

Florida

SMACNA Inc.

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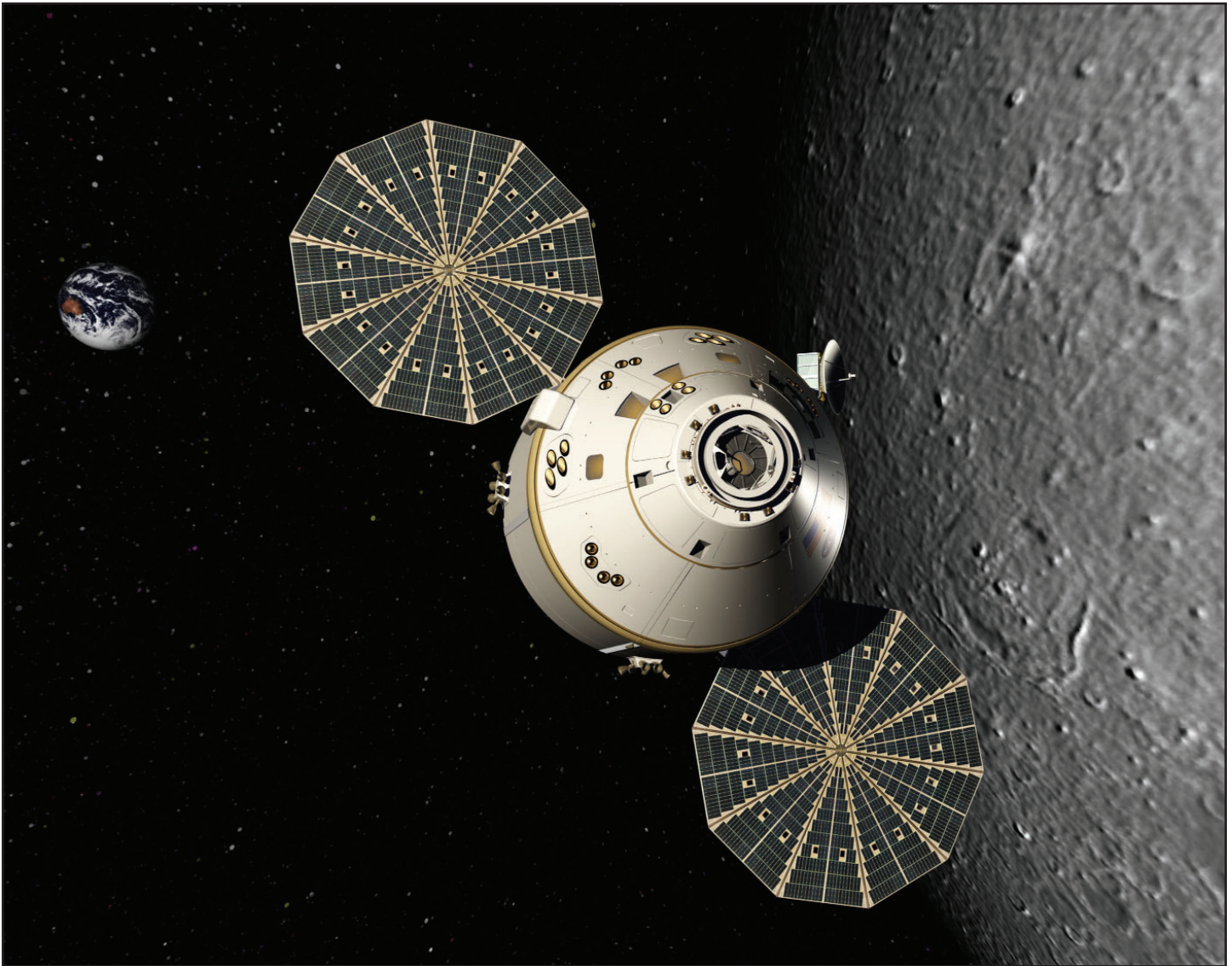
TECH/SPEC NEWS

**O AND C MODERNIZATION PROJECT, NATIONAL AERONAUTICS
AND SPACE ADMINISTRATION, KENNEDY SPACE CENTER,
CAPE CANAVERAL, FL**



**SHEET METAL CONTRACTOR: LAPIN SHEET METAL COMPANY, INC.,
ORLANDO, FL**

O AND C MODERNIZATION PROJECT, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, KENNEDY SPACE CENTER, CAPE CANAVERAL, FL



Owners Representative: Lockheed Martin, Orlando, FL
Architect: BRPH - Architects, Engineers, Constructors, Melbourne, FL
General Contractor: Hensel Phelps Construction Co., Orlando, FL
Mechanical Contractor: Sauer, Inc., Jacksonville, FL
Sheet Metal Contractor: Lapin Sheet Metal Company, Inc., Orlando, FL

The O and C Modernization Project is a remodel of the Operation and Checkout Building at the National Aeronautics and Space Administration at Kennedy Space Center, Cape Canaveral, Florida.

This historic facility will be used for the new Orion spacecraft that is America's next generation of human space exploration.

The O and C Modernization Project is the start of the most significant spacecraft development efforts since the space shuttle.

Orion is an advanced capsule design utilizing state-of-the-art technology that will be capable of transporting up to six crew members to and from the International Space Station and up to four crew

members to the Moon and eventually to Mars.

The scope of the project for Lapin Sheet Metal Company, Inc. consisted of fabrication and installation of HVAC galvanized ductwork throughout the O and C Building.

Lapin Sheet Metal provided all rectangular ductwork on this project made of either single wall or double wall construction.

All double wall spiral duct was fabricated by McGill Airflow's South Carolina Branch. All of the duct supports were fab-

O AND C MODERNIZATION PROJECT, NATIONAL AERONAUTICS AND SPACE ADMINISTRATION, KENNEDY SPACE CENTER, CAPE CANAVERAL, FL



licated and installed by Sauer, Inc.

The challenge on this project was the precise coordination required of the MEP team and the creation and maintaining of a clean room environment.

The ductwork had to be drawn and closely coordinated by the project MEP coordination team of Wilbur Mummey, Lapin Sheet Metal Company's head CAD Designer; Freddie Crawford, Sauer, Inc.; David Johnson, Lockheed Martin's mechanical engineer; with assistance from Scott Shelby of Hensel Phelps.

This group of professionals routed and located all ductwork including locations of each duct support without conflicts to existing equipment, structures, crane rails and vacuum chambers.

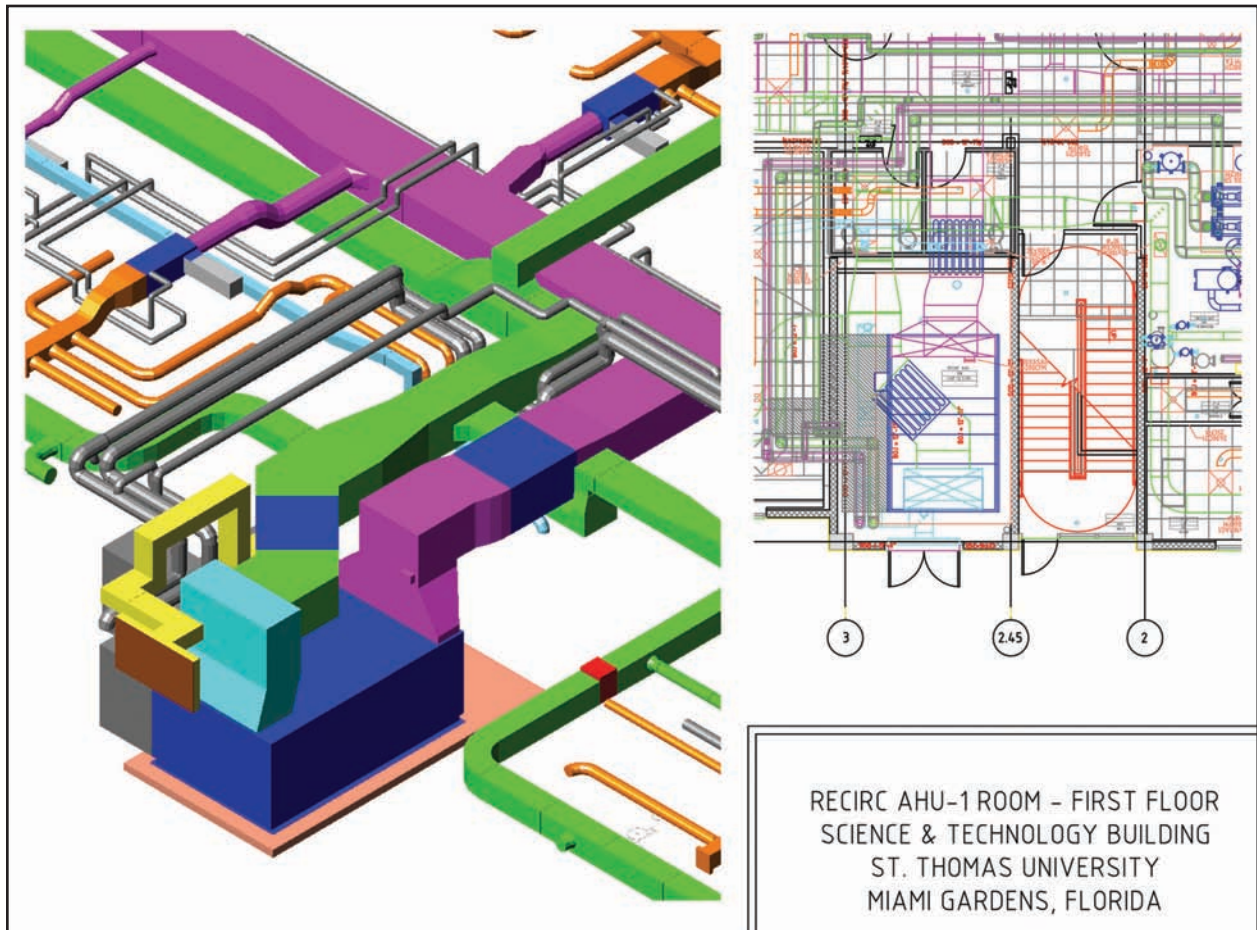
The additional challenge was to internally clean all supply air duct with isopropyl alcohol and capping to maintain a clean room environment according to the specifications.



Daniel Lapin, Lapin Sheet Metal Company, Inc., expressed his gratitude to all team members for making this project a success. With special recognition to Lockheed Martin, Hensel Phelps Construction Company, Sauer Incorporated and to all Lapin Sheet Metal Employees especially to Ronald Irby, Field Superintendent, David Aguilar, Shop Superintendent, and Ray Ackerson, Field Foreman.



ST. THOMAS UNIVERSITY, CARNIVAL CRUISE LINES SCIENCE & TECHNOLOGY BUILDING, MIAMI GARDENS, FL



General Contractor: Modular Contractors, Inc., Miami, FL
Architect: Ponikvar & Associates, Gainesville, FL
Engineer: Moses & Associates, Inc., Gainesville, FL
Mechanical Contractor: Cailis Mechanical Corp., Miami, FL
Drafting/Coordinating: Cadvantage Drafting Services, Inc. St. Petersburg, FL

St. Thomas University Carnival Cruise Lines Science & Technology Building was recently completed in time for the opening of the fall semester.

This \$10.3 million facility will provide students with the opportunity to do undergraduate research with updated equipment.

The 26,000-square-foot facility has 14 research laboratories, eight teaching labs and several special-purpose rooms.

Cailis Mechanical Corporation of Miami provided the mechanical systems for this project meeting the stringent requirements of a laboratory facility.

Cailis contracted the services of Cadvantage Drafting Services, Inc. of St. Petersburg to provide HVAC coordination and fabrication drawings.

Cadvantage Drafting Service, Inc. has been involved in the detailing of a tremendous amount of laboratory work in the United States in the last five years.

This particular facility had a large amount of stainless steel duct relative to the size of the project. The main laboratory is serviced by a Greenheck Vektor-MD fume exhaust system and stainless steel duct as large as 32" round on the roof.

Cadvantage utilizes an in-house custom

3-D Autocad® based software program for ductwork and piping design. The program allows Cadvantage to produce drawings that helped Cailis Mechanical stay on schedule by addressing coordination problems prior to fabrication.

Cadvantage Drafting Services' President, Dan Sinclair, emphasizes the importance of good communication between architects, owners, engineers and project managers. "In today's construction environment, effective coordination is the key to a successful project. Our 3-D drawings enable these professionals to pinpoint problem areas before they can have a negative impact."

Dan Sinclair recognizes the efforts of draftsmen Roger Schwartz and Felipe Aranto, who detailed the HVAC drawings. Dan extends his thanks to Manny Cailis of Cailis Mechanical, for his collaboration in bringing another successful project to completion.

STAINLESS STEEL SELF-DRAINING PLANTERS TAMPA, FL



Sheet Metal Contractor: Metalfab, Inc, San Antonio, FL

The scope of this project presented to Metalfab, Inc. of San Antonio, Florida seemed straightforward on the surface: to fabricate and install self-draining stainless steel planters which were set on solid granite blocks.

However, there were a total of eleven planters. Each planter had a different shape, contained varying angles, and were of different heights.

The customer was experiencing problems with children going into the planters. Metalfab, Inc. solved this problem with the design of the fountain and the generous use of plants.

Each planter self-drains into a fountain and there is a filter screen at each drain tube.

This \$98,000 project used 16 ga stainless steel, 1/2" stainless steel round tubing and stainless steel screen.

The craftsmen at Metalfab made patterns in the field which were brought back to the shop. They then constructed a duplicate fountain of planters in the shop.

All field work was completed during night hours so as not to disrupt business.



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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Rich Applegate

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407-297-7546
Tim Vickers

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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Florida

SMACNA Inc.



• **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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