Spring 2005

PSF's resident Chef John Welch aka PSF Shop Superintendent and daughter Jessica

Mechanical, Inc.
QUARTERLY
Trusted Since 1898

Volume 12 Published by PSF Mechanical, Inc.

Spring Projects

Projects that PSF will be working on this year:

NW Construction Maintenance Facility
- Scope: Design & Install HVAC
- Architect: CNJA Architects
- General: NW Construction, Inc.
- PSF PM: Will Thompson
- PSF Eng: Eddie Shahwan, P.E.

ICOS Chemistry Lab
- Scope: Design & Install Process Chemistry Lab
- Architect: SABArchitects
- General: BNBuilders
- PSF PM: John King
- PSF Eng: Ron Marson

Minor & James Medical
- Scope: Design & Install HVAC
- Architect: Taylor-Gregory-Butterfield
- General: Lease Crutcher Lewis
- PSF PM: Marshall Nichols
- PSF Eng: Joe Dorman

Nordstrom Palm Beach Gardens
- Scope: Design & Install HVAC
- Architect: Callison Architecture
- General: IBEX
- PSF PM: Tom Neely
- PSF Eng: Dan Cushman

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McMurray MOB

Project
- Design & Install HVAC
- 63,909 Gross Square Feet
- 3-Story Shell & Core

Team
- Owner: JCR Development
- Architect: Collins Woerman
- General: Foushee & Associates
- HVAC: PSF Mechanical, Inc.
- Plumbing: Auburn Mechanical
- Electrical: Holmes Electric

Site Location
- Northwest Hospital Medical Office Building
  1550 North 115th Street
  Seattle, WA 98133

McMurray MOB / April 2005 **PSF Installs 132-Ton Packaged Rooftop AC Unit**

PSF is currently under construction on the McMurray Medical Office Building, located on the Northwest Hospital campus. This building is nearing completion (occupancy scheduled for Summer '05). The building is designed to accommodate a mix of medical office uses.

The HVAC uses a central VAV system, with a single 132 ton semi-custom rooftop unit manufactured by Seasons 4. The unit uses dual plug supply fans with inverter drives, supplying 52° F air to the tenant floors. Relief is via propeller fans, also with inverter drives. Separate cooling is provided for the elevator machine room and data room.

In addition to the typical janitor and toilet exhaust, central exhaust systems are installed for future tenant exhaust needs typical to this type of building.

Tenant zone terminals will be series-type fan terminals manufactured by Nailor Industries, using the latest energy efficient ECM (electronically commutated motor) technology. In addition, quality (quiet) mercury switch contactors will be used.

Tech Talk - Filters (Part 3 of 3)

Over the last two newsletters we looked at filters for removing particulates and gaseous contaminants from the air. This issue we will look into a "filter" system most people would generally not think of as a "filter".

Cyclone Air Cleaners: Cyclone type cleaners are used extensively in industrial environments as well as in common shop applications. These "filters" are used where waste products produced in machining, woodworking or processing need to be picked up and transported to a remote location for disposal or recycling. Cyclone systems generally have a duct collection system designed to pick up and transport the waste product to the cyclone. The key to a properly designed duct pickup and transport system is adequate (but not excessive) velocity, smooth low friction ducts and fittings, and an adequately powerful fan capable of passing the product without damage or excessive wear to the fan. Typical waste products include sawdust, wood shavings, metal filings and tailings, plastic particles, other types of "dust", floor sweepings, paper, and other solids.

The cyclone functions by allowing the transported material to drop out of the air stream as it slows down inside the cyclone (thank you Mr. Newton). Each cyclone application requires careful coordination and design of the cyclone dimensions and shape. The waste product, once separated from the air stream, is collected in a hopper, bin or other container for disposal or recycling. The exhaust air stream is then relieved at low velocity out of the top of the cyclone.

Typical concerns with these systems are their physical size, and the noise generated by the (usually) high-pressure fans used to transport the air/waste product to the cyclone. Also, due to the significant amount of air removed from the facility with most systems, some consideration for make-up air is often required.

PSF recently applied this technology to the Capital One Processing Facility in Federal Way. A system was designed to collect and transport 18,000,000 "waste" envelopes per month, as well as waste pin strips from the statement printing process and general paper waste from the facility. The waste paper was collected into a compaction unit, then transported directly to a pulp mill for recycling. This system replaced the previous manual collection, shredding and disposal process, resulting in a $200,000 annual savings (excluding additional labor savings). An additional benefit was the elimination of substantial lifting and manual transportation of waste paper product by Capital One personnel.

Capital One Paper Transport System **Federal Way, WA**

Team

- Owner: Quadrant Corporation/Capital One
- Architect: Lance Mueller & Associates
- General: GLY Construction Company
- HVAC: PSF Mechanical, Inc.
- Electrical: Johnson Electric
- Sprinkler: Patriot Fire Protection

Project

- 143,425 ft^2 Processing & Office Facility
- Recycling system designed for up to 18,000,000 envelopes per month, plus pin strips from inserting machines, and general office paper waste.

HVAC Systems & Features

- Dual Extraction Systems Include:
  - 9,000 CFM high-pressure vacuum fans
  - Build-to-suit cyclone units
  - Ohio blowpipe rotary air valves
  - Custom fabricated pick-up stations

Interior Paper Collecting System

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Tricia Reed Goes Hollywood...


Tricia Reed and family film TV commercial in Miami, FL

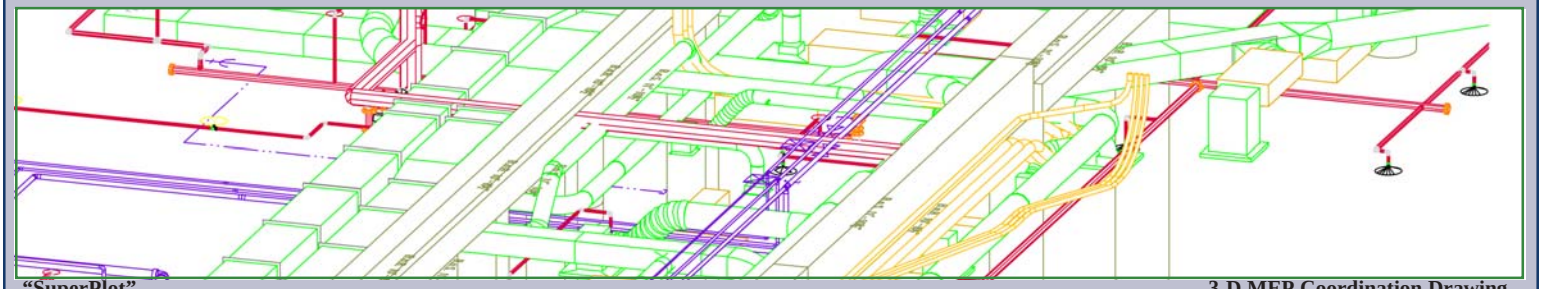
Alright, Hollywood it was not, but Tricia did go to Miami to star in her very first television commercial.

Tricia Reed, PSF CAD Manager, was selected to participate in the filming of a television commercial for ITT Technical Institute. The commercials, filmed by La Fabrica Films, sponsor ITT graduates that successfully gain employment in their field.

Tricia and her family made the cut after first being interviewed by the producer of La Fabrica Films and the Broadcast Production Manager for ITT Technical Institute in April of last year. In February of this year, she was contacted by La Fabrica and sent to Miami where she and her family enjoyed five days of filming, relaxing, and fun.

The commercial, which is slated to debut on the West Coast, will air in late May 2005.

PSF Leads MEP Coordination Efforts


"SuperPlot" 3-D MEP Coordination Drawing

The continuing evolution of CAD Technology applied to shop drawing development by Mechanical, Electrical, and Plumbing (MEP) subcontractors has facilitated the ability to produce detailed, color-coded "Superplots" for major projects. The primary goal of the MEP Coordination process is to eliminate trade conflicts and the associated cost and scheduling impacts prior to construction. By investing in the latest CAD Technology, Internet capabilities, and qualified personnel, PSF is in a strong position to lead MEP coordination efforts. Many General Contractors have realized the value of this process and are requiring the necessary resources from its MEP subcontractors on major projects.

The MEP "Superplot" is a CAD-generated color-coded, composite drawing consisting of the shop drawings of participating subcontractors. When the superplot drawing is finalized, the participating subcontractors' representatives provide signatures on the drawing to confirm that their work has been coordinated and that the installations of their work will not be in conflict with any other trades.

In addition to scheduling, coordinating and supervising the superplot development, PSF also implements a "Conflict Resolution Log" to document and track trade conflicts and their methods of resolution. This Conflict Resolution Log is an Excel document that is linked directly to the superplot drawing. Subcontractors are directed to identify conflicts by assigning "flags" on the drawing, and to formulate and propose solutions prior to the scheduled coordination meetings. The flag designation and its description are automatically transferred to the Conflict Resolution Log for tracking.

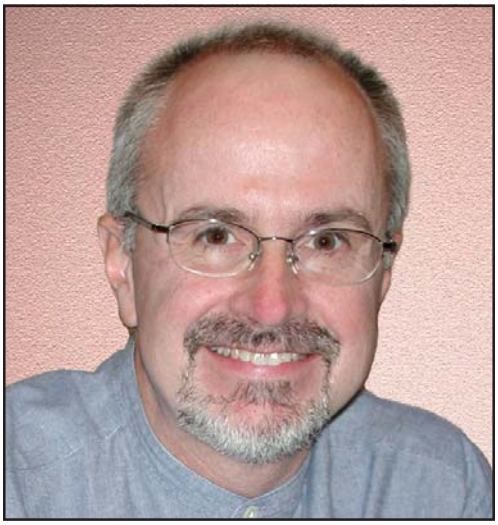
With the support and involvement of the General Contractor, this coordination effort also helps to identify the required flow of work and scheduling information that benefits the overall project. History has proven that well planned, disciplined MEP Coordination results in successful projects by reducing installation time and minimizing costs related to construction change requests.

PSF welcomes the opportunity to provide these services on future Design/Build and Plan/Spec projects.


Chris Bodwin PSF MEP Coordination

Tom Neely Returns to PSF

With experience in new construction, renovation, office, retail, medical, institutional, and bio-technical projects, Tom applies his knowledge of mechanical systems to support owners' evolving mechanical system needs. Over the course of his 25+ year career, including 17 years at PSF, he has helped retail and commercial organizations to meet their operational needs. As Director of Project Management, he is committed to maintaining consistency in applying the latest mechanical construction management methods in order to produce successful and efficient projects for PSF and its customers. Tom also acts as a liaison with PSF's Engineering Department to assure that quality and "constructability" are built into PSF's mechanical systems designs, and that design coordination issues are addressed prior to the final construction documents being issued. Additionally, Tom is involved in the ongoing development and implementation of PSF's comprehensive Commissioning Plan for new and existing buildings.



PSF is pleased to welcome Tom back as Director of Project Management

Throughout his evolving career as a construction worker, mechanical design engineer, project manager, and construction management consultant, Tom has developed technical and business skills that add value to the projects entrusted to him. His understanding of how a facility comes together enables him to lead teams of mechanical design and project management professionals from the conceptual design stages through the construction of successful Design/Build projects.

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For more information or key contacts list, visit our web site at *www.psfmech.com*

PSF Open House Friday, September 16, 2005. See Summer Newsletter for details.

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