

## Robert M. McCaughern, EIT

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### Education



Drexel University, Philadelphia PA

Bachelor of Engineering in Mechanical Engineering, June 2006

Certificate of Engineering Management, June 2007

Eligible for PE Licensing in CA

### Experience

#### **Alpha Mechanical Heating & Air, Inc**, San Diego, CA

*Project Engineer / Manager*, August 2009 to September 2010

Provides management and technical support in a variety of contracting roles. Represents contractor during early design stages into project fruition. Manages documents, subcontractors, internal employees, and field personnel in effective manner. Provides accurate labor and resource tracking and reporting for both internal and external company use. Generates takeoffs, budgets and estimates for future contract work, change orders, or upcoming projects. Provides document and technical support to field and internal employees to yield the best quality project. Worked extensively on military, government, and private projects including:

- El Centro Naval Facility (Child Development Centers & Hangar Construction)
- 29 Palms Marine Base (BEQ Construction)
- Travis Air Force Base (Office Construction)
- Marriott Hotels (Design Build Consultation)

#### **Burns Mechanical Inc**, Horsham, PA

*Sales Support Engineer*, April 2008 to July 2009

Exclusively supports team of senior account representatives and their client base. Performs all phases of mechanical contracting on a direct to client basis ranging from system retrofits, repairs and optimizations to designing and executing turn-key projects, new construction and facility renovations. Notable projects include:

- Philadelphia Police and Fire Medical Center – Mitsubishi City-multi VRF design & retrofit for special needs daycare facility.
- Park Plaza Condominiums – Designed and executed replacement of failed 26-story dual-temperature riser piping and support system.
- Neumann North Retirement Community / Temple University Physicians – Turn key retrofit of Multistack high capacity modular chiller
- SEI Investments – Installation of new data center cooling system (Emerson / Liebert Units)
- Comcast Corporation – Design & installation of split cooling systems for various critical fiber and head-end telecommunication locations
- University of Pennsylvania Hospital (HUP) – Multiple projects including emergency department variable frequency drive retrofits, various HVAC system upgrades and optimizations on a direct-to-hospital basis.

*Assistant Project Manager*, June 2006 to April 2008

Provided long-term onsite support for senior project managers including labor and cost management, scheduling, estimating and mechanical system startup. Projects include the 56-story Comcast Corporate Headquarters (LEED Gold) & Children's Hospital of Philadelphia South Campus Research Facility Central Utility Plant & vivarium.

#### **The Norwood Company**, West Chester, PA

*Assistant Project Manager*, September 2004 to March 2005

Coordinated construction projects onsite; including fire & DOH inspections, scheduling, deliveries and field related design issues. Daily onsite involvement with the most aggressively scheduled large project in company's history: the Toll Brothers Corporate Office facility.

## ***Notable Projects & Construction Achievements***



**The Comcast Center** is the largest skyscraper in the city of Philadelphia, fifteenth tallest building in the United States, and the tallest LEED building in the Americas. Featuring extensive specialty HVAC systems, the building includes dual temperature radiant flooring systems, a conditioned 15 story winter-garden, an embedded glycol snow melt system, advanced central utilities and chiller plant, as well as a myriad of steam stations and specialties.

**Children's Hospital of Philadelphia (CHOP): South Campus Research Facility** began design and construction in 2001 with the effort to double the effective area of the hospital research facilities. Stretching 7 stories below street level, the facility contains an advanced steam generation plant which serves as a CUP for any additional facilities constructed for CHOP. Additional construction included the installation of vivarium equipment, cage-washing stations, and air handling equipment for sensitive healthcare research and development applications.



**Park plaza** is a luxury condominium complex in the Lemon Hill section of Philadelphia. Hailed for their reputation of luxury living, all renovations were carefully scheduled and conducted to avoid disturbing any tenants. Renovations included replacement of a 26-story dual temperature riser system (Complete with new structural reinforcement and bracing), various pool system repairs and enhancements, reconfiguration of the gym air distribution system and various other service contracting related repairs. All projects were conducted with great integrity and final satisfaction to the tenants and property manager.

**The 29 Palms MCAGCC BEQ project** is a large scale, three building bachelor enlistment quarter project. With 572 living units, this facility will house the growing personnel at the 29 Palms Marine Base. A LEED Gold project, the scope includes site utilities work (including prefabricated high temperature hot water piping), site plumbing, interior plumbing and finishes.



**The Toll Brothers Corporate Headquarters** is located in the heart of Horsham PA and is an effort by the Toll Brothers to consolidate different departments of their business under one roof. This 200,000sf office building was one of the most aggressively scheduled fit-out projects ever conducted by The Norwood Company.

### ***Relevant Coursework:***

**Undergraduate:** Fluid Mechanics, Experimental Mechanics, Mechanics of Materials, Statics, Thermodynamic Analysis I & II, Refrigeration and Air Conditioning I & II, Feedback of Dynamic Control Systems, Mechanics of Vibrations, Thermal System Design, Heat Transfer, Manufacturing Process, Microeconomics I, Introduction to Technology Management, Engineering Economical Analysis, Internal Combustion Engines

**Graduate:** Engineering Management I, Technical Communication, Economics for Engineering Management I, Financial Management I

### ***Computer Skills:***

**Specialty Software:** ProEngineer, LabView 7, Maple 7, AutoCAD, Prolog, Primavera Scheduling Software, Logistics Workstation (Estimation7), Mitsubishi CityMulti Design Tool, VisualDOE, EnergyPro.

**Office Software:** Microsoft Office, Microsoft Project, OpenDoc's, Macintosh OS.

**Programming Languages:** Java, C, C++, CSS & HTML.

**Hardware:** Intimate knowledge of PC & Mac hardware implementation and repair. Additional Experience with HVAC equipment programming and control protocols.