

Florida

SMACNA Inc.

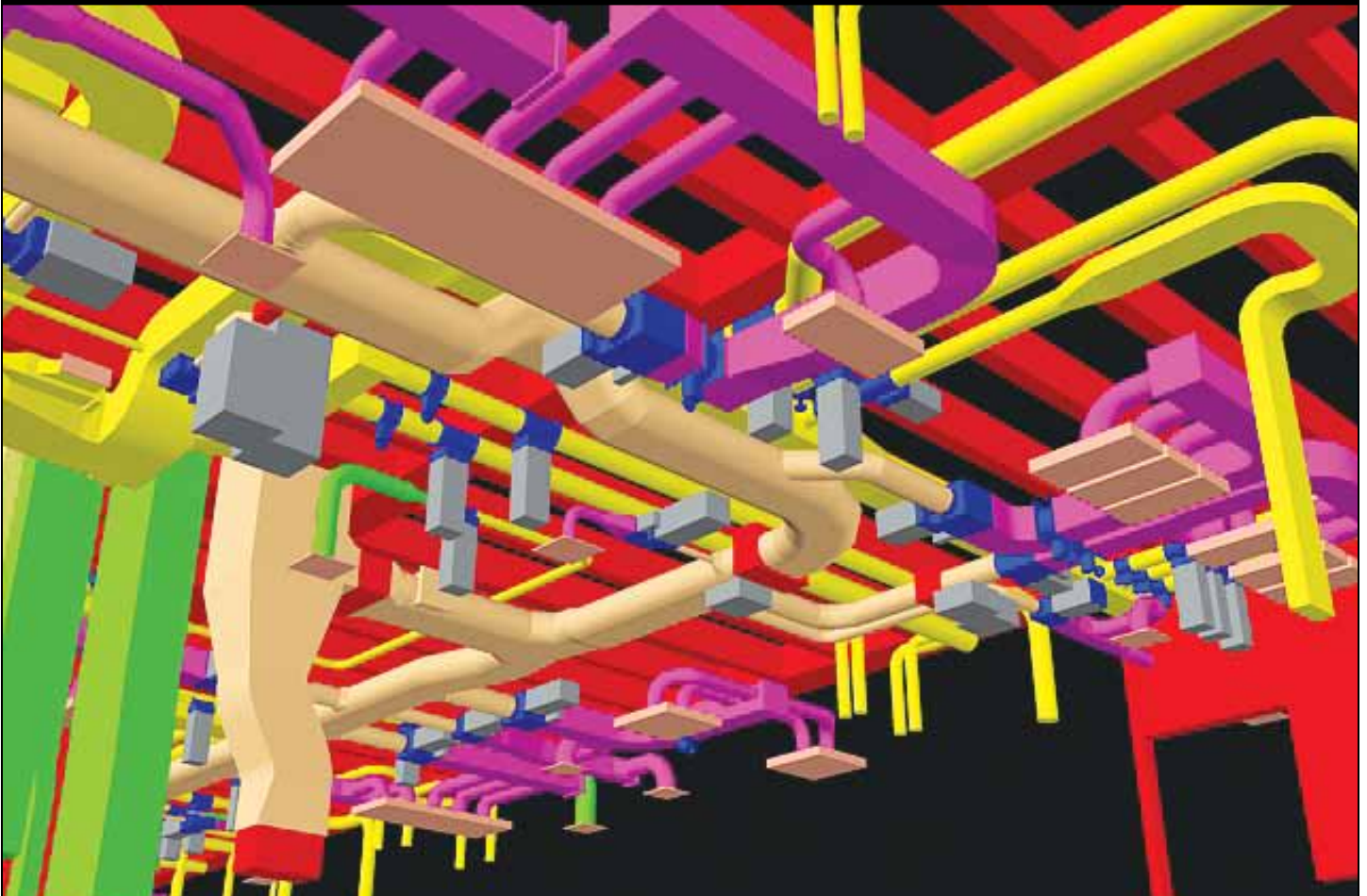
Quarterly Edition - October 2010

Volume 39

TECH/SPEC

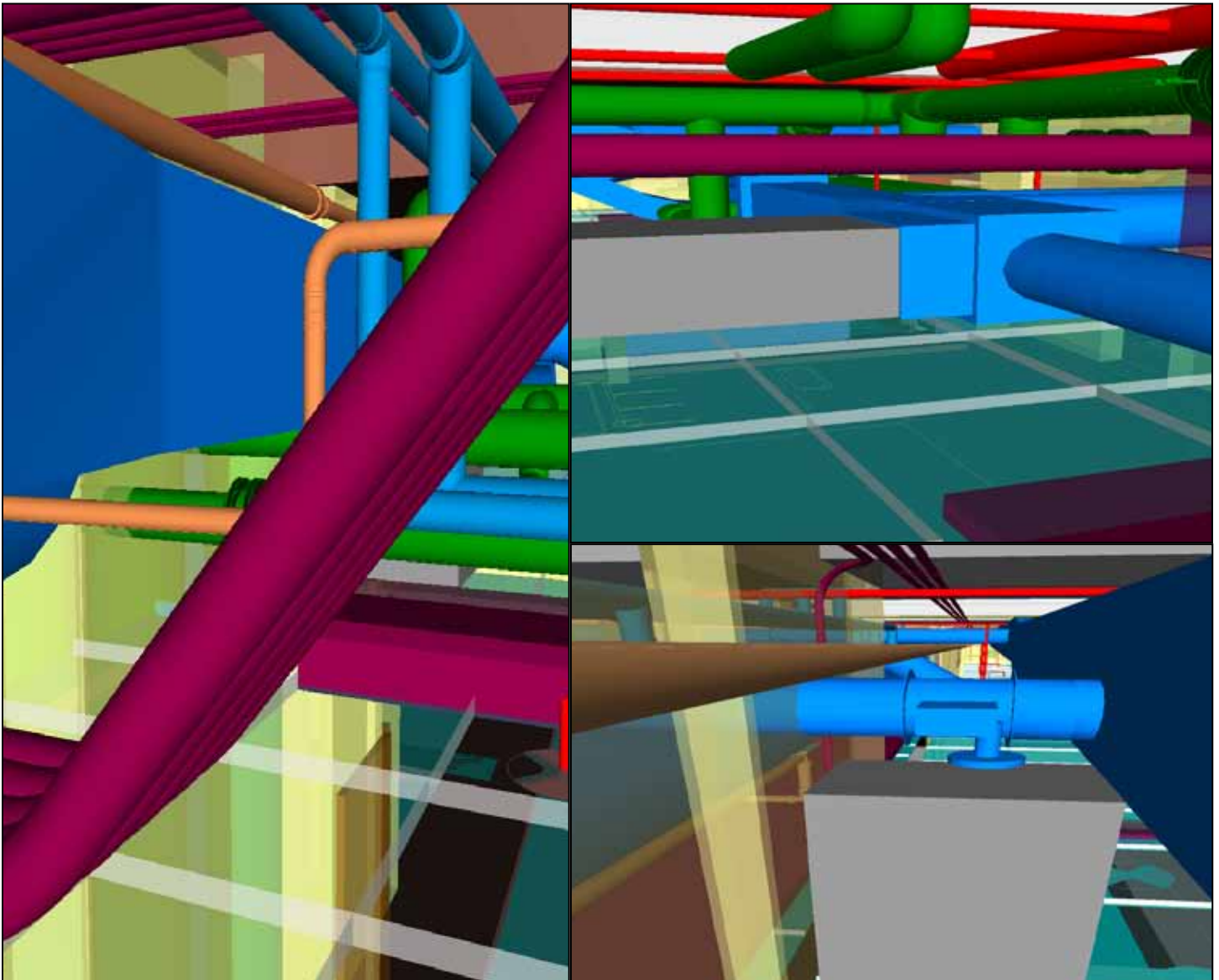
NEWS

**NEW STATE LABORATORY FOR PUBLIC HEALTH & MEDICAL EXAMINER'S OFFICE,
RALEIGH, NORTH CAROLINA**



BIM Services/Sheet Metal Detailing: Cadvantage Drafting Service, Inc., St. Petersburg, Florida

**NEW STATE LABORATORY FOR PUBLIC HEALTH & MEDICAL EXAMINER'S OFFICE,
RALEIGH, NORTH CAROLINA**



Architect/Engineer: Obrien Atkins, Raleigh, NC

Mechanical Contractor: John E. Green, Raleigh, NC

Sheet Metal Contractor: Stromberg Metal Works, Inc., Raleigh, NC

BIM Services/Sheet Metal Detailing: Cadvantage Drafting Service, Inc., St. Petersburg, Florida

North Carolina's New State Laboratory is a combined facility that will house the Public Health Laboratory and Chief Medical Examiner's Office in Raleigh, North Carolina.

This 220,000-square-foot facility will consist of a single building with separate wings for each department. Stromberg Metal Works, Inc. will install approxi-

mately 295,000 pounds of galvanized and 186,000 pounds of welded stainless steel duct during the course of this project.

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Roger Schwartz, Detailing Manager, Cadvantage Drafting Service, Inc. at work on the State Lab viewing building sections utilizing Autodesk NavisWorks software.

Stromberg Metal Works, Inc. contracted the coordination and fabrication of HVAC drawings to Cadvantage Drafting Service, Inc. Cadvantage utilizes custom 3D AutoCAD based software.

Development of HVAC drawings in 3D is crucial to participation in BIM, which was a requirement of this project.

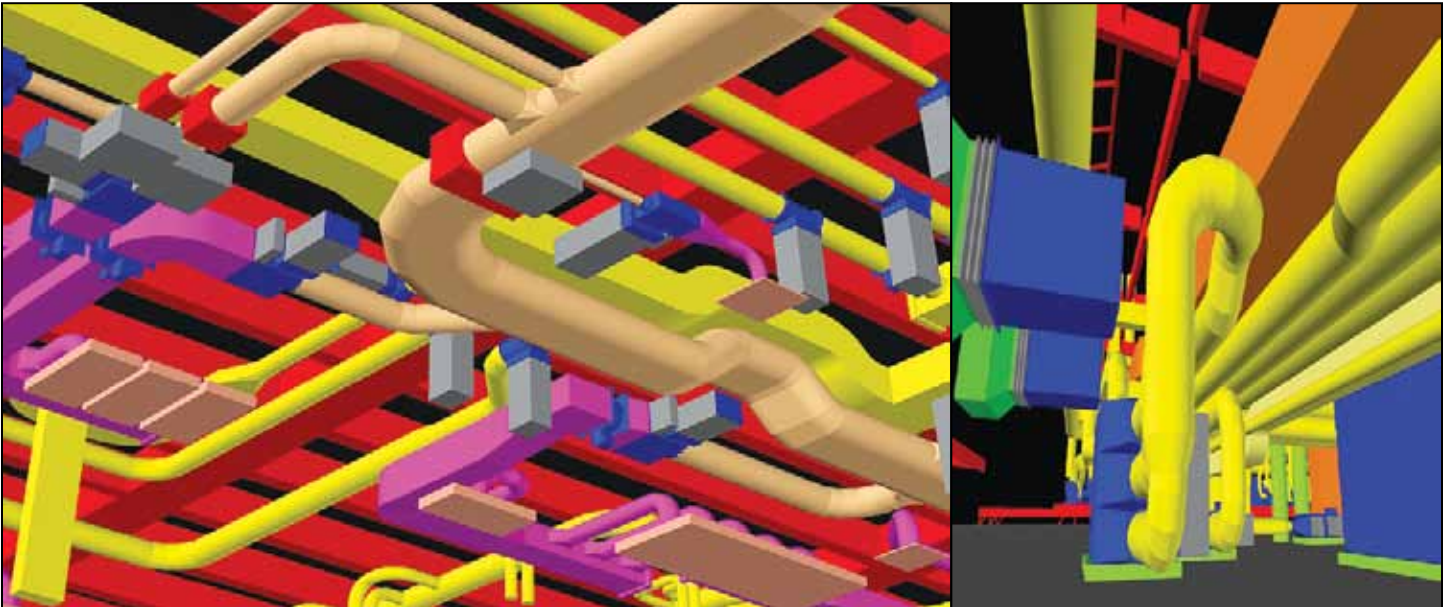


BIM (Building Information Modeling) has been gaining more momentum in the building and construction industry. Due to the large amount of space that most HVAC systems require, 3D visualization results in fewer conflicts in the field. One of the benefits to Stromberg is

the opportunity to identify conflicts prior to fabrication and installation.

For instance, due to the coordination being completed prior to the concrete pours, accurate placement of the embedded structural support system for the ductwork and piping was accomplished.

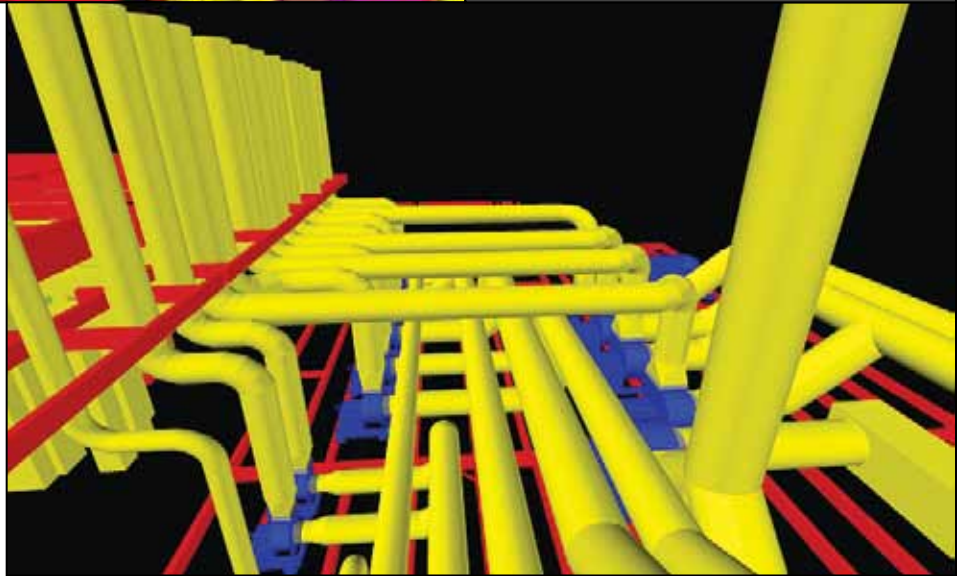
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3D coordination among the subcontractors on this project has taken place at a weekly virtual meeting. Prior to the meeting, completed HVAC drawings for that area have been sent to John E. Green's FTP site for integration into the model.

Utilizing VoIP communication and NavisWorks, a software application which provides 3D CAD file aggregation, clash-detection and real-time navigation of projects, Roger Schwartz, Detailing Manager for Cadvantage, is able to view ductwork in a specific area of the building. Input from HVAC, Piping, Plumbing, Electrical, and Fire Protection contractors is viewed and a virtual walk-thru of each area allows necessary changes to be made.

Typical of today's construction, congested areas above the ceiling have provided a challenge on this project. In particular, there existed a long run of waste piping that had to be held high at one end and sloped



to just above the ceiling at the other end. This required the branch ducts to be routed either above or below the waste pipe depending on the location of the adjacent laboratory rooms.

"Coordination of this area would have been difficult without the use of this 3D tool," states Dan Sinclair, President of Cadvantage Drafting Service, Inc. "Access to BIM technology is rapidly becoming crucial

for the Sheet Metal Contractor. We would like to thank Stromberg for the opportunity to provide BIM/Coordination services for the New State Lab."

As this project progresses, virtual coordination will give Stromberg the ability to make changes prior to installation which translates into lower labor costs, field efficiency and adherence to construction schedules.

**FOR FASTER, LOWER-COST PROJECTS ---- USE BIM!
SMACNA ANNUAL CONVENTION SESSIONS REVEAL HOW**

While attending SMACNA's annual convention this October in Phoenix, SMACNA members will have the opportunity to attend a variety of educational sessions on the benefits of using Building Information Modeling (BIM).

From design to fabrication ---- utilizing BIM to maximize project efficiency.

In this convention session, contractors will learn how to use BIM to streamline their work processes and reduce risk. Eliminating redundant work and maximizing efficiency throughout the job are also benefits of employing BIM.

Bob Mauk, an industry recognized leader in integrating Virtual Design and Construction (VDC) and lean project delivery, will illustrate how project teams have realized the opportunities of using 3D-enabled delivery to streamline their work from design to fabrication.

He will discuss case studies from health care, industrial and governmental projects.

Increasing attention has been given to BIM in recent years and owners are starting not only to expect, but demand that BIM be used on their projects.

Samir Emdanat will show through practical project examples how project teams, when their interests have been strategically aligned, have maximized overall project efficiency.

Mr. Mauk is vice president of Virtual Design and Construction at Ghafari Associates and specializes in integrating VDC and lean project delivery to maximize the efficiency of the project's design and construction supply chains.

He directs the implementation of lean and VDC initiatives for owners in the automotive, governmental, hospitality and health-care industries as well as for contractors and architects/engineers around the country. Mr. Emdanat, is director, Virtual Design and Construction at Ghafari Associates.

SMACNA's 67th Annual Convention takes place at the JW Marriott Desert Ridge Resort and Spa in Phoenix from October 10 - 13, 2010.

For more information, contact SMACNA's Meeting's and Convention Department at (703) 803-2980.

Florida SMACNA, Inc. is a trade association made up of qualified sheet metal and air conditioning contracting firms dedicated to improving the quality of the construction business in Florida. The Association is part of a nationwide network of chapters that represent the leading voice in the industry, the Sheet Metal and Air Conditioning Contractors' National Association (SMACNA) located in Chantilly, Virginia.



FLORIDA SMACNA, INC. MEMBER FIRMS

In the sheet metal and air conditioning business, nobody knows excellence quite the way SMACNA Contractors do.
After all, they wrote the book on it. Why take a chance on doing business with anyone who offers less.

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OTHER CONTRIBUTORS TO THE FLORIDA SHEET METAL INDUSTRY

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Apollo Construction & Engineering
Colbert Air Conditioning
Crown Corr Erection
D&J Sheet Metal
DKG & Associates
Digital Climate & Control

Florida Metal Art
FCR Mechanical Contractors
Hanen Mechanical
Industrial Steel
JV Installation
Lindab, Inc.
MFH Sheet Metal Fabricators, Corp.

Quality Metal Works, Inc.
SDB Engineers and Constructors, Inc.
Spratlin Sheet Metal
System Tech Services
Triple M Roofing Corp.
Veritab Environmental

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USING ASHRAE'S FREE NEW IAQ GUIDE

The building community has lacked a comprehensive and practical resource on achieving good indoor air quality (IAQ) for the building professionals who design, construct and commission buildings.

To meet this long-standing need, ASHRAE teamed up with several key organizations, including SMACNA, to develop the newly published "Indoor Air Quality Guide: Best Practices for Design, Construction and Commissioning."

By going to www.ashrae.org/doclib/20100624_iaqappsarticle.pdf you can access a short summary of the guide including its format, content and a link to the free pdf file for download.

Designed for architects, design engineers, contractors, commissioning agents, and all other professionals concerned with IAQ, the guide is a comprehensive publication that provides both summary and detailed guidance regarding:

- **Best practices for all aspects of IAQ building design, commissioning and construction, including designing for maintainability.**
- **Tools and material for demonstrating the value of IAQ to clients**
- **40 strategies for achieving eight critical IAQ objectives**

To download the IAQ Guide visit www.ashrae.org

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SMACNA'S CONSTRUCTION STANDARDS

- Accepted Industry Practices for Sheet Metal Lagging.
- Architectural Sheet Metal Inspection Guide.
- Architectural Sheet Metal Manual, 6th edition 2003
- Fire Smoke and Radiation Damper Installation Guide for HVAC Systems.
- Guide for Steel Stack Construction.
- Guidelines for Roof Mounted Outdoor Air-Conditioner Installations.
- HVAC Duct Systems Inspection Guide.
- Kitchen Ventilation Systems & Food Service Equipment Fabrication & Installation Guidelines.
- Residential Sheet Metal Guidelines.
- Seismic Restraint Manual: Guidelines for Mechanical Systems.

- Sheet Metal Welding Guide.
- Standard Practice in Sheet Metal Work.

SMACNA'S DESIGN GUIDES

- Duct System Calculator - Imperial + Metric
- Ducted Electric Heat Guide for Air Handling Systems.
- Guidelines for Change Orders
- HVAC Systems - Duct Designs.

SMACNA'S DUCT STANDARDS

- Accepted Industry Practice for Industrial Duct Construction.
- Fibrous Glass Duct Construction Standards.
- HVAC Air Duct Leakage Test Manual.
- HVAC Duct Construction Standards - Metal and Flexible.
- Rectangular Industrial Duct Construction Standards.
- Residential Comfort System Installation Standards Manual.
- Round Industrial Duct Construction Standards.

- Round Industrial Duct Construction Standards (RIDCS) Software Version 2.0.
- Thermoplastic Duct (PVC) Construction Manual.
- Thermoset FRP Duct Construction Manual.

SMACNA'S ENVIRONMENTAL PUBLICATIONS

- Building Systems Analysis and Retrofit Manual.
- Energy Systems Analysis and Management.
- HVAC Sound & Vibration Manual
- HVAC Systems - Applications.
- HVAC Systems - Commissioning Manual.
- HVAC Systems - Testing, Adjusting & Balancing.
- IAQ Guidelines for Occupied Buildings Under Construction.
- Indoor Air Quality - A Systems Approach.
- TAB Procedural Guide.

Florida

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