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Jessica R. Baker

SKILLS SUMMARY:

- Highly Motivated, Analytical, Logical, Adaptive, Flexible Individual
- Excellent Teamwork, Communication, and Organizational Skills
- Strong Building Mechanical Design with Practical Field Experience
- Knowledgeable in Construction Management

EDUCATION:

The Pennsylvania State University U. Park, PA Fall 2000-present
Bachelor/Master of Architectural Engineering (candidate), ABET Accredited - Mech. Option

- Cumulative GPA - 3.89 / 4.0 - Dean's List
- Semester Standing – Integrated BAE/MAE Program
- Expected Graduation Date - May 2005
- Fundamentals of Engineering Exam - Passed: April 2004
- Senior Thesis - The Montgomery County Conference Center and Hotel, Rockville, MD
ASHRAE Standard 62 Ventilation Report
Building and Plant Energy Analysis Report
Mechanical Systems Existing Conditions Report
Thesis Website: www.arche.psu.edu/thesis/2005/jrb924

PROFESSIONAL EXPERIENCE:

Southland Industries Sterling, VA Summer 2004
Building Mechanical Engineering/Design

Performing beside the mechanical engineers in Southland Industries' Mid-Atlantic Division, I worked on projects such as the U.S. Census Building and the Pentagon Renovation. My main responsibilities included performing piping friction calculations and layout design (in CAD) for the primary and secondary chilled water distribution within the U.S. Census Building. I also performed the same calculations/layouts for small portions of the condenser and hot water circulation. I then went on to begin selecting equipment for the water distribution throughout the building. I also assisted in an acoustical analysis for the selection of the building's air-side mechanical system components.

H. F. Lenz Company Johnstown, PA Summer 2003
Building Mechanical Engineering/Design

As one of the mechanical engineers for the health and education team, I was given specific instructions and required tasks that familiarized me with mechanical design in buildings. (Engr. I) I helped in researching mechanical equipment, determining the best mechanical designs for clients. (considering effectiveness and efficiency). I was responsible for running building calculations (load calcs.) and preparing simple mechanical designs. I then drafted the mechanical designs using CAD, producing construction documents. I also performed many routine tasks which provided me with experience and familiarity with the engineering staff, company methods, practices, and programs. I attended company computer training classes and team/progress meetings. I also performed on-site surveying.

James G. Davis Construction Corp. Rockville, MD Summer 2002
Construction Management under PM, APM, and Superintendent

Used construction specifications to prepare the close-out documents (record submittals, O&M's, record drawings) for a 550,000 sq. ft. office building consisting of 5 stories of office space with 3 stories of parking below. I also worked on a 3-story parking garage addition for the American Red Cross National Headquarters. Other responsibilities included dealing with subcontractors on and off the jobsite, writing and posting RFI's, taking weekly progress photos, and attending and taking all meeting minutes.

RELEVANT COURSES:

HVAC systems / Advanced HVAC / Building Combined Heat and Power

Thermal Science / Fluid Flow / Heat Transfer

Centralized Heating and Cooling Production and Distribution

Electrical and Illumination Systems for Buildings

Building System Thermal Design and Optimization

Electrical Circuits and Power Distribution

Building Automation and Control Systems

Structural Analysis / Structural Steel Design / Structural Concrete Design

Building Solar Energy System Design

Architectural Building Materials / Introduction to the Building Industry

Air Quality in Buildings / Advanced Architectural Acoustics

Basic Architectural Design / Design Analysis

Allergen Research / Introduction to Environmental Systems

Architectural Graphics and CAD / Working Drawings

COMPUTER SKILLS:

Experienced with Microsoft Office, AutoCAD 2000i-2004, TRANE Trace, TRANE Acoustics, Carrier's HAP, CFD with Fluent and Gambit, EES, Luxicon, STAAD, C++, MatLab, HTML, Adobe Photoshop, and Adobe PageMaker.

LEADERSHIP POSITIONS / ACTIVITIES:

2003-04 – Penn State AE Envoy, Penn State Student Society of Architectural Engineers (SSAE), American Society of Heating, Refrigeration, and Air-Conditioning Engineers (ASHRAE) - Treasurer, PSU Women in Engineering, Society of Women Engineers.

2002 - Student Partnership for Achieving Construction Excellence (S:PACE), Illumination Engineering Society (IES), SWE High School Stay-over committee chair (spring 2002).

HONORS RECEIVED:

2003-04 – inducted into Phi Alpha Epsilon/Secretary elect, accepted into the Penn State Schreyer's Honors College **2002** – received the PA Sci-Tech Scholarship, nominated for the National Society of Collegiate Scholars.

~ REFERENCES AVAILABLE UPON REQUEST ~