

Florida

SMACNA Inc.

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TECH/SPEC

NEWS

RENOVATIONS TO ROBERT E. LEE ELEMENTARY SCHOOL ORLANDO, FL



**SHEET METAL CONTRACTOR: MCDONALD AIR & SHEET METAL, INC.,
ORLANDO, FL**

RENOVATIONS TO ROBERT E. LEE ELEMENTARY SCHOOL ORLANDO, FL



Architect: C.T. Hsu & Associates, P.A., Orlando, FL
Roger Pafford, Lead Architect

Engineer: S.G.M. Engineering, Inc., Orlando, FL

General Contractor: Clark Construction, Orlando, FL
Kory Krueel

Mechanical Contractor: W. Soule Company, Orlando, FL
Aaron Jones and R.C. Reeves

Sheet Metal Contractor: Mechanical Superintendents
McDonald Air & Sheet Metal, Inc., Orlando, FL
Jim Sheer, Project Manager
Ron Turmenne, Sheet Metal Superintendent
John Crown, Jobsite Foreman



The scope of the project involved the renovation of existing structures and adding some new areas that tie to existing structures. The \$600,000 sheet metal job required 60,000 lbs. of ductwork which included 3000 lbs. of spiral, 48,000 lbs. of rectangular duct, 5000 feet of snap lock pipe, and a stainless steel kitchen hood exhaust. In addition, two air conditioners at 150 tons each, 14 AHU's, and 23 exhaust fans were provided.

Challenges to the project were the necessity to carry on work while school was in session. The coordination of the work during school hours, required safety and badging to become a top priority. There was very little parking and access to the facility so Clark Construction, the general contractor, coordinated all phases of the work as closely as possible. Due to space limitations, material was off loaded in the staging areas of the work.

The entire sheet metal project, originally planned for two years-August, 2007 to March, 2009, will be completed six months ahead of schedule. Building No.1, the final building, was started on November 8, 2008.

Jim Sheer, McDonald Air and Sheet Metal, Inc. Project Manager stated: "For a renovation project, the job was coordinated very well by all trades."

MIAMI INTERMODAL CENTER (MIC) RENTAL CAR FACILITY MIAMI, FL



Sheet Metal Contractor: Lewis and Lambert, LLLP., Fort Worth, TX

The Miami Intermodal Center (MIC) Rental Car Facility will house all the surrounding rental car agencies and their vehicles in one building of over 4.3 million square feet. The project requires over 1.1 million pounds of sheet metal duct and 120 fans mostly to remove vehicle exhaust fumes from within 6 inches of the floor.

A unique aspect of the project is that many fuel dispensers are installed above grade level (this had never been done before). In order to draw off any fumes that may accumulate, there are 14 inch round spiral ducts installed on either side of the fuel dispensers to within 1 inch above the finished floor. The West end of the building on all three floors holds fuel dispensers and carwashes that wash a car in 25 seconds. The customer service area is on the fourth floor, so the arriving busses will bring customers up a long ramp to be dropped off on the roof.



MIAMI INTERMODAL CENTER (MIC) RENTAL CAR FACILITY MIAMI, FL



One challenge to the coordination of the project was the fact that no floor, where cars are driven, is level. In most areas, the floor slopes 14 inches over 60 feet and the floor above does not always pitch in the same direction. This made coordinating the ductwork to fit inside the allotted space tedious, as there is a 10 foot above finish floor clearance requirement for emergency vehicles. Many of the beams were 5.5 feet deep, with most of the duct 80 x 36 inches.

Once completed the MIC will be joined by a Bridge to the TRI-RAIL station to the East and a people mover is proposed on the West side to connect to the Miami International Airport.

Lewis and Lambert have been in business over 35 years. The company has experience in HVAC component fabrication, HVAC contracting and HVAC design. It has three operating divisions, the Spiral duct division, the Industrial division and an HVAC/sheet metal contracting division in Fort Worth, Texas. MFH of North Miami assisted in the fabrication of the rectangular duct in order to defray shipping expenses.



**RAYTHEON TECHNICAL SERVICES COMPANY LLC.,
ORLANDO, FL**



General Contractor: Pertree Construction, Inc., Orlando, FL
Sheet Metal Contractor: Vickers Metal Works, Inc., Orlando, FL

The scope of the project called for Vickers Metal Works, Inc. to fabricate and install decorative wall cladding of .040 and .050 clear anodized aluminum inside the main lobby of the Raytheon Building in Orlando, Florida.

Custom panels were roll formed as required to fit the 17'-0" radius wall on each side of the existing water feature. Each panel was formed with 1/2" 90 degree returns on all edges. Reveals were 1/2" deep x 1 1/2" wide. Panels were adhered directly to plywood substrate using adhesive as required. Dimensions for each side were approximately 4' wide by 12' tall.

Custom panels were also formed to fit three sides and the base of two planters. Each planter was approximately 2' tall x 20' overall length.

The logo was fabricated using 1/2" PVC with brushed aluminum laminate installed by Vickers Metal Works, Inc.

The project required 80 hours for fabrication with field installation taking 130 hours.



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.

Air Management Systems, Inc.

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OTHER CONTRIBUTORS TO THE FLORIDA SHEET METAL INDUSTRY

Advanced Metal Works

All Ready Chute, Inc.

Apollo Construction & Engineering

Colbert Air Conditioning

Conquest Mechanical

Crown Corr Erection

D&J Sheet Metal

DKG & Associates

Day and Zimmerman

Digital Climate & Control

Energy Services Ins, Inc.

Florida Metal Art

FCR Mechanical Contractors

Industrial Steel

JV Installation

Lindab, Inc.

MFH Sheet Metal Fabricators, Corp.

Quality Metal Works, Inc.

Ray Williams Sheet Metal

SDB Engineers and Constructors, Inc.

Superior Mechanical

System Tech Services

TankServ, Inc.

Triple M Roofing Corp.

Union Air Conditioning

Universal Fabrication Services

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NEW EDITION OF “ACCEPTED INDUSTRY PRACTICE FOR INDUSTRIAL DUCT CONSTRUCTION,” 2ND EDITION

The second edition of SMACNA’s “Accepted Industry Practice for Industrial Duct Construction” is a compilation of the latest accepted industry practices and construction techniques, having received wide acceptance for the fabrication and installation of industrial duct systems.

The 208 page guide covers round (long-seam and spiral) duct from 4 inches to 60 inch diameter, both reinforced or unreinforced, for operation

from 4 inch to 20 inch wg positive or negative pressure, and from ambient to 650 degrees F for carbon or stainless steel, 400 degrees F for galvanized steel, and 120 degrees F for aluminum.

Also included is information on rectangular duct fabricated from panels from a few inches up to 5 feet wide; all welded, Pittsburgh, grooved seam pipe lock or standing seam joined duct for operation from 4 inch to 20 inch wg positive or negative pressure and for the same

materials and temperature limits as round duct. Chapters on industrial applications, material properties, hangers and supports, fittings, vents, doors, discharge ducts (small stacks) and surface preparation of metals are part of this comprehensive publication.

Architects and engineers may purchase the publication at the discounted price of \$96 for the book, \$115 for the CD, and \$96 for the PDF download.

To order, contact Florida SMACNA, Inc. 321-242-8223.

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• SMACNA’S CONSTRUCTION STANDARDS

- Accepted Industry Practices for Sheet Metal Lagging.
- Architectural Sheet Metal Inspection Guide.
- 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 Fabrication & Installation Guidelines.
- Residential Sheet Metal Guidelines.
- Seismic Restraint Manual: Guidelines for Mechanical Systems.
- Sheet Metal Welding Guide.

- SMACNA/ASHRAE Seismic Restraint Applications CD-ROM.
- Standard Practice in Sheet Metal Work.

• SMACNA’S DESIGN GUIDES

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

• 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 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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