

Partners **IN** PROGRESS

SMACNA & SMWIA—Building A Future Together

DEC 2003



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MICHAEL J. SULLIVAN

MARK WATSON

CO-PUBLISHERS

JOE SALIMANDO

JSALI@CRIS.COM

EDITOR

DEBORAH APPEL

CREATIVE SERVICES

ERIC WESTBROOK

COVER ART

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NEWS AND SHORTS

IMAGE EFFORTS: FROM ZERO TO SIXTY!

When they write the history of SMWIA-SMACNA joint cooperation some time in the future, and look back on the early 2000s, industry historians will put a special asterisk on 2003 for “the start of the national marketing effort.”

During this year, the sheet metal partners have accomplished the following:

Logo—the two organizations, working together, created the HVAC-expertise logo. This is a new approach for our industry. The “sheet metal” history behind each organization is not being abandoned; HVACexpertise is a marketing concept!

Note that an Architectural Metal Expertise logo also has been developed to promote the industry’s special efforts in architectural sheet metal.

Web site—HVACexpertise.com should be operational by early January. It is aimed at homeowners and commercial building owners and managers. The www.sheetmetalpartners.org Web site remains up and running; it is aimed at “internal” communication, while the hvacexpertise.com site is aimed at marketing our services.

Targeting general contractors—the second issue of this magazine—*Partners In Progress*—was “reused.” Mailed to SMWIA members and signatory contractors at 20 pages, the issue was modified to create a 16-page insert. This insert was placed in *CONSTRUCTOR*, the magazine of the Associated General Contractors of America.

AGC mails 46,000 copies of the magazine. In addition to our industry insert, each issue included a letter, signed by the presidents of SMWIA and SMACNA, explaining why our industry was advertising in the general contractor publication.

FREE HVAC EXPERTISE NEWSLETTER

SMACNA’s HVAC Contractors Council has retitled its newsletter as *HVAC Systems Expertise*—and made it available to members and non-members via the Web.

Find it at www.smacna.org/council/hvac. The most recently posted issue provided results of an owner survey, best practices (for owners and contractors), the role HVAC contractors play in the construction process, and more.

WELDING CERTIFICATION OFFERS ADVANTAGES

The International Training Institute—jointly sponsored by SMACNA and the SMWIA, which also together sponsor NEMI and TABB—has a hit on its hands.

A welding supervisor certification program, put together in cooperation with the American Welding Society, is proving popular with HVAC contractors of all stripes.

One contracting company notes that, after offering customers welding services that could be inspected and approved by a trained Certified Welding Inspector, “We’ve had to hire two more welders just to keep up with the welding.”

For details, see page six of the *Industrial Insights* newsletter: www.smacna.org/pdf/03June_Industrial.pdf. ■



Growing In Markets With Potential

In October, the National Energy Management Institute (NEMI)—a joint SMWIA-SMACNA organization—held a Growth Markets Initiative meeting for contractors. You could sum up the two days of sessions as: “There’s more to growing in these markets than simply identifying them.” Instructors from the leading construction industry consulting firm, FMI Corp., led attendees in everything from strategic analysis of three markets to nitty-gritty tactical details—marketing “how-to” information; how to organize time, management staff, and workers for an attack on growth markets; and much more.

And there really was “much more!” We cannot fit two information-packed days of meetings (and questions and answers) into one issue of *Partners In Progress*. See the nearby matrix—“Tool 1.5”—for a look at just one exercise.

However, we can provide a bit of the information and thinking communicated in sessions on building commissioning, energy management, and indoor air quality.

But wait—what about Residential? Isn’t that a focus of the SMACNA-SMWIA joint marketing efforts? *Yes, it is!*

And—no, we haven’t forgotten the residential market.

In fact, quite the opposite. You’ll find here a feature that differs from “industry outlook for 2004” features elsewhere. Our piece identifies top construction and building improvement markets in 2004—and beyond.

Yes, you’ll find the standard forecast information, for nonresidential markets as well as residential. See the back cover “DataBank” as well. First, check out these three special ideas:

Retrofit/Service study: see page 6 for a preliminary report on the residential retrofit and service opportunity.

Residential service work: Residential improvements, maintenance, and repairs are detailed.

Building improvements boom: As you know, this magazine is a project by the Market Expansion Task Force, a joint SMWIA-SMACNA effort. If you want to talk about market expansion, look at the bottom line on building improvements: They now make up more than 30% of dollars spent on construction, according to FMI Corp.—vs. 25% at the all-time industry peak a few years ago. ■

Tool 1.5: Qualitative Opportunity Evaluator (example)

	Building Commissioning	Energy Management	Indoor Air Quality
Competitive Activity	<ul style="list-style-type: none"> No other HVAC firms offering this in my market Main competitor is an engineering firm 	<ul style="list-style-type: none"> Two other firms I know of have started to do this in the public schools 	<ul style="list-style-type: none"> Not sure of anyone offering this No industrial hygienists in my market
Buyer Requirements	<ul style="list-style-type: none"> Includes building systems that are outside of my area of expertise 	<ul style="list-style-type: none"> Must have good service techs Primarily HVAC related 	<ul style="list-style-type: none"> Risk of litigation? Purchase is reactive, not proactive
Market Demand	<ul style="list-style-type: none"> \$1 million local market Recent delayed schedules 	<ul style="list-style-type: none"> \$6 million local market Several large local energy users 	<ul style="list-style-type: none"> \$3 million local remediation market Threat of law suits
Social, Political, and Technological Forces	<ul style="list-style-type: none"> Have experience with TAB Equipment in place 	<ul style="list-style-type: none"> Local government requirement High energy prices 	<ul style="list-style-type: none"> Insurance companies dropping mold coverage
Organizational Capabilities	<ul style="list-style-type: none"> TAB experience Have PE on staff 	<ul style="list-style-type: none"> No performance contracting experience 	<ul style="list-style-type: none"> No one trained in air sampling Purchased duct cleaning equipment

Corporate Cost-Cutters Could Target Energy!



Building owners know they waste energy, but usually overlook chances to become more efficient. If cost-cutting remains a way of life for some industries, this option will look better and better.

Energy management/retrofit is the process of proactively managing and adjusting building system energy consumption to increase efficiency and reduce energy costs.

Most building owners (in the U.S.) have not instituted formal energy management; informal programs appear more widespread. Many owners indicate familiarity with energy retrofits.

Although awareness is high, only a small amount of energy management work has been performed. Of all HVAC systems replaced in a given year, most result from equipment failure; less than 15% are driven by an energy-minded retrofit.

Experts believe HVAC energy-management potential is at least twice what we see today. The four major reasons for an HVAC/energy retrofit are:

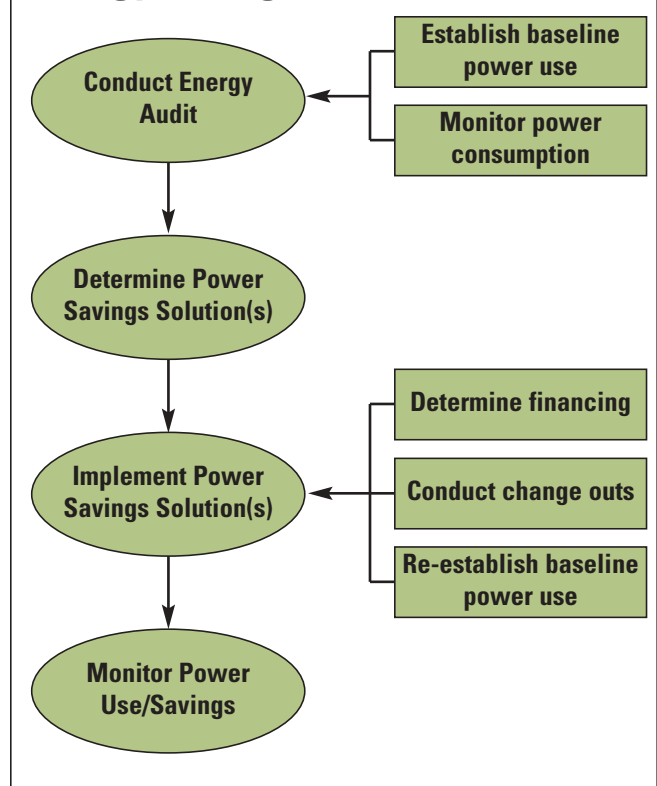
- Greater energy efficiency.
- Lower operating and maintenance costs (plus rebates in some areas).
- The poor performance (energy-wise) of an aging HVAC system.
- Code compliance and/or a change in the building's function or use.

EQUIPMENT NEEDED

This equipment list is more related to the energy audit than replacing HVAC systems. Needs include:

- Multifunctional meters
- Current measurement meters
- Thermometers (including those with laser sights)
- Ultrasonic flow velocity meters
- Stroboscope/tachometers
- Combustion gas analyzers
- Thermohydrometers
- Water quality analyzers
- Infrared G system
- Energy consumption analyzers.

Energy Management Process



Combined cost for the equipment on this list might be less than \$20,000.

GREAT POTENTIAL

Over the next 20 years, replacement of outdated HVAC equipment will be one of the organized sheet metal industry's strongest segments.

Why? Equipment is becoming outdated; government regulations are requiring better performance; and corporate sensitivity to environmental efficiency is increasing. ■

construction outlook:

Improvements & Retrofits Grab Larger Share of All Industry Markets

By Joe Salimando

Ever since the telecom, dot-com, and NASDAQ bubbles popped at (more or less) the same time—in 2000—economic forecasters have been promising an economic recovery that will begin in the current year's second half.

Economic and construction industry forecasters in late 2003 made the same promise—yes, again!—but this time, more forcefully than ever. And this time there is more of a consensus across the many forecasters.

One difference this time: A “bounce” of some sort appeared to rejuvenate the economy just as last year was drawing to a close.

But guess what? Much of the forecast for this year can be summarized as “more of the same for . . . *more of the same.*” Outlooks for 2004 don't differ dramatically from the construction industry's estimated 2003 results. See Table One for selected outlooks from construction and economic forecasts (we picked those that provided numbers through 2005 . . . there were not many!).

For SMWIA members and SMACNA and signatory contractors, then, the question is: What's growing in construction? And: *What's not?* This article, based on data gathered via three national construction outlook conferences, seeks to provide answers.

IMPROVEMENTS GAIN, TOO

Table Two provides data on new construction and improvements, from FMI Corp. It's important to

remember that every time construction crews walk away from a finished building, it becomes a candidate for improvements and maintenance. At the bottom of Table Three, we've provided FMI's data for building construction—new and improvements—on separate lines. The new vs. improvement data omit nonbuilding construction (stadiums, sewage treatment plants, prisons, and so forth).

Here's what we learn after a little math: Improvements as a whole made up 25% of the building market's dollars in 2000, and more than 30% now.

Table Three puts another spin on the same data, showing improvements by major market. Interestingly, despite all the major-media hullabaloo about new residential construction, if one takes improvements as a whole, residential outpaces non-residential!

CONTINUED ON PAGE 6

Table One

2005 Outlooks—Economy-Wide & Construction

	2003	2004	2005
FMI—total construction— change from prior year	- 1%	0%	+ 4%
McGraw-Hill— total construction— change from prior year	+ 1%	+1%	+ 2% to +5%
NAHB—housing starts	1,786,000	1,700,000	1,658,000
Real Gross Domestic Product:			
BNP Paribas	+ 2.5%	+ 3.7%	+ 3.3%
Macroeconomic Advisors LLC		+ 4.3%	+ 3.6%
NAHB	+ 2.9%	+ 4.4%	+ 3.7%

Note: GDP figures are changes from prior year, after inflation is subtracted out.

In fact, Kermit Baker—a respected economist—predicts the home remodeling market will actually exceed (in dollar value) new housing construction by 2010.

Baker fills two posts:

- chief economist for the American Institute of Architects; and
- director of the Remodeling Futures Program at Harvard University's Joint Center for Housing Studies.

Baker claims that remodeling and repairs already outpace new construction of homes in the Northeast—where, he says, work on existing houses makes up 51% of the spending.

How big is this market? Baker claims that home improvement and repair overall was \$214 billion in 2001, broken down as follows:

- 61% spent on improvements to homes by people living in them;
- 16% invested in homeowner-financed maintenance and repairs;
- 12% in improvements to houses that are rental properties; and
- 11% on maintenance and repairs to rental housing.

Note: Baker's estimates of the home improvement market are higher than those of the Census Bureau. The government's home improvement figures are widely believed (by construction industry economists) to have serious flaws. Further, Baker observes that—thanks to the weakness of the government's home improvement data reporting, the mass media's emphasis on new construc-

Residential Service & Retrofit: A NEMI Market Snapshot

NEMI recently released a draft report on the U.S. residential HVAC service and retrofit market. It's not yet final. What follows are details that can be released before completion:

How HVAC housecalls happen: "The demand for residential HVAC service and retrofits is influenced by:

- equipment breakdown—[estimated at 65% of the total market];
- home improvements and remodels [roughly 30%]; and
- energy-savings decisions [5%].

"Demand for HVAC service and retrofits will grow with an increasing national housing stock and greater per-unit use of heating and cooling systems."

How big is the market? The American Housing Survey [a U.S. Census Bureau project] "reports that approximately 3% of HVAC units fail each year." According to FMI Corp., that equates to 2.5 million to 3 million units annually.

However, millions of units that don't yet need replacing are the subject of service calls. FMI has found estimates "that as many as 20-million-plus HVAC units are serviced in a given year."

NEMI's report suggests the market could become even larger. Why? The "rule-of-thumb" puts average residential HVAC unit life at 15 years. There were 9 million single-family homes built new in the U.S. from 1985 to 1989.

Further, National Association of the Remodeling Industry data show more than 13 million home improvement projects that "involved replacing structural elements or major systems," in the 24 months comprising 2000 and 2001.

Competition: "There has been considerable consolidation among residential HVAC contractors. Manufacturers and distributors are moving further downstream to the homeowner. This can potentially threaten union expansion in this market.

"However, the residential HVAC industry remains highly fragmented and is defined by a large number of contractors."

What about us? "Union representation is almost non-existent in the residential HVAC service and retrofit markets in most areas. FMI estimates that residential HVAC service and retrofit revenues represented by union contractors are 3% or less of the total market.

"Reasons for this lack of market share include

- non-union operating and competitive strategies;
- oftentimes lower overhead costs [for non-union contractors];
- coupled with the minimal focus on this market by the unionized segment.

"Capital entry requirements are essentially a non-issue."

More? Has this thin slice of information whet your appetite? Look for one or more *Partners In Progress* articles on the residential service/retrofit market in 2004, based on the final NEMI report.

Table Two**Construction 2004-05 Estimates**
(current dollars in billions)

	2000	2001	2002	2003P	2004F	2005F
Total Residential	\$373.4	\$397.0	\$424.6	\$421.4	\$408.3	\$432.2
Total Nonresidential	\$291.4	\$297.3	\$266.0	\$264.9	\$271.8	\$284.2
Non-Building Structures	\$151.7	\$167.5	\$169.6	\$166.2	\$174.5	\$184.9
Total Put In Place	\$816.5	\$861.8	\$860.2	\$852.5	\$854.6	\$901.3

Summary—New vs. Improvements

(omits nonbuilding structures)

New Construction	\$467.0	\$486.9	\$480.2	\$475.6	\$468.9	\$496.3
Improvements	\$197.7	\$207.4	\$210.4	\$210.7	\$211.1	\$220.1
Total Buildings	\$664.7	\$694.3	\$690.6	\$686.3	\$680.0	\$716.4

Source: Source: FMI Corp. data for 2003 estimates and 2004-05 forecasts. Other data from U.S. Department of Commerce as provided by FMI Corp.

tion, and other factors—home improvement, repair, and remodeling is “a stealth market.”

NONRESIDENTIAL

Table Four, on nonresidential building construction, summarizes a great deal of information in one place. Nonresidential data for 2002, estimates for 2003, and forecasts for 2004 from McGraw-Hill and FMI are included. The three columns at the right-hand border provide FMI’s improvement (as opposed to new construction) estimates.

Health care is perhaps the most interesting line to read from left to right. While McGraw-Hill sees a steep decline from 2002 to 2004 in square footage of new health care construction, the same source projects a less-steep drop in dol-

lars. FMI’s health care projections are for an even smaller new construction dollar figure. However, it’s important to note the dollars (actual, estimated, and forecast) for improvements in this sector exceed new building.

Along the same lines and only a bit less interesting—because it contains fewer billions of dollars—is the manufacturing line. Reading left-to-right, it shows a weak market; the dollar value of contracts for new manufacturing construction, in McGraw-Hill’s estimation, is barely more than 1% of the projected 2004 total.

However, the left-to-right read for manufacturing is similar to health care. Renovations and improvements are significantly higher than new building.

CONTINUED ON PAGE 8

Table Three**Past & Future Numbers—
New Construction vs. Improvements**
(current dollars in billions)

	2000	2001	2002	2003P	2004F	2005F
Residential Breakouts						
Total Residential	\$373.4	\$397.0	\$424.6	\$421.4	\$408.3	\$432.2
Improvements	\$105.3	\$114.5	\$123.1	\$121.4	\$119.9	\$126.3
Nonresidential Summary						
New Construction (all)	\$199.0	\$204.4	\$178.7	\$175.6	\$180.6	\$190.4
Improvements (all)	\$92.4	\$92.9	\$87.3	\$89.3	\$91.2	\$93.8
Total Nonresidential	\$291.4	\$297.3	\$266.0	\$264.9	\$271.8	\$284.2

Source: FMI Corp. data for 2003 estimates and 2004-05 forecasts. Other data from U.S. Department of Commerce as provided by FMI Corp.

Table Four

**Nonresidential Sectors
Summary—McGraw-Hill & FMI Corp. 2004 Forecasts**

Sector	McGraw-Hill \$billions - Construction Starts			McGraw-Hill Starts - Millions Sq. Ft.			FMI Corp. \$billions—New. Con.			FMI Corp. \$billions- improvements		
	02	03	04	02	03	04	02	03	04	02	03	04
Retail	\$18.2	\$19.4	\$20.8	257	277	285	\$26.4	\$28.7	\$30.3	\$11.7	\$11.8	\$12.0
Office	\$19.8	\$18.0	\$19.8	156	140	147	\$31.0	\$28.1	\$29.2	\$9.0	\$8.9	\$9.0
Lodging	\$4.7	\$5.3	\$6.1	40	45	50	\$6.5	\$5.9	\$6.2	\$3.5	\$3.3	\$3.6
Educational	\$42.1	\$43.4	\$42.6	253	240	223	\$45.4	\$45.3	\$43.7	\$20.5	\$21.5	\$20.7
Healthcare	\$16.0	\$15.0	\$14.8	97	88	83	\$8.4	\$8.3	\$7.9	\$12.4	\$12.7	12.7
Manuf.	\$5.3	\$5.5	\$6.0	66	65	70	\$5.9	\$5.8	\$6.2	\$7.7	\$7.9	\$8.3
Total Nonres.*	\$154	\$151	\$157	1,429	1,342	1,380	\$179	\$176	\$181	\$87	\$89	\$91

Sources: McGraw-Hill Construction & FMI Corp. 2002 data = actual. 2003 figures = estimates by the sources for year-end totals. 2004 = forecasts. * Totals do not add to "bottom line" because of niches not presented.

Table Five

2004 Construction Forecast By Region - McGraw-Hill

Region	billions of dollars of construction starts			Change 04/03	States
	2002A	2003E	2004F		
Northeast	\$72.8	\$63.7	\$64.5	+1%	CT ME MA NH NJ NY PA RI VT
North Central	\$104.4	\$105.7	\$102.8	-3%	IL IN IA KS MI MN MO NE ND OH SD WI
South Atlantic	\$116.8	\$119.0	\$121.2	+2%	DE DC FL GA MD NC SC VA WV
South Central	\$81.6	\$83.7	\$84.0	0	AL AR KY LA MS OK TN TX
West	\$126.1	\$133.6	\$136.4	+2%	AK AZ CA CO HI ID MT NV NM OR UT WA WY

Source: McGraw-Hill Construction. A = actual, E = estimate, F = forecast.

WEST LEADS THE REGIONS

McGraw-Hill's 2002 actual, 2003 estimated, and 2004 forecast data by region show the West in the lead. While construction grew by 1% in 2003, and is estimated to grow by 1% in 2004, the West's 2002-04 growth is almost 8%.

Should those projections prove out in 2004, the West will account for almost 27% of new construction contract dollar value.

What's happening in the West to drive this? One thing is new residential construction. As more immigrants come to the U.S., many settle in Western states. Additionally, there's no shortage of emigrants—U.S. citizens moving to California and neighboring states.

SUMMARY

It's always possible that the forecasters have it wrong. There's nothing preventing 2004 from becoming a boom year in non-

residential construction, improvements to existing buildings, and more.

Consider: Minutes of its most recent meeting showed that the Federal Reserve Board has pretty much ruled out a near-term interest rate hike, despite a 40-year-low on short-term rates. Looking at 2004's second half, it seems unlikely the Fed would raise rates until mid-November. *Why?* A key principal of the U.S. system is that the Fed doesn't take actions that can influence presidential elections.

For additional information, see the short story on page 6 on Residential HVAC Market Research from the National Energy Management Institute (a SMACNA-SMWIA trust). Also: See this issue's back cover for FMI's historical, estimated, and projected nonresidential submarket data, including historical info starting in 2000 and projections through 2005. ■

SALIMANDO IS EDITOR OF PARTNERS IN PROGRESS.

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Sunday 5/2/04	Monday 5/3/04	Tuesday 5/4/04	Wednesday 5/5/04	Thursday 5/6/04	Friday 5/7/04
<p>Registration 11:00 a.m. - 6:00 p.m.</p>	<p>Continental Breakfast 7:00 a.m. - 8:00 a.m.</p> <p>Partnership Conference Opening General Session 8:00 a.m. - 12:30 p.m.</p> <p>8:00 a.m. – 5:00 p.m.</p> <ul style="list-style-type: none"> • Effective Communication • OSHA 500 Course and SMOHIT Products & Resources Review <p>Luncheon 12:30 p.m. - 1:30 p.m.</p> <p>Partnership Conference Breakout Sessions 1:30 p.m. - 5:00 p.m.</p> <p>ITI Apprenticeship Contest Orientation 5:00 p.m. - 6:00 p.m.</p> <p>Welcome Reception 6:00 p.m. - 7:00 p.m.</p>	<p>ITI Apprenticeship Contest</p> <p>Continental Breakfast 7:00 a.m. - 8:00 a.m.</p> <p>Partnership Conference General Session 8:00 a.m. - 12:00 p.m.</p> <p>8:00 a.m. – 5:00 p.m.</p> <ul style="list-style-type: none"> • Effective Communication • OSHA 500 Course and SMOHIT Products & Resources Review <p>Health Fair 7:00 a.m. - 2:00 p.m.</p> <p>Box Lunch Pick-up 12:00 p.m. - 1:00 p.m.</p> <p>National Pension Fund General Session 1:00 p.m. - 2:30 p.m.</p> <p>Workshops 1:00 p.m. - 3:00 p.m.</p> <ul style="list-style-type: none"> • Common Safety Hazards & How to Avoid Them • Basic Sheet Metal Estimating • The Business Side of the Sheet Metal Business • Technical University <p>Central States Coalition Meeting 2:30 p.m. - 5:30 p.m.</p> <p>SASMI General Session 3:30 p.m. - 4:30 p.m.</p>	<p>ITI Apprenticeship Contest</p> <p>Continental Breakfast 7:00 a.m. - 8:00 a.m.</p> <p>Trustee Training presented by International Foundation of Employment Benefit Plans—General Session 8:00 a.m. - 12:00 p.m.</p> <p>8:00 a.m. – 5:00 p.m.</p> <ul style="list-style-type: none"> • Effective Communication • OSHA 500 Course and SMOHIT Products & Resources Review <p>Health Fair 7:00 a.m. - 2:00 p.m.</p> <p>Workshops 8:30 a.m. - 12:00 p.m.</p> <ul style="list-style-type: none"> • Basic Sheet Metal Estimating • Lean Production Process • Service Technician Training • Technical University <p>Box Lunch Pick-up 12:00 p.m. - 1:00 p.m.</p> <p>Trustee Training presented by International Foundation of Employment Benefit Plans—Breakouts 1:00 p.m. - 5:00 p.m.</p> <ul style="list-style-type: none"> • Health Care Trustees • Pension Trustees • Training Trustees <p>Workshops 1:00 p.m. - 3:00 p.m.</p> <ul style="list-style-type: none"> • Effective Construction Communication • Creating the High Performing Contractor 	<p>ITI Apprenticeship Contest</p> <p>Continental Breakfast 7:00 a.m. - 8:00 a.m.</p> <p>8:00 a.m. – 5:00 p.m.</p> <ul style="list-style-type: none"> • OSHA 500 Course and SMOHIT Products & Resources Review <p>Apprenticeship Conferences 8:00 a.m. - 12:00 p.m.</p> <ul style="list-style-type: none"> • Central States • Western States <p>Emerging Markets Sessions 8:30 a.m. - 12:00 p.m.</p> <ul style="list-style-type: none"> • Architectural Markets • HVAC Markets - NEMI • Industrial Markets • Residential Markets - NEMI <p>Box Lunch Pick-up 12:00 p.m. - 1:00 p.m.</p> <p>Open Forum with ITI, NEMI & SMOHI Trustees 1:00 p.m. - 3:00 p.m.</p> <p>Workshops 1:00 p.m. - 5:00 p.m.</p> <ul style="list-style-type: none"> • Design/Build Fundamentals • Service Technician Training • Working the Architectural Metal <p>ITI Coordinators Workshop 3:00 p.m. - 5:00 p.m. (coordinators only)</p> <p>Closing Ceremony & ITI Apprenticeship Contest Awards Reception and Dinner 6:00 p.m. - 9:00 p.m.</p>	<p>Western States Apprenticeship Conference 8:00 a.m. - 4:00 p.m.</p> <p>TABB Conference 5:00 p.m. - 7:00 p.m.</p>
					<p>Saturday 5/8/04</p> <p>TABB Conference 8:00 a.m. - 4:00 p.m.</p>

**Register Now—
Use the back
page of this
brochure!**



Partnership Program: Many Eye-Opening Acts

No, there won't be man-eating tigers at this year's SMWIA/SMACNA Partnership Conference, slated for May 3-4, 2004 in Vegas, but there will be free-wheeling, thought-provoking, no-holds-barred presentations.

This year's Partnership program will kick off the first Sheet Metal Industry Week (May 2-8) and feature eye-opening examples of best practices used by locals and chapters to expand into residential, industrial, commercial and institutional markets.

Among the topics this highly popular conference will cover are:

- **Details of the landmark Florida project to regain market share.**
- **Mind-boggling research findings on residential retrofit and service and local labor-management residential success stories!**
- **What industrial decision makers say it takes to get their business.**
- **How labor and management in British Columbia use a "road show" to educate the industry about market realities—what's needed to succeed today!**

HOW TO:

- **Make school officials think twice about non-union contractors.**
- **Use the HVAC Expertise slogan and logo to best effect.**
- **Obtain a federal subsidy for your market expansion efforts.**



PLUS: A wake-up call from owners on "reverse auctions."

Sheet metal contractors, local union leadership, training coordinators and SMACNA chapter executives seeking to improve industry relations and create work opportunities that benefit both labor and management will want to attend not only the Partnership Conference but also the entire Sheet Metal Industry Week. The Industry Week Program will be packed with technical, business, safety, and market opportunity workshops and close with the National Apprentice Contest and Awards Dinner.

To register, use the back side of this page—tear it out or photocopy. Act Today!

SMWIA + SMACNA—Partners In Progress

Timely Training For Trustees!

One-Day Seminar Wednesday, May 5

Designed with the help of the International Foundation of Employee Benefit Plans for Labor and Management Fund Trustees in the Sheet Metal Industry.

AM – fiduciary responsibilities under ERISA. A thorough review of the Trustee's role, updated with current information from the U.S. Department of Labor.

PM – specialized training workshops for Health, Pension, and Training Fund trustees.

Health – hot topics in health and welfare design, funding, and cost & quality management.

Pension – latest trends in effective pension plan design. Actuarial principles affecting the health of your plan.

Training – current issues facing training funds. Included: "Where is the scholarship loan agreement program after the Supreme Court's *Great West* decision?"

All attendees will receive a Certificate of Attendance from the International Foundation.

Expense Coverage: Ask Your Fund

Has your trust fund adopted a policy providing for expense reimbursement for Trustees attending educational programs?

If so, the Certificate of Attendance awarded at the Trustee Training might prove useful. It could allow reimbursement for a proportionate share of airfare, hotel registration costs, and related expenses to attend this meeting.

Trustees: Consult your trust fund rules. Ask your administrator to determine the portion of expenses that may be allocated to the fund.

Commissioning Will Grow— Can We Grow With It?

Analysts tell us the commissioning and ‘retro commissioning’ markets are small now, but could well explode. When commissioning assignments are more abundant, who will be there to pick up the pieces?

Estimates put commissioning of new and existing buildings (the latter called “retro commissioning”) at less than \$200 million in annual revenue. The potential market opportunity could easily be 50 times greater . . . and perhaps as much as 100 times greater.

One hundred times \$200 million is \$20 billion in annual sales!

Commissioning makes use of management and worker skills, knowledge, and abilities already present in the SMWIA workforce and SMACNA contractors. Involved: The systematic process of verifying that the building’s performance and systems:

- meet the specified design intent; and
- make the building comfortable for its occupants, and help them to be productive in their work.

VALUE

Is commissioning valuable to building owners? There are broad-range benefits, as many proponents can tell you. On the other hand, many industry experts say the need for commissioning is not universal, but should be considered on a one-at-a-time (building-specific) basis.

Building owners can save on new construction via commissioning. Days can be shaved from the schedule, lowering construction costs—and leading to early-completion bonuses.

A call to commission an existing building typically is triggered by a complaint from a building occupant. People complain about the things they can see and feel—the lighting and HVAC systems. As a result, the most likely



service provider, in our area, is a contractor with TABB or other certification.

According to FMI Corp: “Industry surveys reveal that the TAB and MEP contractors are among the most-preferred providers of building commissioning.” FMI goes on to point out that while there is a low barrier to market entry in terms of capital, “the knowledge requirements are much greater.”

See the chart on page 14 of competitors, and their strengths and

weaknesses, for FMI’s analysis of the playing field in commissioning.

EQUIPMENT NEEDED

Here is a list of equipment commonly used to perform building commissioning. An estimated cost is \$10,000 to \$20,000:

- Ultrasonic flow meters
- Power analyzer
- Temperature and humidity meters
- Balancing flow hood
- Water flow meters
- Fluke digital meters
- BDC systems
- Other diagnostic and measurement tools.

Important: FMI points out that plumbing, lighting, life safety systems, and controls are a part of building commissioning. Clearly, much more than HVAC systems are involved here.

CONTINUED ON PAGE 14

Competitor Strengths and Weaknesses			
Service	Competitor	Strengths	Weaknesses
Building Commissioning	General Contractor	<ul style="list-style-type: none"> • Owner relationships • Overall facilities knowledge 	<ul style="list-style-type: none"> • Detailed technical knowledge • Ability to directly perform the work
	Architect	<ul style="list-style-type: none"> • Owner relationships • Overall facilities knowledge 	<ul style="list-style-type: none"> • Detailed technical knowledge of systems • Ability to directly perform the work
	Engineer	<ul style="list-style-type: none"> • Owner relationships • Overall and specific facilities knowledge • Detailed technical knowledge of systems 	<ul style="list-style-type: none"> • Manpower to directly perform the physical verification work
	Owner Internal Team	<ul style="list-style-type: none"> • Is the buyer • Detailed and specific knowledge of the facility 	<ul style="list-style-type: none"> • Detailed technical knowledge of systems • Manpower to directly perform the physical verification work
	Other Specialty Contractor (MEP, TAB, Controls)	<ul style="list-style-type: none"> • Detailed facilities knowledge and specific systems knowledge • Overall facilities knowledge • Access to marketing dollars and resources (mostly major controls companies i.e. Siemens, Honeywell, Johnson Controls) 	<ul style="list-style-type: none"> • Systems knowledge only deep in one area (electrical, mechanical, controls, or HVAC) • May lack the manpower to directly perform the physical verification work (this applies to controls contractors mostly)
	OEM Vendor	<ul style="list-style-type: none"> • Very detailed specific knowledge of their equipment/system • Access to marketing dollars and resources 	

So while you may well be able to procure all of the tools and equipment needed, you might need to subcontract out some of the functions to another specialty contractor.

EXPANDING HORIZONS

“Systems knowledge” is the top skill needed to succeed in building commissioning:

- a basic understanding of how systems operate;
- how systems work independently;
- how systems work *dependently*;
- the ability to determine the intent behind a system’s design; and
- how the system(s) will be used by building occupants.

One challenge for the SMACNA-SMWIA team is the scope of building commissioning. It goes beyond HVAC and mechanical systems, to include:

- Building automation systems
- Controls systems
- Lighting systems
- Life safety systems
- Transportation systems

SKILL REQUIREMENTS

Commissioning jobs start with a test protocol, which measures the system’s operations vs. design intent. Typically developed by the commissioning authority, this protocol is then used by the commissioning agent (the SMACNA or other SMWIA-signatory contractor one hopes).

That “agent” then performs field testing. A unique set of skills will be needed among the agent’s workers and managers to do the job in commissioning—the location of a significant advantage for the SMWIA-SMACNA team. To do well in commissioning, one must:

- excel in systems knowledge;
- be able to troubleshoot problems;
- use analytical processes well;
- be detail-oriented;
- work alone as well as part of a team;
- exhibit self-management work skills;
- communicate well;
- document the work that has been performed; and
- have good mathematical skills. ■

IAQ Opportunity Here Today, With More To Come Tomorrow!

Most U.S. residents are indoors most of the time; even active people living in warm climates work, eat, and sleep under roof.

Result: The market for IAQ services is huge now—and threatens to grow!

Indoor air quality (IAQ) is short-hand for the physical, chemical, and biological characteristics of air in the indoor environment—and its effect on occupant comfort and health.

Standards-wise, IAQ is governed by ASHRAE Standard 62. Important criteria include:

- Concentrations of unwanted gases or particles that adversely affect one or more human beings;
- Adequate ventilation;
- Control of airborne contamination; and
- Creation of acceptable temperature and relative humidity in a building.

While it can be “good” or “bad,” the term itself—“IAQ”—is typically considered a negative. One reason might be studies that have come to the public’s attention in recent years. They generally report that the air within commercial buildings, office buildings, and even homes is actually *more* polluted than the outdoor air.

Worse, this is the case even in large, industrialized urban areas . . . where outdoor air quality might itself be a problem.

IAQ VS. ENERGY EFFICIENCY?

Most IAQ issues stem from energy-minded building practices put into effect over the past 25 years. As a result, it can seem that energy efficiency (or energy management) and IAQ are diametrically opposed.

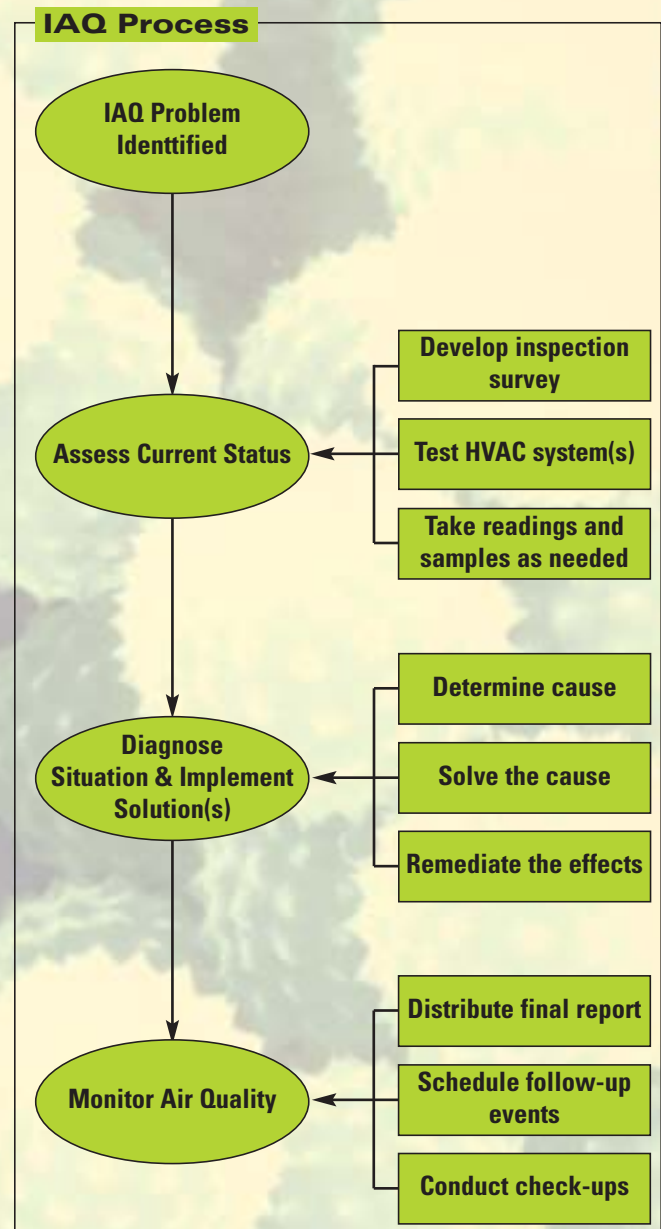
But wait: The perceived conflict between IAQ and energy stems from two elements of building management strategy.

- a tendency to minimize outdoor air ventilation rates; and
- a willingness to relax temperature and relative humidity controls to cut energy use.

Studies of IAQ investigations and remediations indicate occupant complaints are the most common catalyst for this work. In some cases, litigation (or the threat of it) drives IAQ procedures.

As of 2001, building owners rarely monitored indoor air. Today, the threat of bioterrorism, as well as the insurance and legal aspects of the “toxic mold” threat, may be in the process of changing that.

CONTINUED ON PAGE 16



Competitor Strengths and Weaknesses			
Service	Competitor	Strengths	Weaknesses
Indoor Air Quality	O&M Staff	<ul style="list-style-type: none"> • Is the buyer • Detailed and specific knowledge of the facility, systems, and problems 	<ul style="list-style-type: none"> • Detailed technical knowledge of HVAC and other systems • Ability to directly perform the work
	Industrial Hygienist/Epidemiologist	<ul style="list-style-type: none"> • Owner relationships • Specific scientific knowledge of IAQ • Ability to perform highly technical analysis and diagnosis 	<ul style="list-style-type: none"> • Ability to directly perform the remediation work
	Engineer	<ul style="list-style-type: none"> • Owner relationships • Overall and specific facilities knowledge • Detailed technical knowledge of systems 	<ul style="list-style-type: none"> • Manpower to directly perform the physical verification work
	Other Specialty Contractor (MEP, Controls)	<ul style="list-style-type: none"> • Overall and specific facility systems knowledge 	<ul style="list-style-type: none"> • Scientific knowledge needed to perform diagnostics • Systems knowledge typically limited to one area • Ability to directly perform all remediation work
	Environmental Testing Lab	<ul style="list-style-type: none"> • Scientific knowledge and ability to perform environmental tests 	<ul style="list-style-type: none"> • Systems knowledge of HVAC • Ability to prescribe and implement solutions
	General Contractor	<ul style="list-style-type: none"> • Owner relationships • Facilities knowledge • Ability to manage subcontractors 	<ul style="list-style-type: none"> • Detailed technical knowledge • Ability to directly perform remediation work

IAQ EQUIPMENT

Diagnostics and remediation are separate IAQ opportunities.

While an industrial hygienist typically diagnoses a building, sheet metal workers and contractors can perform this function. Tools and meters involved, typically costing less than \$500 each, include:

- Moisture meter
- Thermometer
- Carbon dioxide meter
- Carbon monoxide meter
- Rh meter.

A more likely entry point for those in the organized sheet metal industry is remediation—working with HVAC systems and ductwork. It’s likely the sheet metal contractor already owns the needed equipment and tools. However, for remediations that include duct cleaning, you will need:

- Air compressor
- Collector
- Miscellaneous cleaning tools, such as a rotary brush.

Combined cost of these items might run from \$10,000 to \$12,000.

SKILL SETS

Providers in the U.S. and Canada listed these skill sets as the most beneficial for IAQ work:

- Proper training with IAQ-specific equipment, such as air-sampling tools and air composition meters;
- Industry certification (there are several); and
- A background in industrial hygiene.

Certification is not necessary in IAQ work; customers, however, seem to prefer to have a knowledgeable professional working on solving these problems. While that might be the case, even certified professionals from disciplines closely related to IAQ issues (i.e., industrial hygienists, ventilation engineers, and toxicologists) might not have the expertise needed to resolve many IAQ problems.

What’s missing in the know-how of these specialized people? IAQ service providers must be able to understand the HVAC system and its role in the building’s overall design. This need—which certainly seems to point in your direction!—is not necessarily well understood.

With their specialized knowledge, skills, and abilities, sheet metal workers and contractors are especially well-qualified for IAQ remediation work. That’s worth the attention of SMACNA and SMWIA, as the remediation market is estimated at \$5.5 billion annually in the U.S. alone.

Further, FMI and others estimate that only a piece of the market is being touched. While roughly 30% of U.S. buildings have IAQ problems, only 5% have undergone any IAQ diagnosis and/or remediation. ■

Ohio-WV Partners Key On 'Visibility'

The Ohio-West Virginia partnership of SMWIA and SMACNA faces external and internal challenges. Keeping things going takes a bit of effort—but but look at how much it has accomplished thus far!

By A. Lee Chichester

No matter how successful or long-lived it may seem, keeping a partnership alive still takes work.

"The challenge, quite frankly, is to keep everyone interested in participating," says Jim Shoaff, Executive Director of SMACNA's Cleveland chapter. Key to the effort is *visibility*, he suggests—showing the participants that action is being taken . . . that the effort is worth it.

Reggie Hohenberger, Business Manager at LU 33, would define "visibility" slightly differently. He wants the partnership to have more visibility *to the consumer*: "Let's face it—the customer doesn't hire the union, he hires the contractor," he points out.

"The union just comes along with the signatory contractor, and so we have to make the partnership more visible to the customer."

Hohenberger has proposed a nickel apiece from both sides of the partnership to devote to marketing the union advantage to the consumer of sheet metal services and installations. "In Toledo, we've just finished up the bargaining process, and we got that marketing nickel from both parties," he says.

ACTION IN COLUMBUS, TOO

Visibility in a partnership also means staying in front of the legislators who are in charge of influencing the business climate in a state or region. In the case of LU 33 and the Cleveland Chapter, events in Columbus, Ohio's state capital, are usually top-of-mind.



"Prevailing wage had been knocked out of government education efforts K through twelve," says Hohenberger. "Our sheet metal contractors led the charge when there was an effort to get rid of prevailing wage in other state educational money, like universities and community colleges.

"They called their state senators and reps. They also worked with union contractors from other trades—electrical and mechanical, for example. They all called their legislators to defeat that effort, and they did it."

Why would a SMWIA union leader focus on getting contractors, even if signatory, to call state representatives? "A state senator is much more likely to listen to a guy who employs 10 to 20 people, than to a union business manager," he says. "That's a fact of life."

While cooperation on key issues could not be more important, the SMACNA-SMWIA partnership in Cleveland and surrounding areas goes after other concrete efforts.

"One of our biggest, most visible achievements has been the establishment of a mandatory substance abuse testing program," says Shoaff. "We've just completed testing over 700 union members and roughly 100 of our non-bargaining (office staff) people.

"This has been quite an accomplishment."

EDUCATING THE EDUCATORS

Union and contractors have also invested in an on-site-marketing effort, by purchasing a machine that enables the user to

CONTINUED ON PAGE 18

make individualized badges. In the SMWIA-SMACNA case in northern Ohio, the badges contain an individual company's logo and the partnership logo; workers wear these badges on job sites.

What's the purpose? The badges are a visible manifestation of the partnership. These sheet metal partners believe the badges are especially important when they work at school buildings. The badges, they feel, will help education personnel learn what union quality means for the comfort of their students.

Additionally of course, there is the "visibility" angle—the badges literally "label" the partnership's participants.

"We're encouraging our contractors on school jobs to

introduce their workers to the personnel and show them how important we, too, believe education and training for quality work is," says Shoaff. "And to let them know of our new testing effort so they're aware all the workers on site are drug-free."

Adds Hohenberger: "We need to market what we have to offer that consumer, and let them know about the training we do at the JATC. We have to get them to know about the stress we put on safety and the drug-free workforce. It's important to let the customer know what they've obtained when they go to one of our signatory contractors."

Additionally, partnership members have invested time in visiting local school boards. Board members learn about the

Recruiting in the Schools

Reggie Hohenberger, Business Manager for SMWIA Local Union 33 (Cleveland), remembers organizing a Toledo-based shop that had been non-union for 20 years. What's relevant here is his astonishment when he learned from where the shop's workers had received their training.

"Twenty-five of the 28 workers in that shop had been sent by the instructor straight from one of the only high school programs that taught HVAC," recalls Hohenberger. "That instructor had been told his graduates didn't have enough experience to get into our commercial program.

"Obviously, upon hearing that, he had said . . . 'Okay. Fine.' Then he sent his graduates to the open shop's residential programs.

"We were just flabbergasted."

How do you correct such a flaw? Hohenberger and SMWIA organizers met with the instructor. They told him they'd take his promising students into the organized sheet metal industry's residential training program.

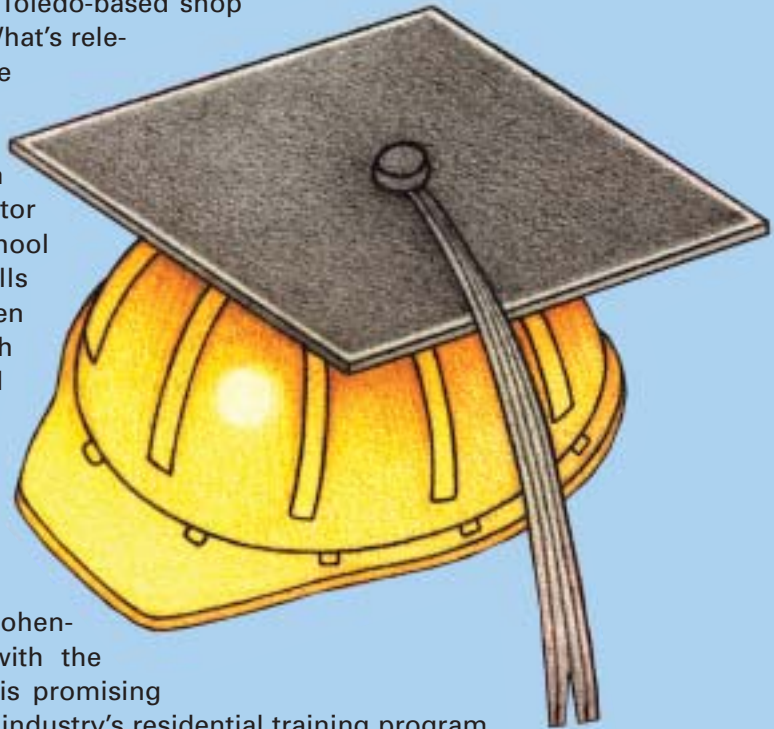
"We didn't ask for only the top students," Hohenberger reveals. "If they showed up to class on time; if they were hard workers, we'd take them. Would this type of student get into the commercial program? Maybe not.

"But we can find a place for him in the siding/decking program, the industrial program, or the residential program. We can offer a lot of different paths for him to take.

"Over the past three years, we've gotten nearly every student worth his salt out of the two high schools that teach HVAC. It's a matter of knowing who to talk to and making the effort.

"In most of our areas, we don't have any shortage of skilled people entering the training program," Hohenberger claims. "We like to think of this work as 'Cutting Off the ABC's Oxygen Supply.'"

—Lee Chichester



SMACNA-SMWIA commitment to training, continuing education, and how workers and managers stay on top of advances in HVAC technology.

Emphasis on interfacing with the educational network has resulted in some visible recruitment efforts as well (see story below for details).

GEOGRAPHY & SUCCESS

One astounding element of the partnership committee is its enormous physical area of coverage—89 counties! These include two in Michigan, one in Pennsylvania, 40 in Ohio, and 46 in West Virginia.

Importantly, this territorial span helped create another focus—a source of another achievement: Breaking down barriers that have tended, in the past, to constrict union contractors to limited geographic areas of work. “Through the partnership, the union recognized the restrictions the contractors were encountering when they had an opportunity to move outside of their traditional geographic territories to bid new work,” says Shoaff.

Historically, contractors had operated with a “two-man-rule;” no more than two workers from a given company could travel into other jurisdictions. SMWIA Local 33 waived that in favor of a “four-man-rule” to help contractors win more work.

“We looked around and saw that the bordering counties to the LU 33 jurisdiction were hurting us, and the contractors weren’t encouraged to go there,” remembers Hohenberger. “So back in 2000, I think it was, we had a meeting in Toledo and there was a unanimous union vote to open up the borders to four men.

“Currently, we’re working with our sister locals to open up their borders also.”

Shoaff notes: “This has helped our contractors to go outside their traditional areas—and to be more aggressive in their bidding patterns. It’s helped a lot in making our contractors more competitive.”

ADDITIONAL EFFORTS

The SMWIA-SMACNA local partnership sponsors annual conferences which, as it turns out, are helpful in meeting geographic challenges. These meetings (plus Mutual Gains Bargaining meetings sponsored by SMACNA’s national office and SMWIA international) bring together contractors and Business Agents from the various jurisdictions.

“Now, our contractors in the Cleveland area know the Business Agents in Toledo and Akron,” Shoaff points out. “This is important because when they have an opportunity to

bid a job in those areas, they’ll at least have a familiarity with the folks they’re going to be doing business with.

“That’s a very positive result of the partnership.”

Another visible result is training offered to the Ohio Building Inspectors. Like most state’s building officials, they maintain their certification through continuing education credits (CECs).

“The state of Ohio offers them ongoing training so they can access those credits,” says Shoaff. “But my concern, having been a Building Chief myself, was that they weren’t offered any training in HVAC systems.”

Result: SMWIA Local Unions #33 and #24, the International Training Institute, and SMACNA’s Cleveland Chapter together established a seven-hour HVAC training program. It is certified by the State Board of Building Standards and presented it as a CEC option for the inspectors.

“Over a period of two years, we’ve been able to train 300 Building Chiefs in the state of Ohio, across our entire

district,” says Shoaff. “That was an effort I was personally involved in. I’m proud that we were able to raise the level of HVAC training with these inspectors.”

INVESTING IN A PARTNERSHIP

In northern Ohio, the partnership still faces varied challenges, such as staying visible—to both participants and customers; producing results; and allowing access. These efforts keep the partnership effort alive and kicking—and ultimately are designed to involve more contractors and workers in the joint activities that promote the organized sheet metal industry.

“Dealing with the day-to-day requirements of simply keeping a business alive takes a toll on the time contractors can make available to invest in a partnership,” Shoaff states. “That means the time invested in this partnership effort is a big commitment for them.

“We’re striving to show that their commitment does produce results, and that they’re essential to its success.”

Hohenberger agrees, and lays out a basic plan for the future: “Every facet of the partnership is important, and we’ve done so many things we can point to. We’ve got a lot of good ideas, and we’re always improving ways of doing business together. Now that we’re working together well, I think we need to get more into telling people who we are, and marketing the union choice.” ■

CHICHESTER IS A VIRGINIA-BASED FREELANCE WRITER WHO OFTEN CONTRIBUTES TO BUILDING TRADES AND CONSTRUCTION-ORIENTED MAGAZINES—INCLUDING THIS ONE.

SMWIA-SMACNA partners visit local school boards to explain the industry’s commitment to training, education, and more.

Markets & Trends

HVAC DataBank

Nonresidential Market —Historical Data & Future (current dollars in billions)						
	2000	2001	2002	2003P	2004F	2005F
Education						
New	\$36.9	\$41.7	\$45.4	\$45.3	\$43.7	\$45.7
Improvements	\$17.1	\$19.2	\$20.5	\$21.5	\$20.7	\$21.0
Total	\$54.0	\$60.9	\$65.9	\$66.8	\$64.4	\$66.7
Retail						
New	\$27.2	\$27.8	\$26.4	\$28.7	\$30.3	\$32.2
Improvements	\$13.5	\$12.8	\$11.7	\$11.8	\$12.0	\$12.3
Total	\$40.5	\$40.6	\$38.1	\$40.5	\$42.3	\$44.5
Office Buildings						
New	\$45.7	\$44.2	\$31.0	\$28.0	\$29.2	\$30.8
Improvements	\$11.6	\$11.0	\$8.9	\$8.9	\$9.5	\$9.7
Total	\$57.3	\$55.2	\$39.9	\$36.9	\$38.7	\$40.5
Public Safety, Admin. + Other						
New	\$19.8	\$22.7	\$22.2	\$21.5	\$24.0	\$25.9
Improvements	\$8.5	\$9.7	\$8.5	\$10.0	\$10.7	\$11.5
Total	\$28.3	\$32.4	\$30.7	\$31.5	\$34.	\$37.3
Health Care (incl. nursing homes)						
New	\$6.2	\$6.3	\$8.4	\$8.4	\$7.9	\$7.7
Improvements	\$11.8	\$11.3	\$12.4	\$12.7	\$12.7	\$13.3
Total	\$18.0	\$17.6	\$20.8	\$21.1	\$20.6	\$21.0
Industrial (omits warehouses)						
New	\$11.9	\$11.8	\$5.9	\$5.8	\$6.2	\$6.8
Improvements	\$11.4	\$11.4	\$7.7	\$7.9	\$8.4	\$8.5
Total	\$23.3	\$23.2	\$13.6	\$13.7	\$14.6	\$15.3
Hotel/Motel						
New	\$11.0	\$9.9	\$6.5	\$5.9	\$6.2	\$6.6
Improvements	\$4.4	\$4.2	\$3.5	\$3.3	\$3.6	\$3.7
Total	\$15.4	\$14.1	\$10.0	\$9.2	\$9.8	\$10.3

Source: FMI Corp. data for 2003 estimates and 2004-05 forecasts. Other data from U.S. Department of Commerce as provided by FMI Corp.

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