commercial and industrial buildings; and facilities condition assessment and construction surveillance. This experience is significant because many of the projects he has been involved with have been multi-discipline design and construction projects and having that "field" knowledge gives him a more holistic perspective when performing constructability reviews of projects.

The project team consists of one subconsultant:

- DRS architects will be responsible for architecture considerations.

The Gannett Fleming project team personnel shown in the organization chart and proposed in the *Key Personnel Section* of this submission, possess the registrations and licenses required to perform studies, inspections, testing, design, and construction-phase services for this assignment.

**Performance Capability**

Our project team reflects sufficient capacity to provide the required engineering services to accomplish the project goals with timely, cost-effective solutions; and the expertise to address unforeseen conditions and schedule aberrations.

## Client Satisfaction Evaluation

Gannett Fleming solicits a "Client Satisfaction Evaluation" from every client–state, government, municipal, private industry, etc. Typically, we receive responses from approximately 45-55 percent of those solicited. There are six individual measurement points – technical quality, timeliness, effectiveness, dependability/reliability, cooperation, and communication – and one overall "*performance*" assessment. Ratings are based on a scale of one through five, with five being the highest.

### Performance

The records for the prior seven complete years are included for overall "*performance*":

| Year | Total # Responses | Highest Rating (#5) | Second Rating (#4) | Subtotal | % Total Responses |
|---|---|---|---|---|---|
| 2003 | 320 | 168 | 99 | 267 | 83.4 |
| 2004 | 283 | 171 | 88 | 259 | 91.5 |
| 2005 | 302 | 191 | 95 | 286 | 94.7 |
| 2006 | 250 | 156 | 83 | 239 | 95.6 |
| 2007 | 263 | 180 | 68 | 248 | 94 |
| 2008 | 744 | 162 | 575 | 737 | 98.6 |
| 2009 | 225 | 151 | 62 | 213 | 94.6 |

This combined data represents a consistently high level of client satisfaction irrespective of client market sector in an increasingly critical environment.

### Technical Quality

An extremely important factor that contributes to the overall "*performance*" assessment is our clients' subjective evaluation of technical quality as shown:

| Year | Total # Responses | Highest Rating (#5) | Second Rating (#4) | Subtotal | % Total Responses |
|---|---|---|---|---|---|
| 2003 | 230 | 136 | 68 | 204 | 88.7 |
| 2004 | 242 | 137 | 86 | 223 | 92.1 |
| 2005 | 275 | 174 | 86 | 260 | 94.5 |
| 2006 | 243 | 143 | 79 | 222 | 91.4 |
| 2007 | 69 | 43 | 20 | 63 | 91.3 |
| 2008 | 744 | 133 | 571 | 704 | 94.6 |
| 2009 | 225 | 139 | 64 | 203 | 90.2 |

**Timeliness**

One other critical factor that contributes to the overall assessment of "performance" is our clients' perception of our timeliness.

| Year | Total # Responses | Highest Rating (#5) | Second Rating (#4) | Subtotal | % Total Responses |
|---|---|---|---|---|---|
| 2003 | 231 | 132 | 65 | 197 | 85.3 |
| 2004 | 242 | 128 | 83 | 211 | 87.2 |
| 2005 | 275 | 149 | 94 | 243 | 88.4 |
| 2006 | 234 | 126 | 84 | 210 | 89.7 |
| 2007 | 69 | 41 | 22 | 63 | 91.3 |
| 2008 | 744 | 125 | 571 | 696 | 93.5 |
| 2009 | 225 | 130 | 64 | 194 | 86.2 |

**Project Control**

Gannett Fleming's methodology to manage the project and control the schedule, quality, and costs is briefly outlined below.

Project Understanding – We will make certain that the Gannett Fleming Team members understand the scope of work of the project as communicated with WV Army National Guard C&FMO staff to complete each task/phase of this project efficiently, within budget, and on time for conceptual design phase, construction document phase, and construction administration phase.

Quality Assurance/Quality Control - Gannett Fleming's quality policy is to "provide professional services that meet the requirements of clients and involve all personnel in continually improving work processes." As part of that commitment, in 2007, Gannett Fleming set and successfully achieved its goal of achieving ISO 9001:2000 certification. This certification, along with our corporate quality guidelines, establishes and monitors requirements for:

- Working with the client to establish an appropriate scope of work.
- Allocating necessary resources to the project.
- Monitoring the progress (cost and schedule) of the work.
- Establishing and following project standards.
- Reporting progress to the client.
- Checking and correcting work products.
- Transmitting deliverables to the client.
- Closing out the project.

Schedule Control –The Project Manager will be responsible for maintaining the project schedule. He will be responsible to pull the necessary personnel and resources to meet the needs of the task order and the deadlines established.

The Project Manager will work with the WV Army National Guard CFMO to establish reasonable schedules with associated deadlines for input. He will keep them informed of any seen or unforeseen changes to schedule regardless of reason, and will provide regular updates to the project schedule.

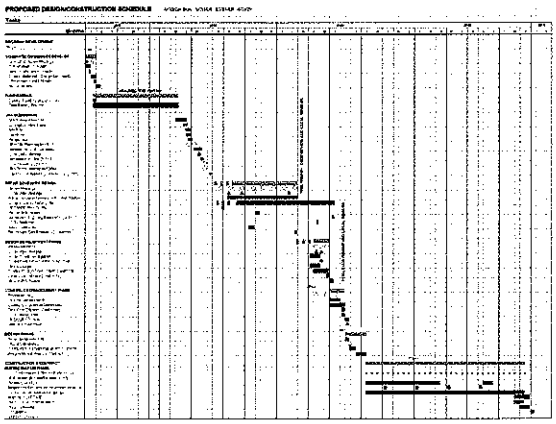
Scope/Cost Control – Gannett Fleming routinely manages well over $300 million dollars in professional services on major project work each year. Additionally, we provide construction management services on several hundred million dollars of construction services annually. Cost containment is a basic criteria for virtually everything we do. It is imperative to our future that we maintain a competitive position in the marketplace. That means a constant, careful management of our costs. It is critical that our clients receive engineering services that are not only technically sound, but are performed within strict cost-control objectives and responsive to our client's needs and expectations. Gannett Fleming will make certain that during the design process the team delivers a well-conceived and complete work product. The QA/QC review team will be actively involved throughout the entire design process to minimize any engineering related design change. In addition, regularly scheduled stakeholder design and review sessions and associated design minutes should also insure that the owner's input has been properly addressed and recorded. Those issues that do arise during the construction process that necessitate a change will be reviewed thoroughly with the owner and contractor to minimize the cost and scheduling impact of the change.

Budget Tracking and Compliance - Gannett Fleming proposes to use its existing management information system, BST Enterprise, in the planning, budgeting, and cost tracking and control of work assignments under this project. The existing management information system is PC-based and Internet accessible, which allows effective digital communication and use of data throughout the firm.

## PROJECT APPROACH

Typically, the design of maintenance facility and associated site grading project consists of five phases. These include schematic design, design development, construction documents, bidding and construction administration. The first step is to identify the stakeholders who will work with the Design Team on the project which we would presume to include the WV Army National Guard CFMO.

### Schematic Design Phase



As a first step in the Schematic Design Phase, we will work with the stakeholders to establish a project schedule and set milestones and meeting dates for the project.

Once the schedule is established we will collect all information relative to the project site. Typical information to be collected includes topographic survey, property line/right-of-way lines/easement locations, existing utility locations/capacities and local permitting requirements.

Once the pertinent information has been collected we will work with the stakeholders to develop alternatives for the access road location. Based on feedback from the stakeholders, we will select a preferred alignment. The preferred alignment will be further developed so that all parties will have an understanding of the schematic design. The schematic design will include drawings depicting the preferred access road alignment, proposed utility locations, preliminary site grading, a project schedule and an opinion of the probable construction cost. The schematic design will be submitted to the stakeholders for review approval.

### Design Development Phase

The Design Development Phase will kick off with a meeting with the stakeholders to discuss any comments from the schematic design which need to be incorporated into the design. The Design Development Phase will further refine and develop the drawings with input at review meetings with the stakeholders and local utility providers.

During this phase, maintenance facility design requirements will be considered to provide adequate organizational maintenance support for vehicles and equipment. In addition, geotechnical issues will be examined to determine cut/fill slope requirements and other site issues. A code review will be completed and updated drawings will be submitted for preliminary meetings with local and state agencies to establish regulatory requirements. The design development documents will be finalized and will include more detailed drawings for the access road, utilities and site grading. Outline

specifications will be developed which will define the materials to be used in the construction of the project. The project schedule will also be updated and a more detailed opinion of probable construction cost will be completed. The design development documents will be submitted to the stakeholders for review and approval.

**Construction Documents Phase**

The Construction Documents Phase will kick off with a meeting with the stakeholders to discuss any comments from the design development which need to be incorporated into the design. Meetings will be held to finalize the design of the project. The construction documents will be completed and will include the final drawings for the access road, utilities and site grading. During the construction document process, submittals will be made for approval to the various utility providers and regulatory agencies which have jurisdiction over the construction of the project. The final drawings will incorporate all comments received from the stakeholders, local utility providers and regulatory agencies. Project specifications which identify all materials to be used on the project will be completed. The schedule will also be finalized and a detailed opinion of probable construction cost provided. The construction documents will be submitted to the stakeholders for review approval. All revisions will be made to the construction documents prior to release for bidding.

**Bidding Phase**

The construction of the project will be advertised and the documents will be issued to the contractors. During the Bidding Phase, the Design Team will attend the prebid conference, clarify and interpret the documents, issue any addenda as necessary and assist with the analysis of the bids and award of the contract.

**Construction Administration Phase**

The construction administration portion of the project will begin with notice to proceed to the contractor. The Design Team will attend job conferences on a periodic basis depending on the construction activity, respond to requests for information, review and approve shop drawings, issuing change orders as required and review payment requests from the contractor. At the end of the project a punch list will be completed. As built drawings will be completed based on contractor's marked up drawings and project closeout will occur.

The above description is our understanding of the project scope and approach to the design process for a typical access road project. We have also indicated some of our experience for each of the project elements and refer you to the project descriptions and resumes for a more in depth review of the experience and capabilities of Gannett Fleming.

Gannett Fleming has selected a Team with qualifications to match the project requirements. Our proposed Team consists of a highly qualified group of engineers, architects, planners, environmental scientists, and technicians who collectively possess the analytical and technical experience to provide the services necessary for the design of a maintenance complex including prefabricated metal buildings and site design for Coonskin Park. Gannett Fleming offers the following strengths:

- Facility planning, design, and construction inspection experience.
- Employee-owned, discipline-based firm that responds to clients first and is not distracted by outside business concerns.
- 95 years of corporate experience.
- Commitment to sustainability and energy efficiency in our design and practices.

## SPECIALIZED EXPERIENCE

The Gannett Fleming Team have provided designs for new facilities that involved a number of renovation-type projects for both the Army and Air National Guard (NG). During the past 31 years, we have designed more than 40 facilities for the NG. We have a good appreciation of the NG's procedures and have substantial experience in using Army and Air Force Design Criteria.

### Sustainable Design

In recent years, there has been greater emphasis on using sustainable design practices. Gannett Fleming is an active proponent in the principles of sustainable design (energy conservation, pollution prevention, waste reduction, and the use of recovered materials) and has incorporated this philosophy on specific projects and in our core business practices. We are a member of the U.S. Green Building Council (USGBC), participate in applicable industry workshops, and have certified Leadership in Energy and Environmental Design (LEED) Accredited Professionals, representing various disciplines including mechanical, electrical, and architectural.

Currently Gannett Fleming employs more than 40 LEED Accredited Professionals. These individuals successfully demonstrate knowledge of green building practices and principles and the LEED rating system, resources, and process. They continue to demonstrate Gannett Fleming's commitment to designing high-performance, energy-efficient, and environmentally friendly facilities. Gannett Fleming uses integrated design approach and life-cycle costing to evaluate options that provide the most energy efficient solution for each client.

Our dedication to implementing sustainable technologies and systems focuses on improving our personal performance through an improved working environment using more efficient and cost-effective building systems. Energy conservation (which favorably reduces source pollution) is an important aspect of our design philosophy, beginning

with the building envelope, efficient lighting, and efficient heating and cooling systems, supplemented by building management systems.

Our proposed project team for this assignment consists of 19 LEED Accredited Professionals. Additionally Gannett Fleming has received LEED certification or registered (awaiting certification) for the following projects displaying the diversity of usage of sustainable design practices:

| Project Title | Square Feet | Cost | Completed |
|---|---|---|---|
| Londonderry School District, Harrisburg, PA | 26,000 | $3 mil | 2005 |
| Harrisburg Area Community College, Harrisburg, PA | 50,000 | $10 mil | 2006 |
| Greater Richmond Transit Company, Richmond, VA | 100,600 | $35 mil | 2010 |
| MTA Metro-North Railroad, Croton-on-Harmon, NY | 180,000 | $48 mil | ongoing |
| Northampton Borough Municipal Authority, Northampton, PA | 31,500 | $25 mil | 2006 |
| Exelon Renewal Energy Education Center, Fairless Hills, PA | 4,000 | $1.5 mil | 2008 |
| PAANG Air Support Operations Squadron Bed-Down Facility, Annville, PA | 34,100 | $5.27 mil | ongoing |
| **Project Title** | **Square Feet** | **Cost** | **Completed** |
| PAANG Troop Camp Dormitory, Annville, PA | 16,150 | $4.7 mil | ongoing |
| Campus Square Office Building, Harrisburg, PA | 75,000 | $8.5 mil | ongoing |
| PAANG Bldg 75 Maintenance Hangar Renovation, Harrisburg, PA | 54,600 | $4 mil | ongoing |
| Conowingo Dam Visitor Center, Darlington, MD | 4,000 | $1 mil | ongoing |
| New Jersey Turnpike Authority Interchange 8 Toll Facility, NJ | 8,000 | $1 mil | ongoing |
| PAANG Regional Support Group Headquarters Facility, PA | 17,000 | $6.3 mil | ongoing |
| Borland Lab Renovation, State College, PA | 76,000 | $1 mil | 2008 |
| School of Forest Resources, State College, PA | 96,000 | $1 mil | 2006 |

Gannett Fleming provides a qualified team and focused approach to performing energy and sustainability assessments. Our full service in-house capabilities include engineering, architectural, construction management, environmental, and specialty services that are focused on providing comprehensive energy management, design, and operations solutions. Our staff includes Certified Energy Auditors, Certified Energy Managers, Certified Lighting Efficiency Professionals, and High-Performance Building Design Professionals. Gannett Fleming's services include energy consultation and audit studies, energy modeling services, preliminary and final design services, construction management, equipment testing, start-up, commissioning, and ongoing services.

# PAST EXPERIENCE AND SIMILAR PROJECTS

Our comprehensive energy assessment program gives our clients an objective analysis of their costs and operations. Such an analysis can provide the basis for energy conservation measures, improved facility management and operations, as well as implementation of sustainability practices. Gannett Fleming's in-house engineering and technical services are organized to positively support our client's energy conservation efforts and their energy service requirements. Our Energy Services Team has developed a detailed approach to identifying and evaluating the potential benefits of energy conservation measures, which has lead to reduced operating costs for our clients. Our areas of expertise include:

- **Structural** - Our structural staff has significant experience in the design of projects requiring the renovation and expansion of existing facilities. The renovation work has varied in complexity from repairing or strengthening existing members to completely replacing them while maintaining the integrity of the overall structural system. We have designed building expansions for single and multiple-level structures as a result of the clients need to expand services or change the function or use of the facility. This design work has often been performed in a manner that allows the continuous operation of the facility during the construction phase.

- **Electrical** - Our electrical design experience includes copper and fiber data networks, router/hub selection, wireless telemetry, and distance learning systems as well as traditional facility design, high-voltage applications, and retail lighting and power design. Our experience in power system design includes the phases of high-, medium-, and low-voltage power distribution systems; substations; protective relaying; emergency power; and cogeneration systems for industrial facilities. The comprehensive electrical services we have provided for special systems include lighting, telephone, security, fire protection/control, closed circuit television, card access, paging/intercom, and Uninterruptible Power Supply systems.

  Our state-of-the-art power systems expertise gives us the ability to handle projects where system reliability and performance, along with meeting schedule and budget requirements, are critical client concerns. We have evaluated and modeled the adequacy and reliability of existing systems and auxiliary facilities and completed many major renovations involving phase-by-phase design and construction with minimal disruption to our clients active operations. Our electrical distribution systems are routinely modeled using interactive PC-based load flow and fault duty software programs to evaluate the adequacy of the existing systems. We are also well versed in control theory and application as well as the integration of existing multi-vendor systems. These systems include Building Automation Systems; Energy Management Systems; Programmable Logic Controllers Systems; the types of field instrumentation; computer systems; and operator interfaces such as Human-Machine Interfaces, telemetry links, and data communications in support of a totally integrated design.

- **Mechanical** - Our mechanical engineers are trained to use the latest design codes, industry standards, and CADD software. The mechanical services we provide include site inspection; feasibility and energy studies; design development; construction document development; and construction services for heating, ventilating, and air conditioning; and plumbing systems.

- **Site/Civil** - Our civil engineers are trained to use the latest design codes, industry standards, and CADD software. The site/civil services we provide include site inspection; storm water management, site grading, and erosion sediment control. Other services our civil engineers typically provide include waterline and sanitary sewer line connections to the site. In addition, our engineers typically prepare and submit agency permits requirements.

- **Construction Administration Services** - We also have provided construction-related engineering services during the construction phase of almost all of our designs, including buildings, facilities, water treatment plants, site improvements projects, new construction projects, renovation projects, and many miles of water transmission/distribution main and wastewater conveyance/collection systems. Our services are tailored to the specific needs, size, and complexity of each individual project. This means providing all of the necessary management and technical services from planning and pre-design . . . through final design . . . during construction . . . and into operation. Specifically, our approach to Construction Administration includes developing a contract that contains language with specific milestones to be achieved (by the contractor) within a certain time frame, diligently monitoring progress, and challenging any slippage. Liquated damages may be associated with these milestones. Our goal is to provide comprehensive construction observation and monitoring of contractor progress, catch any schedule slippage early on, and compel corrective action at the earliest point possible. Our experience is that delays in contract completion are often due to slippage occurring early on in the critical path of activities. Our team has provided similar services and are familiar with hospitality projects and know what to look for, where to start, and what questions to ask the contractor. We intend to have the contractor submit a schedule for approval by Engineer/Architect (at the beginning of the project) and we will hold contractor accountable.

Of the many projects designed for DOD and National Guard facilities and related agencies, the following projects demonstrate GF's past experience with similar projects, as well as DRS Architects.

Gannett Fleming

## PENNSYLVANIA AIR NATIONAL GUARD 201ST RED HORSE SQUADRON TRAINING FACILITY

Client: U.S. Property and Fiscal Office for Pennsylvania
Location: Fort Indiantown Gap, Pennsylvania
Construction Cost: $5.1 Million

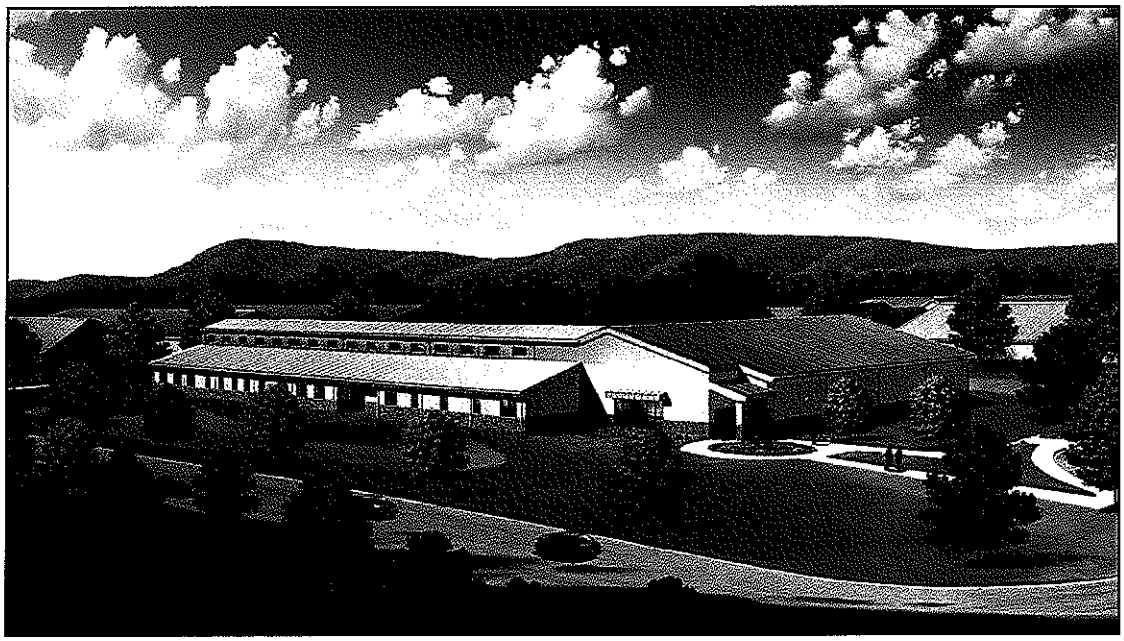
Gannett Fleming is providing complete architectural, structural, civil, geotechnical, mechanical, and electrical engineering design services for a new 22,500-square-foot operations and training facility for the Pennsylvania Air National Guard's 201st Red Horse Squadron. The facility includes operations, engineering, base operating support, readiness, arms vault, combat arms training, logistics, medical, security contracting functions, training classrooms, administration, storage, planning, recruiting, conference, testing laboratory, medical, restroom/locker room, and communications areas. The five-acre site has a secure perimeter and is located at Fort Indiantown Gap in Area-1, Block 500.

**Project Feature**

- A 22,500-square-foot training facility
- Site development for a five-acre site
- A unit deployment control center
- A combat arms training area
- Sustainable design features

**Services Provided**

- Architectural design
- Structural design
- Civil engineering
- Geotechnical engineering
- Mechanical engineering
- Electrical engineering
- Security



Gannett Fleming

## PENNSYLVANIA AIR NATIONAL GUARD 112TH AIR OPERATIONS SQUADRON TRAINING FACILITY

Client: U.S. Property and Fiscal Office for Pennsylvania
Location: State College, Pennsylvania
Construction Cost: $4.77 Million

Gannett Fleming provided complete architectural, structural, civil, geotechnical, mechanical, and electrical engineering design services for a new training facility for the Pennsylvania Air National Guard's 112th Air Operations Squadron. The project involved a new 22,500-square-foot facility. The facility includes an operations training floor; a battle laboratory; a secure intelligence training room; classrooms; an auditorium; conference, communications, maintenance, military testing, arms vault, warehouse, and storage areas; a gymnasium; and a break room. The 6.3-acre site has a secure perimeter and is located on the University Park Airport.

**Project Features**

- A 22,500-square-foot training facility
- Site development for a 6.3-acre site
- Sustainable design features
- A 1,900-square-foot, 20-foot-high battle laboratory

**Services Provided**

- Architectural design
- Structural engineering
- Civil engineering
- Geotechnical engineering
- Mechanical engineering
- Electrical engineering

Gannett Fleming

## PENNSYLVANIA AIR NATIONAL GUARD 193RD REGIONAL SUPPORT GROUP TROOP TRAINING QUARTERS

Client: U.S. Property and Fiscal Office for Pennsylvania
Location: Annville, Pennsylvania

Gannett Fleming provided complete architectural, structural, civil, geotechnical, environmental, mechanical, and electrical engineering design, and bid-phase services for a 17,497-square-foot dormitory project for the Pennsylvania Air National Guard's 193rd Regional Support Group at Fort Indiantown Gap in Annville.

Our firm designed a new, 84-bed dormitory facility with ancillary common spaces, to support the functions at the training site. The structure replaces the existing bachelor enlisted quarters and bachelor officer quarters facilities on the base. In addition, our firm was retained to provide construction-phase services.

The dormitory facility was designed to achieve a Silver rating, according to the Leadership in Energy and Environmental Design (LEED®) design criteria, and to comply with the Energy Policy Act of 2005. The project design also meets relevant requirements of the Anti-Terrorism Force Protection standards.

**Services Provided**

- Site upgrades
  - parking, sidewalks, and landscaping
  - utilities extended from adjacent campus
- Billets
  - one-person rooms (includes Americans with Disabilities Act (ADA)-compliant rooms), two-person rooms, and four-person rooms
  - bathrooms (includes ADA-compliant bathrooms)
- Common spaces
  - dayroom, services office, unisex restroom, fitness room, and vending/ice/laundry room
- Support spaces
  - mechanical, electrical, communications, janitorial and elevator equipment rooms
  - elevator

**Sustainable Features**

- High-efficiency heating, ventilation, and air-conditioning (HVAC) systems
  - air-side energy recovery systems, dedicated outside air units with high-efficiency filtration, condensing boilers, and water heaters
- High-efficiency water source heat pumps
  - individual room control and occupancy sensors for automatic temperature set back
- Water conservation
  - low-flow shower heads and dual-flush toilets
- Renewable energy generation to reduce peak energy demand
  - roof-mounted photovoltaic panels

Gannett Fleming

## REPAIR FUEL CELL HANGAR, BUILDING 71

Client: Pennsylvania Air National Guard, 193rd Special Operations Wing
Location: Middletown, Pennsylvania
Construction Cost: $3.25 Million

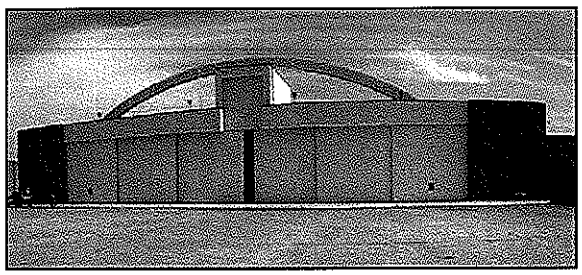
Gannett Fleming provided complete architectural, structural, civil, geotechnical, environmental, mechanical, and electrical engineering design services for a 19,636-square-foot aircraft hangar renovation project for the Pennsylvania Air National Guard's 193rd Special Operations Wing in Middletown, Pennsylvania. This aircraft hangar was built in 1974 and is used for the repair, maintenance, and washing of C-130 aircraft.

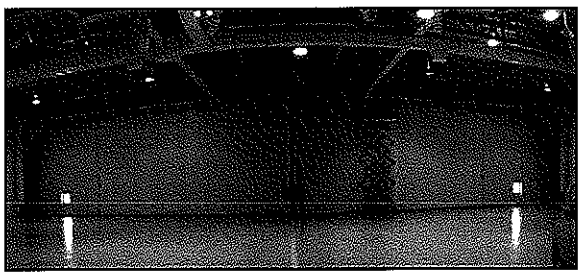
Our firm's services included the renovation and repair of both the interior and exterior of the facility. The project also included a high expansion foam (HEF) system designed by a subconsultant.

**Facility Enhancements**

- Electrical, mechanical, and utility systems upgrades
- Exterior surfaces repair and painting
- Addition of standing seam metal roof over existing office/support area
- Hangar door upgrades
- Restroom and office renovations to meet current standards and upgrade finishes
- Hangar bay finish upgrades
- Pump room addition
- HEF system installation, in the hangar bay, to comply with Air National Guard requirements

The HEF system pump room, pumps, and storage tank facilities were designed to handle a future HEF system for the aircraft maintenance hangar (Building 75). This project included all the HEF requirements for Building 71 and the pumps and water storage for Building 75. A pump house addition and two water tanks were constructed for the HEF system.





Gannett Fleming

## AIR TRAFFIC CONTROL TRAINING COMPLEX

Client: U.S. Property and Fiscal Office for Pennsylvania
Location: Johnstown, Pennsylvania
Construction Cost: $5 Million

Gannett Fleming provided design and construction-phase services for an air traffic control training complex for the Pennsylvania Air National Guard at the Johnstown Cambria County Airport, Johnstown, Pennsylvania. The complex includes a composite support facility, mobile radar facilities, and a mobile control tower. Tasks for the project consisted of site development of ten acres of roadways, utility infrastructure, parking, mobile radar and tower sites, and design of a new training facility for the 258th Air Traffic Control Squadron. The composite support facility has a total gross area of 20,350 square feet and houses operations functions, air traffic control functions, maintenance shops, and warehouse and supply areas.

**Services Provided**

- Civil engineering
- Geotechnical engineering
- Architectural design
- Preparation of construction documents

**Project Features**

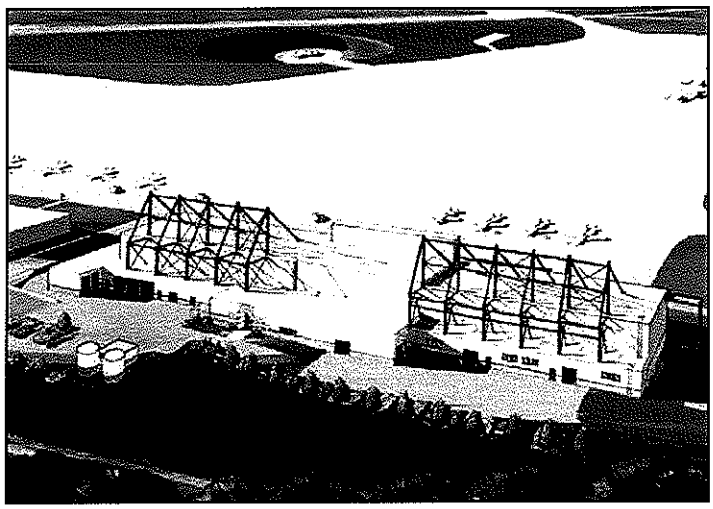
- Offices and support areas
- Classroom and training room
- SIPERNET room
- Composite power production and refrigeration shop
- Composite communications electronics maintenance shop, battery room, and hazmat room


Gannett Fleming

## PAANG A-10 AIRCRAFT MAINTENANCE HANGAR

Client: Naval Facilities Engineering Command
Location: Willow Grove, Pennsylvania
Construction Cost: $3.5 Million

Gannett Fleming provided comprehensive architectural/ engineering services for a 57,000-square-foot A-10 aircraft hangar and maintenance facility for the Pennsylvania Air National Guard (PAANG). The project consisted of converting two existing facilities into a hangar by adding a new 21,550-square-foot facility located between the two existing structures. The hangar was designed for maintenance, inspection, and washdown of A-10 aircraft. Work also included refurbishment to form new functional space, new roofing, asbestos abatement in the existing hangar, a new fire protection system, and investigation of new hangar door alternatives for cost and energy conservation. Design services were structured to include the design of two options for three hangar doors on two hangars. The first option was a sliding door design; the second was a vertical lift fabric door ("Mega Door"). The dual design allowed for the contractors to solicit prices on both doors and include the most cost-effective door in their bid. Functional areas in the facility include three hangar bays for five A-10 aircraft, support space for maintenance of AGE equipment, vehicle garage space, classrooms, locker facilities, tool storage, and covered storage. Building equipment included flexible stainless steel exhaust ducts, circulation paddle fans, an AFFF (aqueous film-forming foam) overhead preactivation system, an underwing AFFF system, breathable air, fire hose racks, compressed air, a fire alarm system, smoke detectors, heat detectors, a paging system, a telephone system, grounding with touch bars, bridge cranes in the shop area, and monorails. Site work included parking for 25 vehicles, a new duct bank for electric and communications systems, a fire protection system with two 100,000-gallon water storage tanks, a fire pump house, a concrete apron, and landscaping. Also included were two engine test pads (one for high thrust and one for low thrust) and a jet blast deflector. This task was part of a five-facility upgrade for the PAANG at the Willow Grove Naval Air Station. Facilities included two aircraft hangars, a weapons release facility, a munitions storage facility, and engine test facilities.



Gannett Fleming

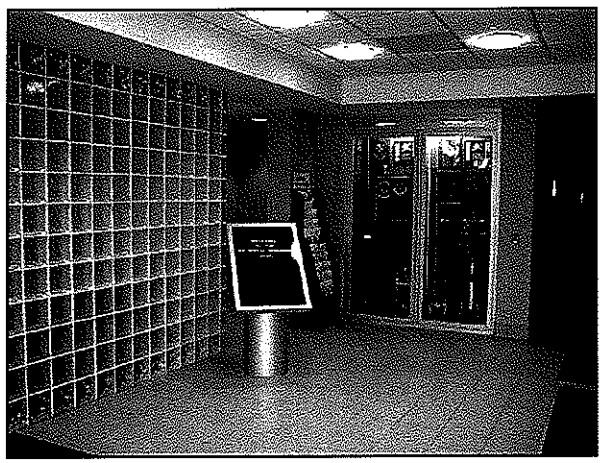
## PAANG INDEFINITE DELIVERY/ INDEFINITE QUANTITY CONTRACT 193RD SPECIAL OPERATIONS WING HARRISBURG INTERNATIONAL AIRPORT

Client: U.S. Property and Fiscal Office for Pennsylvania
Location: Middletown, Pennsylvania
Cost: $4.6 Million

Gannett Fleming provided architectural, civil, geotechnical, and environmental engineering design and related services for a fi e-year, open-end contract involving a variety of projects for the Pennsylvania Air National Guard (PAANG) 193rd Special Operations Wing based at Harrisburg International Airport. Facilities renovated and/or designed include the following:

- 31,424-square-foot roof replacement, Building 76
- 3,300-square-foot relocation/renovation of Wing Commander's Suite
- 7,000-square-foot Logistics Group renovation, Building 75
- 4,300-square-foot Deployment Control Center
- 1,900-square-foot Aerospace Support Equipment Shop addition, Building 80
- 3,500-square-foot Special Missions Equipment (SME) Interim Facility
- 13,900-square-foot SME Maintenance Facility

Our project responsibilities also included boundary surveys, apron and taxiway studies, and the design of parking lots for Buildings 36 and 80.

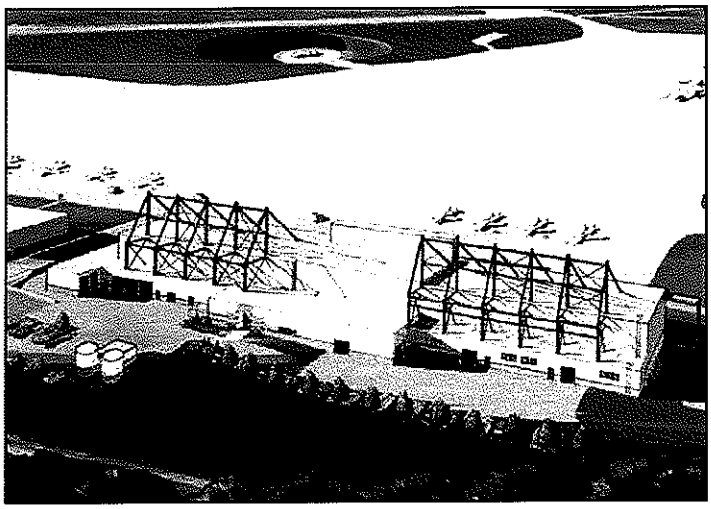


Gannett Fleming

## PAANG A-10 AIRCRAFT MAINTENANCE HANGAR

Client: Naval Facilities Engineering Command
Location: Willow Grove, Pennsylvania
Construction Cost: $3.5 Million

Gannett Fleming provided comprehensive architectural/engineering services for a 57,000-square-foot A-10 aircraft hangar and maintenance facility for the Pennsylvania Air National Guard (PAANG). The project consisted of converting two existing facilities into a hangar by adding a new 21,550-square-foot facility located between the two existing structures. The hangar was designed for maintenance, inspection, and washdown of A-10 aircraft. Work also included refurbishment to form new functional space, new roofing, asbestos abatement in the existing hangar, a new fire protection system, and investigation of new hangar door alternatives for cost and energy conservation. Design services were structured to include the design of two options for three hangar doors on two hangars. The first option was a sliding door design; the second was a vertical lift fabric door ("Mega Door"). The dual design allowed for the contractors to solicit prices on both doors and include the most cost-effective door in their bid. Functional areas in the facility include three hangar bays for five A-10 aircraft, support space for maintenance of AGE equipment, vehicle garage space, classrooms, locker facilities, tool storage, and covered storage. Building equipment included flexible stainless steel exhaust ducts, circulation paddle fans, an AFFF (aqueous film-forming foam) overhead preactivation system, an underwing AFFF system, breathable air, fire hose racks, compressed air, a fire alarm system, smoke detectors, heat detectors, a paging system, a telephone system, grounding with touch bars, bridge cranes in the shop area, and monorails. Site work included parking for 25 vehicles, a new duct bank for electric and communications systems, a fire protection system with two 100,000-gallon water storage tanks, a fire pump house, a concrete apron, and landscaping. Also included were two engine test pads (one for high thrust and one for low thrust) and a jet blast deflector. This task was part of a five-facility upgrade for the PAANG at the Willow Grove Naval Air Station. Facilities included two aircraft hangars, a weapons release facility, a munitions storage facility, and engine test facilities.



Gannett Fleming

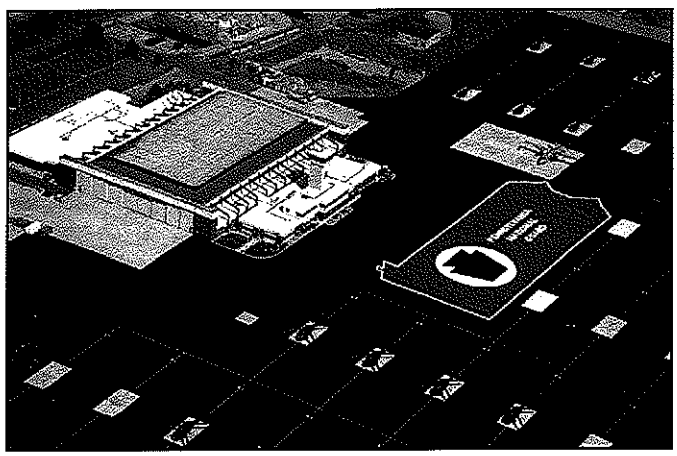
## PAANG INDEFINITE DELIVERY/ INDEFINITE QUANTITY CONTRACT

Client: U.S. Property and Fiscal Office for Pennsylvania
Location: Fort Indiantown Gap, Annville, Pennsylvania

Gannett Fleming provided architectural, civil, geotechnical, and environmental engineering design and related services for a five-year, open-end contract for a variety of projects at Fort Indiantown Gap.

**Facilities/Projects Designed**

- Building 19-101: Replacement of a 45,500-square-foot roof
- Building 8-1: Renovation of existing 8,340-square-foot bachelor officers' quarters to 14 one-man rooms, offices, polygraph training rooms, and classrooms for the Northeast Counter drug Training Center (NCTC)
- Building 4-114: Renovation of an existing block wall mess hall into a 9,500-square-foot training site medical clinic
- Building 19-109: Renovation to facilitate the enlargement of an existing aviation medical clinic
- Buildings 19-108 and 19-109: Fascia replacement
- Raid House Facility: Renovation of an existing 8,340-square-foot, two-story wooden building into a state-of-the-art raid house for law enforcement training
- NCTC Distance Learning Center: New 4,800-square-foot clear-span metal building with offices, classrooms, and support areas for the NCTC to use as a Distance Learning Center
- Muir Airfield Pavement Projects: Repairs and rehabilitation of airfield aprons, including 15,500 square yards of resurfacing and the rehabilitation of sequestered airfield apron areas. Also designed helicopter landing pads and associated paving
- EST 2000 Simulator Building: New 7,200-square-foot clear-span metal building to house the EST 2000 Simulator
- SIMNET Simulator Building: New 6,000-square-foot clear-span metal building to house the SIMNET Simulator
- Parking Lot Projects: 50 personal-owned vehicle (POV) parking lot and associated site improvements for Building 8-80, and parking and site infrastructure for the Military Education Facility and Buildings 8-71 and 8-73. The project included parking for 216 POVs, access road, signage, walks, landscaping, utilities, and repaving existing roads
- Medina Ridge Tank Trail: One-mile-long by 35-foot-wide aggregate-covered trail for tracked and wheeled vehicles to gain access to the Medina Ridge training area



Gannett Fleming

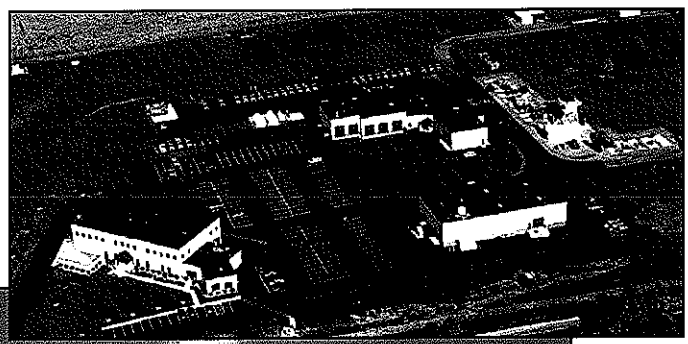
## PAANG COMMUNICATIONS ELECTRONICS TRAINING COMPLEX

Client: U.S. Property and Fiscal Office for Pennsylvania
Location: State College, Pennsylvania
Construction Cost: $8.5 Million

Gannett Fleming provided complete architectural/ engineering services for a three-building communications electronics training complex for the Pennsylvania Air National Guard (PAANG) at the University Park Airport. The project consisted of the site development of 25 acres of roadways, utility infrastructure, parking, technical training site, and the design of three buildings to provide a new base of operations for two Mobile Radar Units of PAANG. Site development design included access roads, stormwater management, parking areas for 170 vehicles, tech site areas, and outdoor storage for equipment.

**Building/Features**

- A 22,000-square-foot Operations and Training Building
- Administrative offices
- Logistics
- Intelligence
- Operations classrooms
- Radar and communications maintenance
- Dining room and kitchen
- A 13,000-square-foot Vehicle Maintenance and AGE Shop
- Office area
- Classrooms
- Locker rooms
- Lube, paint, and refueler maintenance bays
- Tool storage
- A 10,000-square-foot Base Supply and Mobility
- Storage Warehouse
- Administration
- Shipping and receiving
- Clothing and mobility storage
- Warehouse
- Locker rooms



Gannett Fleming

## PENNSYLVANIA ARMY NATIONAL GUARD READINESS CENTER

Client: Pennsylvania Department of General Services
Location: New Milford, Susquehanna County, Pennsylvania
Construction Cost: $4.3 Million

Gannett Fleming provided complete architectural and engineering planning, design, and construction-related services for a new armory for the Pennsylvania Army National Guard. The project involved developing an 18-acre site with roadways, walks, utility infrastructure, and parking for military and privately owned vehicles.

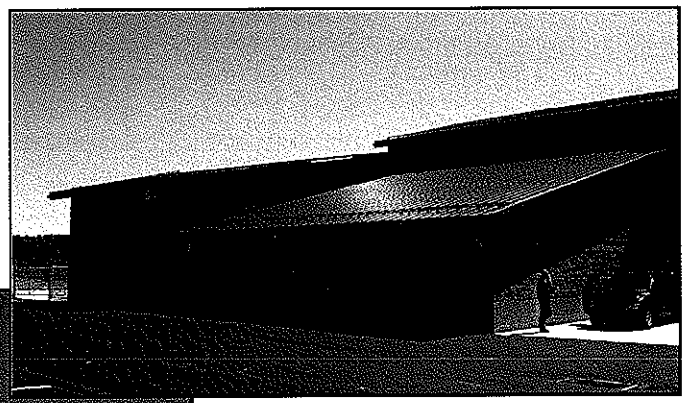
The armory features a 25,600-square-foot building that houses office and training facilities, including an 800-square-foot Bradley Full-Crew Interactive Training Simulator Room with vehicle exhaust. Site improvements include a water well to serve the facility, an on-lot sewage disposal system, and a water-retention basin with wetland plantings.

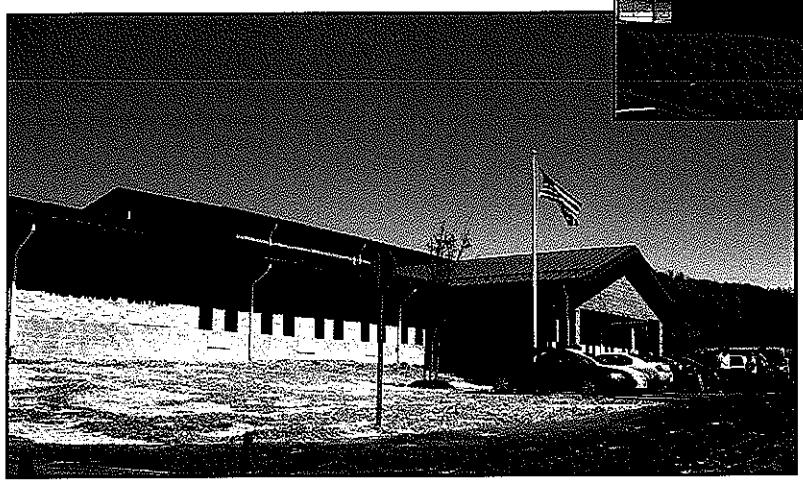
**Services Provided**

- Site planning
- Architectural and engineering design
- Construction-related services

**Special Features**

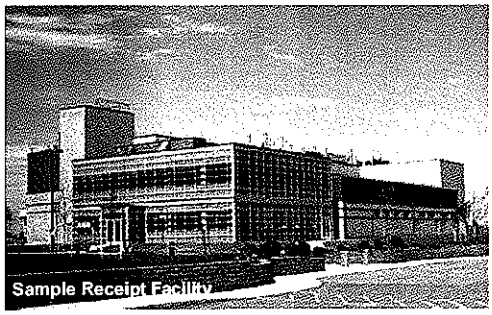
- Development of 18-acre site
- 25,600-square-foot building
- Simulator room
- Site improvements



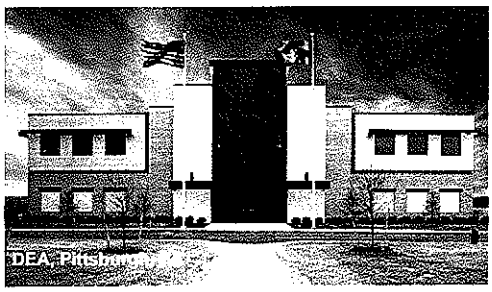


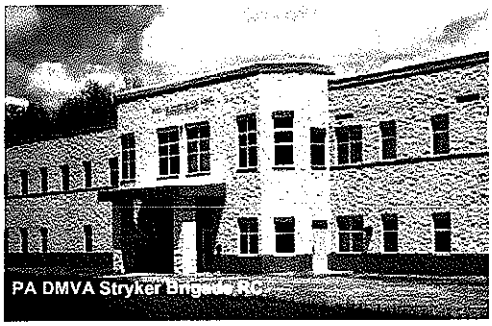
ARCHITECTS

DRS approaches all of our projects with an eye toward environmental stewardship. Currently, seven of our architects and designers are LEED Accredited Professionals and we are actively encouraging others to become accredited. At the outset of the LEED process, we establish an open, collaborative process with our engineers and the entire project team to seek the best solutions that contribute to our client's long and short range sustainable or LEED certification goals.


Sample Receipt Facility


Advanced Chemistry Lab


DEA, Pittsburgh, PA


PA DMVA Stryker Brigade Rdy


Duquesne University, Power Center

The following are DRS Architect's projects that have received LEED or SPiRiT* certification or are designed for LEED certification.

**BNY Mellon—30 and 31st Floors**—Pittsburgh, PA
LEED Gold Certification

**BNY Mellon—27th Floor**—Pittsburgh, PA
Designed for LEED Silver Certification

**BNY Mellon—32nd Floor**—Pittsburgh, PA
Designed for LEED Platinum Certification

**Drug Enforcement Administration**, Milwaukee, WI
Designed for LEED Certification

**Drug Enforcement Administration**, Pittsburgh, PA
LEED Certification

**DRS Office Renovations**, Pittsburgh, PA
Designed for LEED Certification

**Duquesne University, Power Center**, Pittsburgh, PA
LEED Silver Certification

**SSA Building,** McKeesport, PA, LEED Silver Certification

**PNC YMCA at Market Square** , Pittsburgh, PA
Designed for LEED Silver Certification

**Thelma Lovette YMCA**, Pittsburgh, PA
Designed for LEED Silver Certification

**Student Union, Slippery Rock University**, Slippery Rock, PA
Designed for LEED Silver Certification

**Expansion/Renovation of the Schools of Dental Medicine & Pharmacy, University of Pittsburgh,** Designed for LEED Certification

**McCoskey Center, Slippery Rock University**, Slippery Rock, PA
Designed for LEED Existing Building

**Advanced Chemistry Lab**, Aberdeen Proving Ground, MD
Bronze SPiRiT Certification

**Sample Receipt Facility**, Aberdeen Proving Ground, MD
Bronze SPiRiT Certification

**PA DMVA Stryker Brigade Readiness Center**, Cambridge Springs, PA, Bronze SPiRiT Certification

**Duquesne University, Student Union, 1st Floor**, Pittsburgh, PA,
Designed for LEED Silver Certification

**Duquesne University, Gumberg Library Renovation**—Pittsburgh, PA
Designed for LEED Certification

**Duquesne University, Locker Room Renovation**—Pittsburgh, PA
Designed for LEED Certification

**Starting Gate,** Beaver, PA, Designed for LEED Certification

*The SPiRiT rating was developed by the Department of Defense prior to adopting LEED standards.

ARCHITECTS

# U. S. ARMY RESERVE AVIATION FACILITY
## JOHNSTOWN, PA

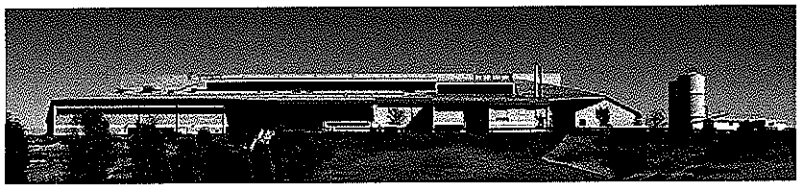
**ROLE: PRIME**
Master Plan
Project Management
Architectural Design
Interior Design
Coordination of engineering disciplines

**COMPLETED**
1997

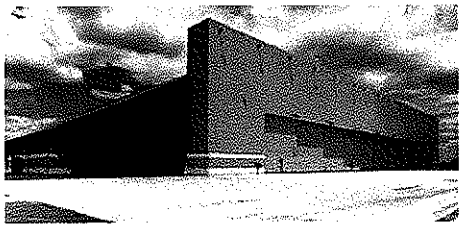
**CONSTRUCTION COST**
$22,000,000

**REFERENCE**
James K. Payne, Chief, Project Development
US Army Corps of Engineers
Aberdeen Proving Ground-IPO Bldg. E-1356
Bush River & Scully Roads
Aberdeen Proving Ground, MD 21010
Phone: 410-436-0526

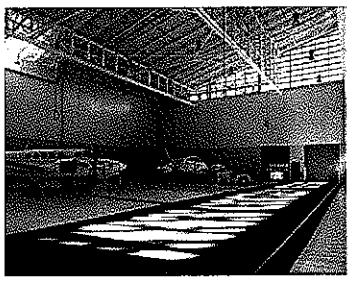
**SCOPE OF WORK**



DRS had prime responsibility for the design of a new 120,000 SF U. S. Army Reserve Aviation Facility for both rotary and fixed wing aircraft located at the Johnstown-Cambria County Airport. The multi-building complex is located on a 80-acre site and construction was completed in the spring of 1997. It was determined that the Facility was to be shared by the U. S. Army Reserves and PAARNG. Salient points of the project includes:



Site development included the entrance roads, site utilities, parking lots, security fencing and landscaping. The scope of the work includes design of taxiways, hangar apron areas, parking for twenty-four AH-1's and four C-12's associated aircraft and taxi-way lighting, aircraft signage and site storm drainage collection and retention.



Hangar floor area of 330 feet x 94 feet with a safety corridor around the perimeter is comprised of flexible work bays and a wash bay. Individually motorized operation sliding doors with door pockets at either side provide access to the Hangar. A 5-ton crane with a 40 foot span serves the entire length of the hangar. A foam water fire suppression system is provided along with a detention area.

Shop areas include hydraulics, air frames, sheet metal shop, rotor shop, engine shop, battery shop, material and maintenance control, corrosion control, arms vault, unit maintenance and GSE storage. Support spaces for the shop areas include parts storage, tool room, ordnance and extensive storage space.

Aircraft related spaces include avionics, navigation and flight planning, flight briefing room, officers ready room, safety and NATOPS, quality assurance and maintenance administration.

Administrative spaces include offices and common administration area, classrooms, legal, medical, computer work area and reserve facilities. Common spaces include lobby, break room, toilets and locker rooms.

The Reserve Center will provide administrative areas, unit common space, assembly hall, classrooms, learning center, library, unit and individual storage and support space. A secured parking area is also provided for military equipment parking.

DRS provided the selection of furniture for 60,000 SF of office space for this project using GSA Furniture & Furnishings Procurement and UNICOR.

ARCHITECTS

# U.S. ARMY RESERVE CENTER/OMS
## GRANTSVILLE, WEST VIRGINIA

**ROLE: PRIME**
Master Plan
Project Management
Architectural Design
Interior Design
Coordination of Engineering Disciplines

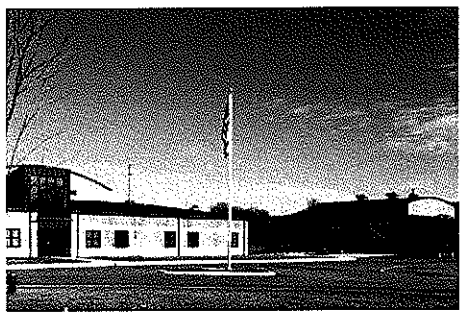
**COMPLETION**
1998

**CONSTRUCTION COST**
$4,500,000

**REFERENCE**
U.S. Army District, Baltimore
Corps of Engineers
P. O. Box 1715
Baltimore, Md 21203-1715
Margie Marcus, Design Manager
(410) 962-6790

**SCOPE OF PROJECT**

The DRS Design Team was responsible for architectural/engineering and interior design services. Site Delineation Study and Engineering Feasibility Study were required to determine the viability of the selected site.



The project consisted of a 15,300 SF Training Building and 2,400 SF Organizational Maintenance Shop. The Training Building contains full-time staff offices, unit exclusive offices, unit common space, retention office and administrative support. Assembly areas include assembly hall, chairs/table storage, kitchen, arms vault and armorer. Educational facilities include classrooms, library reading room, library storage, learning center, training aid storage, comsec training and comsec storage. Special training areas include weaponeer room and special projects classroom. Storage areas include unit and individual storage, staging area and supply offices. A completed interior design package was developed for this facility.

The OMS contains shop office, tool storage, parts storage, battery storage and charging, flammable storage, hazardous storage and toilet. The maintenance area consists of a double work bay and single wash bay.

ARCHITECTS

**COMPANY NAME**
DRS Architects

**OPERATIONAL MAINTENANCE SHOP**
**PENNSYLVANIA DEPARTMENT OF GENERAL SERVICES FOR**
**PA ARMY NATIONAL GUARD**
**RICHLAND TOWNSHIP**
**JOHNSTOWN, PENNSYLVANIA**

**ROLE:**
Project Management
Architectural Design
Interior Design
Coordination of all engineering disciplines

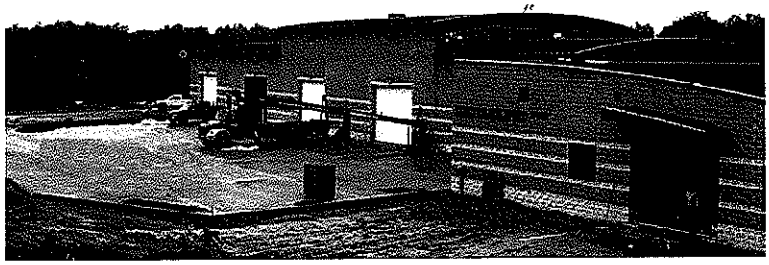
**COMPLETION**
January 2005

**ESTIMATED CONSTRUCTION COST**
$4,161,000

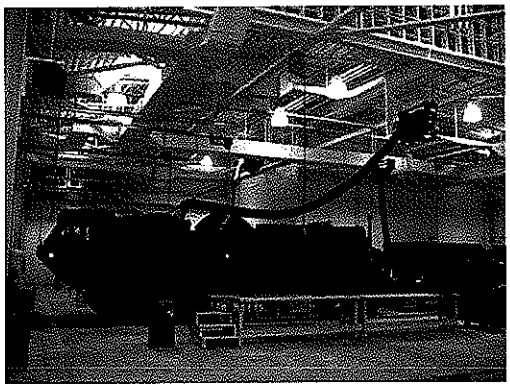
**DRS FEE**
$260,000

**REFERENCE**
Major Mark Austin
Pennsylvania Army National Guard
Department of Military Affairs
1129 Utility Road
Annville, PA 17003
(717) 861-2915

**SCOPE OF PROJECT**



The new maintenance facility is designed to provide adequate organizational maintenance support for vehicles and equipment supported by this Shop. The facility will consists of eight (8) maintenance workbays of which two (2) bays will be serviced by a 30-ton overhead crane, one (1) warm-up bay plus administrative, personnel and work areas. The eight (8) workbays, each 32' x 74', are designed as drive through bays to accommodate the largest equipment system supported by the facility. Supporting facilities include one (1) exterior wash rack, one (1) exterior fuel storage and dispensing system, controlled waste handling facility, building for miscellaneous storage, military vehicle parking (74) and POV parking (31).



The building is constructed of a steel frame, concrete masonry walls with split faced concrete masonry veneer and a curved seamed metal roofing system. Primary heating system for the workbays will be an in-slab radiant piping system with hot water provided by two (2) gas-fired boilers. Utility services to each workbay includes a carbon monoxide exhaust system, compressed air hose reel, overhead power reel and 220v power outlets.

The site configuration and physical constraints had a major impact upon building placement and orientation. The site contains 13.56 acres in an irregular configuration. A 6.15 acre portion of the site is within the runway protection zone of the adjacent airport and is unbuildable. The remaining 7.41 acres is bisected diagonally by an area of wetlands leaving approximately 5.00 acres for development.

ARCHITECTS

**COMPANY NAME**
DRS Architects

# U.S. ARMY RESERVE CENTERS/OMS MORGANTOWN, ELKINS & KINGWOOD, WEST VIRGINIA

**ROLE: PRIME**
Project Management
Site Planning
Architectural Design
Interior Design
Coordination of Engineering Disciplines

**CONSTRUCTION COST**
$12,000,000

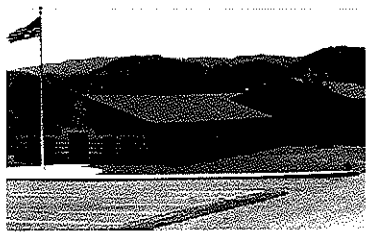
**COMPLETION**
1994—1996

**REFERENCE**
U.S. Army District, Baltimore
Corps of Engineers
P. O. Box 1715
Baltimore, MD 21203-1715
Margie Marcus, Design Manager
(410) 962-6790

**SCOPE OF PROJECT**
DRS has prime responsibility for the design of three USAR Centers with each having an Organizational Maintenance Shop in Morgantown, Elkins and Kingwood, West Virginia. All three facilities are constructed.

The 300-Member Morgantown USAR Center is located on an 8 acre site and contains 21,700 SF of space in the Administration/Training Building and 5,500 SF in the four bay OMS building.

The 60-Member Elkins USAR Center is located on a 4.2 acre site and provides 12,000 SF of space in the Administration/Training Building and 4,200 SF in the three bay OMS Building.



The 100-Member Kingwood USAR Center is located on a 4.8 acre site and provides 19,000 SF of space in the Administration/Training Building and 5,000 SF in the four bay OMS Building with 600 SF of covered storage area.

The DRS Design Team was responsible for the site planning, space planning, facility design, all submission requirements, i.e., design analysis, LCCA, M-CACES, construction schedule, construction drawings and specifications, interior design and selection of furniture for all three of these Reserve Centers. In selecting the furniture, the Design Guide for U. S. Army Reserve Centers and Furniture Design Guide for U. S. Army Reserve Centers was used. All three projects were designed to meet ADA Compliance. This was the first group of USARC/OMS' undertaken by DRS.

All three facilities contain the following functional elements:

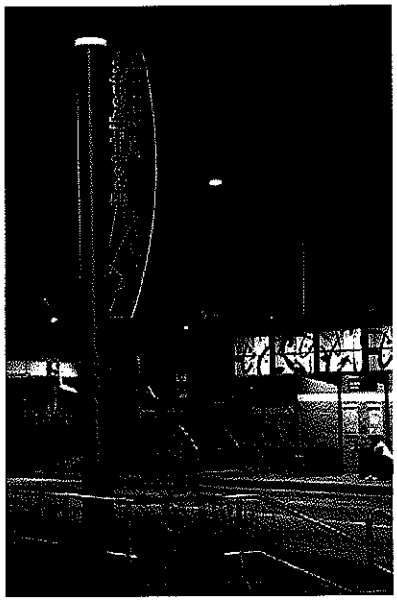
- Administrative Spaces - Full time staff offices; Unit exclusive offices; Unit common spaces; Retention.
- Educational - Classrooms; Learning Center; Library; Comsec Training.
- Storage Spaces - Unit and Individual Storage; Comsec Storage.
- Assembly Area and Support Spaces - Food Preparation; Arms Vault; Chair Storage.
- OMS Facility - Work Bays; Wash Bays; Shop Office; Battery Room; Parts & Tool Storage; Flammable Storage; Hazardous Storage.

Because of our performance on these projects , the Baltimore Corps of Engineers awarded DRS four other U. S. Army Reserve Center w/ Organizational Maintenance Shop projects.

ARCHITECTS

# PORT AUTHORITY OF ALLEGHENY COUNTY INDEFINITE DELIVERY CONTRACT

## PITTSBURGH, PENNSYLVANIA



**OWNER**
Port Authority of Allegheny County

**ROLE**
Architectural Design
Project Management
Coordination of Engineering Disciplines
Construction Administration

**CONTRACTOR**
Various

**CONSTRUCTION COST**
Various

**SQUARE FOOTAGE**
Various

**COMPLETION**
2007
Current

**REFERENCE**
Jerome Marinzel, RA
Project Manager
Engineering & Construction Division
Port Authority Allegheny County
345 Sixth Avenue, Third Floor
Pittsburgh, PA 15222
412-566-5159

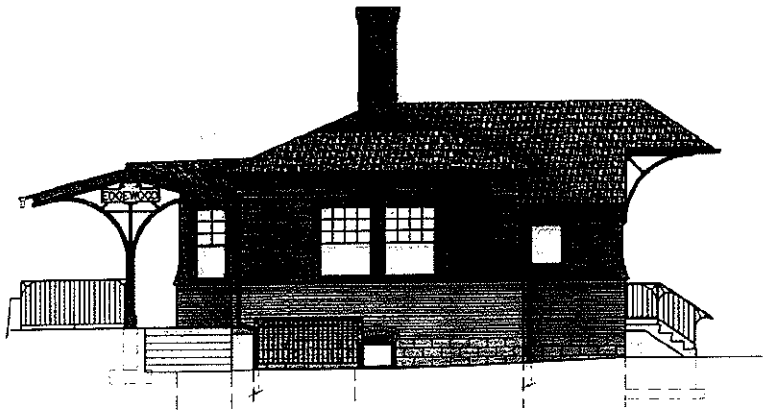
DRS was selected to provide A/E services for an Open Ended Type A-E Contract for Port Authority Allegheny County, Pennsylvania.

IDC Projects from Current Contract:

- Feasibility study for moving the PAAC headquarters office back to the Manchester Office Building on North Side.
- East Liberty Bus Wash Replacement
- Renovation of Paint Booths at the Manchester Garage to accommodate articulated buses
- Renovation of the Ross Garage to accommodate articulated buses in the Body Shop, Tire Change Bay and Wash Lanes
- Wash Bay renovations at the South Hills Garage

Projects completed in 2007 included:

- East/South Busway Rehabilitation Study
- East Busway Landscape Construction Documents
- East Busway Final Design
- Rehabilitation of Collier Garage
- Security Systems for Collier, Harmar, Ross and East Liberty Division Garages
- Renovation to the Edgewood Train Station, a historically significant building
- Renovation of a pedestrian bridge on the East Busway
- Miller Print Building Cost Evaluation



ARCHITECTS

**COMPANY NAME**
DRS Architects

# U. S. ARMY RESERVE CENTER WITH OMS/AMSA DESIGN/BUILD PROJECT
## WHEELING, WEST VIRGINIA

**ROLE: 30% CONCEPT DESIGN**
Project Management
Site Planning
Architectural Design
Interior Design
Review of Design/Build Contractors Submissions

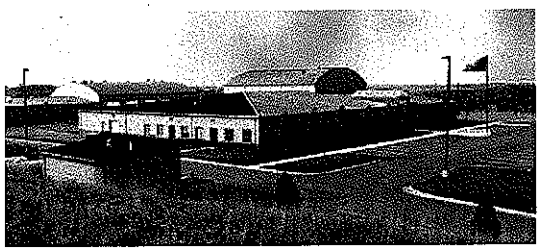
**CONSTRUCTION COST**
$10,197,000

**COMPLETION**
1994 Concept Design
1996 Construction

**REFERENCE**
U.S. Army District, Baltimore
Corps of Engineers
P. O. Box 1715
Baltimore, MD 21203-1715
Bill Taylor, Design Manager
(410) 962-4453

**SCOPE OF PROJECT**

The Army Reserves and the Corps of Engineers chose to complete this project by the Design/Build method based on the 30% Concept Design in order to expedite the schedule. The DRS Design Team working in conjunction with the BCOE also developed the RFP Package which primarily used Commercial Standards in lieu of COE requirements. Proposals were obtained from Design/Build Contractors and a contractor was selected. DRS was responsible for reviewing the Design/Build Contractor's submissions.



The project includes a 24,000 SF Training Building and 17,000 SF OMS/AMSA. The Training Building consists of full-time staff offices, unit exclusive offices, unit common space, retention office and administrative support. Assembly areas include assembly hall, chair/table storage, kitchen, arms vault and armorer. Educational facilities include classrooms, library reading room, library storage, learning center, training aid storage, comsec training and comsec storage. Special training areas include weaponeer room, medical section, soils testing lab and drafting room. Storage areas include unit and individual storage, staging and supply offices.

The OMS/AMSA contains an organizational maintenance shop consisting of shop office, tool storage, parts storage, battery storage and charging, flammable storage and a controlled waste storage. The area maintenance support activity (larger maintenance facility) consists of shop offices, toilets and locker rooms, classroom and break area, tool room, parts room, battery room, small arms repair shop, small arms vault, AMSA flammable storage and controlled waste storage. Joint areas of the OMS/ AMSA include four double work bays with a 10-ton overhead crane and double wash bay.

ARCHITECTS

# STRYKER COMBAT BRIGADE READINESS CENTER & OMS

## CAMBRIDGE SPRINGS, PA

**OWNER**
Department of Military & Veterans Affairs

**ROLE: DESIGN/BUILD ARCHITECT**
Project Management
Site Planning
Architectural Design
Interior Design
Submissions

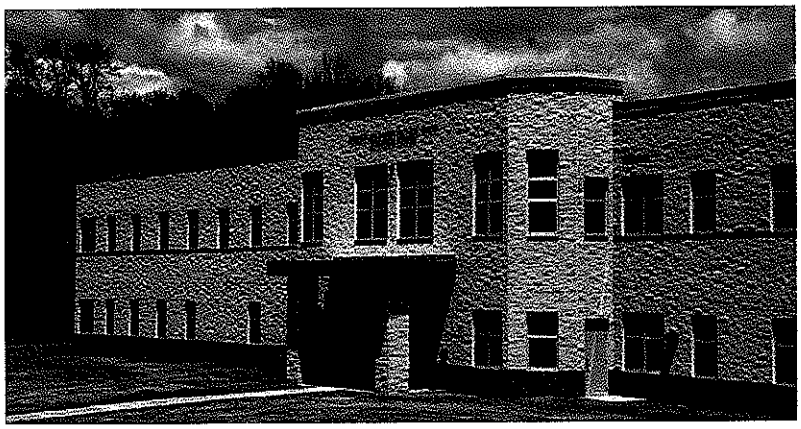
**DESIGN/BUILD CONTRACTOR**
Mascaro Construction Company

**CONSTRUCTION COST**
$19,000,000

**SQUARE FOOTAGE**
85,000 SF

**COMPLETION**
June, 2008

**REFERENCE**
Mark Austin, Director,
Bureau of Facilities and Engineering
Department of Military & Veterans Affairs
Fort Indiantown Gap, Pennsylvania
717-861-2915



The two-story, 65,000 SF, $19 M Readiness Center is designed to support the consolidation of three units totaling 438 reservists. Each unit has dedicated locker rooms, unit storage, arms vault and administrative offices to permit independent operations. Facilities shared by the three units include a 2,200 SF medical clinic; a 1,200 SF fitness room, a 7,300 SF assembly hall with full service kitchen, 4 large classrooms, break areas, general administrative offices and a recruitment center. In addition, there are areas designated for specific functions. The building is designed to permit community access to the assembly hall and adjacent restrooms while locking out the remainder of the facility. The site development and building construction are appropriate to meet the Anti-Terrorism and Force Protection Level established for the facility.

The maintenance facility is 20,000 SF and designed to provide adequate field maintenance support for vehicles and equipment supported by this Facility. The facility consists of six (6) maintenance workbays of which two (2) bays are serviced by a 15-ton overhead crane, one (1) warm-up bay, one (1) welding bay plus administrative, personnel, storage and work areas. The six (6) workbays, each 32' x 74', are designed as drive through bays to accommodate the largest equipment supported by the facility. Supporting facilities include one (1) exterior wash rack, one (1) exterior fuel storage and dispensing system, controlled waste handling facility and a building for miscellaneous storage. Primary heating system for the workbays is an in-slab radiant piping system with hot water provided by two (2) gas-fired boilers which is supplemented by gas-fired radiant heaters at the overhead door. Utility services to each workbay include a carbon monoxide exhaust system, compressed air hose reel, overhead power reel and 220v power outlets.

Both buildings are constructed of a steel frame, concrete masonry walls with split face concrete masonry and face brick veneer and a SBS modified bitumen metal roofing system.

Parking for POV and military vehicles is provided.

The Readiness Center is designed to achieve a SPiRiT Bronze rating for energy and environmental design. The project was constructed with the Design/Build method of delivery.

## KEY PERSONNEL

Gannett Fleming has identified the following key project personnel to fill all roles required to successfully complete the project. The project will be managed from our Morgantown, WV office. Mr. Samer H. Petro, P.E. will serve as our Project Manager.

Project Manager- Samer H. Petro, P.E., WV Operations Manager and Senior Project Manager. Mr. Petro, a long- time Morgantown resident and a WVU graduate, has completed his BSCE in 1987 and his MSCE in 1993. His diverse background includes significant experience in both new construction and renovation of existing facilities, bridges, buildings, and civil infrastructure. He brings over 20 years of total relevant experience to this project. Mr. Petro is familiar with the State Park(s) and Morgantown, WV Gannett Fleming office is located within a short driving distance from the site. He is ideal to manage the structural facilities assessment and coordination of this project and will be responsible for ensuring that the requirements for each task are completed in a satisfactory manner and that the schedule is achieved. He will communicate regularly with park staff and the project team to ensure that the final products meet all the expectations of the WVDNR.

Quality Assurance/Quality Control (QA/QC) – Bradley A. Diffenbaugh, P.E., Senior Project Manager. Mr. Diffenbaugh has extensive experience in the inspection, design, and rehabilitation of commercial and industrial buildings, water and wastewater treatment facilities, health care facilities, and maintenance facilities for bus and rail systems. This experience is significant because many of the projects he has been involved with have been multi-discipline design and construction projects and having that "field" knowledge gives him a more holistic perspective when performing constructability reviews of projects.

Structural - Bradley A. Diffenbaugh, P.E., Senior Structural Engineer/ Senior Project Manager.

Site/Civil - Michael A. Neely, P.E. – Mr. Neely is a Senior Project Manager in Morgantown. With over 12 years of experience, he is responsible for the design and management of highway/roadway, site development, and airport projects, including right-of-way, site grading, stormwater, utilities, signing and pavement marking, erosion and sediment pollution control, final cross sections, quantities, cost estimation and report preparation. Mr. Neely is experienced in the use of various design and drafting software packages including MicroStation, InRoads, AutoCAD, WaterCAD, StormCAD, CulvertMaster, FlowMaster, and PondPack as well as Microsoft Office Suite of programs.

Geotechnical Engineering - Robert H. Yauger, P.E. – Mr. Yauger is a Geotechnical Project Manager responsible for managing geotechnical aspects on projects involving the design of highway, water supply, mine reclamation, landfill, and other geotechnical systems.

Mechanical / Electrical / Plumbing (MEP): - Thomas M. Long, P.E. - Mr. Long is the Mechanical Section Manager and Senior Project Manager responsible for technical direction, staff development, business development, project management, administration, quality assurance/quality control (QA/QC), and overall performance of the Mechanical Section. Experience includes engineering design, economic evaluations, studies, development and preparation of construction drawings and specifications, and on-site review of mechanical construction. Has extensive experience in heating, ventilation, and air conditioning (HVAC) and in the areas of industrial ventilation, engineered plumbing, fire protection, process piping, and control systems for commercial, industrial, and institutional projects.

Additional information including an Organization Chart and resumes of key personnel for Gannett Fleming and DRS Architects follows:

**YEARS EXPERIENCE:** 20

**EDUCATION:**

B.S.C.E., Civil Engineering, West Virginia University, 1987
M.S.C.E., Structural Engineering, West Virginia University, 1993

**PROFESSIONAL REGISTRATION(S):**

P.E.: Ohio - No. 66132 (2001)
West Virginia - No. 15710 (2003)
Kentucky – No. 24682 (2006)

**CURRENT RESPONSIBILITIES:**

**Manager WV Operations -** responsible for supervising, directing, and performing structural design activities, as well as the complete development of plans and specifications for highway bridges and other transportation related structures. Experience includes nondestructive testing and evaluation of highway bridges using real time intelligent devices; damage detection using dynamic characterization; load assessment using frequency measurements; ultrasonic testing; and instrumentation. Responsibilities also include structural repair and rehabilitation of conventional and historic structures using fiber reinforced polymer (FRP) composite materials. Also responsible for preparing budget information, scheduling project related submissions, and preparing proposals with man-hour estimates.

**SUMMARY OF EXPERIENCE:**

**Headsville Bridge Replacement, Mineral County, WV,** *West Virginia Department of Transportation, Division of Highways.* Project Manager and Senior Structural Engineer responsible for designing a bridge replacement. Work includes development of structure geometry; type, size, and location studies; foundation submissions; final design submission; and construction cost estimates. The Headsville Bridge consists of four horizontally curved steel plate girders and the substructure units consist of semi-integral abutments supported by steel piles and two single column post-tensioned integral piers with solid circular column shafts.

**Dolls Run Bridge Replacement, Monongalia County, WV,** *West Virginia Department of Transportation, Division of Highways.* Senior Structural Engineer responsible for designing a bridge replacement. Work includes development of structure geometry; type, size, and location studies; foundation submissions; final design submission; and construction cost estimates. The project consists of replacing the existing bridge with a new structure at its existing location using a temporary bridge for maintaining traffic. The structure is on a 30-degree skew and tangent alignment. The superstructure consists of a single span steel structure with integral abutment.

**Morgan Run Bridge, Monongalia County, WV,** *West Virginia Department of Transportation, Division of Highways.* Senior Structural Engineer responsible for pier redesign as a VE to Mosites Construction Company.

**16th Street Bridge, Phoenix, AZ,** *City of Phoenix Street Transportation Department.* Senior Structural Engineer responsible for retrofit of a two span concrete slab bridge using carbon fiber reinforced polymer (CFRP) composite materials. The project also included preparing bridge repair plans, calculating load ratings, and load testing using strain gages to verify effectiveness of FRP repair.

**19th Avenue Bridge, Phoenix, AZ,** *City of Phoenix Street Transportation Department.* Senior Structural Engineer responsible for retrofit of a three span concrete slab bridge using carbon fiber reinforced polymer (CFRP) composite materials. The project also included preparing bridge repair plans, calculating load ratings, and load testing using strain gages to verify effectiveness of FRP repair.

**Automated Train Guideway, Phoenix, AZ,** *City of Phoenix Sky Harbor International Airport.* Senior Structural Engineer responsible for the design and plan development for a portion of an elevated automated train. Structures include a portion of the mainline in a switching area and two spans to a maintenance facility. The main line structure is a four-span, multiple steel box girder (tub girder) superstructure. The spur lines consist of three-span curved continuous single steel box girder (tub girder) superstructures.

**Evansdale Campus Bridge-Garage, Morgantown, WV**, *West Virginia University (WVU).* Project Manager responsible for development of conceptual renderings for pedestrian bridge over US 19 on the Evansdale campus. These early concepts included cable-stayed and arch truss type alternatives. Project also included a proposed multi-level parking facility accommodating 1017 vehicles.

**North Shore Connector, Pittsburgh, PA**, *Port Authority of Allegheny County/DMJM+Harris.* Structural Project Engineer responsible for the design for a portion of 16-span aerial structure consists of structural steel, trapezoidal, plate girders spanning an average of 130 feet per span and is composed of simple, two-span and three-span continuous structures. The bridge carries light rail transit vehicles and also supports a double cross-over and station platform.

**King's Covered Bridge, Somerset County, PA,** *Pennsylvania Department of Transportation, District 9-0.* Senior Structural Engineer responsible for the rehabilitation design of a covered bridge. the King's covered bridge spans 120 feet and was built, ca. 1857. The King's bridge is historically significant because it retains its original features until it was bypassed in the 1930s by the construction of an adjacent steel highway bridge for vehicular traffic. The preservation and rehabilitation strategy for the King's covered bridge is to minimize interventions, repair in-place, and to use glass fiber reinforced polymer (GFRP) materials where possible to improve the strength and stiffness of the wooden members.

**Bridge Testing and Analysis, Various Locations, WV,** *West Virginia Department of Transportation.* Bridge Engineer responsible for evaluating tension levels of structural members using contact and non-contact (laser) vibration measurements in three bridges, including the Ice's Ferry Cheat Lake Truss Bridge, the Moundsville Tied-Arch Bridge, and the Macomber Truss Bridge.

**S.R. 28 over Yutes Run Road Bridge, Allegheny County, PA,** *Pennsylvania Department of Transportation, District 11-0.* Project Bridge Engineer for the widening of a three-span continuous reinforced concrete slab bridge supported on an integral stub abutment. The structure is on a curved alignment.

**Wood Bridge, Barbour County, WV,** *West Virginia Department of Transportation, District 7.* Bridge Engineer for the design of a 60-foot-long, single-span bridge. The structure consisted of a Parallam (engineered wood) deck supported on steel rolled beams.

**Railroad Bridge, Moorefield, WV,** *West Virginia Department of Transportation, State Rail Authority.* Bridge Engineer responsible for the rehabilitation and repair of a seven-span timber railroad bridge using FRP composite materials.

**Bridge Designs, Various Locations, WV,** *West Virginia Department of Transportation.* Bridge Engineer for the design of various short-span highway and pedestrian bridges using fiber reinforced polymer (FRP) decks.

**Salt Creek Bridge, Muskingum County, OH,** *Ohio Historical Society.* Bridge Engineer responsible for performing ultrasonic field testing of a historic covered bridge. The in-situ testing indicated that 17 members in the bridge contained defects needing immediate rehabilitation.

**Elkins Bypass, Elkins, WV,** *West Virginia Department of Transportation.* Project Bridge Engineer for the design of a 125-foot-long, dual single-span bridge. The structure consists of steel plate girders supported by a reinforced concrete integral-type abutment.

**Mon/Fayette I-68 Interchange and Expressway, Morgantown, WV,** *West Virginia Department of Transportation.* Project Bridge Engineer for the design of a 155-foot-long, dual single-span bridge. The structure is on a 30-degree skew and curved alignment. The superstructure consists of curved steel plate girders supported by a reinforced concrete integral-type abutment.

**Mon/Fayette I-68 Interchange and Expressway, Morgantown, WV,** *West Virginia Department of Transportation.* Project Bridge Engineer for the design of the structure geometry of a 600-foot-long ramp. The structure is on a 30-degree skew and curved alignment. The superstructure consists of curved steel plate girders.

**Mon/Fayette I-68 Interchange and Expressway, Morgantown, WV,** *West Virginia Department of Transportation.* Project Structural Engineer for a 300-foot soldier pile and concrete lagging retaining wall.

**S.R. 1001 (Freeport Road), Section A14 over Deer Creek, Harmar Township, Allegheny County, PA,** *Pennsylvania Department of Transportation, District 11-0.* Project Bridge Engineer for the design of a widening of S.R. 1001 (Freeport Road), Section A14, Segment 0220, Offset 1890 over Deer Creek. The project involved the design of additional prestressed concrete beams to accommodate one extra northbound lane of traffic. The structure is on a 74-degree skew and curved alignment.

**Steel Bridge, Duquesne, Allegheny County, PA,** *Pennsylvania Department of Transportation, District 11-0.* Project Bridge Engineer responsible for the preliminary design of an 81-foot, single-span, steel plate girder bridge supported by reinforced concrete abutments. The structure provides grade-separated access (fly-over ramp) over Norfolk Southern Railroad tracks to the RIDC Riverplace City Center.

**S.R. 1001 over I-90, Erie County, PA,** *Pennsylvania Department of Transportation, District 1-0.* Project Bridge Engineer for the foundation redesign for a bridge over an interstate highway. Work included stem widening design, final drawings, material specification, and quantity calculations.

## PROFESSIONAL AFFILIATIONS AND PUBLICATIONS:

American Society of Civil Engineers
Association for Bridge Construction and Design
Steering Committee Member, National Conference on Integral Abutment and Jointless Bridges, 2005. Conference sponsored by FHWA and WVDOT.
Developed two (2) workshops (for WVDOT) across WV on Load Rating Timber Bridges.

**SELECTED PUBLICATIONS (more than 50 total):**

Petro S. H., "First-class upgrade: Series of bridges in Phoenix Strengthened Successfully." *Roads & Bridges* Magazine, May 2010.

Petro S. H., Peaslee J. T., Leech, T. G. "Strengthening a Concrete Slab Bridge Using CFRP Composites." ISEC-5, The Fifth International Structural Engineering and Construction Conference, Las Vegas, Nevada, 2009 (accepted for publication and presentation).

Petro, et al. "King's Covered Bridge Restoration" IBC-06-05, International Bridge Conference, Pittsburgh, Pennsylvania, 2006.

Petro, S. H., H. GangaRao, E. Kemp. "Saving Covered Bridges With Glass Fiber Reinforced Polymers." APT Bulletin, The Journal of the Association for Preservation Technology, 2004.

Petro, S. H., Z. Shekar, H. GangaRao. "Fiber Reinforced Polymer Composite Bridges in West Virginia." Transportation Research Record: Journal of the Transportation Research Board, No. 1819, Volume 2, Eighth International Conference on Low-Volume Roads, TRB, National Research Council, Washington, DC, 2003, pp. 203-209.

Petro, S. H., H. GangaRao. "Modern Timber Bridges: Manual for Load Rating." West Virginia Department of Transportation, Division of Highways, Charleston, WV, 2003.

Petro, S., Chen, S., GangaRao, H., Venkatappa, S., (1997)," Damage Detection Using Vibration Monitoring," Proceedings, 15th International Modal Analysis Conference, Orlando, Florida.

Petro, S. H., Halabe, U. B., Fuchs, P., Klinkhachorn, P., and GangaRao, H. V. S. (1996). "Fatigue evaluation of highway bridges using ultrasonic stress measurements," Building International Community of Structural Engineers - Proceedings of ASCE Structures Congress XIV, Chicago, IL, April 15-18, pp. 876-883.

**YEARS EXPERIENCE WITH FIRM:** 2

**YEARS EXPERIENCE WITH OTHER FIRMS:** 10

**EDUCATION:**

B.S., Civil Engineering, West Virginia University, 1996

**PROFESSIONAL REGISTRATION(S):**

West Virginia - No. 015304 (2002)
Florida - No. 61143 (2004)

**CURRENT RESPONSIBILITIES:**

**Project Manager** for the West Virginia Regional Office responsible for the design of highway and airport projects, including right-of-way, site development, stormwater, utilities, signing and pavement marking, erosion and sediment pollution control, final cross sections, quantities, and report preparation. Also assists in client consultation, budget preparation, and project scheduling.

**SUMMARY OF EXPERIENCE:**

**Preston County 911 Center, Kingwood, WV,** *Preston County Commission,* Project Manager responsible for final site design, utility coordination, construction plan preparation, permitting and construction observation of a new 911 center located on +/- 5 acres located just outside the City of Kingwood. This project is currently in the design phase.

**Sunnyside Up, Morgantown, WV,** *RBA Group, Inc.,* Project Manager responsible for utility coordination and preliminary engineering design and cost estimation of a stormwater management system for the Sunnyside area of the City of Morgantown.

**Jerome Park Subdivision, Morgantown, WV,** *Habitat for Humanity of Monongalia County.* Project Manager/Project Engineer responsible for final site design, utility coordination, construction plan preparation, permitting and construction observation of a +/- 13 unit single family subdivision located within the City of Morgantown. This project is currently in the design phase.

**Mingo County Airport, Mingo County, WV,** *Chapman Technical Group.* Project Manager responsible for the design and preparation construction plans for a +/- 2 mile access road for a new airport in Mingo County. The design includes horizontal and vertical geometry, erosion and sedimentation control, stormwater management, NPDES permitting, quantity calculation and cost estimation.

**Logan County Airport, Logan County, WV,** *Chapman Technical Group.* Project Manager responsible for the preparation of an airport layout plan. This package includes a property map of land uses, airspace evaluation and plans for future improvements to the 3600' runway and terminal area.

**Evansdale Campus Bridge-Garage, Morgantown, WV,** *West Virginia University (WVU).* Project Engineer responsible for preliminary parking garage layout and access road design for a 1,000-space parking garage at the WVU Coliseum.

**North Shore Connector, Pittsburgh, PA,** *Port Authority of Allegheny County/DMJM+Harris.* Project Engineer responsible for the final design of a 12-inch waterline relocation, including quantity

calculations, specification review, and plan preparation. Performed final design of erosion and sedimentation control facilities including quantity calculations, specification review, and plan preparation.

**Final Design, S.R. 0022, Section B10, Westmoreland County, PA,** *Pennsylvania Department of Transportation (PennDOT), District 12-0.* Project Engineer responsible for updating stormwater management detention facilities and stormwater drainage systems. Tasks include verifying detention facility and drainage system capacities, updating facilities as necessary, and generating detailed storm water management and roadway drainage reports following PennDOT guidelines.

**Mon/Fayette Expressway, PA 51 to Pittsburgh, Section 53M, Pittsburgh, PA,** *Pennsylvania Turnpike Commission.* Project Engineer responsible for developing utility relocation plans for overhead and underground electric and natural gas lines.

**WV 705 Connector Design Study Report, Monongalia County, WV,** *West Virginia Department of Transportation, Division of Highways (WVDOH).* Project Manager responsible for preliminary roadway design of an approximately three-mile section of roadway to connect the WV 705 Connector to Beechhurst Avenue in downtown Morgantown, including an interchange at the intersection with the WV 705 Connector. The main alignment follows the Falling Run Valley with multiple alignments between University Avenue and Beechhurst Avenue. This portion of the project required significant coordination between WVDOH, the City of Morgantown, West Virginia University, and developers along the corridor.

**Dolls Run Slab Bridge Replacement, Monongalia County, WV,** *West Virginia Department of Transportation, Division of Highways.* Project Manager responsible for quantity calculations, construction cost estimate, construction working-day estimate, final roadway construction plan preparation, and quality control.

**Headsville Bridge Replacement, Mineral County, WV,** *West Virginia Department of Transportation, Division of Highways.* Project Manager responsible for highway design, quantity calculations, construction cost estimate, construction working-day estimate, final roadway construction plan preparation, and quality control.

## EXPERIENCE PRIOR TO GANNETT FLEMING:

**RWA, Inc., Naples, FL**

**Project Engineer and Project Manager** responsible for overseeing an engineering group and providing project coordination, project design, permitting, and contract document preparation. Other duties included client consultation, subconsultant coordination, and project management. Typical permitting efforts required a site development permit through Collier County Community Development and Environmental Services, an environmental resource permit through the South Florida Water Management District, a General Permit for Construction of Water Main Extensions, a General Permit for Constructing a Domestic Wastewater Collection/Transmission System, and a Generic Permit for Stormwater Discharge from Small and Large Construction Activities through the Florida Department of Environmental Protection.

**Orchid Cove, Port of the Islands, Collier County, FL,** *Bayview Villas, LLC.* Project Manager responsible for overseeing the design, permitting, contract document preparation, subconsultant coordination, and client consultation for a condominium association containing 160 residential units housed in 40 buildings located on approximately 50 acres. The project included a stormwater management system to collect and detain stormwater on site and provide water quality treatment prior to

discharge offsite, a potable water line extension, a fire/irrigation line extension, internal gravity sanitary sewer lines, and a sanitary sewer lift station to support the community.

**Gusto Bella Vita, Naples, FL,** *Equity Resources, Inc.* Project Manager responsible for overseeing the design, permitting, contract document preparation, subconsultant coordination, and client consultation for a condominium association containing 160 residential units housed in 40 buildings located on approximately 70 acres. The project consisted of a stormwater management system to collect and detain stormwater on site and provide water quality treatment prior to discharge offsite, a potable water line extension, on-site gravity sanitary sewer lines, and a sanitary sewer lift station to support the community.

**Trail Ridge, Naples, FL,** *Habitat for Humanity.* Project Manager responsible for overseeing the design, permitting, contract document preparation, subconsultant coordination, and client consultation for a single-family subdivision containing 204 residential units. The project consisted of a stormwater management system, potable water line extension, gravity sanitary sewer lines, and a sanitary sewer lift station to support the community.

**Collier County Fleet Facility, Naples, FL,** *Disney and Associates, PA.* Project Manager for a facility to house the Collier County vehicle maintenance facility, Collier County Sheriffs administration and vehicle maintenance facility, and a communication tower on approximately 10 acres. Responsibilities involved overseeing the design, permitting, contract document preparation, subconsultant coordination, and client consultation. The project consisted of three buildings, a stormwater management system, potable water line extension, gravity sanitary sewer lines, a sanitary sewer lift station, and parking lot layout.

**Golden Gate Fire Station No. 73, Naples, FL,** *Golden Gate Fire and Rescue District.* Project Manager responsible for the design, permitting, contract document preparation, subconsultant coordination, and client consultation for a fire station and administration building located on approximately five acres. The project consisted of a fire station building, an administration building, a stormwater management system, potable water line extension, gravity sanitary sewer lines, and parking lot layout.

**Golden Gate Parkway, Grade-Separated Overpass, Naples, FL,** *Collier County Transportation Department.* Project Engineer for the reconstruction of a 1.6-mile section of the Golden Gate Parkway from a four-lane rural roadway to a six-lane urban roadway with a single-point elevated urban interchange. Responsible for the design of drainage and stormwater management systems and signing and pavement marking plans.

**Alpha Associates, Inc., Morgantown, WV**

**Project Engineer** responsible for the design of highway and airport projects including right-of-way, site development, stormwater, utilities, signing and pavement marking, erosion and sediment pollution control, final cross sections, quantities, and the preparation of required reports.

**Springfield Grade Road, Hampshire County, WV,** *West Virginia Department of Transportation Division of Highways.* Project Engineer for a project to raise the grade of a ½-mile section of County Route 3, a two-lane rural route along the South Branch of the Potomac River, to reduce the frequency of roadway flooding events. Responsible for engineering design including geometric design, stormwater collection, coordination with The Nature Conservancy and geotechnical engineers, as well as the preparation of construction documents including roadway plans, signing and pavement marking, right-of-way maps, and utility coordination and relocation.

**Wheatland Road, Martinsburg, WV,** *West Virginia Department of Transportation, Division of Highways.* Project Engineer responsible for engineering design for the reconstruction of a two-mile section of U.S. Route 11 from a two-lane rural section to a three-lane urban section with a center left-turn

lane. Project tasks involved geometric design, stormwater collection, and the preparation of construction documents, including roadway plans, signing and pavement marking, right-of-way maps, and utility coordination and relocation.

**Rocky Lane, Martinsburg, WV,** *West Virginia Department of Transportation, Division of Highways.* Project Engineer responsible for engineering design to realign the intersection of Rocky Lane and U.S. Route 11 and to widen U.S. Route 11 to provide turning lanes onto Rocky Lane. Project tasks involved geometric design, stormwater collection, and the preparation of contract documents, including roadway plans, signing and pavement marking, and right-of-way maps.

**Uvilla-Shepherdstown Road, Uvilla, Jefferson County, WV,** *West Virginia Department of Transportation, Division of Highways.* Project Engineer responsible for engineering design to widen a ½-mile section of County Route 230. Project tasks involved geometric design, stormwater collection, and the preparation of contract documents, including roadway plans, signing and pavement marking, and right-of-way maps.

**Market Street Bridge, Wheeling, WV,** *West Virginia Department of Transportation, Division of Highways.* Project Engineer responsible for engineering design to replace the Market Street Bridge. Project tasks involved geometric design, stormwater collection, coordination with geotechnical and structural engineers, and the preparation of contract documents, including roadway plans, signing and pavement marking, and right-of-way maps.

**South High Street Bridge, Morgantown, WV,** *West Virginia Department of Transportation, Division of Highways.* Project Engineer responsible for engineering design to replace the South High Street Bridge. Project tasks involved geometric design, stormwater collection, coordination with geotechnical and structural engineers, and the preparation of contract documents, including roadway plans, signing and pavement marking, and right-of-way maps.

**Williamstown Information Center, Williamstown, WV,** *West Virginia Department of Transportation, Division of Highways.* Project Engineer responsible for engineering design for a new information center located off of Interstate 77. Project tasks involved geometric design, grading, stormwater collection, and parking lot layout; coordination with geotechnical engineers, structural engineers and architects; and the preparation of contract documents, including roadway plans, signing and pavement marking, utility coordination, and right-of-way maps.

**I-68 Welcome Center, Hazelton, WV,** *West Virginia Department of Transportation, Division of Highways.* Project Engineer responsible for quantity estimates, geometric design, grading, and stormwater collection for a new welcome center.

**West Buckeye Acrow Bridge, Monongalia County, WV,** *West Virginia Department of Transportation, Division of Highways.* Project Engineer responsible for engineering design to replace the West Buckeye Bridge on County Route 39/1. Project tasks involved geometric design, stormwater collection, coordination with geotechnical and structural engineers, and contract document preparation, including roadway plans, signing and pavement marking, and right-of-way maps.

## PROFESSIONAL AFFILIATIONS:

National Society of Professional Engineers

**YEARS EXPERIENCE WITH FIRM:** 10

**YEARS EXPERIENCE WITH OTHER FIRMS:** 10

**EDUCATION:**

B.S., Civil Engineering, Carnegie Mellon University, 1993

**PROFESSIONAL REGISTRATION(S):**

P.E.: Pennsylvania - No. 055063E (1999)
P.E: West Virginia – (Pending)

**CURRENT RESPONSIBILITIES:**

**Geotechnical Project Manager** responsible for managing geotechnical aspects on projects involving the design of highway, water supply, mine reclamation, landfill, and other geotechnical systems. Responsibilities include preparing technical scopes of work and man-hour estimates, negotiating with clients, preparing project schedules, tracking project budgets, providing technical assistance to staff engineers, preparing and/or reviewing geotechnical work products, and coordinating the geotechnical aspects of projects with other design disciplines and clients.

**SUMMARY OF EXPERIENCE:**

**U.S. Route 35 Widening, Little Five Mile Creek to Coast Guard Station, Point Pleasant, WV,** *West Virginia Department of Highways.* Geotechnical Project Manager responsible for final design geotechnical investigations and recommendations for approximately two miles of new four-lane highway. Developed boring contract and oversaw subsurface exploration program involving over 6,000 linear feet of drilling and multiple drilling subcontractors. Roadway recommendations included numerous cut and fill slope designs and settlement evaluations. Geotechnical recommendations in support of structural design included deep foundation recommendations for three structures. Computations included pile capacity evaluations, negative skin friction considerations, and drivability analyses. Detailed Geotechnical Engineering Reports and Structure Foundation Reports were prepared and updated based on the continually evolving design. Continually worked with the Client and prime consultant to ensure consistent design.

**Dolls Run Bridge Replacement, Monongalia County, WV,** *West Virginia Department of Transportation, Division of Highways.* Geotechnical Engineer responsible for foundation design recommendations and roadway approach work for bridge replacement project. Evaluations included bearing capacity, scour, and global stability considerations for new structure. Recommendations for roadway design included evaluations of embankment slope stability, consolidation settlements, and lateral squeeze in soft alluvial soils. Prepared final report of recommendations including detailed analyses.

**Beaner Hollow Roadway Improvements, S.R. 4016, Section B01, Brighton, PA,** *Pennsylvania Department of Transportation, District 11-0.* Geotechnical Project Manager responsible for design and construction oversight of approximately 1,200 feet of two-lane state-owned roadway that was failing due to a loss of support caused by a sliding land mass beneath the roadway. Work was performed under an emergency contract, as the roadway provides direct access to Beaver County Medical Center, and an existing eight-inch gas line located directly beneath the roadway was jeopardized by the slide. Developed

innovative slide stabilization designs incorporating drilled soil nails, high-tensile steel wire mesh, and erosion control matting. Developed final design plans, specifications, and estimates. Provided periodic construction oversight and observation of soil nail testing. Coordinated directly with the Department of Transportation, the construction manager, and the contractor to assist in responding to requests for information (RFIs) and inspecting the work in progress.

**Monongahela Lock and Dam No. 3 Study, Pittsburgh, PA,** *U.S. Army Corps of Engineers, Pittsburgh District.* Assistant Project Manager responsible for formulating and developing multiple stability and reliability models for an existing 100-year-old lock and dam structure on the Monongahela River, and developing detailed construction rehabilitation recommendations. Stability analyses consisted of modeling and evaluating eight typical two-dimensional models for various individual locks and dam structures in a spreadsheet environment bearing on bedrock or driven timber piles within the river alluvium. Reliability analyses were conducted through Monte Carlo simulation using the Microsoft Excel add-in program @Risk. Developed final geotechnical and structural plans, specifications, and cost estimate for stability improvements to the existing fixed-crest dam, consisting of a sheet pile cut-off wall, downstream stone scour protection, and detailed construction staging and sequencing plan. Developed conceptual recommendations for structure monitoring, construction rehabilitation, and associated cost estimates for the lock structures based on the reliability evaluations.

**Emsworth Dams Apron Extension, Pittsburgh, PA,** *U.S. Army Corps of Engineers, Pittsburgh District.* Assistant Project Manager responsible for developing final plans, specifications, and estimates for both the main and back channel Emsworth dams. Completed the development of preliminary cost and feasibility alternative analyses to develop scour protection recommendations and select apron extension type. Technical alternatives considered included a new precast-concrete apron extension, tremie concrete construction, and prefabricated articulated concrete mat apron construction. Planned and monitored a subsurface investigation program, involving 24 geotechnical test borings drilled from a barge in the Ohio River. Developed the final design, consisting of a combination of prefabricated concrete slabs and tremie concrete. Final design also included two combination pipe and sheet pile cut-off walls, downstream stone scour protection, a graded rock filter, and grouted stone for riverbank protection. Developed two distinct sets of plans, specifications, and estimates for both the main and back channel dams.

**S.R. 3016, Section B02, Green Garden Road Bridge Replacement, Hopewell, PA,** *Pennsylvania Department of Transportation, District 11-0.* Assistant Project Manager responsible for developing final design geotechnical recommendations in support of a single-span bridge replacement over Raccoon Creek and associated roadway realignments. Developed and executed a subsurface investigation and a soil and rock laboratory testing program for bridge foundations and roadways. Developed detailed cost estimates for bridge foundation alternatives, performed final geotechnical evaluations, and developed construction recommendations for drilled pile-supported abutment structures. Evaluated corrosivity due to the presence of a coal seam within the foundation bearing material, and provided special provisions for the construction of the deep foundations.

**Waterford Energy Facility, Waterford, OH,** *Bowen Engineering Corporation.* Geotechnical Engineer responsible for the design of an active landslide stabilization system and pump intake facility at an electric generating facility. Designed an anchored caisson wall system to stabilize the landslide along approximately 250 linear feet of proposed intake pipeline, developed a temporary shoring system for a pump intake facility, prepared project specifications for the installation of caissons and anchors, and provided part-time construction inspection of geotechnical activities.

**PA Route 68 Bridge and Culvert Replacements Over Wolf Run and Six Mile Run Creek, S.R. 0068, Sections 016 and B03, Beaver County, PA,** *Pennsylvania Department of Transportation (PennDOT), District 11-0.* Geotechnical Engineer responsible for providing structure foundation recommendations for the removal and replacement of a bridge and culvert structure supporting S.R. 0068 over Wolf Run and Six Mile Run Creek, respectively. Conducted bearing capability and settlement analyses for the proposed structures and developed geotechnical recommendations in accordance with PennDOT *Design Manual (DM)-4.* Developed special provisions for temporary shoring during construction and for concrete corrosion protection. Prepared and produced the structure foundation report for each proposed structure.

## EXPERIENCE PRIOR TO GANNETT FLEMING:

**Michael Baker, Jr., Inc., Pittsburgh, PA**

**S.R. 0028, Sections A09 and A10, Pittsburgh, PA,** *Pennsylvania Department of Transportation, District 11-0.* Geotechnical Engineer responsible for preliminary geotechnical alternatives analyses of three proposed roadway alignments of the Route 28 corridor in Etna. Evaluations included consideration of embankment fill and benching requirements, associated right-of-way constraints, and potential alternatives for steepened embankments. Preliminary evaluations of cut slope conditions included a thorough evaluation of existing slope conditions with special consideration to marginally stable claystone, colluvial, and fill conditions, and analyses of potential impacts of the roadway alternatives to the existing slope.

**Chester Industrial Highway, S.R. 0291, Section A10, Chester County, PA,** *Pennsylvania Department of Transportation, District 6-0.* Geotechnical Engineer responsible for conducting pile design and liquefaction analysis. Completed settlement analysis for the approach embankment.

**Corridor H Section 6 Subsurface Investigation, Hardy County, WV,** *West Virginia Department of Highways.* Geotechnical Engineer responsible for performing a test boring inspection for more than 100 roadway and structure borings. Conducted slope stability analyses for embankment cut-and-fill slope designs. Provided recommended allowable bearing capacities and lateral earth pressures for structure foundations. Calculated and tracked estimated earthwork quantities.

**Cargo Interchange, S.R. 3160, Section A03, Allegheny County, PA,** *Moon Township Municipal Authority.* Geotechnical Engineer responsible for inspecting test borings for roadways and structure foundations. Performed slope stability analyses on fill embankments and evaluations of proposed cut-slope ratios and associated coal seam treatments. Calculated and tracked earthwork quantities, incorporating estimates of shrink and swell for construction. Completed detailed pavement evaluations and design for new roadway pavements in accordance with Publication 242 and provided recommendations for subgrade improvements.

## PROFESSIONAL AFFILIATIONS AND PUBLICATIONS:

Officer, U.S. Army Reserves, Corps of Engineers
American Society of Civil Engineers
Society of American Military Engineers
Pittsburgh Post Secretary, 2000-2003
Pittsburgh Post Vice-President, 2009

James, James R., and Yauger, Robert H. "Monongahela Locks and Dam No. 3 Risk and Reliability Evaluations." *Association of State Dam Safety Officials,* Northeast Region Annual Conference, 2007.

# Paul W. Huffman, P.E., LEED AP, C.E.A. Resume

**YEARS EXPERIENCE WITH FIRM:** 28

**YEARS EXPERIENCE WITH OTHER FIRMS:** 0

**EDUCATION:**

B.S., Mechanical Engineering, The Pennsylvania State University, 1982
80-hour Gannett Fleming/The Pennsylvania State University collaborative Project Manager Training Program, 2001

**PROFESSIONAL REGISTRATION(S):**

P.E.: Pennsylvania - No. PE036217E (1987)
Maryland - No. 27702 (2002)
New York - No. 080885 (2003)
Kentucky - No. 24983 (2006)
Missouri - No. 2007000410 (2007)
Georgia - No. PE028590 (2003)
District of Columbia - No. PE905649 (2010)
USGBC - LEED 2.2 Accredited Professional (2009)
Certified Energy Auditor: The Association of Energy Engineers (2010)

**CURRENT RESPONSIBILITIES:**

**Mechanical Engineer** responsible for design development for a variety of mechanical systems including heating, ventilation, and air conditioning (HVAC) and plumbing for industrial and commercial clients.

**SUMMARY OF EXPERIENCE:**

**Tunnel Inspection Services for Tunnel Operations, Washington, DC,** *District of Columbia Department of Transportation.* Mechanical Discipline Manager responsible for performing quarterly inspections of various tunnels, including the Mall, Air Rights, and 9th and 12th Street Tunnels. Work included visual observations of the equipment, testing and operational observations, and a review of preventive maintenance procedures. Deliverables included a scoring summary of the mechanical and plumbing equipment and devices and a written report.

**Indefinite Delivery/Indefinite Quantity Engineering Services, New Cumberland, PA,** *Defense Distribution Depot Susquehanna Pennsylvania.* Senior Project Manager for a multi-year indefinite delivery contract at a military base valued at $500,000 per year. Projects have included:

- Condition assessment and a report of a 1.6 million-square-foot distribution center. Detailed studies were performed for roofing, HVAC, and electrical systems.
- HVAC upgrades of the Officer's Club, including converting the building to water-source heat pumps.
- Various HVAC replacement projects.
- Roof replacements for five buildings, including the design of the first green roof on the base.
- Structural assessment of 34 buildings. Deliverables included a detailed report and design documents to correct deficiencies.

- Fire protection upgrades at multiple buildings.

**Health Department Building Upgrades, Annapolis, MD,** *Anne Arundel County.* Project Manager and Principal Mechanical Engineer responsible for the HVAC renovations of the buildings at One and Three Harry S. Truman (HST) Boulevard. Work included a detailed survey of the existing buildings and systems, updates to floor plans and ceiling plans, load calculations, and replacement of existing water-source heat pumps. Also included were the replacement of the boiler at One HST and the make-up air units at Three HST.

**Library Headquarters, Annapolis, MD,** *Anne Arundel County.* Project Manger and Principal Mechanical Engineer responsible for the HVAC renovations of the Library Headquarters at Five Harry S. Truman Boulevard, involving the replacement of package terminal air conditioner units and four water-source heat pumps.

**Corbalis Water Treatment Plant, Herndon, VA,** *Fairfax Water.* Mechanical Engineer responsible for the study, design, and construction services associated with replacing air handling units and ductwork in a solids dewatering building. During the study phase, developed a low-cost alternate to replacing units in an inaccessible location.

**Chantilly Vehicle Maintenance Facility, Chantilly, VA,** *Fairfax Water.* Mechanical Engineer responsible for the study and design of HVAC renovations to a vehicle maintenance facility. The study included a condition assessment of the facility's mechanical systems and a report with recommendations and construction cost estimates. Design work included the upgrade of HVAC and vehicle exhaust systems in the repair shop portion of the facility.

**Fort Meade Senior High School, Anne Arundel County, MD,** *Anne Arundel County Public Schools.* Project Manager responsible for preparing and submitting documentation for converting from a private natural gas system to a public system. Work included a survey of the school and the preparation of a gas load letter and drawings with gas pipe modifications.

**On-Call Miscellaneous Services, Frederick County, MD,** *Frederick County Public Schools.* Mechanical Engineer on a contract to provide a wide variety of engineering services for existing facilities. Current projects include:

- Midtown Elementary School elevator.
- Gov. Thomas Johnson High School - Reviewed the existing automatic temperature control system for compliance with contract documents. Submitted a report indicating deficiencies.

**Hillside Maintenance Complex Shop Improvements, Queens, NY,** *MTA Long Island Rail Road (LIRR).* Project Engineer assisting in the design of improvements to an existing railroad maintenance facility. The renovated facilities will enable LIRR to efficiently perform life-cycle maintenance activities and unscheduled repairs on its complete fleet of M-7 electric cars, diesel electric locomotives, and bi-level coaches. Responsibilities included HVAC and plumbing design for the reconfiguration of the truck, wheel, motor, and air brake shop work areas. Work elements were prioritized, and four separate design packages were produced to allow LIRR to accelerate the completion of the most critical improvements. Each package included a staging plan designed to keep the shops operational during construction.

**Turnkey Replacement Proposal, Camp Hill, PA,** *Gannett Fleming.* Mechanical Engineer responsible for preparing a request for proposal package for the turnkey replacement of a 360-ton, water-cooled

chiller located in the penthouse of a six-story building. Work included preparing a detailed scope of work, procuring bids, and reviewing submittals.

**South River High School, Anne Arundel County, MD,** *Anne Arundel County Public Schools.* Principal Mechanical Engineer and Project Manager responsible for HVAC renovations, including the replacement of air handling units, cooling tower, and chillers. Work included life-cycle cost analyses for cooling systems, replacement of one water-cooled chiller with two water-cooled chillers, replacement of one cooling tower with two cooling towers, ASHRAE 15 compliance, and related electrical and control upgrades. Services also included bid and construction services.

**Center of Applied Technology South, Anne Arundel County, MD,** *Anne Arundel County Public Schools.* Principal Mechanical Engineer and Project Manager responsible for HVAC renovations, including the replacement of rooftop air conditioning units with a two-pipe system (hot water/chilled water), addition of air-cooled chiller, chilled-water piping, replacement and addition of make-up air systems in shop areas, replacement of exhaust fan, and conversion of controls from pneumatic to direct digital control. Services also included bid and construction services.

**Lothian Elementary School, Anne Arundel County, MD,** *Anne Arundel County Public Schools.* Project Manager responsible for HVAC and electrical renovations, including the replacement of classroom unit ventilators, addition of an air-cooled chiller, air conditioning for the gymnasium and cafeteria, and electrical upgrades to air handling units, cooling tower, and chillers. Work included converting existing boilers from steam to hot water, converting the school from self-contained unit ventilators with steam heat to unit ventilators with chilled water/hot water coils, and converting controls from pneumatic to direct digital control. Services also included bid and construction services.

**Boiler Building, Confidential Location,** *U.S. Department of Defense.* Mechanical Engineer responsible for the design of mechanical systems in a new 7,000-square-foot, steam-generated boiler plant. The project included three new 300 HP steam boilers, hot-water converters, condensate return system, heating hot-water pumping system, fuel-oil storage and pumping system, forced-air combustion air make-up system with air-cooled chiller, and replacement of underground heating hot-water piping systems. Other systems included office HVAC systems, instrument and shop compressed-air systems, emergency generator exhaust and fueling, and automatic temperature-control systems. Also coordinated the design development, construction document preparation, and construction cost-estimating services.

**Stadium Mechanical Renovations, Shea Stadium, Flushing, NY,** *City of New York Department of Design and Construction.* Mechanical Engineer responsible for the design of mechanical renovations at a major league baseball stadium. Work included the replacement of three water-cooled air conditioners, one split system, eight heating hot-water pumps, three sewage ejectors, dug-out sump pumps, and upper-level sumps, as well as the design of an energy-management system.

**Building Conversion, Swatara Township, Dauphin County, PA,** *Capital BlueCross.* Mechanical Engineer responsible for developing contract drawings and specifications for the conversion of a former AMP/Tyco light-manufacturing facility into a new 112,000-square-foot corporate facility for a healthcare provider. The facility includes a cafeteria and full-service kitchen, open and enclosed office spaces, a computer room, and mechanical and electrical spaces. All existing mechanical systems were removed. Water-source heat pumps were placed throughout the facility. Cooling towers and gas-fired boilers were installed to remove or add heat to the heat-pump water loop. Five 100 percent outside-air make-up units were installed and fresh-air-ducted to each heat pump. The make-up air units are water-source heat pumps with enthalpy wheels to recover heat from the exhaust air stream. Other mechanical systems include gas-fired humidifiers, data room cooling, water wash-down kitchen exhaust hood, domestic hot water, and an energy-management system.

**Base Hospital, Lajes Field, Azores, Portugal,** *U.S. Air Force.* Deputy Project Manager and Mechanical Engineer responsible for five projects at a 44-building base hospital that included design of a surgical suite HVAC system, design of hospital gas systems, replacement of a fire alarm system, repair of hospital interior walls and floors, and replacement of sanitary plumbing fixtures.

- **Surgical Suites:** Renovated HVAC system for surgical suites. Work included replacement of mechanical equipment, ductwork, diffusers, and automatic temperature controls. Estimated construction cost for the mechanical systems was $250,000 and $100,000 for the electrical.
- **Medical Gases:** Designed medical gas distribution system. Work included designing compressed-air and vacuum systems, gas central supply system, and gas distribution system. Gases included air, vacuum, oxygen, and nitrous oxide that were distributed to surgical suites, delivery rooms, recovery rooms, critical care rooms, and patient rooms. Estimated construction costs for the mechanical and electrical systems were $300,000 and $100,000, respectively.
- **Architectural Renovations:** Renovated interior walls and floors for a 100,000-square-foot building. Cost of the renovation work was $500,000.
- **Bathroom Facilities:** Replaced plumbing fixtures and modified the sprinkler system for toilet room upgrades. Cost of this work was $400,000.
- **Fire Alarm:** Designed a central fire alarm reporting and control system using FM radio frequency telemetry reporting equipment to provide monitoring and control of fire alarm systems for individual buildings. Work included fire alarm detection and annunciation systems design for 41 of the buildings on and off the base. Project also included designing a tower transmitter to allow communications over a large hill located outside the base. Ganflec, an affiliated company of Gannett Fleming, Inc., coordinated design documents with manufacturers located in the continental United States to secure international sales for materials being provided. Total cost of the fire alarm system was $400,000.

**Yards Creek Generating Station, Blairstown Township, NJ,** *Jersey Central Power and Light.* Mechanical Engineer responsible for designing a 1,000-gallon aboveground, double-walled fuel oil storage tank for an emergency generator. Work included tank piping, emergency venting, tank gauge, tank fittings, and spill containment.

**Yards Creek Generating Station Office and Storage Building, Blairstown Township, NJ,** *Jersey Central Power and Light.* Mechanical Engineer responsible for designing HVAC and plumbing systems for an office building. Work included surveys, calculations, design, and specifications for a 12-ton variable air volume air conditioning system, electric heat, shop, and toilet room ventilating, and plumbing systems. Also modified plumbing systems in a generating station.

**Maintenance and Storage Facility, Pittsburgh, PA,** *Pennsylvania Air National Guard.* Mechanical Engineer responsible for designing HVAC and plumbing systems for a munitions maintenance and storage facility. Work included calculations, system design, cost estimating, and specifications. Systems designed included gas-fired hot water boilers, hydronic heating system, rooftop air conditioner, solvent tank ventilating, oil interceptor, and sanitary lift station.

## PROFESSIONAL AFFILIATIONS:

American Society of Heating, Refrigerating and Air-Conditioning Engineers
Pennsylvania Society of Professional Engineers

# Gary D. Garbacik, P.E. Resume

**YEARS EXPERIENCE WITH FIRM:** 18 **YEARS EXPERIENCE WITH OTHER FIRMS:** 4

## EDUCATION:

B.S., Structural Design and Construction Engineering Technology, The Pennsylvania State University, 1991
M.E., Engineering Science, The Pennsylvania State University, 2002
80-Hour In-House Project Management Training, administered by The Pennsylvania State University, 2001

## PROFESSIONAL REGISTRATION(S):

P.E.: Pennsylvania - No. PE049751E (1997)

## CURRENT RESPONSIBILITIES:

**Structural Project Manager** responsible for structural design, preparation of construction plans and specifications, and construction-phase services for a wide variety of projects including industrial facilities, office buildings, educational institutions, commercial buildings, and water and wastewater treatment facilities. Also evaluates the integrity of existing structures; performs structural inspections, some of which involve confined space entry; and prepares reports. Responsibilities include project management, design development, contract document production, discipline coordination, and in-house construction-phase supervision for structural projects. Additional responsibilities include monitoring discipline budgets and coordinating project resources, including project staffing.

## SUMMARY OF EXPERIENCE:

**Education Center, Fairless Hills, PA,** *Exelon Generation Corporation.* Project Engineer responsible for the structural design and detailing of a new façade to be attached to an existing office structure. The façade consists of structural tube members and structural support of an architectural wing on the exterior of the building, which attaches to the façade. The project also included renovations to other portions of the office areas, including the addition of new doors through the existing structure and the addition of new permanent structures within the office area. Exelon Generation's Renewable Energy Education Center at Fairless Hills includes classrooms, a display and lobby area, and an interactive exhibit space. Located at an operating landfill gas electric power generation plant, the new spaces are accommodated by renovating an existing office suite. The squat, painted, metal panel façade was reworked with large windows walls; new metal panels; stone piers; a building-engaged stone pylon sign; and a shallow, open-framed arch above the roof line. The project attained Leadership in Energy and Environmental Design (LEED) Silver status.

**Operations and Training Facility, 201st Red Horse Squadron, Fort Indiantown Gap, PA,** *U.S. Property and Fiscal Office for Pennsylvania.* Structural Project Engineer responsible for the design and detailing of a 22,500-square-foot operations and training facility. The facility includes operations, engineering, logistics, and base operations support; mobility bag storage; and a combat arms training room using a simulated combat system. The operations and training functional areas include training, administration, storage, planning, recruiting, conference, material testing laboratory, medical, restroom/locker room, and communications area. The design, if registered with the United States Green Building Council, would attain Leadership in Energy and Environment Design (LEED)-certified status design and meet the design standards of the Anti-Terrorism/Force Protection criteria (UFC 4-010) for military facilities. Shallow foundations support insulated concrete formwork walls and shear walls. A light-gauge truss system supports a metal deck roof system.

**Lightning Force Academy, Fort Indiantown Gap, PA,** *U.S. Property and Fiscal Office for Pennsylvania.* Structural Project Engineer responsible for the design and detailing of a 4,000-square-foot facility for the training and education of personnel responsible for the construction of temporary communications rooms under simulated field conditions. The design of the facility gives students an opportunity to build and tear down communications rooms, including pulling wires via conduits to a point

outside of the facility. The design included classrooms, mock communication training rooms, an administration area, a break area, and private offices for the facility's commissioned and non-commissioned officers. The project incorporated many elements of sustainable design and met the design standards of the Anti-Terrorism/Force Protection criteria (UFC 4-010) for military facilities.

**Regional Equipment Operators Training School, Fort Indiantown Gap, PA,** *U.S. Property and Fiscal Office for Pennsylvania.* Structural Project Engineer responsible for the design and detailing for a 4,000-square-foot schoolhouse for the training and education of heavy equipment operators tasked with repairing and constructing temporary military airfields. The design included classrooms, an administration area, a break area, and private offices for the facility's commissioned and non-commissioned officers. The project incorporated many elements of sustainable design and met the design standards of the Anti-Terrorism/Force Protection criteria (UFC 4-010) for military facilities.

**Cancer Institute Facility, Hershey, PA,** *The Pennsylvania State University.* Project Engineer responsible for designing portions of a new five-level, 150,000-square-foot cancer research and treatment facility. The new facility serves as the new main entrance to the hospital through an at-grade enclosed passageway. The structural scheme for the building incorporates structural steel framing supported by a deep-type foundation system (minipiles). In addition to the passageway, a single-level, steel-framed enclosed bridge structure connects the Institute to the existing hospital. Tasks included designing structural steel and concrete deck roof/floor framing and connections for a below-grade usable space and an at-grade Healing Garden that attaches the Cancer Institute to the existing hospital. The work included retrofits to existing caissons and additional rehabilitation work to the existing structure.

# John C. Lydzinski, P.E. Resume

**YEARS EXPERIENCE WITH FIRM:** 4 **YEARS EXPERIENCE WITH OTHER FIRMS:** 1

## EDUCATION:

B.S., Civil Engineering, University of Virginia, 2004
M.S., Civil Engineering, University of Virginia, 2006

## PROFESSIONAL REGISTRATION(S):

P.E.: Pennsylvania - No. PE077560 (2010)

## CURRENT RESPONSIBILITIES:

**Structural Engineer** responsible for designing and checking a variety of structures, including buildings, transit facilities, and treatment plants.

## SUMMARY OF EXPERIENCE:

**PHX Sky Train, Phoenix, AZ,** *City of Phoenix.* Primary Structural Engineer responsible for designing a 30-foot-high vertical structure that transports pedestrians from an overhead bridge at an airport to a light rail platform at grade. Developed loading criteria in accordance with national and local codes and developed a RAM Advanse structural model to determine the structure's response to wind and seismic loading. Subsequently designed the concrete substructure from the analysis results, including cast-in-place columns and beams, a mat slab foundation, and an end pier to support a long-span 'Texas u-beam' bridge. Designed the steel framing to support the roof and escalator system with high-strength steel members, and designed concrete shear walls for the elevator tower. Also developed a building information model to aid in coordination and oversaw the development of the construction drawings.

**Air National Guard Training and Storage Facility, State College, PA,** *U.S. Property and Fiscal Office for Pennsylvania.* Structural Engineer of a multi-story building consisting of concrete shear walls and a joist floor and roof framing system. Assisted in the load development and creation of a RAM structural model, which was used to design floor and roof joists and determine lateral forces used in the design of insulated concrete formwork (ICF) shear walls and their foundations. Also designed ICF shear walls and developed a building information model, and assisted the technician in developing construction drawings and details.

**Red Horse Air National Guard Training Facility, Fort Indiantown Gap, PA,** *U.S. Property and Fiscal Office for Pennsylvania.* Structural Engineer for a steel superstructure with a lateral system composed of braced frames and masonry shear walls. Developed a RAM structural building model and subsequently analyzed the gravity and lateral steel members. Designed steel roof joist framing, continuous and spread concrete footings, and non-bearing masonry walls and lintels. Assisted in the review of shop drawings, responses to miscellaneous requests for information, and the development of material quantities.

**Air National Guard Training and Storage Facility, Fort Indiantown Gap, PA,** *U.S. Property and Fiscal Office for Pennsylvania.* Structural Engineer assisting in the development of loadings and the creation of a RAM structural model used to develop the structural steel framing to support pre-engineered roof trusses. Also designed insulated concrete formwork bearing and shear wall systems and their supporting foundation elements. Assisted in reviewing shop drawings and miscellaneous requests for information responses.

**Classroom Building, Penn State Scranton Campus, Scranton, PA,** *The Pennsylvania State University.* Structural Engineer assisting in the design of a three-story steel superstructure consisting of moment and braced-frame lateral systems. Responsibilities included the development of loading criteria, creation of the RAM structural model and its subsequent analysis, the design of a mat slab foundation, the design of bearing and lateral concrete walls, and an in-depth floor vibration analysis. Also assisted in the review of shop drawings and connection calculations.

# Thomas L. Bransom, P.E., LEED AP Resume

**YEARS EXPERIENCE WITH FIRM:** 12 **YEARS EXPERIENCE WITH OTHER FIRMS:** 1

## EDUCATION:

B.S., Mechanical Engineering Technology, The Pennsylvania State University, 1997
Introduction to Sprinkler Design for Engineers, Society of Fire Protection Engineers, 2001

## PROFESSIONAL REGISTRATION(S):

P.E.: Pennsylvania - No. PE060969 (2002)
USGBC - LEED 2.0 Accredited Professional (2002)

## CURRENT RESPONSIBILITIES:

**Mechanical Engineer** responsible for design development for a variety of mechanical systems including heating, ventilating, and air-conditioning (HVAC), plumbing, fire protection, and site utilities such as steam and chilled-water distribution systems for industrial, public works, military, and commercial clients. Also responsible for the preparation of drawings and specifications, construction-phase services, field surveys, and construction cost estimating.

## SUMMARY OF EXPERIENCE:

**PaANG Command Post, Middletown, PA,** *U.S. Property and Fiscal Office for Pennsylvania.* Mechanical Engineer responsible for designing HVAC and plumbing system modifications for a partial building renovation to incorporate a base command post into an existing building. The HVAC systems include zoned heating and air conditioning with an energy-recovery unit for a training room and conference room that will be incorporated into the command post. The new HVAC systems will operate independently from the existing building HVAC systems.

**PaANG Intelligence Vault, Middletown, PA,** *U.S. Property and Fiscal Office for Pennsylvania.* Mechanical Engineer responsible for designing HVAC system modifications in support of floor plan changes to an intelligence vault. Modifications included adding security screens in ductwork passing though the secure perimeter and relocating some sections of ductwork.

**Norristown Intermodal Parking Facility, Norristown, PA,** *Southeastern Pennsylvania Transportation Authority.* Mechanical Engineer responsible for designing HVAC, fire-suppression, and plumbing systems for an intermodal facility, which consists of five levels of parking with a bus station on the ground level. The bus station includes a ventilation system for the platform area to control the buildup of diesel exhaust fumes. The facility also includes an air-conditioned waiting and ticketing area, drivers' room, and administrative areas. Fire suppression consists of a wet-pipe sprinkler system, a manual standpipe system, and clean agent fire-suppression systems for the telecommunications rooms, generator room, and primary switchgear and transformer room.

**Mid-County Operations Facility, New Castle County, DE,** *Delaware Transit Corporation.* Mechanical Engineer responsible for designing HVAC and plumbing systems for a bus maintenance facility. The facility includes a bus wash and fueling building, a maintenance and administrative building, and an interior cleaning and fare-collection building. HVAC systems include single-zone air conditioning and heating systems and general ventilation systems with make-up air. Plumbing design included compressed air, drainage, an oil-water separator, bathrooms, and shower facilities.

**YEARS EXPERIENCE WITH FIRM:** 17 **YEARS EXPERIENCE WITH OTHER FIRMS:** 24

## EDUCATION:

B.S., Mechanical Engineering, Drexel University, 1969
80-Hour Gannett Fleming/The Pennsylvania State University Collaborative Project Management Certificate Program, 2001
Continuing training courses and seminars in Project Management, Fire Protection Systems, Indoor Air Quality, Building Control and Automation Systems, Risk Management, and Business Management Practices

## PROFESSIONAL REGISTRATION(S):

P.E.: Pennsylvania - No. PE021700E (1974)
Virginia - No. 0402010220 (1978)
California - No. 32437 (2003)
North Carolina - No. 018294 (2003)
Delaware - No. 12965 (2003)
New Jersey - No. 24GE04440200 (2003)
Nevada - No. 19540 (2008)
Massachusetts - No. 48333 (2009)
New Mexico - No. 17503 (2011)
USGBC - LEED 2.0 Accredited Professional (2002)

## CURRENT RESPONSIBILITIES:

**Mechanical Section Manager and Senior Project Manager** responsible for technical direction, staff development, business development, project management, administration, quality assurance/quality control (QA/QC), and overall performance of the Mechanical Section. Experience includes engineering design, economic evaluations, studies, development and preparation of construction drawings and specifications, and on-site review of mechanical construction. Has extensive experience in heating, ventilation, and air conditioning (HVAC) and in the areas of industrial ventilation, engineered plumbing, fire protection, process piping, and control systems for commercial, industrial, and institutional projects.

## SUMMARY OF EXPERIENCE:

**Repair or Replace Stacks and Steam Lines, Veterans Affairs Hospital, Bedford, MA,** *U.S. Army Corps of Engineers.* Project Manager responsible for the overall design and coordination of a multi-discipline project to upgrade a hospital facility. The upgrade included the design of individual free-standing stacks for three gas- or oil-fired steam boilers in the central steam plant, and the demolition of an existing 150-foot-tall masonry chimney. Construction phasing was a critical element, since the steam plant load during heating season required two boilers on line and the third operable as standby capacity. The upgrade also involved replacing approximately 700 LF of underground steam and condensate return piping, upgrading existing valve manholes, and installing a new valve manhole. A new steam-pressure-powered pump was also provided to correct a water hammer problem in one segment of the piping system.

**Stryker Brigade, Lebanon, PA,** *Pennsylvania Army National Guard.* Project Manager responsible for the final design of building HVAC and plumbing systems in a National Guard facility, consisting of renovations to an existing armory to provide a new readiness center. Multiple and redundant mechanical systems were required to accommodate the unit's mission-critical nature. The renovations were completed as a design-build project.

**Student Recreation Center, Shippensburg, PA,** *Shippensburg University.* Project Manager responsible for the engineering design on a new student recreation center. The facility includes multi-purpose gymnasium spaces (four basketball courts), an elevated running track, a fitness center, two racquetball courts, men's and women's locker rooms, a group fitness studio, toilet rooms, and administrative and

utility spaces, totaling approximately 63,000 square feet of floor space. The design incorporated energy-efficient lighting, HVAC, and plumbing systems.

**Nanoscience Laboratory, U.S. Naval Research Laboratory (NRL), Washington, DC,** *Naval Facilities Engineering Command, Chesapeake Division.* Mechanical Discipline Manager responsible for the design and coordination of HVAC, plumbing, and fire protection systems for a research laboratory. The building incorporates Class 100 clean rooms, quiet and ultra-quiet rooms (acoustically quiet and free of electromagnetic radiation), and support spaces. Design tasks included providing air-handling and air-distribution systems for all spaces to meet user requirements; connection to the NRL's central chilled-water and steam systems; supplemental glycol chiller to meet low-temperature/humidity criteria; variable-speed pumping systems; and a building automation/control system. Plumbing system design included domestic hot- and cold-water piping, acid waste drainage, high-purity compressed-air and nitrogen systems, and provision for future laboratory vacuum and high-purity water systems. The design also incorporates a complete wet-pipe automatic sprinkler system. The project required close coordination with the design-build mechanical/electrical subcontractor.

# Vladimir Cecka, P.E. Resume

**YEARS EXPERIENCE WITH FIRM:** 21 **YEARS EXPERIENCE WITH OTHER FIRMS:** 0

## EDUCATION:

B.S., Civil Engineering, Structural Design, South Dakota School of Mines and Technology, 1987

## PROFESSIONAL REGISTRATION(S):

P.E.: Pennsylvania - No. PE045454E (1996)
Georgia - No. PE028290 (2002)
Missouri - No. 2006029697 (2006)
Kentucky - No. 25195 (2007)
Virginia - No. 0402046873 (2009)

## CURRENT RESPONSIBILITIES:

**Structural Project Manager** experienced in the inspection, design, and rehabilitation of commercial and industrial buildings, water and wastewater treatment facilities, and maintenance facilities for bus and rail systems. Responsibilities include project management, design development, contract document production, discipline coordination, and in-house construction-phase supervision for structural projects.

## SUMMARY OF EXPERIENCE:

**Building Design, York, PA,** *BAE Systems.* Structural Project Manager responsible for designing a building addition and canopy to an existing manufacturing building. Work also included partial demolition of the existing building and coordination with the pre-engineered building supplier.

**Cafeteria Addition, Harrisburg, PA,** *Pennsylvania Higher Education Assistance Agency.* Project Manager responsible for the design and preparation of construction plans and specifications for a new 2,800-square-foot cafeteria/auditorium addition. The building houses the seating area for the cafeteria and doubles as a training room. The structure contains an open seating area that is free of interior columns. Glass curtain walls frame the architecturally exposed structural-steel, single-story building. Exposed acoustic metal deck creates the backdrop for an acoustic cloud effect in the ceiling. An architectural canopy on the south side of the building mimics other local building elements. A spread-footing foundation supports the building as well as an architectural slate accent wall directly behind it. The structure was designed using sustainable design procedures.

**Loading Dock Replacement, Buildings 56, 58, and 59, New Cumberland, PA,** *Defense Distribution Depot Susquehanna Pennsylvania.* Discipline Manager responsible for designing new three-bay loading docks to replace existing substandard docks at three warehouses. The design included new reinforced-concrete masonry unit cantilever walls, reinforced concrete foundation and retaining walls, concrete stairs, and a steel-framed canopy with light-gauge purlin/standing-seam metal roof. Underpinning of existing columns and phased construction was necessary to maintain operation of existing loading docks during construction.

**National Guard Readiness Center, New Milford, PA,** *Commonwealth of Pennsylvania Department of General Services.* Discipline Manager responsible for coordinating design and contract documents for a 28,500-square-foot office/training/maintenance building. The facility's construction consisted of a one-story reinforced masonry structure with a concrete storage mezzanine framed with steel joists, beams, columns, and non-composite floor deck. The sloping roof was designed using special steel joists. Spread footings were used under masonry walls and columns.

**EDC Facility, New Cumberland, PA,** *Defense Distribution Depot Susquehanna, Pennsylvania.* Discipline Manager responsible for inspection, evaluation, and repairs of concrete slabs in a 650,000-square-foot warehouse. The design included repairs of floor cracks, construction joints, concrete spalls, and floor hardener. Strict requirements called for a near-dust-free environment and for all floors repaired to be open to traffic within 48 hours.

# Brian A. Seip, P.E., LEED AP Resume

**YEARS EXPERIENCE WITH FIRM:** 13 **YEARS EXPERIENCE WITH OTHER FIRMS:** 0

## EDUCATION:

B.S., Engineering (Electrical and Mechanical Emphasis), Messiah College, 1997
University of Tennessee Certificate in Sustainable Design and Green Buildings Level 1, The University of Tennessee, 2011

## PROFESSIONAL REGISTRATION(S):

P.E.: Pennsylvania - No. PE060299 (2002)
Maryland - No. 28580 (2003)
Delaware - No. 12983 (2003)
Colorado - No. PE-37538 (2003)
Tennessee - No. 109880 (2005)
Texas - No. 96423 (2005)
New Mexico - No. 17588 (2006)
Florida - No. 64916 (2006)
Missouri - No. 2006026503 (2006)
Kentucky - No. 25144 (2007)
Georgia - No. PE033547 (2008)
Illinois - No. 062061383 (2008)
Kansas - No. 20733 (2009)
Minnesota - No. 47730 (2009)
Indiana - No. PE11011733 (2010)
North Dakota - No. PE-6911 (2011)
Nebraska - No. E-13619 (2011)
Wyoming - No. 12981 (2011)
Washington - No. 47942 (2011)
USGBC - LEED 2.0 Accredited Professional (2002)
Building Design and Construction (2010)
Certified Energy Auditor: No. 1089 (2010)
Renewable Energy Professional: No. 22 (2010)

## CURRENT RESPONSIBILITIES:

**Electrical Design Group Leader/Electrical Engineer** responsible for designing electrical systems for water and wastewater treatment plants, roadway toll facilities, and commercial buildings. Design work includes preparing plans, specifications, and cost estimates for medium- and low-voltage switchgear and distribution systems, as well as for lighting, general power, fire alarm, intrusion-detection, and communications systems. Inspection responsibilities involve evaluating and performing operational tests of roadway tunnel and building electrical systems. Duties also include coordinating work efforts with architects and process, structural, and mechanical engineers. Project engineering and administrative duties include the day-to-day leadership and guidance of a self-directed work team consisting of seven electrical engineers/designers and two computer-aided drafting and design (CADD) technicians. Personal day-to-day responsibilities involve decision-making, problem solving, task management, resource management, project monitoring, project reporting, quality assurance, design review, team communication, peer mentorship, personnel development, and project administrative duties.

**Camp Hill Sustainability Coordinator** responsible for prioritizing commitments that create a unified strategy to move towards sustainability to become a leader in environmental, social, and economical practices for the Camp Hill office. Proposes sustainability initiatives and assesses the cost-effectiveness of the overall strategy while participating in the corporate committee. Creates detailed sustainability implementation plans and coordinates with appropriate departments and individuals to implement sustainability into projects. Also analyzes and reports the effectiveness and results of the projects upon

completion. Coordinates information sharing and research needs to increase the corporate sustainability goal.

**SUMMARY OF EXPERIENCE:**

**Operations and Training Facility for the 201st Red Horse Squadron of the Pennsylvania Air National Guard, Fort Indiantown Gap, Lebanon County, PA,** *U.S. Property and Fiscal Office for Pennsylvania.* Electrical Engineer responsible for developing a design narrative, contract drawings, specifications, and a construction cost opinion for an operations and training facility, which includes a combat arms training room, a weapons vault, conference areas, classrooms, administrative offices, a communications and maintenance testing area, a warehouse, and storage areas. Responsibilities include designing the low-voltage power distribution, security/intrusion-detection, fire alarm, and telecommunications systems and coordinating the installation of a new electric utility service for the facility. The electrical system design includes connections for a portable generator for standby power, general power devices, interior lighting, structured wiring for a telecommunications system, and security and fire alarm systems. The interior lighting design will incorporate architectural fluorescent dimming for combat arms training and multimedia briefings. Occupancy sensing, scheduling, and daylighting controls will be used to reduce operating costs while improving functionality.

**Lightning Force Academy, Fort Indiantown Gap, PA,** *U.S. Property and Fiscal Office for Pennsylvania.* Electrical Engineer responsible for the development of design narratives, construction documents, construction specifications, and construction cost estimation for a 4,000-square-foot facility for the training and education of personnel responsible for the construction of temporary communications rooms under simulated field conditions. The design of the facility gives students an opportunity to build and tear down communications rooms, including pulling wires via conduits to a point outside of the facility. The design included classrooms, mock communication training rooms, administration area, a break area, and private offices. Responsibilities included designing the low-voltage power distribution, fire alarm, and raceway for a telecommunications systems and coordinating the installation of a new electric utility service for the facility. The electrical system design includes connections for a portable generator for standby power, general power devices, interior lighting, raceway for a structured wiring for a telecommunications system, and fire alarm systems.

**Regional Equipment Operators Training School, Fort Indiantown Gap, PA,** *U.S. Property and Fiscal Office for Pennsylvania.* Electrical Engineer responsible for the development of design narratives, construction documents, construction specifications, and construction cost estimation for a 4,000-square-foot schoolhouse for the training and education of heavy equipment operators tasked with repairing and constructing temporary military airfields. The design included classrooms, administration area, a break area, and private offices. Responsibilities included designing the low-voltage power distribution, fire alarm, and raceway for a telecommunications systems and coordinating the installation of a new electric utility service for the facility. The electrical system design includes connections for a portable generator for standby power, general power devices, interior lighting, raceway for a structured wiring for a telecommunications system, and fire alarm systems.

**Cancer Institute, Hershey, PA,** *The Pennsylvania State University.* Electrical Engineer responsible for providing site utility design and construction-phase services for the four-story, 170,000-square-foot Cancer Institute building on the campus of the Milton S. Hershey Medical Center. The work included handling significant site utility relocation challenges resulting from the placement of the Cancer Institute and the future Children's Hospital building. Tasks included coordinating the design effort with the utility staff of both the university and the medical center, as well as with the construction manager.

**Boiler Building, Confidential Location, VA,** *U.S. Department of Defense.* Electrical Engineer for the design of a new 7,000-square-foot, steam-generated boiler plant. The project involved the installation of three new 300 hp steam boilers and other supporting equipment. The electrical design effort involved interior/exterior lighting; an automatic fire alarm system; and a standby diesel generator for critical loads,

including boiler operation. Responsibilities included coordinating the design development, construction document preparation, and construction cost-estimating services provided by our firm.

# Brian J. Olinger, IDP,
# LEED Green Associate

# Resume

**YEARS EXPERIENCE WITH FIRM:** 13 **YEARS EXPERIENCE WITH OTHER FIRMS:** 0

## EDUCATION:

B.Arch., Architecture, Virginia Polytechnic Institute and State University, 1998

## PROFESSIONAL REGISTRATION(S):

National Council of Architectural Registration Boards (NCARB): IDP No. 81362 (1998)
USGBC - LEED Green Associate - No. 10105359 (2010)

## CURRENT RESPONSIBILITIES:

**Designer** responsible for planning and conceptual design, calculation of Building Owners and Managers Association-recognized square-foot tabulations, preparation of contract drawings and specifications, cost estimates, construction inspection, and shop drawing review, including Leadership in Energy and Environmental Design (LEED) certification. Also develops computer-generated renderings and animations using photo-realistic methods for presentations and client use and visualization.

## SUMMARY OF EXPERIENCE:

**Operations and Training Facility, 201st Red Horse Squadron, Fort Indiantown Gap, PA,** *U.S. Property and Fiscal Office for Pennsylvania.* Designer responsible for creating a project book outlining the scope of work and design criteria (Type A1 services), concept design and associated narratives (Type A2 services), construction documents, construction specifications, and construction cost estimation (Type B services) of a 22,500-square-foot operations and training facility. The facility includes operations, engineering, logistics, and base operations support; mobility bag storage; and a combat arms training room using a simulated combat system. The operations and training functional areas include training, administration, storage, planning, recruiting, conference, material testing laboratory, medical, restroom/locker room, and communications area. The design was registered with the U.S. Green Building Council and attained LEED-certified status design and met the design standards of the Anti-Terrorism/Force Protection criteria (UFC 4-010) for military facilities.

**Lightning Force Academy, Fort Indiantown Gap, PA,** *U.S. Property and Fiscal Office for Pennsylvania.* Designer responsible for the concept design and associated narratives (Type A services), construction documents, construction specifications, and construction cost estimation (Type B services) of a 4,000-square-foot facility for the training and education of personnel responsible for the construction of temporary communications rooms under simulated field conditions. The design of the facility gave students an opportunity to build and tear down communications rooms, including pulling wires via conduits to a point outside of the facility. The design included classrooms, mock communication training rooms, administration, a break area, and private offices for the facility's commissioned and non-commissioned officers. The project incorporated many elements of sustainable design and met the design standards of the Anti-Terrorism/Force Protection criteria (UFC 4-010) for military facilities.

**Regional Equipment Operators Training School, Fort Indiantown Gap, PA,** *U.S. Property and Fiscal Office for Pennsylvania.* Designer responsible for concept design and associated narratives (Type A services), construction documents, construction specifications, and construction cost estimation (Type B services) of a 4,000-square-foot schoolhouse for the training and education of heavy equipment operators tasked with repairing and constructing temporary military airfields. The design included classrooms, administration, a break area, and private offices for the facility's commissioned and non-commissioned officers. The project incorporated many elements of sustainable design and met the design standards of the Anti-Terrorism/Force Protection criteria (UFC 4-010) for military facilities.

**Air Operations Squadron Training Facility, 112th Air Operations Squadron, State College, PA,** *U.S. Property and Fiscal Office for Pennsylvania.* Designer responsible for creating a project book

outlining the scope of work and design criteria (Type A1 services), concept design and associated narratives (Type A2 services), construction documents, construction specifications, and construction cost estimation (Type B services) of a 22,500-square-foot Operations and Training facility. The facility includes an operations training floor for simulated theater battle management; Secure Compartmented Information Facility incorporating secure Internet protocol (IP) router and Joint Worldwide Intelligence Communications System networks; classrooms and a 139-seat auditorium with integrated sound and projection systems; conference, communications, maintenance, military testing, warehouse, weapons vault, and mobility bag storage areas; and a gymnasium and break room. The design was registered with the U.S. Green Building Council and attained LEED-certified status design and met the design standards of the Anti-Terrorism/Force Protection criteria (UFC 4-010) for military facilities.

ARCHITECTS

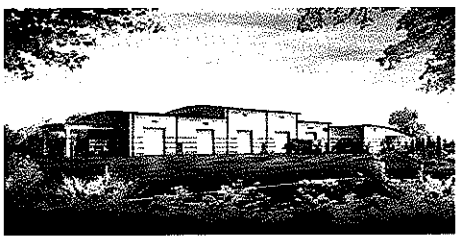
## GREGORY P. MADEJ, AIA
Principal

**NAME OF FIRM**
DRS Architects

**REGISTRATION**
Pennsylvania, West Virginia and Ohio

**EDUCATION**
B. Architecture/1971/University of Notre Dame

**PROFESSIONAL AFFILIATIONS**
LEED Accredited Professional
American Institute of Architects
Pennsylvania Society of Architects
Certified, National Council of Architectural Registration Boards
Past Board Member, Community College of Allegheny County, Education Foundation



**SPECIFIC EXPERIENCE AND QUALIFICATIONS RELEVANT TO THIS PROJECT**
Mr. Madej has extensive has extensive experience in all areas of design and construction and has served as Project Manager/Quality Control and has been responsible for numerous projects in more than 30 years with DRS. His career has focused on governmental, educational and healthcare facilities. In addition to his project responsibilities, Mr. Madej serves as a coordinator of the Firm's construction document standards. Some of his relevant experience as Project Manager includes:

**$19M Stryker Combat Brigade Readiness Center & Organizational Maintenance Shop, Cambridge Springs, Pennsylvania.** The 65,000 SF Readiness Center supports 438 reservists and includes locker rooms, unit storage, arms vault and administrative offices there is a medical clinic, fitness room, assembly hall, full service kitchen, classrooms, break areas and recruitment center. The 20,000 SF maintenance facility services the vehicles and equipment supported by this facility and includes six maintenance workbays two of which will be serviced by a 15-ton overhead crane. Other facilities include fuel storage and dispensing system, controlled waste handling facility plus administrative, personnel, storage and work areas.

**The PAANG Organizational Maintenance Shop in Johnstown, Pennsylvania** was designed to provide adequate organizational maintenance support for vehicles and equipment supported by this Shop. The facility consists of eight (8) maintenance workbays of which two (2) bays serviced by a 30-ton overhead crane, one (1) warm-up bay plus administrative, personnel and work areas.

**24,000 SF Ford City, Pennsylvania, Armory for the PA Army National Guard.** The Armory includes common spaces, administrative spaces, educational facilities, assembly hall, food preparation area and maintenance training area.

**West Mifflin and Ross Division Garages, Allegheny County, Pennsylvania.** Mr. Madej reviewed the construction documents for the renovations and additions of 250,000 SF of space for two Bus Maintenance Garages for the Port Authority of Allegheny County in Pittsburgh, Pennsylvania. Facilities include 25 full service maintenance bays with hydraulic lifts, inspection pits, chassis wash, tire change area and body shops with paint booths. The project was phased to maintain operation during construction.

**Drug Enforcement Administration, Pittsburgh, Pennsylvania**— The project was completed via design/build method. The two-story, 48,000 SF DEA Building has 24,000 SF of office space on the upper floor with the ground floor serving as an entrance lobby and garage. The building obtained a LEED certification in 2007.

ARCHITECTS

**SARINA BODNAR, AIA**
Architect

**NAME OF FIRM**
DRS Architects

**REGISTRATION**
Pennsylvania

**EDUCATION**
B. Architecture/1978/The Pennsylvania State University

**PROFESSIONAL AFFILIATIONS**
American Institute of Architects
Pennsylvania Society of Architects

**SPECIFIC EXPERIENCE AND QUALIFICATIONS RELEVANT TO THIS PROJECT**

Ms. Bodnar has extensive experience in many facets of architecture, including the design and detailing of municipal structures. In addition to her project management capabilities, Ms. Bodnar has successfully followed many projects through the construction administration phase, with responsibility for shop drawing approval, site visitation, project meetings and payment requisitions. She is proficient in the use of CADD. As Project Architect she will be responsible for coordination of all consultants. Relevant experience as Project Architect includes:

**$19M Stryker Combat Brigade Readiness Center & Organizational Maintenance Shop in Cambridge Springs, Pennsylvania**. Project Architect for this facility. Both buildings total 85,000 SF and support 438 reservists. Spaces include locker rooms, arms vault, administrative, medical clinic, full service kitchen, classrooms, assembly hall, recruitment center and the Maintenance shop contains six bays two of which are serviced by a 15-ton crane.

**Operational Maintenance Shop for the Pennsylvania Army National Guard at Johnstown, Pennsylvania**. Project Architect for the 23,000 SF Facility includes 8 maintenance bays, a wash platform, fuel storage and dispensing system, flammable storage building, controlled waste handling facility, personnel support areas, office areas and various equipment/storage areas. This $4.69 M project was completed in January 2005.

**Westmoreland County Transit Authority, Bus Maintenance Garage** – Project Architect for a 30,000 SF multi-purpose bus maintenance facility. Spaces include administrative, maintenance shop (four bays), indoor fueling, automated bus washing bay, climate-controlled vehicle storage and associated support spaces.

**The U. S. Army Reserve Aviation Facility at Johnstown, Pennsylvania,** completed in the Spring of 1997. This $22 M Facility houses the PAARNG and the U. S. Army Reserves. As Project Architect, she was responsible for the preparation of the construction documents for the 15,000 SF Training Building and the 92,784 SF Hangar Facility. She was responsible for coordinating all engineering disciplines.

**100-Member, $4.5M Grantsville, West Virginia, USAR Center/ Organization Maintenance Shop for the U.S. Army Reserve**. The OMS facility houses work bays, wash bays, shop office, tools/parts storage and flammable storage. Served as Project Architect.

**$11.7 M renovations/additions to South Hills Health System Jefferson Hospital, Pittsburgh, Pennsylvania**. Served as Project Architect for this 100,000 SF Multiservice Building that contains offices, laboratories, meeting rooms and a 17,000 SF warehouse/ receiving area, a vehicle maintenance garage and an ambulance garage.

**150,000 SF West Mifflin Division Garage Renovations/Additions for the Port Authority of Allegheny County, Pennsylvania**. Facilities contain 15 full service maintenance bays with hydraulic lifts, inspection pits, chassis wash, tire changing area and body shops with a paint booth. An important aspect of this project was to develop a workaround plan which maintained the operation of the garage 24 hours a day without interruption of service during the construction. Served as Quality Control.

ARCHITECTS

## S. PHILIP HUNDLEY, AIA

Principal

**REGISTRATION**

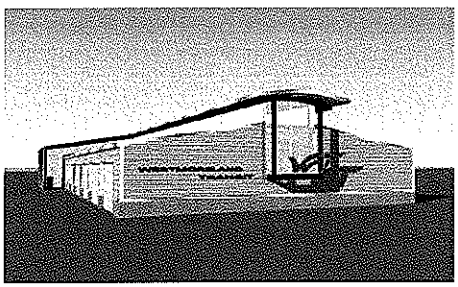
Pennsylvania, Ohio, West Virginia and seven other states

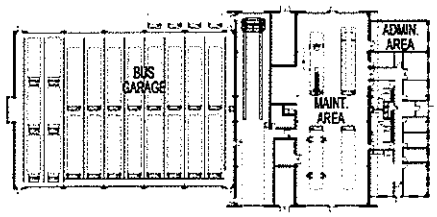
**EDUCATION**

B. Architecture/1966/Architecture

**PROFESSIONAL AFFILIATIONS**

American Institute of Architects
Pennsylvania Society of Architects
Certified, National Council of Architectural Registration Boards
Construction Specifications Institute
Councilman, Sewickley Heights
Historical Architectural Review Board, Sewickley Heights
Planning Commission, Sewickley Heights
Western Pennsylvania Conservancy
National Historical Trust






Mr. Hundley is a principal of DRS and has extensive experience as a Principal-In-Charge/Project Manager/Project Designer on a wide range of major commissions undertaken by the firm. These include major projects for the private sector, institutional, the Federal Government and corporations in his forty year career with the firm. During the last fifteen years, he has been responsible for the design of ten Reserve Center/Readiness Center/OMS/AMSA projects. In addition, Mr. Hundley has been involved in the site planning, programming and design of numerous administration/maintenance buildings. Projects for which Mr. Hundley has been responsible have received numerous awards for design and technical excellence. Some of Mr. Hundley's present and past experience includes:

**Indefinite Delivery Contract, Port Authority of Allegheny County, Pittsburgh, PA** Project Manager for the IDC. Projects included East/South Busway Rehab Study; East Busway Final Design' Rehab of Collier Garage; Security Systems for Collier, Harmar, Ross and East Liberty Division Garages; Renovation to the Edgewood Train Station; Renovation of pedestrian Bridge on East Busway; Miller Print Building Cost Evaluation; Customer Service Relocation to Steel Plaza; Paint Booth Renovations at the Manchester Garage and wash bay renovations at the South Hills Garage.

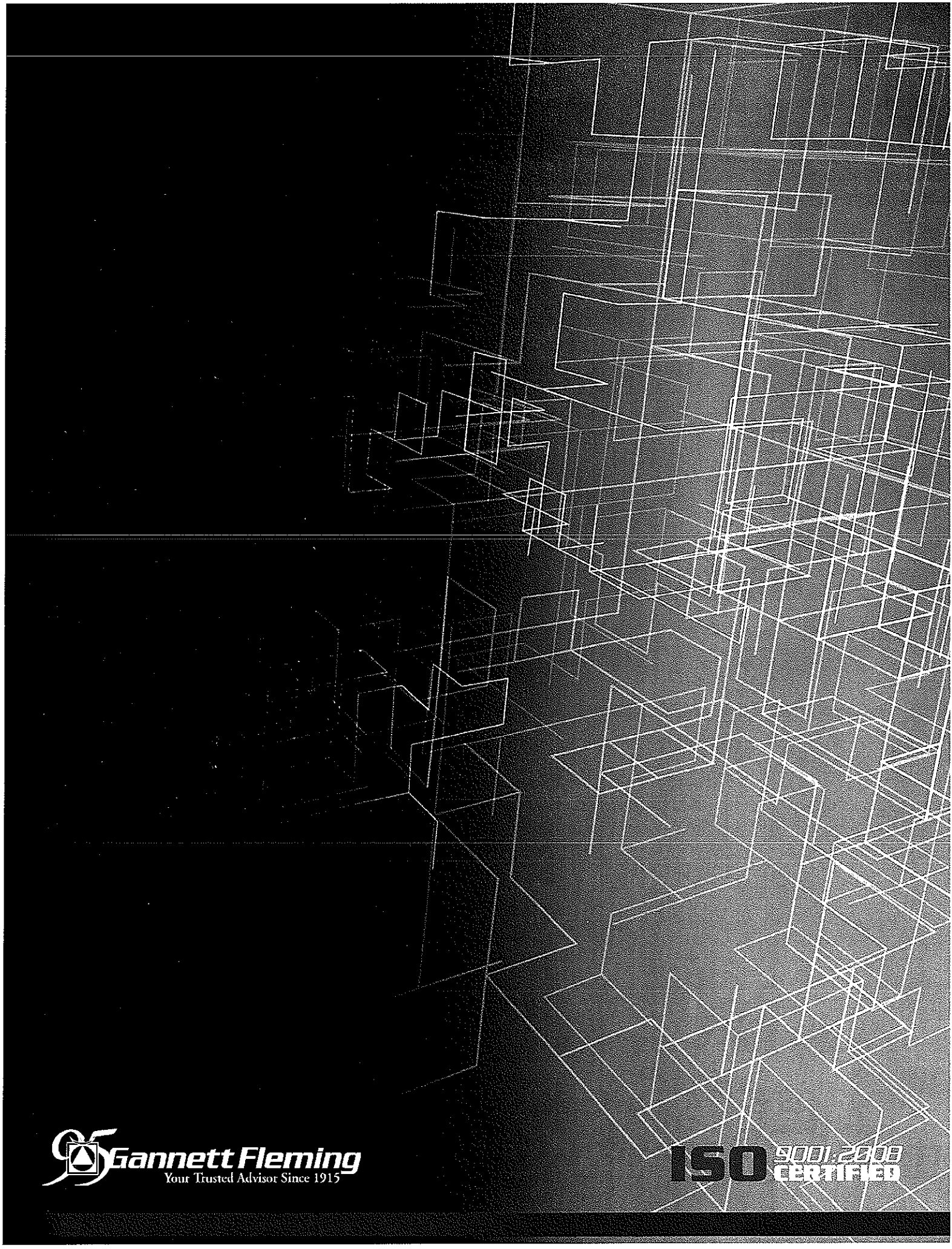
**Westmoreland County Transit Authority, Bus Maintenance Garage** – Architectural Manager for a 30,000 SF multi-purpose bus maintenance facility. Spaces include administrative, maintenance shop (four bays), indoor fueling, automated bus washing bay, climate-controlled vehicle storage and associated support spaces.

**West Mifflin & Ross Division Garage Renovations, Port Authority of Allegheny County, PA** Served as Project Manager for the renovations of the West Mifflin & Ross Division Garages. The 250,000 SF, $22 M project involved a workaround plan which maintained the operation of each garage 24 hours a day without interruption of service during construction. Both garages contain full-service maintenance bays, lifts, pits, chassis wash, body shops with paint booths, overhead crane fueling islands, bus wash lanes, parking and administrative space.

**U. S. Army Reserve Aviation Facility, Johnstown, Pennsylvania** The $22 M facilities include a training building and hangar facility. The Aviation Facility is comprised of administrative offices, maintenance shops, educational facilities, storage areas and five work bays. DRS was responsible for the site planning, design of all facilities, along with the interior design package.

**USAR Center/OMS, Grantsville, West Virginia**—Completed the USAR Center/OMS and includes administrative spaces, educational facilities, unit and individual storage, assembly area, work bays and support space. DRS was also responsible for the site delineation study, engineering feasibility study and interior design package for this project.

**Three New USAR Centers/OMS, Morgantown, Elkins, Kingwood, West Virginia** The facilities include administrative spaces, educational facilities, unit and individual storage, assembly area, work bays and support spaces. DRS was responsible for designing the three USAR Centers/OMS' along with the interior design packages.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