

Florida

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TECH/SPEC

NEWS

THE REPLACEMENT OF AHU-10 AT JAMES A. HALEY VETERANS' HOSPITAL,
TAMPA, FL



Sheet Metal Contractor: McDonald Air & Sheet Metal, Inc., Orlando, FL
Drafting: Cadvantage Drafting Service, Inc., St. Petersburg, FL

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The scope of this project was the replacement of AHU-10 at the James A. Haley Veterans' Hospital in Tampa, Florida.

This article illustrates the necessary detail, organization, and complexity of issues to be dealt with in completing the project. The following first-hand account is provided by Richard Daniel, Project Manager, who says that the project was both challenging and rewarding.

There were several major hurdles to overcome: first, was to field measure and verify the location of all existing ducts, units, fans, and other equipment on the roof. This field work provided Dan Sinclair and his employees at Cadvantage Drafting Service, Inc., with the information necessary for them to produce accurate shop drawings.

The next major hurdle, and the key to the success of the job, was to locate and accu-

rately set all the stands prior to the fabrication of the duct work. To accomplish this, I got Dan Sinclair to produce not only duct drawings, but also a set of drawings showing the location of each leg of every stand from established control lines.

They did a fantastic job! Larry Harrelson, foreman, McDonald Air & Sheet Metal, Inc., along with his crew did a great job of accurately measuring and spotting the legs with the use of the Cadvantage drawings. Sizing and quantity of the support stands were coordinated between Mike DiRaimo, foreman for Entek Mechanical/Enthalpy Engineering Corp., and me. Enthalpy fabricated and installed all of the support stands.

Other issues to overcome were the lack of a staging area for materials, and a restriction which allowed hoisting only on Saturdays. The only place where a crane could set up to swing materials was in the

middle of the loading docks driveway. Rick Boyer, sales representative for McGill Air Flow, the company that fabricated all the double-wall round duct for the job, and I had to closely coordinate his fabrication and shipping of this duct. McGill Air Flow had a total of ten flat-bed truck loads to deliver to the job site. Rick and I agreed the two truck loads of duct could be delivered and installed in a ten-hour day on Saturday.

I showed him where we wanted to start and in what direction we would go to install the duct. Rick conferred with McGill's plant foreman and the round duct went into production. Once Rick could guarantee the delivery date for the first shipment, I contacted Tom Toney of Sims Crane Service and scheduled the commitment of a crane and operator for eight consecutive Saturdays. Week by week, I communicated with Rick Boyer to guarantee which pieces were coming and on

THE REPLACEMENT OF AHU-10 AT JAMES A. HALEY VETERANS' HOSPITAL, TAMPA, FL



which truck they would be placed. We needed eight lifts because it took five for McGill's pipe and three for the rectangular duct which was fabricated by McDonald Air & Sheet Metal, Inc.

Now, it was up to Larry Harrelson, McDonald foreman, and his crew along with Sims Crane to get it done. They did a great job. The new R.A. duct was hooked to an existing relief duct which was tied into the R.A. mixing chamber. This was used for a temporary return system until the new units were online. Once all the duct was in place, and the two new units were set, we field measured the four square-to-rounds needed for both the supply and return. McGill's Rick Boyer was present so he could get a first hand look at what we would be ordering from his plant.

With the AHU's hooked up, piped, wired, and tested, we now had to jump the next hurdle. This required a shut down weekend to demolish the existing supply air duct from the old AC-10 Unit and connect

it with the new duct which had been installed just through the mechanical room wall.

We were given from 6:00 p.m. Friday to 6:00 a.m. Monday for all work to be completed. McDonald Air & Sheet Metal worked three shifts, starting at 3:00 p.m. Friday and completing the work by 1:00 p.m. Saturday.

Now, with the new unit on line, it was up to Cross Construction to demolish and remove the old AC-10 Unit and associated duct, with the exception of temporary return air duct/relief duct. With the old unit gone, the new return air duct could be installed in the mechanical room just short of the R.A. mixing chamber and the two take off taps from the new 88 inch round return duct on the roof.

Finally, we were ready to jump our last hurdle: to make the final connections with the return duct. We were able to complete this in a six-hour time frame with the unit

still running, saving the Veterans' Administration Hospital the headaches of a second shut down.

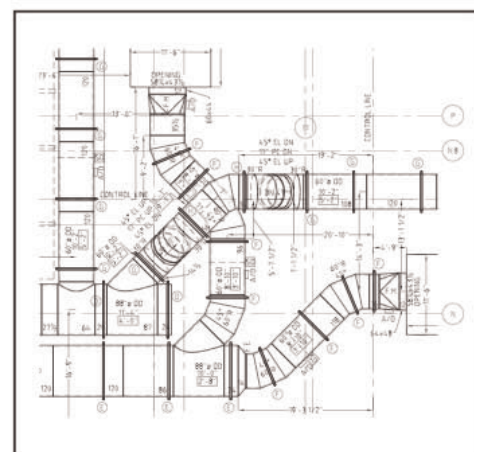
Cross Construction could now finish the demolition, the roof could be cleaned up, and the project demobilized.

Richard Daniel, McDonald's Project Manager, gave special thanks for a job well done to: Larry Harrelson, McDonald Air & Sheet Metal, Inc; Dan Sinclair, Cadvantage Drafting Service, Inc.; Rick Boyer, McGill Air Flow; Mike DiRaimo, Entek Mechanical/Enthalpy; and Tim Toney, Sims Crane.

Cadvantage Drafting Service provided drawings that met McDonald's requirements for accuracy and timeliness. This project required particular attention to detail to avoid field modification of the very large dual wall duct.

Dan Sinclair, President of Cadvantage, gave credit to CAD detailer, Souksavan Khountivilay, for leading the production of these drawings. Souksavan utilized 3-D software, developed by Cadvantage, along with her skills and knowledge to produce drawings that allowed McDonald's Sheet Metal to avoid conflicts on the job site.

"Our in-house Autocad based 3-D software made the drafting of this project's compound angles and offsets manageable." Sinclair stated. "3-D design helps us utilize the space available in an efficient manner."



**IMAGNETRON STOREFRONT MAGNET DISPLAY,
DOWNTOWN DISNEY, ORLANDO, FL**



Architect: ACE Architects, Oakland, CA
Sheet Metal Contractor: Vickers Metal Works, Inc.,
Orlando, FL

This project for Magnetron, completed in December, 2006, required Vickers Metal Works, Inc. of Orlando, to fabricate and install three 15 ga CR steel cutouts with 1/8" mill finish aluminum hardware as specified by the owner.

Cut-outs were to represent (left to right) a Refrigerator, a file cabinet, and a locker required for a storefront magnet display.



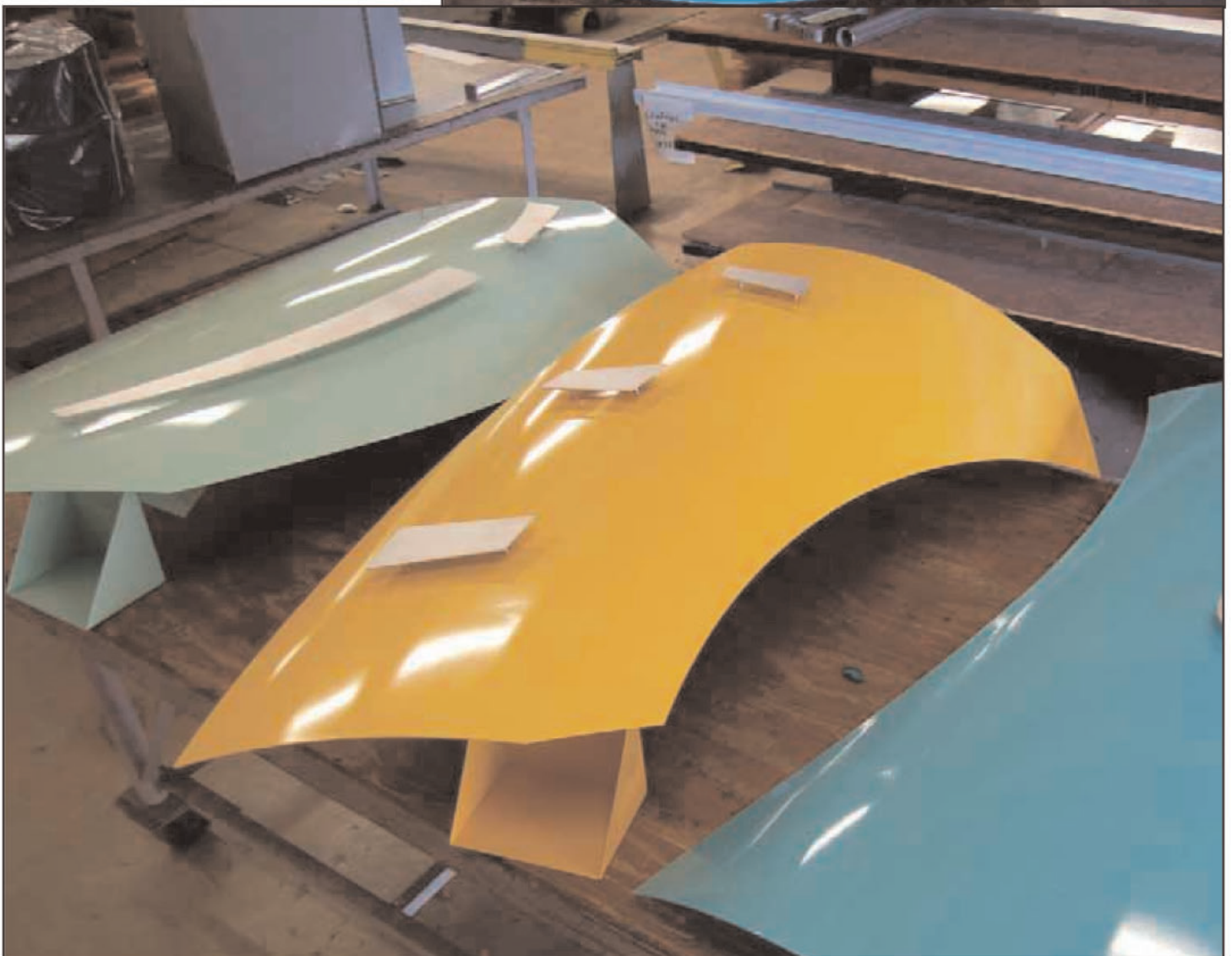
IMAGNETRON STOREFRONT MAGNET DISPLAY, DOWNTOWN DISNEY, ORLANDO, FL

The painted parts were then returned to Vickers shop to attach the custom fabricated 1/8" mill finish aluminum "simulated" hardware.

This hardware allowed each part to take on specific characteristics of a refrigerator, a file cabinet, and a locket.

After Vickers installed the display, Magnetron hired a graphic artist to pin-stripe each part to give a 3-dimensional effect.

The customer could then attach various magnets to each part to create the display.



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OTHER CONTRIBUTORS TO THE FLORIDA SHEET METAL INDUSTRY

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Apollo Construction & Engineering

D&J Sheet Metal

DKG & Associates

Digital Climate & Control

EK Installations

EMC2 Sheet Metal

Florida Metal Art

FCR Mechanical Contractors

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Triple M Roofing Corp.

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SMACNA CONVENTION: ARCHITECTURAL SHEET METAL COUNCIL FORUM PREVIEW: ACHIEVING OPTIMAL STAINLESS STEEL PERFORMANCE

Stainless steel is a "hot" design material because it can be aesthetically spectacular while providing practical long-term performance benefits for sustainable construction.

Whether the application is a well maintained lobby or a corrosive exterior location prone to vandalism, appropriately selected and fabricated stainless steel can remain attractive over the life of the building. Conversely, uninformed decisions can lead to expensive, unattractive mistakes.

Catherine Houska, an architectural consultant for TMR Consulting, will discuss how to achieve optimal stainless steel performance at this year's Architectural

Sheet Metal Council forum at SMACNA's annual convention, October 21 to 25 in Las Vegas.

She will emphasize how fabricators need to be knowledgeable so that unnecessary problems with flatness, finish quality, and corrosion can be avoided. Attendees will learn about available finishes, specification tips to avoid common problems, and how to evaluate the corrosiveness of the environment to ensure appropriate stainless steel selection. Examples of the latest design trends will be provided and case studies will be used to illustrate common problems and successful use of stainless steel materials. Industry association literature will be provided and free software tools introduced.

Houska is an architectural consultant for numerous industry associations including the Nickel Institute (NI), International Molybdenum Association ((IMO), Ornamental Metal Institute of New York (OMINY), and Specialty Steel Industry of North America (SSINA). She has provided technical assistance and given workshops to thousands of industry decision makers in North, Central, and South America, Asia, Australia, New Zealand, and Europe.

For more information on the annual convention, October 21 to 25 in Las Vegas, contact Mary Lou Taylor, director of meetings and convention at (703) 803-2998 or mtaylor@smacna.org.

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SMACNA Inc.

• SMACNA'S CONSTRUCTION STANDARDS

- Accepted Industry Standards for Sheet Metal Lagging.
- Architectural Sheet Metal Manual.
- Architectural Sheet Metal Manual, CADD Version 2.0
- 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 Guidelines.
- Managers' Guide for Welding.
- Residential Sheet Metal Guidelines.
- Seismic Restraint Manual: Guidelines for Mechanical Systems.
- SMACNA/ASHRAE Seismic Restraint Applications CD-ROM.

- Standard Practice in Sheet Metal Work.

• SMACNA'S DUCT STANDARDS

- Duct Research Destroys Design Myths (Bubble Video).
 - Duct System Calculator - Imperial.
 - Ducted Electric Heat Guide for Air Handling Systems.
 - HVAC Duct Design Home Study
 - HVAC Systems - Duct Design.
- ### • SMACNA'S DESIGN GUIDELINES
- 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 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.

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