

July/August 2007

VOLUME 23

NUMBER 4

Facilities Manager

THE OFFICIAL PUBLICATION OF APFA

BACK TO THE **FUTURE**



What's Next
For Educational
Facilities

Nonprofit Org.
U.S. Postage
PAID
Permit No. 653
Alexandria, VA

Replace Outlet Check Filters Replace Hardware
Check-in Equipment Room too Cold Paint Stairwell
Check Filters Replace Light Fixture Polish Floors Check
Paint Stairwell Electrical Repair Meter Readings
Check Fire Extinguishers Change Oil Light Fix
Meter Readings Polish Floors Elect

**Juggle less.
Manage more.**



Run your educational institution's maintenance department efficiently and effectively with a CMMS that fits your every need.

Whether you use one of TMA's desktop solutions, TMA eXpress, TMA WorkGroup, TMA Enterprise, or the most powerful web-based system available for facilities — WebTMA, you can be assured that you're on the leading edge of facility maintenance management.

 **TMA**SYSTEMS
Success Made Simple

800.862.1130 • www.tmasystems.com • sales@tmasystems.com



THIS ISSUE:

BACK TO THE FUTURE:

What's Next For Educational Facilities?

FEATURE ARTICLES

20 Employee Succession Planning: Are You Prepared?

by Jeffery Campbell Ph.D.

With David Schultz, Trent Murray, Jordan Smith, Kendall Neilson,
and Matt Moffatt

24 Cinderella Stories: Adaptive Reuse of Older Buildings

by Joseph Brinkman, AIA, LEED, and David Miller, LEED

28 Private and Public Space Profiles: A Report from the Facilities Core Data Survey

by Laura Long

36 Validating Comfort Complaints with Data Loggers

by Evan Lubofsky

AR-1 2006-2007 APPA Annual Report

Facilities Manager

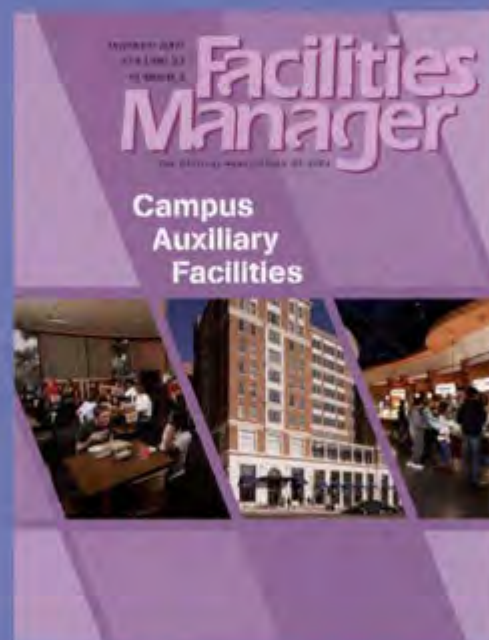
THE OFFICIAL PUBLICATION OF APPA

Volume 23 Number 4

July/August 2007

COLUMNS

From the Editor	4
APPA News	6
<i>by Kisha D. DeSandies</i>	
Code Talkers	10
Fire and Life Safety Compliance Protects Students	
<i>by Matthew S. Munter, P.E. and J. Michael Thompson, P.E.</i>	
Membership Matters	12
New Credential in Educational Facilities Management	
<i>by Jack K. Colby and Philip Cox</i>	
Knowledge Builders	17
Students at Canadian Institutions (Part III)	
<i>by Gary L. Reynolds</i>	
Facility Asset Management	41
The ROI of Trade Labor	
<i>by Matt Adams, P.E.</i>	
The Bookshelf	45
Reviewed in this issue:	
• <i>Coaching, Counseling & Mentoring: How to Choose and Use the Right Technique To Boost Employee Performance, Second Edition</i>	
• <i>Leading Change Toward Sustainability: A Change-Management Guide for Business, Government and Civil Society</i>	
New Products	50
Coming Events	52
Index of Advertisers	52



Reprints are available
for all articles in
Facilities Manager.

Contact: Kisha D. DeSandies
kisha@appa.org



**Real Security Is When You Stop
Worrying About Your Access System And
Start Worrying About The Football Team.**

When you install Schlage® products in your facility, you know your people are secure. After all, we're the leader in the security industry, with the most trusted and reliable products available today. We're also at the forefront of cutting-edge technologies like wireless, CCTV and biometrics, with experienced security consultants who ensure the right product for the right application. Which means you have the confidence of a system that performs perfectly and the freedom to focus on things that, well, don't.

Real Security Sets You Free.™

SCHLAGE

www.schlage.com
877-840-3621

Facilities Manager

PRESIDENT: Christopher K. Ahoy,
Iowa State University

EXECUTIVE VICE PRESIDENT:
E. Lander Medlin, Alexandria, Virginia

EDITOR: Steve Glazner

ASSISTANT EDITOR: Kisha D. DeSandies

SUBSCRIPTIONS: Cotrenia Aytech

CREATIVE DIRECTION:

Creative Media Group

PRINTING: Corporate Press, Inc.

EDITORIAL OFFICE:

703-684-1446 ext. 236

FAX: 703-549-2772

E-MAIL: steve@appa.org, kisha@appa.org,
cotrenia@appa.org

WEB: www.appa.org

ADVERTISING:

Gerry Van Treeck

Achieve Communications

3221 Prestwick Lane

Northbrook, Illinois 60062

Phone: 847-562-8633

Fax: 847-562-8634

E-mail: gvygt@earthlink.net

Facilities Manager (ISSN 0882-7249) is published six times a year (January, March, May, July, September, and November). Editorial contributions are welcome and should be sent to the address below.

Of APPA's annual membership dues, \$53 pays for the subscription to **Facilities Manager**. Additional annual subscriptions cost \$66 for APPA members, \$120 for non-members. For information on rates and deadlines for display advertising, telephone 847-562-8633 or 703-684-1446 ext. 237.

Copyright ©2007 by APPA. Contents may not be reprinted or reproduced in any form without written permission. The opinions expressed are those of the authors and do not necessarily reflect the views of APPA. Editorial mention of companies or products is for informational purposes only and should not be construed as an endorsement, actual or implied, by the Association.

POSTMASTER: Send address changes to **Facilities Manager**, 1643 Prince Street, Alexandria, VA 22314-2818.



Published by APPA

1643 Prince Street
Alexandria, Virginia
22314-2818

From the Editor

by Steve Glazner



William A. Daigneau Receives 2007 Rex Dillow Award

We are pleased to announce that William A. Daigneau, vice president and chief facilities officer at the University of Texas M.D. Anderson Cancer Center, is the recipient of the 2007 Rex Dillow Award for Outstanding Article in *Facilities Manager*.

Bill is the second author in APPA history to be awarded the Rex Dillow Award three times. He ties with Walter Simpson of SUNY at Buffalo for having three separate articles honored by APPA.

A longtime APPA member, Bill is an occasional agent provocateur on topics that APPA and its members need to consider, but are sometimes not quite ready to confront. His award-winning article, "Megatrends and Myths: Facilities Management Practices in Higher Education," (November/December 2006) continues that tradition by offering five megatrends, or major categories, that higher education and facilities professionals need to deal with to remain current: changing student demographics, access and efficiency,

technology, accountability, and environmental stewardship.

At the same time, Bill presents five myths of higher education facilities management:

1. Build for the long haul
2. Build flexibility into the design
3. Form follows function
4. Deferred maintenance is bad
5. Facilities attract students

This is provocative indeed. APPA's Information and Research Committee—led by Michael J. Sofield of the Smithsonian Institution—agreed and selected Bill's article from 13 eligible articles this year.

APPA has presented the annual Rex Dillow Award since 1987. The award is named for APPA member emeritus Rex O. Dillow, formerly of the University of Missouri-Columbia, who contributed much to the development and improvement of APPA's publication and educational programs during his active membership in the association.

Congratulations to Bill for his award and his contribution to the body of knowledge. ▲

Past Rex Dillow Award Recipients (2002 – 2006)

2006	Roger E. Rowe
2005	Leonard Friesenhahn, P.E.
2004	Richard W. Robben
2003	Donald J. Guckert & Jeri R. King
2002	Walter K. Simpson



Real Security Is Knowing There Are No Strings Attached. And No Wires Either.



When you install Schlage® wireless access control technology in your facility, you don't have to replace existing components. After all, this exclusive technology is designed to work with any brand of access control system. Utilizing radio transmissions instead of wires, it cuts installation time from eight hours to less than one and reduces installation costs. Which means you have the confidence of keeping what works and the freedom to grow beyond it.

Real Security Sets You Free.™

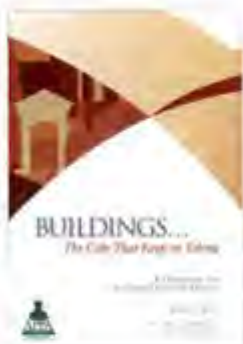
SCHLAGE

www.schlage.com

by Kisha D. DeSandies

Anticipated Buildings Book Released

After four years of research and development, *Buildings...the Gifts That Keep on Taking* is now on sale. Primary author Rod Rose provides institutions with a framework for integrated decision making in the long-term management and maintenance of a facility built with donated money. Rose presents seven key facilities issues, strategic questions to consider, asset investment perspectives, and a host of other resources. This is a timely, must-have tool for all educational facilities managers and other top university administrators. Purchase this book online at www.appa.org/applications/publications.



New APPA Website Coming soon

Later this year, look for an updated and improved APPA website, which will illustrate the association's new brand expression, make the site more user-friendly, and provide enhanced content that will make it the "go to" resource for educational facilities information. Through the new MyAPPA feature, members will soon have access to personalized information, including their membership dues status, renewing their membership dues, record of attendance at educational sessions, list of publications purchased, online membership directory, and more.

Registration Open for September Institute & Toolkit

APPA will offer two of its premier educational programs September 9-13 in Phoenix, Arizona. The Institute for Facilities Management and

Supervisor's Toolkit

Notes and Bolts of Facilities Supervision

Supervisor's Toolkit provide current and aspiring managers the opportunity to expand their leadership skills. Space is limited, so register today. Registration is first come, first served. Visit www.appa.org/education for more information.

New Book on Leadership in Facilities Management

In *Leadership in Educational Facilities Administration*, outgoing APPA President Chris Ahoy shares the wisdom he gained while leading Iowa State University Facilities Planning and Management Department on a 12-year journey to becoming a world-class organization. Ahoy identifies solutions to the biggest challenges facing the facilities management field, including developing future generations of facilities management leaders, adapting to a global economy, and responding to ecological problems such as global warming. He also discusses leadership styles, types of people in an organization, and the importance of mission and vision statements. Fellow facilities managers who are eager to lead their own organ-



izations on the path to greatness will find many ideas and much inspiration within these pages. Visit the APPA bookstore online to purchase this book.

Job Express Provides Focused Hiring Platform

Find the facilities manager with the right tools for your campus or land the job of your dreams. Job Express is APPA's premier job-listing service, which features job descriptions for all levels within the facilities department. In addition, if you are looking for a new position, the Resume Bank can help you meet your goals. Job seekers can post and maintain their resumes. Employers can also search online resumes. For more information, visit www.appa.org/jobexpress.

APPA List of Educational Facilities Websites

Did you know that APPA has a list of campus facilities departments' websites? Visit www.appa.org/

Continued on page 9

COMING

IN SEPTEMBER/OCTOBER
ISSUE OF FACILITIES MANAGER

- 2007 Awards: Effective & Innovative Practice Award and Award for Excellence Winners
- APPA President Profile
- New Board of Director List
- Highlights from APPA 2007 Conference

DRYWALL IS A MAJOR PORTION OF ANY EDUCATIONAL BUILDING. SHOULDN'T IT BE MOISTURE AND MOLD RESISTANT?



Traditional drywall has paper on both sides. And mold eats paper. So insist on DensArmor Plus® paperless drywall instead. Its ingenious glass-mat facings resist moisture and mold better than regular paper-faced drywall. Plus, DensArmor Plus offers a three-month exposure warranty against moisture damage during construction. And it has superior fire and abuse resistance when compared to regular paper-faced drywall. All of which helps preserve your long-term investment. To learn more, visit www.densarmorplus.com.

By removing the paper,
we've reduced
the chances for mold.



Does your work order tray look like this?

Only the MAXIMUS MobileFM™ solution makes it possible for any Java-enabled cell phone to wirelessly dispatch work orders. MobileFM™ works with any wireless provider and provides real-time, paperless work orders and time sheet tracking — saving countless hours of duplicate data entry. Go paperless with MobileFM™.



Keep it that way.

800.659.9001
www.maximus.com/assetsolutions



Enterprise Asset Management Solutions For The Way You Do Business.

Visit MAXIMUS at APPA 2007 in Booth # 1013

Resources/institutional facilities listings.cfm to see if your department is on the list. We invite links from all educational organizations, including colleges, universities, K-12 districts, private or independent schools, museums, hospitals, city/county governments, and other nonprofit entities. We can include links to all facilities-related departments, including facilities management/physical plant, facilities planning, architecture and design, energy and utilities, environmental stewardship, or auxiliary facilities departments, such as athletics, housing, or student centers. If you would like to list your facilities department's website or have any changes, contact our web manager at webmaster@appa.org.

It's Too Hot! It's Too Cold!



Ceiling Air Diffusers
with an Innovative Design that:

- Eliminates Drafts
- Creates Even Temperatures
- Saves on Energy
- Eliminates HOT or COLD Drafts Blowing on People
- Quiet

**APPLAUSE
DISTRIBUTING INC**
www.applausedistr.com
810-569-3000
sales@applausedistr.com

Chris Ahoy Named to Malcolm Baldrige National Quality Award Board of Examiners

APPA President, Chris Ahoy of Iowa State University, was recently appointed to the 2007 Board of Examiners for the Malcolm Baldrige National Quality Award. The award is the highest level of national recognition for performance excellence that a U.S. organization can receive. As an examiner, Ahoy is responsible for reviewing and evaluating applications submitted for the award. The board is composed of approximately 500 leading experts selected from industry, professional and trade organizations, education and health care organizations, and government.



Have You Considered an FMPEP?

The effect of enhanced facilities influences the retention and recruitment of students. Do you know how your facilities program measures up? Do you want to:

- achieve continuous quality improvement
- exceed customer expectations
- develop a strategic planning tool
- improve your understanding of facilities issues
- change your organization's responsiveness



Consider APPA's Facilities Management Evaluation Program (FMPEP). The program provides institutions with a customized evaluation conducted by a team of institutional peers across a comprehensive set of criteria.

Continued on page 51

WHO BENEFITS WHEN DRYWALL IS MOISTURE AND MOLD RESISTANT?

Architects

DensArmor Plus not only helps your projects stay on schedule by allowing drywall to be hung before the building is dried in, but you can also sell your clients on the long-term benefits of moisture and mold resistance.

Building Owners and Facility Managers

The use of DensArmor Plus helps protect your investment by providing moisture and mold resistance during and after the construction process.

General Contractors

DensArmor Plus helps your projects stay on schedule by allowing drywall to be hung before the building is dried in. And it comes with a three-month limited exposure warranty.*

To learn more, visit
www.densarmorplus.com.

*See limited warranty for details.

Fire and Life Safety Compliance Protects Students

by Matthew S. Munter, P.E. and J. Michael Thompson, P.E.

Fire and life safety is always a "hot" issue on college campuses. The National Fire Protection Association's (NFPA) Fire Analysis and Research Division reported an average of 1,425 fires per year in college and university dorms between 1994 and 1998, plus an annual average of 141 fires in fraternity and sorority houses during the same period. In aggregate, campus housing fires injure approximately 75 civilians each year, and cost nearly \$10 million annually in property damage. But even when no one is critically injured, and property damage is minimal, a fire can damage an institution's reputation and have a residual impact on parent and student confidence. The best defense is a strong offense: a sound, compliant program for routine inspection and maintenance of fire and life safety systems.

Institutions that implement routine inspection of critical operating systems, have routine maintenance programs for each building maintenance division, and also require strict compliance with building standards and codes for new construction projects may still fall short in fire and life safety if they are not meeting the NFPA's Standards for installation, testing, and maintenance of life safety systems.

Chief among the NFPA's Standards that apply to fire and life safety are



NFPA 25 and NFPA 72. Familiarity with these Standards is the first step in developing an institutional safety system plan.

NFPA 25, the Standard for the Inspection, Testing, and Maintenance of Water-Based Fire Protection Systems, establishes the minimum requirements for the periodic inspection, testing, and maintenance of water-based fire protection systems, including land-based and marine applications. The Standard, last revised in 2002 and slated for updating this year, applies to fire sprinkler systems, standpipe and hose systems, fire service piping and appurtenances, fire pumps, water storage tanks, fixed water spray, foam-water, and valves.

To be compliant with NFPA 25, a facility must have qualified in-house or contracted personnel routinely: (1) inspect the fire and life safety and components, (2) test and maintain the system at prescribed intervals, and (3) keep records. According to NFPA 25, Section 4.1.2.3, "These tasks shall be performed by personnel who have developed competence through training and experience." In some states,

detailed training and certification requirements are indicated for these tasks. Visual inspections are typically performed by in-house staff, while testing and maintenance are contracted out to service or consulting companies. Facility managers should confirm that any personnel involved in the compliance process for fire and life safety are trained and certified sufficient to federal, state, and local government requirements, as well as industry standards.

NFPA 72, the National Fire Alarm Code, covers the application, installation, location, performance, inspection, testing, and maintenance of fire alarm systems, fire and emergency warning equipment, and their components. In the past decade, new research and developments in technology have advanced the role of alarm and signaling systems, improved egress times, and enhanced system reliability. But even the most technically advanced alarm systems can fail when inspection and maintenance routines break down. Facility compliance with NFPA 72 requires:

- monthly system and component inspection,
- annual testing and maintenance, record keeping, and
- personnel training and education.

Key to maintaining compliance and ensuring that life safety systems will perform on demand is the development of an institutional facility plan for maintenance and inspection of fire protection systems. This plan should establish a calendar of weekly, monthly, quarterly, and annual inspections; identify those inspections that will be performed by in-house personnel and those that will be performed by contractors; and document any rationale for non-compliance with

Matthew Munter, P.E., is senior vice president of EMG, an engineering and environmental consulting firm in Hunt Valley, Maryland. He can be reached at msmunter@emgcorp.com. J. Michael Thompson, P.E., is president of Protection Engineering Group in Chantilly, Virginia. He can be reached at mthompson@PEGroupPC.com.

consensus standards such as NFPA 25 and NFPA 72.

The NFPA's Standard handbooks or qualified contractors can help facilities managers develop and implement a life safety systems inspection and maintenance plan, which will include a combination of visual inspections, testing, and specified maintenance. For example, routine visual inspections of fire suppression systems range from weekly verification that sprinkler valves are open, to annual assurance that sprinkler heads are unobstructed and that building alterations have not resulted in uncovered areas. Testing of sprinkler components, such as alarm devices and main drains, is required on a quarterly or annual basis. Maintenance is required annually for all valves, or seasonally (before freezing) for low point drains in a dry pipe system. Standpipes should also be checked for proper operation. Facility managers should consult NFPA 25 for specific, detailed frequencies of all types of inspection, testing, and maintenance.

Portable fire extinguishers require monthly inspections to verify that the extinguisher is still present in its proper location and that it has not been discharged. A related Standard, NFPA 10, stipulates that portable fire extinguishers must be serviced annually by qualified personnel, which typically means hiring an outside service company to ensure that extinguishers are properly sized, clearly marked, and routinely inspected properly. Records of the monthly inspections and annual service should be clearly indicated on the service tag attached to each extinguisher.

NFPA 72 requires annual visual inspections of monitored fire alarm control equipment and semi-annual inspections for most other fire alarm components. Supervised control equipment; initiating devices like smoke detectors and pull stations; and notification appliances such as

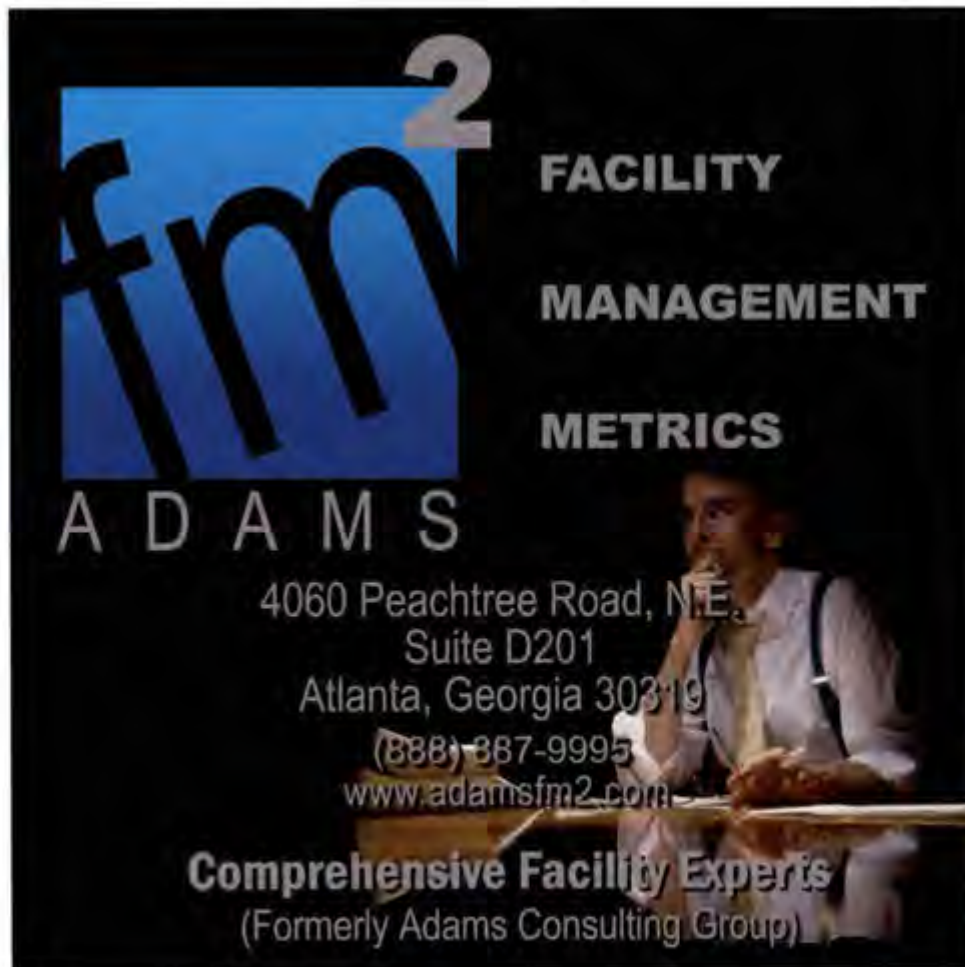
"Facility managers should confirm that any personnel involved in the compliance process for fire and life safety are trained and certified sufficient to federal, state, and local government requirements, as well as industry standards."

horns, speakers, and strobes all require annual testing. For larger systems, the testing may be split: half of the system is tested in the first six months, and the balance tested in the second six months. The type and frequency of maintenance required for fire alarm systems depends on specific manufacturer's instructions and the ambient conditions where the systems

are located. NFPA 72 also defines the requirements that personnel must meet to be qualified or certified for testing and maintenance procedures.

Facility managers must remember that according to both NFPA 25 and 72, the requirements for inspection, testing, and maintenance of fire and life safety systems are not satisfied without complete, accurate records. In both Standards, record keeping is a mandatory condition of compliance.

To ensure the safety of a campus population and facilities, it is always a good idea to go back to school and revisit the Standards and their cyclical revisions, to keep your institution at the forefront of fire and life safety. Copies of the Standards are available at www.nfpa.org. ▲



fm²
A D A M S

**FACILITY
MANAGEMENT
METRICS**

4060 Peachtree Road, N.E.
Suite D201
Atlanta, Georgia 30319
(888) 887-9995
www.adamsfm2.com

Comprehensive Facility Experts
(Formerly Adams Consulting Group)

Membership Matters

New Credential in Educational Facilities Management

by Jack K. Colby and Philip Cox

The APPA debate on the merits of professional certification goes back to the 1980's. Every six to eight years, there was a lively exchange of opinions on whether professional certification needed to be a part of APPA's services to its members and why Physical Plant managers even needed to be certified at all?

At the time, most of us were already experienced facility managers, working in the ideal work environment at a higher education institution. Why risk the embarrassment of failing an

exam when we were already very confident in our skills and abilities as leaders of our organizations. In short, if you put in your time, worked your way up the chain, and didn't cause waves—you could be a physical plant director. *Certification?* What is the point?

Why Certification?

Fast forward to 2005. The world of higher education is changing at an amazing speed. We are faced with rapid rises in the cost of education and the pressure to do more with less

status, because they are not willing to wait and depend on attrition to provide promotional opportunities.

The Gen Xer's have learned fast and need a way to demonstrate their knowledge and skills. Credibility is king and they want a portable means of demonstrating to potential employers that they are ready to take on the job. They also demand a professional association that understands this and meets their need to move forward and stay at the top of their game in the educational facilities field.

During this time, APPA's leadership identified several key indicators that forced us to step back and take a close look at these changes in our profession. Surveys of our membership told us that we must change the direction of APPA if we were to be successful in meeting the professional needs of all groups—from the young facilities professional and the manager at mid-career, to the senior facilities officer.

To be the association of choice, APPA needed to look forward instead of backwards and prepare our membership at all levels for the future challenges on our campuses and in our association. Thus, the 7 Key Strategies were born. Strategy 3 says we must, "*Engage young facilities professionals*" and Strategy 7 says to, "*Establish credible and valued credentialing programs for individuals and institutions.*" These strategies were the genesis for the APPA professional certification programs. The time for credentialing and certification of the APPA membership is NOW.

In July 2005, the APPA Board approved the creation of a Task Force charged to take a comprehensive look at the need for and justification to establish a credentialing and/or certification program. The Certification Task Force began its work by learning



is unrelenting. Our old facilities are no longer suitable for teaching with high-tech methods and deferred maintenance is growing. We begin to recognize "the graying of APPA." Baby Boomers are beginning to retire and the Gen-Xer's are starting to move into the management and leadership positions.

These young professionals come from varied backgrounds and have a totally different view of the workplace. They are technologically savvy and fearless in using modern information tools. They also seek upward mobility and don't mind changing jobs to advance in

Jack Colby is chair of the APPA Certification Board, immediate past president of APPA, and assistant vice chancellor for facilities operations at North Carolina State University. He can be reached at jkcoby@gw.fis.ncsu.edu. Philip Cox is vice chair of the APPA Certification Board, a past president of APPA, and director of facilities management at Cornell University. He can be reached at plc4@cornell.edu.



Educational Facilities Professionals Certification Board of Directors

Chair

Jack K. Colby, NC State University

Vice Chair

Philip Cox, Cornell University

Secretary/Treasurer

Erin Babson, Grand Valley State University

APPA VP for Professional Affairs

Dan Johnson, Cal State Monterey Bay

Member at Large

Dr. David Cain, Higher education consultant

Member at Large

James O. Roberts, Campbell University

APPA Executive VP

E. Lander Medlin

APPA Certification Manager

Berlos Davis

all the basics of the credentialing hierarchy and the rudiments of creating a successful program. We looked at best practices of other associations, industry benchmarks, a full range of alternatives, and a list of potential partnerships. All options were evaluated against a set of criteria established to ensure that the program would meet APPA's obligation to its membership and provide synergies with APPA's other programs. The Task Force recommended the establishment of the credentialing program, the creation of a separate governing entity to administer the credentialing program, and the authorization of funding for the program. Once approved by the APPA board, bylaws were written; names were selected; articles of incorporation were filed; a marketing plan and operating procedures were created; and a certification consultant was selected to guide us through the process of creating the exams that will be the cornerstone of our program.

Following the establishment of the Certification Board, a volunteer group of subject matter experts (SMEs) was called together to work with the Board and our certification consultants to initiate a psychometrics evaluation. First, the SMEs completed a job analysis to determine the tasks performed by educational

facilities professionals on which examination questions would be based. Then, the identified tasks were verified through a focused survey of APPA members. Finally, working under the guidance of the psychometrics experts, the SMEs wrote examination questions to test applicants' skills and knowledge.

APPA is now offering the first of two credentials in educational facilities management: the Educational Facilities Professional (EFP). This initial level of certification is intended to serve those facilities professionals who may be fairly recent entrants into our profession. The qualifications for the EFP designation are based on a combination of applicable experience in the education arena and successful completion of an assessment examination based on APPA's body of knowledge, contained in the *Manual for Facilities Management* and delivered by the APPA Institute for Facilities Management. The examinations will be offered in connection with the Institute, which is scheduled twice a year.

A preparatory course will be offered at the Institute on September 14 in Phoenix, Arizona and exams will be offered September 14 and 15. The exam will be offered in 2008 in con-

The Shortest Distance Between Two Points is Actually **Thousands** of Lines.

Technology is transforming construction delivery and Barton Malow is leading the way. Building Information Modeling (BIM) is the use of software to simulate the construction and operation of your facility. The resulting data-rich models clarify decision making, accelerate the schedule, increase estimating accuracy, and

minimize interferences during construction to avoid change orders.

Barton Malow has a full time staff dedicated to providing BIM solutions for projects of all sizes, shapes, and complexities. BIM provides the shortest distance to project success.



For more information, contact:
Ken Dawson @ 248.436.5488 or
ken.dawson@bartonmalow.com



www.bartonmalow.com

"...young professionals...seek upward mobility and don't mind changing jobs to advance in status, because they are not willing to wait and depend on attrition to provide promotional opportunities."



Creative parking solutions FOR A WORLD IN MOTION.

Wherever their day takes them—shopping, business, recreation—we make it our business to make sure people find the best parking spot. With logical site layout, cost-efficient and practical functional design, state-of-the-art structural solutions, meaningful signage, appropriate access controls and sensitive architecture, you can count on **Carl Walker** to be the single source that brings it all together.

800.FYI.PARK
www.carlwalker.com

Ideas for parking
SOLUTIONS FOR PEOPLE®



ATLANTA
CHARLOTTE
CHICAGO
CLEVELAND
DALLAS
DENVER
INDIANAPOLIS
KALAMAZOO
PHILADELPHIA
PHOENIX
TAMPA




Carl Walker
Parking
Planning Engineering Restoration

junction with each Institute and during the annual conference.

The EFP designation will serve to recognize newer educational facilities professionals for their knowledge and abilities to manage complex campus facilities. It is a designation that remains their own and should open many doors for those who chose to be mobile in their career paths.

Beginning in 2008, APPA will also offer a second, more advanced certification—Certified Educational Facilities Professional (CEFP). This certification will recognize seasoned facilities professionals for their vast knowledge of facilities management in our unique educational environment and their many years of practical application of that knowledge. Qualifications for the CEFP will be based on a combination of knowledge and successful demonstration that this knowledge has been shared and applied at the applicant's institution. Examinations for the CEFP, like the EFP, are expected to be offered three times each year, beginning in 2008 in conjunction with the fall session of the Institute. Look for details on how to apply for the CEFP early next year. ▲

**Invest in yourself and
the success of your
institution by
establishing yourself
as an Educational
Facilities
Professional, visit
[www.appa.org/
education/
efpcredentialing.cfm](http://www.appa.org/education/efpcredentialing.cfm)**



Your building's energy costs have a **direct impact**
on the environment in your boardroom.

And on the planet.

What's good for business is good for society. Turn to TAC for complete building solutions that cut energy usage. Go to **tac.com** today.



Copyright © 2006, TAC, a company of Schneider Electric.





The Leader in Higher Education Parking Decks

Design/Build,
Construction Management,
or General Contracting...

Donley's does it all.

Whether its your first deck project or your tenth, we can provide the experience and expertise to help find the right solution.

Our free Online Delivery System Selector Guide and Online Parking Deck Survey can help you on your way to project success!

For more information, contact Mike Biesiada at mbiesiada@donleyinc.com.

Visit us at **Booth 906** at the APPA National Conference in Baltimore, Maryland, for more on Donley's free online tools!



Donley's

Design/Build • General Contracting
Construction Management

216-524-6800 • 804-560-7820

www.donleyinc.com

Students at Canadian Institutions (Part III)

by Gary L. Reynolds

The research we have reported on the Impact of Facilities on the Recruitment and Retention of Students thus far has focused on students attending institutions in the U.S. This article will examine the satisfaction levels of students attending Canadian institutions.

The sample in this survey included 16,153 students, with 2,313 students (14.4 percent) responding from two institutions in Canada. This is a relatively small sample representing only two institutions in Canada and the results reported here are only representative of the sample.

The demographics of the students attending Canadian institutions are repeated here—66.6 percent of the respondents were female and 33.4 percent were male. Of these students, 84.1 percent were Caucasian, 7.8 percent Asian, and very small percentages were reported for other races. Most of the students were full-time (93.8 percent), with 6.2 percent part-time students.

The students were asked which facilities they felt were important in making a decision as to which institution to attend, and then were asked how satisfied they were with those facilities. Five facilities were identified as clearly more important relative to other facilities, and the satisfaction levels for these same five facilities were much higher than the other facilities (Table 1).

The students were then asked if they were pleased with the facilities on campus. The results are shown in



Chart 1. Note that approximately three-fourths of the students Strongly Agreed or Agreed with the statement.

The students were also asked to rate the quality of the maintenance on

their campus. The results are shown in Chart 2. Note that almost half the students rated the maintenance as Excellent or Very Good, but almost a quarter of the students rated the maintenance as Fair or Poor.

The students were also asked about their overall feelings for the campus with the results shown in Chart 3. Three quarters of the students were Enthusiastic or Like their campus.

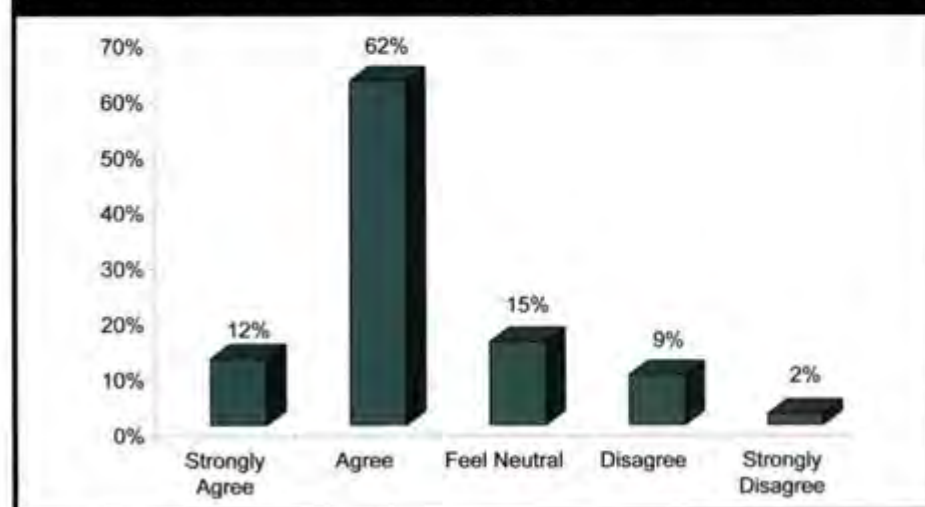
In conclusion, students attending Canadian institutions feel that the facilities which they viewed as important during their decision-making process as to which school to attend, also generally feel satisfied with these facilities once on campus. This data

TABLE 1:

Facility	Extremely Important or Very Important	Very Satisfied or Satisfied
Facility in Major	72.5%	69.1%
Library	54.9%	78.4%
Technology	47.5%	58.2%
Bookstore	44.3%	57.2%
Classrooms	42.9%	58.3%

CHART 1:

Student Response to Survey Question on Being Pleased with Facilities on Campus



Gary Reynolds is director of facilities services at the Colorado College in Colorado Springs and the co-director of APPA's Center for Facilities Research. He can be reached at greynolds@coloradocollege.edu.

CHART 2:
Student Response to Survey Question on Quality of Maintenance

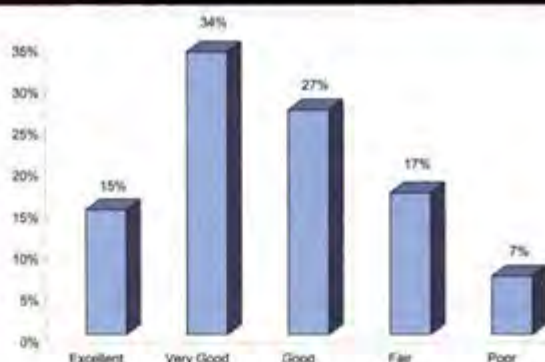
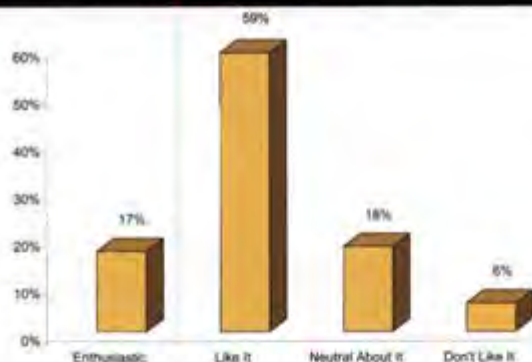


CHART 3:
Student Response to Survey Question on Overall Feelings for Their Campus



“A high percentage of students are pleased with the facilities on their campuses. While, half the students feel the maintenance is excellent or very good, one-fourth of the students view the maintenance as fair or poor.”

suggests that Canadian institutions are providing satisfactory facilities, which are viewed as important by their students.

A high percentage of students are pleased with the facilities on their campuses. Half of the students feel the maintenance is excellent or very good, while one-fourth of the students view the maintenance as fair or poor. This data suggests that there is room for improvement in some specific areas of the surveyed campuses.

Finally, only a small percentage of students (6 percent) dislike their campus, which indicates that they made a good choice (or do not want to admit they made a bad one). ▲

McDONOUGH BOLYARD PECK CONSTRUCTION ENGINEERING



MBP's Schools Construction Management services cover all phases of your school construction program –

PLANNING, DESIGN, & CONSTRUCTION

Our construction engineers assist you in getting the most for your construction dollar while minimizing the impacts to your school community.

Program Management
Risk Management • Constructibility Review
CPM Scheduling • Cost Estimating
Contract Administration
Dispute Resolution • Commissioning • Training

K-12 - AND - Higher education



Construction Management

www.mbpce.com
800-898-9088

**Get the latest trends in
facilities management...**

**From the leading
source of information for
facilities professionals.**

www.appa.org

Smart Schools Choose **EMG**



NORFOLK STATE UNIVERSITY VIRGINIA

36 University buildings, 1.6 million s.f

EMG Services:
Facility Condition Assessments
Capital Needs Planning Database

EMG assisted NSU with capital planning forms for submission to the State Council of Higher Education, under EMG's open-end Facilities Condition Assessment contract with the Commonwealth of Virginia. Upon completing a comprehensive field assessment of NSU's buildings, EMG developed custom database reports that automatically populate required forms for State submission – providing for annual forms updates at the touch of a button. EMG's assessment data and reports for NSU resulted in a 100% funding increase over previous years.



HOWARD COMMUNITY COLLEGE MARYLAND

*14 Higher Education buildings plus
campus grounds*

EMG Services:
Facility Condition Assessments

EMG assessed campus buildings, infrastructure, security, fire protection systems, and an off-site conference center to help HCC develop a Capital Budget and Facility Master Plan for submission to the State of Maryland. Working to minimize student and staffing impact while school was in session, EMG submitted timely reports that allowed HCC to revise its maintenance programs, develop new practices for infrastructure maintenance, and effectively budget for future replacements and repairs.

Visit EMG at **APPA 2007**
Booth No. 812
July 15-17

EMG has 20 years of experience helping educational facility managers and administrators across America make smart decisions about buildings and campuses for higher education. Learn why EMG is head of the class in environmental and engineering consulting services.

Contact:
Matthew S. Munter, P.E.
Senior Vice President
800.733.0660 x2709
msmunter@emgcorp.com

Your Partner in Real Estate
Lifecycle Planning
& Management
www.emgcorp.com



In a survey of APPA members, it was discovered that only 51 percent had a succession plan for future staffing. When asked to describe their plan, many stated that they planned was to simply post the jobs locally or through APPA. That strategy may work today, but it probably won't in the future, due to the impending shrinking of the labor force. The United States Bureau of Labor predicts a 47 percent drop in the total number of working-age people by 2050, which means there is a real possibility that trained and prepared professionals may not be available to fill future management vacancies.

There are six additional challenges that APPA members are currently facing when filling vacancies.

- **Retiring Workforce:** As leaders and experienced employees retire they are taking with them institutional knowledge.
- **Lack of Time/Resources:** As organizations use time and resources to keep up with customer demands and

- **Lack of Opportunity:** Many facilities groups do not offer a clear path for growth and experience to their employees. When there is little opportunity for growth-to-leadership positions, it is more difficult to recruit and retain future leaders.
- **Location:** An undesirable location causes difficulty in attracting talent to an organization. On the other hand, a desirable, growing location creates the challenge of competing with surrounding opportunities that can offer more competitive salaries and benefits.

Future Hiring Needs

The research showed that 43 percent of APPA institutions will need to fill managerial positions in the next five years,

Employee Succession Planning:

Are You Prepared?

by Jeffery Campbell Ph.D.

With David Schultz, Trent Murray, Jordan Smith, Kendall Neilson, and Matt Moffatt

expectations, they have little opportunity to plan and properly train potential future leaders.

- **Lack of HR Support:** Human Resource departments often inadequately evaluate positions on criteria that may not properly define the need or responsibility for a position. This causes difficulty, as FM departments cannot properly offer competitive compensation for the positions needed.
- **Size of Organization:** The size of an organization is often a determining factor in its ability to offer entry-level positions. The organization may not be able to provide adequate experience to allow employees to prove they are capable of leadership or develop skill sets needed.

Jeff Campbell is the faculty advisor for the facilities management degree program at Brigham Young University, Provo, Utah. He also serves on APPA's CFaR Advisory Council and can be reached at jcampbell@byu.edu. Coauthors and researchers David Schultz, Trent Murray, Jordan Smith, Kendall Neilson, and Matt Moffatt are recent graduates of BYU's facilities management program.



and 57 percent over the next six to nine years. Findings also showed that 68 percent of the respondents are looking outside of their organizations to fill these positions. If APPA institutions will be replacing managers and the number of experienced candidates is dwindling, the possibility of recruiting from other organizations in the industry is going to be limited.

APPA institutions were asked what type of educational background would be required to fill future managerial positions. The research showed that most would be seeking candidates with a bachelor's degree (60 percent). A master's

degree would be required of 11 percent of future positions. Associate, high school, and technical degrees accounted for 34 percent of other education requirements.

The research also showed that six to ten years of experience was desired by 39 percent of respondents and three to five years was desired by 37 percent. This reveals that 91 percent of job openings will require from three to more than ten years of experience.

This finding reemphasizes the need to prepare younger professionals by providing work experience. Where is that work experience going to come from? Who is going to provide the experience? To date, very few APPA institutions have provided internships or other work experiences for young professionals. Most internships are being sponsored by outsourcing companies working in higher education. The survey did reveal that 88 percent of respondents would like to have an opportunity to give experience to interns seeking careers in the facilities management field.

Lessons Learned From Other Industries

The literature review found practices that are being used successfully in other industries to form a framework on which to build a succession plan. No one element appeared to be more important than the other.

- **SWOT Analysis:** A Strength, Weakness, Opportunities, and Threats (SWOT) Analysis can be a helpful tool. Creating a matrix where the timeline, position competencies, character qualities, and cost are displayed and used in scenario planning is the best way to evaluate the SWOT Analysis.
- **Top Support:** Top support occurs when a succession plan is supported by the administration. This is very much like a coaching role played by the administration. The plan is first aligned with the mission and strategies of an organization. Someone needs to champion the plan by encouraging others to participate in its success.
- **Needs-Driven:** An organization needs to identify positions critical to the success of the organization and the qualities, which make those positions important.
- **Know Timeframe:** An organization should be aware of future vacancies so that appropriate steps can be taken to identify, develop, and prepare qualified successors in a timely manner.
- **Plan from Within:** Grow and develop individuals within the organization to enhance the quality of the staff. Identify employees that can be groomed to make smooth transitions

into vacant positions. These employees are already familiar with the organization, thus making the transition smoother.

- **Development and Training:** When potential employees are identified, it is vital to the success of the plan to discover where the employee needs to grow. The plan should assist them in developing qualities needed to succeed in the position.
- **Communication:** A succession plan should be shared with everyone in the organization to provide a clear path for growth and assist them in understanding their role.
- **Recruitment:** In order for the plan to continue, the organization must actively recruit new talent that can be developed and trained to take future positions. No organization can fill 100 percent of its vacancies internally, without eliminating other positions. Recruitment is the fuel that keeps the plan moving.

Call to Action

Succession planning is more than posting a vacancy in the newspaper or online when the need arises. It is an active discovery of what the organization needs to fulfill its long-range mission. Quality development is something everyone in the organization can participate and benefit from. A successful plan will focus on these needs to allocate resources wisely during implementation. Many participants in the survey



*Thermal Energy Storage Tank
Southern Illinois University Edwardsville, Illinois*

BRiC
PARTNERSHIP, LLC
CONSULTING ENGINEERS

100 E. Washington Street
Suite 220
Belleville, Illinois 62220
T: 618.277.5200
F: 618.277.5227

tbuchheit@bricpartnership.com

Note: This research was done by a team of faculty and student researchers from Brigham Young University's Facilities Management Program in 2006. The research was accomplished by surveying APPA members on their current needs and attitudes about succession planning. The researchers also sought to discover what successful organizations and industries are doing to fill vacancies through such planning. The research involved an extensive literature review that examined best practices for successful succession planning. A select number of qualitative interviews were also conducted with leaders in APPA. An 11-question quantitative survey was sent to approximately 1,000 APPA institutional representatives. The response rate was 11.1 percent. For a complete copy of the research findings e-mail Dr. Jeff Campbell at jcampbell@byu.edu.

said that they could not afford the time and money required to plan for vacancies. An institution cannot afford not to plan; otherwise resources are unwisely used for activities that will not produce the needed results.

We suggest that institutions would benefit by taking an active role in promoting the advantages of being employed by APPA member institutions, and developing and showing career path opportunities for younger professionals. There is

also a need to bridge the gap between required levels of education and young professional experience. These suggestions give focus to help those less experienced in the industry rise to the occasion and fill those roles as future leaders in higher education. ▲

References

- Berstein, P. (2005). 9 Succession planning tips for accountants to give themselves. *NPA Magazine*, 4(6), 14-14.
- Boswell, W.R., Roehling, M.V., LePine, M.A., & Moynihan, L.M. (2003). Individual job-choice decisions and the impact of job attributes and recruitment practices: A longitudinal field study. *Human Resource Management*, 42(1), 23-37.
- Burne, K. (2005). Luring the brightest. (cover story). *Reactions*, 25(12), 32-34.
- Burt, T. (2005). Leadership development as corporate strategy: Using talent reviews to improve senior management. *Healthcare Executive*, 20(6), 14-18.
- Chace, H. (Personal Communication, March 30, 2006).
- Christensen, D. (Personal Communication, March 3, 2006).
- Colby, J. (Personal Communication, March 23, 2006).
- Donelan, J. (2005). Top of the class. *Computer Graphics World*, 28(8), 50-52.
- Flamer, M. (2005). Dealing with a tight labor market. *Modern Materials Handling*, 60(6), 21.
- Kovach, R. (2005). Cultivating the next generation of leaders. *British Journal of Administrative Management*, (49), 22-24.
- Lee, I. (2005). Evaluation of fortune 100 companies' career web sites. *Human Systems Management*, 24(2), 175-182.
- Marshall, J. (2005). Succession planning is key to smooth process. *Financial Executive*, 21(8), 26-28.
- Martin, C., & Glenn, V. (2002). Filling the pipeline.
- Medlin, E.L., *Public Roads*, 66(3), 6. (Personal Communication, March 1, 2006).
- Rothwell, W.J. (2001). *Effective succession planning: Ensuring leadership continuity and building talent from within* (2nd ed.). New York: Amacom.
- Ryan, A.M., & Tippins, N.T. (2004). Attracting and selecting: What psychological research tells us. *Human Resource Management*, 43(4), 305-318.

CEILING GUARD®

Early Warning Leak Detection Systems

With patented
"Sensing Panel"
technology.

Water from:
leaking roof
or
leaking hot water pipe
or
leaking cold water pipe
or
leaking drain pipe
or
over flowing drinking fountain
or
over flowing toilet
or
over flowing sink
or...



AVOID THIS SCENE!

Are your computer and electrical systems safe from undetected water leakage?...Don't wait 'till its too late!



From the Mfg'r of
WATER ALERT®

Call **1-800-533-6392** today for free catalogs and pricing or
visit our web site at: [**WWW.WATERALERT.COM/CG.HTM**](http://WWW.WATERALERT.COM/CG.HTM)

Systems installed in over
19,000 sites across the U.S.

Dorlen Products
6615 W. Layton Ave. Milwaukee, WI 53220

BUILDING INSIGHT

Visit us at
Booth #412
APPA 2007



LERCH BATES

Building Insight

Lerch Bates understands the way your campus facilities interact with people, and how all of a building's systems come together to enhance its overall safety, use and effectiveness. Our experts have been using this insight to advise on elevators and escalators, materials management/materials handling, façade access and building systems for over 60 years.

- Modernization Evaluations and LEED® Certification
- Maintenance Audits & Condition Assessments
- Client Oriented Maintenance Contracts
- Real Time Elevator Performance Monitoring
- New Construction Design



800.409.5471
www.lerchbates.com

Cinderella Stories:

ADAPTIVE REUSE OF OLDER BUILDINGS

by Joseph Brinkman, AIA, LEED, and David Miller, LEED

On campuses today, older buildings are being renovated, not only beyond their current condition, but even better than their original condition. When done properly, campus architectural treasures can become high-performance facilities by today's standards.

When to Renovate

When considering renovation there are at least five tests that determine if the effort should be pursued:

1. Land acquisition is unrealistic.
2. Existing infrastructure has capacity.
3. Funding is limited.
4. There is historical value or alumni support.
5. Sustainability is a priority.

If the campus is land-locked, growth is limited to existing acreage. Often the character of a beautiful quadrangle or green space would be destroyed if a new facility is built. Yet when land becomes available, the cost of acquisition can be extremely high, especially when land owners realize the value of the property to the institution.

Most campuses have a utility loop of some kind, typically hot and chilled water. When older buildings are renovated

Joseph Brinkmann is the director of projects for Trivers Associates, an architecture firm in St. Louis, Missouri and heads their Leadership in Energy and Environmental Design (LEED®) group. He can be contacted at jbrinkmann@trivers.com. David Miller is the director of Trivers' Illinois office and can be contacted at dmiller@trivers.com. This is their first article for Facilities Manager.

Above top photo: Wilson Hall, Washington University in St. Louis
Above bottom photo: Lela Raney Wood Hall exterior, Stephens College

Above, top image: Selective or complete demolition allows for a more accurate estimate. Above, bottom photo in frame: The detail and character of older buildings is difficult to replace.

"When older buildings are renovated into high-performance facilities, the resulting drop in the utility load allows the buildings to remain on the central system."

into high-performance facilities, the resulting drop in the utility load allows the buildings to remain on the central system. Additional capacity might even be freed to allow for further use of the loop.

When capital improvement funds are tight, renovating can be the most cost-effective solution. The structure, core and shell are already in place. Further, the detail and character of older buildings are expensive to reproduce. There are some issues that can create larger expenses when renovating though. If extensive demolition or structural work is necessary to convert a building to a new use, these items can cause renovation costs to go up to near or beyond the typical cost of building new structures. In addition to those issues, abatement of hazardous materials such as lead or asbestos can be financially significant and extend schedules beyond expectations. All of these issues should be analyzed and planned for by the project team.

Some buildings have historical or even sentimental value. For example, Lela Raney Wood Hall at Stephens College was

the social hub of the entire campus for years. However, over time, the building was used less and sat nearly dormant, even though it is in the heart of the campus. A plan was launched to restore the hall to its former glory, and allow much needed consolidation of campus administration functions. Key to fundraising for the project was the restoration of the ballroom, where most of the social events on the campus took place. The great memories of the once-active building allowed college alumni to raise the entire cost of the project.

Sustainability will always be important on a campus. Yet one should not assume if a building is being renovated it is inherently a "green" project. Granted, renovating can keep quite a bit of material out of landfills, but some older buildings are not well-suited to every sustainable principle. For instance, large windows are typically found on every side of older buildings. While a new building might limit exposure on the southern or western sides, it is not always possible with adaptive reuse.



WEB WORK[®]
CMMS / EAM by Tero
www.tero.ca

Maintenance & Operations Software

- ✓ Campus Service Management
- ✓ Ground Maintenance Management
- ✓ Facility & Asset Maintenance
- ✓ Work Request Management
- ✓ Routine & Preventive Maintenance
- ✓ Vendor & Materials Management
- ✓ Comprehensive Financial Reporting
- ✓ Detailed Ad-Hoc Reporting
- ✓ Remote Access Anywhere

"Safer Healthier Learning Environments"

Tero Consulting Ltd.
200 - 2441 United Blvd.
Coquitlam, BC V3K 6A8
Toll Free: 866-818-8376
Email: sales@tero.ca
Web: www.tero.ca

**Complete Campus Maintenance
&
Operations Management Software**

Web Work is a registered trademark of Tero Consulting Ltd.

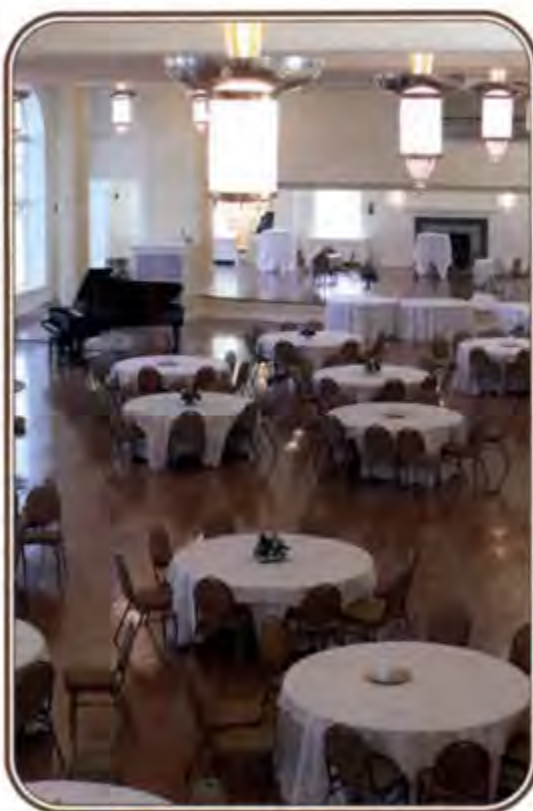
On the other hand, there are clearly times when renovating is not an option. First and foremost the building needs to have the square footage and volume required to accommodate the new program. Trying to put 20 pounds of program into a 10-pound building will likely result in a compromised facility, and will not meet the needs of the department. The spacing of the structural column grid may be restrictive, or the floor-to-floor heights may be unacceptable, especially when adding systems that did not exist prior to the renovation.

Also, there are times when closing a building, or a portion of it, for renovation is unacceptable. Some functions on campus are simply mission-critical; they must stay in operation. If an improvement program involves several buildings on campus, the sequencing of departmental moves may not allow a building to close until another comes back on line. Lastly, some facilities are simply beyond repair. If a facility is neglected for too long, or if the building was not built well in the first place, renovation is probably not a viable option.

Evaluating Facilities

Perhaps the best thing an administrator can do is to bring on an architect and engineer at the beginning of the process. An impartial set of eyes thoroughly assessing a building will go a long way toward avoiding costly mistakes. Any existing information should be made available including as-built

Lela Raney Wood Hall ballroom, Stephens College



Restoring the ballroom at Lela Raney Wood hall was the key to garnering alumni support.



HOAR PROGRAM MANAGEMENT

www.hoarpm.com
205-423-3500

Teamwork is the combined efforts of a talented group of people to accomplish a common goal.

Our team is ready to help with your next capital program or construction project.

drawings, facility schedules and uses, and the campus master plan.

Similarly, a contractor with experience in renovation will speed the process, eliminating some of the guess work. A contractor brings cost information to the table, as well as a wealth of knowledge concerning constructability, sequencing, staging, and phasing. The best design in the world will be useless if construction issues escalate the budget beyond a reasonable level. For example, while planning the renovation of Washington University's Wilson Hall, the need for a substantial crane was identified by the builder. A special route had to be mapped to bring a crane to the site in order to avoid underground utility tunnels. Knowing constructability issues early can help managers avoid surprises that lead to costly redesign or change orders during construction.

Prior to finalizing documents, selective or complete demolition is necessary to eliminate as many unforeseen conditions as possible. Unforeseen conditions inevitably lead to change orders

"Sustainability will always be important on a campus. Yet one should not assume if a building is being renovated it is inherently a 'green' project."

and additional costs. If the building can be vacated, complete demolition speeds the construction process. The advantage of knowing what is behind walls and ceilings cannot be underestimated. A clean building also presents less mystery to prospective bidders, resulting in more accurate bids and schedule projections.

Chances are, the mechanical and electrical systems in an older building are going to be inadequate. Older buildings were often not designed to be air-conditioned. Further, the demands of air conditioning and modern technology require an electrical capacity well beyond what was anticipated in previous decades. Computers, wireless technology, projection systems, and other technologies add space, generate heat, and use electricity. Further, if the use of a building is being changed, the building must be updated to meet current codes. Lela Raney Wood Hall is such an example. Two completely new stair towers had to be added to provide proper egress. In addition to inadequate egress, most older buildings will require other additional systems such as fire sprinklers and smoke evacuation systems. Space for these systems can be hard to come by.

Turning Challenges into Opportunities

If handled correctly, many of the challenges associated with renovation can be turned into opportunities. Nearly every older facility will have lower floor-to-floor heights than their modern counterparts. Running ductwork is next to impossible. However, a little creativity can uncover potential design opportunities when facing such challenges. The creation of a coffered ceiling allowed a sprinkler system to be "hidden" in Wilson Hall's lecture room. Through the creative use of soffits and decorative pilasters, new ductwork and data lines were run throughout the building without littering the interior.

Also, the lobby for the building was undersized for new inter-departmental uses. A larger, two-story lobby was created by opening the space above and widening the entry area. The second story corridor became a new curved balcony overlooking the lobby. The formerly

congested area is now a local point for the building and brings daylight into previously dark areas.

Through careful planning and the proper experience, renovation will remain a viable option for campuses everywhere. ▲

**Get the latest trends in
facilities management...**

**From the leading
source of information for
facilities professionals.**

www.appa.org

Pick the Low Hanging Fruit

- Typical Cleaning Cost: Over \$2.00 per Square Foot
- Typical Setup Cost: \$0.005 - \$0.02 per Square Foot
- Typical Productivity Gains: 4% - 14%
- Five Year ROI: 1,900% - 27,000%
- Typical Conclusions: No Brainer to NO BRAINER

Cleaning Management Software™
for custodial workforce optimization

www.contractron.com



Each spring, parents and their offspring approaching college age pack their suitcases and set out to preview potential college campuses. It is important for them to drive onto each campus to see what it looks like, talk to some students and faculty, sit in on one or more classes, and stay overnight in a residence hall? what we call "getting a feel for the place."

While this rite of pending adulthood played out again this year, one could wonder if, when they drive onto a campus, they could sense a difference in how space and buildings are developed in a private versus a public institution. Does a private college "feel" and "look" different from a public campus, and if so, what are the factors in play?

Background

APPA started collecting statistics on ASF (assignable square feet) by building category and GSF (gross square feet) by building type in the 2003-04 Facilities Core Data survey. From the onset, the data showed different patterns of space development between private and public institutions. That being the case, it should be understood that the space data in

Laura Long is president of LTL Collaborative, LLC, and serves as APPA's survey consultant for the Facilities Core Data Survey. She can be reached at ltl@rockisland.com.

A Report from the Facilities Core Data Survey

by Laura Long

the Facilities Performance Indicators (FPI) reports demonstrate only the characteristics of the survey participants, and the statistics have not been tested to be representative of all private and public institutions. For one thing, the number of institutions completing space data surveys is growing each year but it is still low. (The change in the 2005-06 survey schedule and its shortened data collection period resulted in what is expected to be a one-time drop in survey participation. A higher percentage of 2005-06 survey participants completed space questions even though the counts did not increase.)

Some of the references in this article come from the General Data and Strategic Financial Measures portions of the annual Facilities Core Data Survey. There are robust counts in the FPI

Report for statistics on campus acres, number and average age of buildings, and building condition.

The following statistics are drawn from the 2005-06 FPI Report with some references to the 2004-05 FPI Report.

Density on Private and Public Campuses

The first set of comparisons concern the relative density of campus build-out. In the FPI Report, private campuses average 16,667 GSF build-out per acre maintained, and public campuses have 22,542 GSF of development per acre maintained.

Number of Institutions with Space Entries

Funding	ASF by Space Category 2005-06	GSF by Building Type 2005-06
Private	20/18	16/13
Public	91/93	13/37
Total	111/111	19/50

When we look at the number of buildings per acre maintained, it averages between 0.59 and 0.60 for private institutions and between 0.52 to 0.56 for public campuses. The public institution has about 10 percent fewer buildings per acre maintained.

In the third factor, the average number of GSF per building, private institutions have an average of 40,592 GSF per building. Public institutions average about 10 percent more GSF per building at 43,159.

To summarize the observations to date, the public institutions have a greater average number of GSF per acre maintained, about 10 percent fewer buildings per acre and about 10 percent more GSF per building. This can be summa-

rized as a slightly more concentrated development pattern using either larger building footprints or higher buildings.

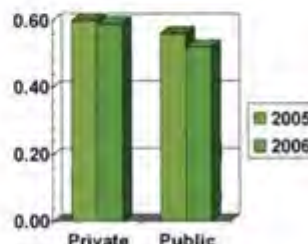
Then there is a question of the density of the campus in relation to its student population. The private institutions average between 35 to 39 students per acre maintained and the public institutions average between 76 and 89 students per acre maintained. This implies that the public campus will feel more occupied and their paths and plazas will be more crowded.

Campus Density

GSF/Acre Maintained



No. Buildings/Acre Maintained



2006 Facilities Performance Indicators Report

The Association of Higher Education Facilities Officers
© 2007 AHEF

PGMS

School of Grounds Management & GIE+EXPO

- **Courses Tailored to Grounds Professionals**
- **Nationally Recognized Faculty and Curriculum**
- **Networking with Fellow Professionals**
- **Budget Saving Techniques**
- **Hands-On Experience**
- **Equipment Demonstrations**
- **Over 550 Green Industry Exhibitors**
- **Behind-the-Scenes Tours of Local Grounds Programs**

PGMS will be honoring its 2007 Green Star recipients at this event.
Enter YOUR facility NOW!

Discounts available to APPA members.
Additional information available at www.PGMS.org.

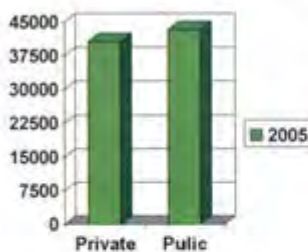
October 24-27, 2007

Kentucky Expo Center

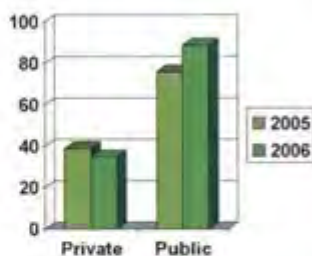
Louisville, KY

Campus Density

Average GSF/Building



Students/Acre Maintained



(2006) Facilities Performance Initiative Report

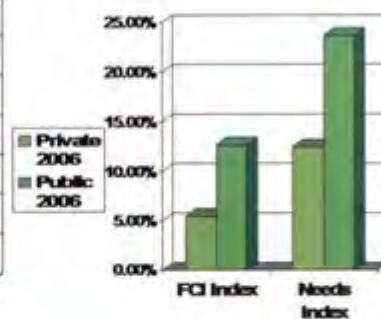
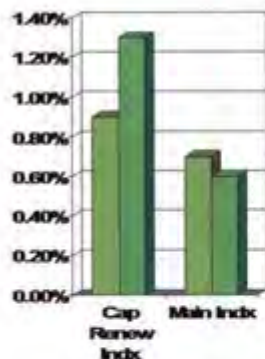
The Association of Higher Education Facilities Officers © 2007 AHOA

We don't know how these differences translate into impressions of vitality, relaxation, contemplation, energy, excitement, or comfort—to name a few intangibles. One has to think that the public campus, with larger building profiles and more compact use of outdoor spaces, would impart a different impression than the less populated private college.

Condition of Campus Buildings and Grounds

The Needs Index (deferred maintenance plus cumulative need for renovation, modernization, and adaptation compared

Condition Building Indexes by Funding (2006 Only)



to Current Replacement Value, or CRV) provides a snapshot of the condition of campus buildings. The private campuses in the study group are in better condition, with a Needs Index of 14 percent, than public campuses, whose Needs Index averages 20 percent. In both private and public groupings, half of the Needs Index comes from deferred maintenance and half from the cumulative need for renovation, modernization, and adaptation.

GILSULATE 500XR



THE TRADE NAME WITH OVER
A HALF CENTURY
OF LEADERSHIP IN
THERMAL EFFICIENCY,
RELIABILITY AND INNOVATION

Thermal Efficiency

Corrosion Protection

Long-term Reliability

Dimensional Stability

Application Flexibility

Ease of Installation

Low Installed Cost

For complete material and design assistance contact:

Gilsulate International, Inc. • P.O. Box 802650 • Santa Clarita, Ca 91380 • 1-800-833-3881 • www.gilsulate.com

Overall Average CRV

Funding	2004-05 with Auxiliary Services	2005-06 without Auxiliary Services
Private	\$239	\$250
Public	\$216	\$251

We examine the Capital Renewal and Maintenance Indices to see if they provide insight on the condition of campus facilities. The Capital Renewal and Maintenance Indices are based on expenditures divided by CRV. Private campuses spent equal amounts (0.9 percent of CRV) on capital renewal and operating maintenance in 2004-05. In 2005-06 their Capital Renewal stayed at 0.9 percent, but the Maintenance Index dropped to 0.7 percent of CRV.

Over the same two surveys, public campuses put between 1.7 and 1.4 percent into capital renewal and 0.6 percent of CRV into operating maintenance. In these two survey periods, the public institutions invested more into capital renewal and less into routine and scheduled maintenance than private campuses when the expenditures are normalized by the CRV. The maintenance expenditures measured by GSF in the FPI Operating Costs Report also showed a slightly higher cost per GSF for private versus public institutions.

Another touchstone for the condition of campus facilities is customer satisfaction. Over the last two years, private campuses have had a high satisfaction average of 3.9 to 4.1 percent. Public campuses have a satisfaction average of 3.6 percent.

All the statistics tend to indicate that private campuses in this study are maintained at a better level than the public institutions and the cause might be that public institutions, on average, invest less in routine operating maintenance when measured against either CRV or GSF.

Quality of Private and Public Buildings

One indication of the quality of facilities is the cost per GSF of new construction. The FPI Report has two sources of CRV statistics from the Facilities Core Data Survey.

1. Single entry overall CRV value:
 - a. Some single entry CRV estimates stem from detailed CRV studies and can be very accurate.

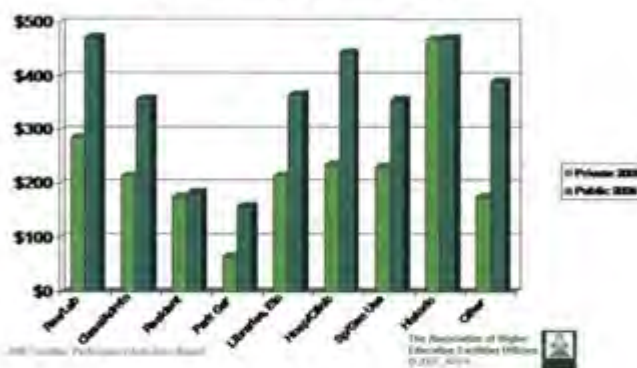
- b. The less accurate single entry estimates are calculated as total GSF times an overall average construction cost. This estimating method usually does not weight the differences in construction costs by building types very well.

2. CRV Calculation Worksheet, which computes CRV by building type.

- a. The Worksheet is second in accuracy only to a detailed campus CRV study.

Continued on page 33

CRV/GSF by Building Type by Funding (2006 Only)



Pool Problems? Consider Our Solutions.



PVC Clad Metal Pools
50 Year Warranty



Turnkey Aquatic
Renovations



RecDeck Recreational
PVC Flooring



RenoSys PVC
Pool Shells



Pool Equipment, PVC
Decking, Gutters, Grating
and PVC Pool Shells

When facility managers have pool or deck problems, they turn to the leaders – RenoSys. Our remarkable watertight pool and deck renovation systems have solved problems at over 4,000 facilities across North America. Our nationwide network of commercial renovators stand ready to solve your problems and make you look good in the process.

- Pool Renovation
- Pool Gutters & Grating
- Slip-Resistant Flooring
- Free Design Assistance
- Pool Maintenance Supplies
- Pool Equipment



RenoSys®

"We Fix Old Pools, Gutters and Decks."

2825 E. 55th Place • Indianapolis, IN 46220 • 800-783-7005
www.renosys.com • info@renosys.com

www.poolequip.com

Public Pool Equipment
at Competitive Prices

800.287.1588
www.poolequip.com

© 2004-2007 RenoSys Corporation

Get Commercial Quality Get Commercialite®!

THE HEAVY DUTY PLASTIC FOLDING TABLE

Load tested
to over 3500 lbs!

It can take it!
Bring on the college kids!

Polyethylene blow
molded top has a
smooth writing surface,
resists heat, stains,
chemicals & weather
and is sealed against
biological contamination

Light Weight!
4'x30" = 37 lbs
5'x30" = 40 lbs
6'x30" = 44 lbs
8'x30" = 56 lbs
6'x18" = 38 lbs
8'x18" = 46 lbs
5' Round = 66 lbs
6' Round = 80 lbs

Accepts standard 3/4"
skirting clips

Polyester
powder
coated US
steel legs &
frame are
tough and
weather
resistant

Steel frame attached with
nylon locking nuts and bolts
through, not just into, table top

18" tops
available as
OVERSIZED BENCHES
for locker rooms
and playing fields



MADE IN
FORT SMITH,
ARKANSAS, USA

BUY FACTORY DIRECT & SAVE!

6' x 30" TABLE ONLY

\$74⁰⁰

Call Rudy

800.333.2687

www.mccourtmg.com

TOLL FREE FAX 800.982.2530



McCourt
manufacturing

*Commercialite is a McCourt Manufacturing trade name

GET CREDIT —AND CREDENTIALLED— FOR ALL YOUR HARD WORK

APPA Educational Facilities
Professional Certification Programs



APPA Board for Educational
Facilities Professionals Certification



Coming in 2008

Leaders on the Ground and in the Boardroom

APPA members have the power to influence student recruitment and retention in dramatic ways. You are a driving force in creating a better future for campuses and students, just as APPA – the only association dedicated to educational facilities management – is driving to create a better future for you. APPA exists to support you as you rise to higher levels in your professional growth and development, encouraging professionalism and excellence within educational facilities management.

The EFP Credentialing Program

APPA is proud to announce the first credentialing standard for the educational facilities profession. The Educational Facilities Professional (EFP) was developed in response to members' demand as a way to validate your knowledge and competence and show decision-makers that you are an accomplished professional. Working for an educational institution is a calling, and one that affects the future every day. The EFP program confirms your achievements and illustrates your basic, fundamental understanding of what it takes to create and maintain safe, functional and inspiring learning environments, now and for future generations.

Documentation of Distinction: the Need for Credentialing

Qualified educational facilities professionals are in demand. That demand will increase exponentially as populations grow, expectations for education rise, and businesses expand and diversify. APPA members are qualified, through extensive instruction and training, to communicate ideas, facts, and principles to inform campus decision-making processes. You want, and deserve, professional acknowledgement for all you have attained.

Every day you work to implement sound practices and progressive ideas which impact the lives of others. Managing a campus is like managing a small city, requiring an expansive vision and comprehensive understanding of structures and their surrounding environment. It is stewardship backed by research and experience. By earning the EFP, you illustrate a familiarity with standards and best practices that is the fundamental sign of first-rate talent.



Want to ramp up your resumé? EFP credentialing gives you authoritative documentation of your progress. You are distinguished as a central and indispensable constituent in the educational facilities community. You bring the background, vision, and commitment that empower educational leaders.

The Industry Standard

- The EFP credential is an exciting new standard for educational stewardship. It represents core knowledge, talent, and skill, underscoring accountability and commitment to growth and mastery.
- EFP preparation guides you to a holistic, systemic mindset that is the key to progressive development in educational facilities. You grasp the interdependence of each structure and space and the ways in which every building communicates a sense of place, history, and real connection with its purpose and those it serves.
- Employers want to know that they're getting the best. If you want your work profile to reflect superior standards and the highest degree of credibility, the EFP designation is essential. It signifies mastery and commitment to your work, your institution, and your colleagues.
- EFP credentialing makes you competitive and desirable. Empowered by your training, your successes survive changes in administration and make indelible impressions on generations to come. And they inspire other young professionals who are determined to make a difference.
- The EFP designation is *your* accomplishment, enhancing your portfolio wherever you may go in your professional and personal journey.

Earning the EFP

Start by enrolling in the preparatory course for the Educational Facilities Professional credentialing examination, offered July at APPA's 2007 conference and at the Institute for Facilities Management September 2007. The first examination will be held at the conclusion of training at the Institute in September 2007 and February 2008.

Visit www.certification.appa.org or contact the Certification Manager at certification@appa.org to receive important updates and information via email.

Who is eligible for the EFP?

Your level of education and professional experience determines your eligibility to sit for the EFP Credentialing Examination.



EFP EXAM ELIGIBILITY CHART

**If Your Education Level
Consists of:**

**Your Experience
Requirement is:**

Facilities management or masters degree	0 years
Related bachelor's degree	2 years
Institute for Facilities Management (IFM) graduate	2 years
Non-related BS/BA and IFM graduate	2 years
Related BS/BA and IFM Graduate	2 years
Non-related BS/BA or related associate degree	3 years
HS diploma or non-related associate degree	4 years

The EFP Credentialing Exam will cover APPA's Four Core Competency Areas for the educational facilities professional:

- General Administration and Management
- Facilities Planning, Design and Construction
- Maintenance and Operations
- Energy and Environment

Application

To apply, visit www.certification.appa.org or contact certification@appa.org

Dates and Locations for the Preparatory Class*

July 18, 2007	Baltimore, Maryland
September 14, 2007	Phoenix, Arizona (Institute for Facilities Management)
February 8, 2008	Newport Beach, California (Institute for Facilities Management)

Dates for the EFP Credentialing Exam*

September 14 or 15, 2007	Phoenix, Arizona
February 8 or 9, 2008	Newport Beach, California

RATES AND COSTS

ITEM DESCRIPTION	COST
GRADUATE, INSTITUTE FOR FACILITIES MANAGEMENT (IFM)	
EFP Credentialing Exam Application Fee	\$75.00
EFP Exam Fee Graduate IFM (Institute for Facilities Management)	\$250.00
Option 1 EFP Preparatory Course (Includes: Facilities Management Manual and Course Notebook)	\$495.00
Option 2 Training and Study Manual-Facilities Management Manual (Four Volumes)	\$150.00

**APPA reserves the right to modify the course and exam schedule with proper notification*

RATES AND COSTS

ITEM DESCRIPTION	COST
NON-GRADUATE, INSTITUTE FOR FACILITIES MANAGEMENT (IFM)	
EFP Credentialing Exam Application Fee	\$75.00
EFP Exam Fee Non-Graduate IFM (Institute for Facilities Management)	\$450.00
(OPTIONAL) EFP Preparatory Course (Includes: Facilities Management Manual and Course Notebook)	\$495.00
or Training Study Manual-Facilities Management Manual (Four Volumes)	\$150.00

**APPA reserves the right to modify the course and exam schedule with proper notification*

Moving toward full certification: the Certified Educational Facilities Professional (CEFP)

The EFP credential is the initial standard and is the foundation of a solid, thoughtfully built career in educational facilities management administration. The Certified Educational Facilities Professional (CEFP) is the advanced standard for the experienced educational facilities professional, currently in development by APPA. The CEFP will recognize those professionals with mid to senior level professional experience and education in the field of educational facilities management. APPA plans to open the CEFP certification program to eligible exam applicants in September of 2008.

The CEFP is an advanced level of certification within the educational facilities management profession. The CEFP will be the capstone of educational facilities management representing a mastery of professional expertise and is a mark of superior proficiency in the core competencies for educational facilities professionals. The CEFP is a demonstration of one's superior proficiency, professional strength, unfailing dedication in the field of educational facilities management.





Start Earning Your EFP Credential Today

Mark your calendar for:

One of the EFP Credentialing Preparatory Classes

July 18, 2007	Baltimore, Maryland
September 14, 2007	Phoenix, Arizona
February 8, 2008	Newport Beach, California

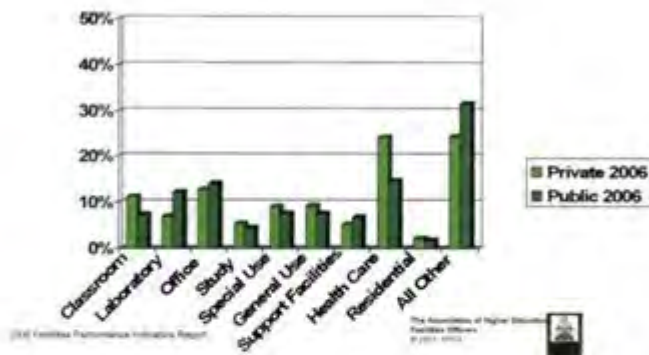
The EFP Credentialing Exam Offerings

September 14 or 15, 2007	Phoenix, Arizona
February 8 or 9, 2008	Newport Beach, California



Visit www.certification.appa.org or
call 703.684.1446 or
contact certification@appa.org
for more information

Space Category ASF @ % of Total ASF by Funding (2006 Only)

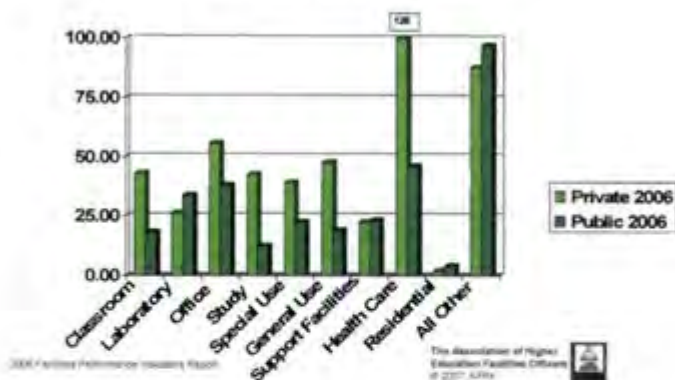


Continued from page 31

In terms of overall average CRV/GSF (Total CRV value divided by campus GSF), the difference between private and public campuses is not noticeable.

However, there are differences in construction costs by building type that are derived from the CRV Calculation Worksheet. About half of the institutions providing CRV statistics used the Worksheet in 2005-06.

ASF per Student by Funding (2006 Only)



The differences between private and public institutions are substantial. Construction on public campuses costs about twice the amount per GSF than private campuses with two exceptions; about the same amounts per GSF are invested into residence halls and historic buildings. However, our counts are not large enough to claim this is representative of the two groups. So, we look to the 2006-07 FPI Report for additional input and encourage those who participate in the Facilities Core Data Survey to use the power of the CRV Calculation Worksheet.

Service and Support.

It's how Bartlett Tree Experts improves the landscape of commercial tree care



We can make a significant difference in the beauty and value of the trees and shrubs on your property. Bartlett innovations lead the industry in hazard prevention, soil management, root care and pest control. Our services include pruning, fertilization, lightning protection, tree removal, bracing, cabling and detailed inspections.

Bartlett has been dedicated to caring for trees on commercial properties since we first broke ground in 1907.



**BARTLETT
TREE EXPERTS**
100TH ANNIVERSARY
1907 - 2007



877-BARTLETT (877-227-8538) or visit our website www.bartlett.com

A View of Private and Public ASF

As previously stated, counts for private institutions' ASF statistics are too low to be representative. Therefore, these observations are far from conclusive. However, there are statistical similarities between the last two FPI Reports, which is a good indication that the statistics have some validity.

The first impression of this chart is that private and public institutions, in general, balance their ASF by type of space in the same manner. Closer examination by space category shows a few of the subtle differences that might be expected. Private institutions have a larger percentage of their total space in classrooms, while public institutions have larger percentages in laboratories. The healthcare category results were different in 2004-05, so the 2005-06 disparity is discounted for now.

Another view of space is from the student's perspective. These statistics have not been consistent between 2004-05 and 2005-06, and we cannot rely on the statistics until we see consistency from one report to another.

However, let's note some patterns and see if they reappear in the 2006-07 FPI Report. It appears that private institutions may provide twice the ASF of classroom space per student than public institutions, with more study, special use, and general use space per student. On the other hand, public institutions provide more laboratory ASF per student. Both

"... the number of institutions completing space data surveys is growing each year but it is still low."

public and private institutions provide almost identical amounts of support facilities ASF per student.

Summary

It is interesting to explore the patterns of space and building statistics between private and public institutions. We have not drawn any conclusions but have made a number of observations.

The average private higher education campus might compare to public institutions in the following ways:

- more open landscaped or natural grounds
- slightly smaller and better maintained buildings
- possibly a less expensive type of construction
- less crowded walkways and plazas
- more student-centered ASF per student

The public institution might be different than the average private campus in these ways:

- denser build-out of maintained acreage
- larger building profiles
- campus facilities that are more in need of maintenance and renewal
- more laboratory space, indicating a higher concentration of science programming
- higher student occupancy patterns in buildings and on grounds

Whether the 2006-07 FPI Report confirms or changes these observations remains to be seen. The 2006-07 Facilities Core Data Survey will open in late-August, and the resulting FPI reports and dashboards will be available in February 2008. We invite your participation. ▲

Providing Solutions That Diagnose, Upgrade & Restore
Thermally Degraded Underground Heat Distribution Systems

ConduFill®

Removable Insulation Covers

APPA 2007
#206

We provide reliable solutions that will:

- Restore thermal efficiency
- Prolong the life of piping systems
- Minimize heat losses and reduce heat costs
- Eliminate manhole vapor
- Prevent damage to grounds
- Detect hidden problems within piping systems



**Thermal
Science
Technologies**

To learn more about our products & services,
call us at

Phone: 1-877-CONDUFILL
or visit our website at
www.thermalsciencetech.com





The World's Smartest Solar Lighting Just Got Brighter!

SolarOne® Lighting delivers:

- Clean, White Light that is Dark Sky Compliant
- Low Voltage, Low Liability System
- No Electric Bills, No Emissions
- Simple, Speedy Installation
- Immunity to Power Outages



Visit:
www.solaronelight.com

Call Toll Free:
877.527.6461

SolarOne is a registered trademark of
SolarOne Solutions. All Rights Reserved.

SolarOne® Lighting incorporates **SO-Bright™** intelligent technology to deliver maximum efficiency, provide unparalleled control and ensure that you never leave your students in the dark.

Don't miss us at
"Back to the Future 2007"
Booth 516

SolarOne®
Lighting
Simply Brilliant!

Validating Comfort Complaints with Data Loggers

By Evan Lubofsky



Employee productivity is—at least in part—influenced by the indoor environmental conditions in which people work. Temperature is often a major factor, and, according to a recent survey by the International Facilities Management Association, thermal comfort complaints were the single most common office complaint in 2003. It seems that in any work environment, whether it's a college campus or an office park, some employees are always too hot and others are always too cold.

While the complaints themselves may not always be warranted, the potential dollars lost in productivity due to employee discomfort can be substantial. Since salaries typically make up over 90 percent of the total operating cost of a commercial building, even tiny increases in employee productivity can mean a lot to an organization's bottom line. Studies have shown, for instance, that just a three percent productivity gain can translate into a nearly \$3 million gain in a 500,000-square-foot facility.

Evan Lubofsky is director of marketing for Onset Computer Corporation, Bourne, Massachusetts; he can be reached at evan@onsetcomp.com. This is his first article for Facilities Manager.

Before determining what the root cause of a comfort complaint might be (e.g., lack of proper zoning, poor workspace design, lack of ventilation) and taking corrective action, facilities managers must first figure out whether the subject area is in fact too hot or too cold.

Getting Answers

To validate temperature-related comfort complaints, an increasing number of facilities managers and HVAC contractors are relying on battery-powered data loggers. Data loggers are low-cost, compact instruments that incorporate built-in micro processing, high-accuracy temperature sensing, recording, and battery power in a self-contained package. Temperature data loggers employ sensors that can measure temperature, relative humidity, light, and other parameters. The logger monitors and records at user-defined intervals (e.g., every 10 minutes) and stores it digitally into its onboard memory. Many temperature loggers are small enough that they can be placed in hidden, "out-of-the-way" locations to gather information in a workspace without being seen or disturbed. Depending on the amount of built-in memory and the interval for taking readings, data loggers can realistically collect data for several months at a time before reaching their full capacity.

According to Steve Walker, an HVAC supervisor for Massachusetts-based Genzyme Corporation, data loggers have been an important tool in investigating comfort complaints at the company's 11-building campus in Framingham, Massachusetts.

"In one of the administration buildings, employees were complaining about their feet being cold," explains Walker.

"We put data loggers underneath desks in the area and actually showed that the air was four to six degrees colder than the air above the desks. From this, we were able to determine that there was not enough velocity of heat coming out of the registers to get the air to circulate under the desks, which were built into the walls. Realizing there was a problem in how the workspace was configured, we went back to the design firm and had them make modifications in the configuration."

Ron Mincks, a district energy manager for the Rapid City School District in South Dakota, also uses data loggers to investigate comfort complaints from teachers and other school employees.

"When a teacher complains about classroom temperature," he explains, "we are now able to monitor conditions very easily. In one building, I had computerized univents, and the custodian had them coming on at 7:00 a.m. The teacher was

"It seems that in any work environment, whether it's a college campus or an office park, some employees are always too hot and others are always too cold."

saying that at 9:00 a.m. the room was cold. We couldn't figure why the room would still be cold, so we deployed a few data loggers and from the data we were able to determine that there was a computer operation glitch that was causing the temperature to drop."

Mincks adds that just the process of using data loggers itself can help with comfort issues. "We've really increased student and teacher comfort just by documenting temperature." Mincks also uses loggers on an ongoing basis to verify that classroom thermostats are working properly, and collects a daily log of temperatures in the classrooms.

Using Data Loggers

Using a data logger involves four basic steps: logger set-up, deployment, data retrieval, and analysis. Setting up a logger is typically done by connecting the device to a PC, and using accompanying logger software to make a number of point-

Buried under an avalanche of **energy** data?



The *first step* towards energy efficiency begins with getting a handle on your energy information!

- One system handles *all* of your energy and utilities information
- Chargebacks, rebillings, splits, submeter readings
- Accounting interface for A/P and A/R
- Audits, accruals, rate/tariff calculations, budgets, forecasts
- Measurement & verification of cost avoidance
- Hundreds of reports, charts, graphs
- Integrated tracking of both billing data and interval data
- Client/server for large universities
- New Desktop Campus version and OnLine web service for smaller institutions

FREE DEGREE DAY charts!

See how the weather affects your building energy use.

www.EnergyCAP.com

THE BEST-SELLING ENERGY EFFICIENCY SOFTWARE SINCE 1980.

and-click selections. These include how often the logger should take a temperature measurement, and the specific data and time the logger should start recording.

Deployment involves determining optimal placement of the logger(s) in the workspace and placing the logger in that area. Data retrieval involves offloading the collected data onto a PC, laptop, or data shuttle.

Analysis of the data is typically performed using accompanying data logger software, which allows the facilities manager to quickly and easily translate the temperature data into time- and date-stamped graphs that show spikes and drops in temperature over the given data collection period. This temperature data offers facilities managers an accurate and complete picture of the actual temperature activity that occurred throughout the entire monitoring period. The data, in turn, can be used to determine where problems exist.

Capabilities to Consider

When evaluating data loggers, there are a number of features and capabilities to look for. First, it is a good idea to make sure that the logger offers an option for offloading data without having to bring the logger back to an office PC each time. Dedicated data logger "shuttles" allow users to conveniently retrieve data from loggers deployed throughout a facility quickly and conveniently.

Second, make sure the accompanying logger software enables you to rapidly and easily perform tasks such as configuring parameters, launching the logger, and offloading data with point-and-click simplicity. At the same time, it should offer powerful data plotting capabilities, and enable you to easily export data to other programs, such as Microsoft Excel, for analysis.

Finally, look closely at the total cost of ownership when shopping for a data logger. Here are some questions you may want to ask your supplier:

- Will the logger need to be calibrated by the manufacturer periodically, and if so, what are the cost implications over time?
- Will you need to invest in a pricey software package to analyze your results?
- Will you be able to use the AA batteries in your kitchen drawer, or will the logger require a proprietary or hard-to-find power source?
- Are cables included with the logger?

While facilities managers may never be able to put a stop to the age-old too hot/too cold battle, they at least have access to compact, affordable tools that can validate the complaints. Data loggers have become the instruments of choice among facilities managers and contractors due to their 24/7 operation, high-accuracy, ease-of-use, and PC-based analysis and reporting capabilities. ▲

Sample of Data Logger Providers

THE DATA LOGGERS STORE

www.microdaq.com

DATATAKER DATA LOGGERS

www.datataker.com

GEMINI DATA LOGGER

www.gemindataloggers.com

OMEGA ENGINEERING, INC.

www.omega.com

ONSET COMPUTER CORPORATION

www.onsetcomp.com

PICO TECHNOLOGY

www.picotech.com/data.html

VERITEQ

www.veriteq.com

MORE THAN ENGINEERING EXPERIENCE TEAM STANLEY

APPA 2007
Booth 811

Chilled Water Plant Design Experience

Project Name	Year	Ultimate Plant Capacity (Tons)	Installed Capacity (Tons)	Satellite Plant (Y or N)	# Units in Project	Machine Size	Drive Type	Project Scope		
								Study	Design	Construct
Qatar Cool C.A.T. Group Cool 1006 RT Plant Doha, Qatar	2007	120000	115000	N	46	2500	Electric		✓	
West Chilled Water Plant Expansion Phase II The University of Iowa Iowa City, Iowa	2006	12000	12000	Y	3	4000	Steam	✓	✓	✓
Chiller #1 Replacement University of Texas-Pan American Edinburg, Texas	2006	7900	2000	N	1	2000	Electric		✓	✓
West Chilled Water Plant Renovation Phase 2A The University of Iowa Iowa City, Iowa	2005	17000	6000	N	2	3000	Electric	✓	✓	✓
Central Plant Expansion - Phase 1 Thermal Energy Corporation, Solar Medical Center Houston, Texas	2005	11000		Y	11	1000	Electric	✓		
District Cooling Plant Locking Board of Senior and Light Locking, Michigan	2000	10000	6000	N	4	2000	Steam/Electric	✓	✓	✓
Willy & Co. Chilled Water Plant Mandy & Co. Houston, Texas	1998	10000	6000	N	6	1000	Steam/Electric	✓	✓	✓

Total Installed Chiller Capacity Since 1998 410730



We are a full services E/A consulting firm.

800.553.9694
www.stanleyconsultants.com

Runs quietly in the halls.



The tough, agile Speed Scrub® cleans fast and never misses the tight spots.

- ▶ Cleans quietly (only 67 dBA) and floors dry in seconds
- ▶ Reduce accidents - NFSI Certified to deliver high traction
- ▶ FaST® technology uses 70% less water and chemical - saves money and environment
- ▶ Easy to operate, rugged and dependable

For more information, see your local dealer today, visit www.nobles.com/speed
or call 800.328.5727

**Thousands of our customers save
money recovering heat with no sweat.**



Save by generating combined heat and power. We make it easy.

With a cogeneration system from Solar Turbines, you can turn clean-burning natural gas into cost-effective electricity – plus steam for production processes; or heat for water, building space and chillers. It's like getting two forms of energy for the price of one. Best of all, Solar can handle everything, including installation, operation, financing and service. And you can get all this in one convenient package with our Energy Service Contract. So take control of your future by making your energy work harder. For more details about Solar cogeneration systems, call 1-619-544-5352, e-mail cogen@solarturbines.com or visit www.solarturbines.com.

©2007 Solar Turbines Incorporated

WHERE THE WORLD TURNS FOR POWER

Solar Turbines

A Caterpillar Company

The ROI of Trade Labor

by Matt Adams, P.E.

Much has been said about the budgets for our plant departments. Considerable progress has been made in justifying increases in staff roles for trade labor. Consistent with the proposal for increases in maintenance staff budgets are efforts to maximize the effectiveness of that resource. It is not enough to increase the size of our staff; best practices dictate that we make every effort to optimize the utilization of our trade staff resource. While this goal seems intuitively obvious to most of us, the specifics of its realization are not. For example, what percentage of each trade-person's annual available hours is actually utilized for true maintenance work? Are the numbers for your institution as good as they could or should be?

It is hard to find experienced, qualified trade staff. The recent construction boom has made it even more difficult for our public institutions to attract skilled staff. For the staff that we have, each full-time equivalent, or FTE, results in much less than the 2,080 hours of wrench-turning time we might expect. In fact, when you take each person and subtract their benefits there is typically only 1,750 hours—give or take—available for working during the year. Each institution should calculate this average value for its staff. The generous benefits that most of our institutions grant staff make it that much more imperative that we value the potential productive time available. In essence, we are starting with less productivity time compared with the private sector.



To find the return on investment (ROI) for our trade labor, we first must know the costs. The cost of the salary and benefits are obvious. Less obvious is the cost per hour of available or actually delivered labor. With only 1,750 maximum hours available for work, the cost per hour is much higher than most consider. In fact, the

maximum is never realized within our institutions. There are many intended and unintended obstacles or deductions from the available hours for each trade person. For example, there are breaks, lunch, travel time, shop time, etc. Any task other than actual trade work is a deduction from the available time for each person. Looking at this on an annualized basis, we see that we are really shortchanged. Given this reality, any effort to increase the utilization of trade labor has a meaningful ROI.

ROI is important in evaluating operational improvements for our plant maintenance departments. Based on the structural limitations discussed



GALE

Consulting Engineers

**Engineered Solutions for Roofs,
Walls, Windows, and Waterproofing.**

Our Services Include:

- ▶ Condition Assessments
- ▶ Forensic Investigations
- ▶ Maintenance Plans and Budgeting
- ▶ Design Consultations
- ▶ Preparation of Design Documents
- ▶ Construction Period Services
- ▶ Construction Inspections
- ▶ Expert Testimony

**Specialized Building Envelope Engineering
Services for Educational Facilities Since 1964**

Gale Associates, Inc.

1-800-366-1714

ejm@gainc.com

www.galeassociates.com

Matt Adams, P.E. is president of FM2, Atlanta, Georgia. He can be reached at matt@adamsfm2.com.

earlier, the actual cost per hour of working time is high—higher than most of us realize. Furthermore, the cost per hour is not the only element of cost to the institution. It is assumed that we all have constrained budgets and are normally short on funding. As such, the cost of work not performed by trade staff becomes highly relevant. Put another way, considering that we have more work to do than we have staff, the cost of any “non-work” deduction from each person’s annual pool of hours exceeds their salary. In fact, there is a significant opportunity lost/cost. Let’s assume the cost per hour for a plumber is \$50. This is based on salary, benefits, overhead allocations, and only 1,750 hours available per year. In order to evaluate the merits of proposed operational changes, we must calculate the value, or better the ROI, of our trade labor. If an operational improvement costs our institution x dollars, but enables a

“ROI is important in evaluating operational improvements for our plant maintenance departments. Based on the structural limitations discussed earlier, the actual cost per hour of working time is high—higher than most of us realize.”

trade person to have 1 hour more per week to turn a wrench, we will make this change if the value of that hour of work is 2x. So what else is there to this value proposition above and beyond the \$50 per hour previously determined?

If we are considering adding staff to deliver materials from the storeroom to the trade staff, we know what this additional staff costs. The value

created by saving travel time for trade staff is rooted not only in the cost per hour from salary, but also the value of potential increases in work delivered. What is the worth if, as a result of making this change, trade staff are able to execute more preventive maintenance (PM)? This is an essential question for institutions trying to make the transition from reactive to planned maintenance operations. To determine this, we need to know the cost of not performing preventive maintenance. The cost to the institution of not performing preventive maintenance is equal to the value delivered by performing it. This is the ROI.

Unplanned maintenance is directly related to planned maintenance. There is a trade-off relationship that we all recognize. By surveying the published references available to us, we can determine that unplanned maintenance is approximated by 150 percent of theoretical planned maintenance. While statistical records from sources like RS Means and Whitestone support this figure, common sense also justifies this based on the following facts:

- Unplanned maintenance often requires overtime, as failures do not occur on our schedule.
- Unplanned failures generally require more invasive procedures for correction.
- Lack of planned, preventive maintenance results in a reduced life cycle or asset consumption as a significant cost.
- Outages and reactive actions have a negative impact on the productivity of any plant management operation. For the trade person that costs \$50 dollars per hour, the net cost of unplanned maintenance per hour is \$75 – \$50 per hour for salary, benefits, etc., and \$25 per hour for unplanned maintenance avoidance.

If the cost of not performing preventive or planned maintenance is approximated by 150 percent of the

Continued on page 44

Come on in ...the water is fine!

Let Natare take the guesswork out of your aquatic facilities.

Construction

- Stainless Steel Pools
- Technical Consulting
- Modular Pre-engineered Pool Systems
- Design & Specification Assistance
- Design Build Pools

Renovation

- PVC Pool Linings & Decking
- Stainless Steel Gutter Systems
- Filtration Systems
- Facility Evaluation/Design Assistance
- Turnkey Renovation



Equipment and Systems

- Bulkheads & Moving Floors
- Filtration, Circulation & Mechanical Systems
- Shock Absorbing Safety Surfacing
- Grating & Specialty Deck Equipment
- Air Spargers & Underwater Windows

Whether it's operation, construction or renovation, we can help.



Natare Corporation
5905 W. 74th Street • Indianapolis, IN 46278
(800) 336-8828 • Fax (317) 290-9998
www.natare.com • natare@natare.com

**See us at our
Booth #805**


SPIROVENT®

Condition the **water** to condition the **air**.



Protect your investment by removing the air and dirt from your **hot** or **chilled** water system.

Air and dirt in large volume fluid systems cause many problems.

The life and the efficiency of a large volume fluid system are greatly dependent on clean system water. Air and dirt problems cause frequent breakdowns and increased customer complaints. Corrosion, cavitation and wear are only some of the consequences of system water filled with air and dirt. Recurring problems and increased maintenance result in unnecessary costs and dissatisfied owners.

There is a solution! A large volume fluid system without air and dirt is possible. Spirovent® is a unique dual-purpose device that will remove air and dirt down to the smallest particle, eliminating the need for frequent venting and purging. It is low-maintenance and works without strainers or filters. Less maintenance, fewer costs, satisfied owners!

Case Study: Spirovents Solve a Series of Problems

Cotter College in Nevada, Missouri is a private two-year liberal arts college for women. Robertson Hall, Cotter's dining hall and largest residence hall, had air and dirt in the chilled water system that caused numerous problems, including pump cavitation. This resulted in very noisy and inefficient operation.

To solve the problems, the existing centrifugal separator was replaced with a 6" high velocity Spirovent combination air/dirt separator. Within one week of installing the Spirovent, the problems were solved. "The product certainly proved itself," states Neal Swames, Cotter's Director of Physical Plant. "It works effectively, and we will continue down that path."

The President's house was another challenge: Constant air lock and noise drove the maintenance staff to replace the existing air separator in the house with a brass Spirovent 1 1/4" Junior. Swames explains, "We had been battling system problems forever, and the Spirovent solved them."

To date, there are several Spirovents installed or waiting for installation with even more planned for the future. When asked how the Spirovents have made his job easier, Swames had this to say: "They have worked very well, and that always makes our jobs in the maintenance field easier. They removed the excess noise and pump cavitation, and cleaned up the water. This has given us peace of mind knowing that the dirt and air are gone from these systems. We look forward to having Spirovents in all of our systems."

- The only high-efficiency units available for full-flow high velocity systems such as central plants and district heating/cooling.
- No change to piping required. Units often match pipe size.
- Large shell and coalescing/ barrier medium provide high efficiency.
- Dirt can be flushed while system is fully operational.
- Reduced oxygen-based corrosion and pump cavitation.
- No bypass, isolating valves or filters to clog and reduce flow.
- Available to 36" pipe size.
- Minimal pressure drop; always constant.

For more information on how Spirovents can protect your hot or chilled water system and save you thousands in maintenance costs, contact Spirotherm or visit our website.

SPIROTHERM
A SPIRO RESEARCH COMPANY

Spirotherm, Inc.
25 N. Brandon Drive
Glendale Heights, IL 60139

Tel.: 800-323-5264
Fax: 630-307-3773

Website: www.spirotherm.com
E-mail: info@spirotherm.com

The Spirovent's unique construction allows it to not only remove micro-bubbles and entrained air but also dirt particles. The Spirotube®, the core of the unit, causes dirt particles to sink to the bottom and collect in the dirt chamber, eliminating any blockage concerns. The air bubbles rise and collect in the air chamber and are released via an integral automatic valve.

Continued from page 42

cost of doing PM, we can make real value judgments for operational change. Given that we are trying to increase the level of PM within our institutions, and almost all of us are, we can determine ROI based on adding PM work to our stewardship activities. Using the same example as before, we might determine that adding expeditors to the storeroom for parts delivery would reduce travel

"By removing as many obstacles and interruptions as we can from their workday, our ROI can only increase. With an increase in productivity comes the possibility of more PM projects being executed."

time of the trade staff equal to 40 hours per month. This is valued by multiplying the hours saved in travel time each month (40) by the salary and overhead of the trade staff and the UPM avoidance (\$50 and \$25, respectively), which will yield \$3,000 per month. The formula would be as follows:

$$\begin{aligned} 40 \text{ hr/m} \times (\$50 + \$25) &= \\ \$3,000/\text{m} \text{ or} \\ 40 \text{ hr/m} \times \$75 &= \$3,000/\text{m} \end{aligned}$$

Every institution would like to increase the number of hours available for true maintenance work. It is important to realize the value of our skilled trade people, knowing that downtime does occur with trips made back and forth to the shop. This type of interruption invites more interruptions in their workday. An expeditor would not only increase their productivity, but would afford more time available for PM activities. For this proposed initiative to break even, the cost of the new person, or expeditor, must not exceed \$36,000 per year. The point is that the trade labor is now fully valued or recognized based on an ROI that more intrinsically represents the total cost to the institution.

To summarize, we all want to get the best return on investment when it comes to labor. Obtaining and maintaining a strong level of skilled trade people in today's world is not an easy task. However, the skilled individuals we do have on staff need to be fully utilized during the 1,750 hours they have for wrench-turning each year. By removing as many obstacles and interruptions as possible from their workday, our ROI can only increase. With an increase in productivity comes the possibility of more planned maintenance projects being executed. As stated earlier, the cost to the institution of not performing PM is equal to the value delivered by performing it. Do we, as institutions, have an idea of the percentage of each of our trade person's available hours for maintenance work; and, is it as good as it could be? ▲



Rental Solutions

What would be lost if a building's HVAC or Power system were to break down for a lengthy period? Tenants, revenue, or even life! These systems are such an integral part of our everyday life that even temporary shutdowns are unacceptable.

The solution - **Carrier Rental Systems.**

Typical Applications

- Supplemental Tower Water
- Supplemental Heating
- Supplemental Steam
- Temp. HVAC Systems
- Backup HVAC Systems
- Comfort Cooling
- Clean Room Humidity Control
- Water Damage Drying
- Emergency Power
- Construction Site Humidity and Ventilation Control

For additional information and equipment specifications, check our web site www.hvacportablesystems.com or call 800-586-9020 today and find out why we are "The Ones to Call!"

800-586-9020

www.hvacportablesystems.com



Rental Systems

New Name. Same Great Solutions.

A Subsidiary of Carrier Corporation. Formerly doing business as HVAC Portable Systems.

The Bookshelf

In this issue, we present two books that address a variety of issues. As campus administrators focus on preparing for the next academic year, we advise they take time read a book that will help create solutions.

Coaching, Counseling & Mentoring: How to Choose and Use the Right Technique To Boost Employee Performance, Second edition, by Florence M. Stone, AMACOM, New York, 2007, 223 pages, hardcover, \$24.95.

Reviewed by Suzanne Drew, FMP

The best managers

seem to know exactly when and how to say just the right thing to their employees. In *Coaching, Counseling, and Mentoring: How to Choose and Use the Right Technique to Boost Employee Performance*, author Florence M. Stone provides practical advice for supervisors on how to identify and meet—effectively and efficiently—the ever changing needs of employees.

Key is spending time with employees on a regular basis just to ask how things are going. This regular coaching provides an opportunity for timely feedback, encouragement, and problem solving that results in more productive and confident employees and provides the manager invaluable

Suzanne Drew is the director of staff development and management at the University of Nebraska-Lincoln. E-mail her at sdrew2@unl.edu.

Ted Weidner is assistant vice chancellor of facilities management & planning at the University of Nebraska-Lincoln and president of Facility Asset Consulting. E-mail him at tweidner@unl.edu.



“...practical advice for supervisors on how to identify and meet—effectively and efficiently—the ever changing needs of employees.”

information regarding operations, establishes a level of trust that benefits everyone involved, and helps him or her decide how and when to act.

Since overreacting to less than expected performance can be as harmful as failing to take adequate action, distinctions are drawn between various responses. For example, nonjudgmental feedback and probing questions can help a good performer stay motivated and on-course as part of a coaching session. Helping an employee acknowledge and take ownership for closing a gap between expectations and outcomes describes a sometimes necessary escape

Continued on page 47

Cost-Effective Vertical Transportation Solutions

For over 25 years, VDA has been providing facility management professionals with a wide range of consulting services designed to protect their vertical transportation investment and make their lives easier.

We have tailored our services to meet their individual needs relating to maintenance, modernization and new installations.

Contact Bill Bell to see how VDA can help maximize your vertical transportation ROI.

VDA Baltimore Office:

4692 Millennium Drive, Suite 102

Belcamp, MD 21017-1535

Phone: 877-931-5012

E-mail: bbell@vdassoc.com

www.vdassoc.com



worldwide vertical transportation consultants

vda

Van Deusen & Associates

Headquarters: Livingston, NJ
Offices: Atlanta, GA • Baltimore, MD
Boston, MA • Chicago, IL
Minneapolis, MN • New York, NY
Norwalk, CT • Philadelphia, PA
Pittsburgh, PA • Washington, DC

SPECIALIZING IN

COLLEGE/UNIVERSITY

CUSTODIAL SERVICES



WFF "Circle Of Quality"

Our singular goal is to partner with Physical Plant Directors to provide a clean & safe environment for your customers and ours...the student.

Professional Management

WFF Facility Services' management philosophy emphasizes a strong team approach between on-site management, regional management and corporate staff.

Trained Associates

WFF believes quality starts with professionally trained associates. They are the frontline of our company. The individuals our customers see everyday are our associates.

Advanced Technology

As a provider of custodial services to college and university campuses for over 25 years, **WFF** recognizes the importance of advanced technology in all aspects of our business.

Quality Assurance

WFF's Quality Assurance Program requires commitment to excellence by every member of our custodial staff. Our Management Team reinforces this standard of excellence each and every day!

For more information please call: 1-800-852-2388



WFF Facility Services

2815 Olive Street Saint Louis, MO 63103

www.wffservices.com

Continued from page 45

lation into counseling. Finally, for situations involving misconduct or repeated failures in spite of counseling, there is the traditional disciplinary process.

Is the problem passive-aggressive behavior? Focus on the specific verbal and physical behaviors, their impact on operations, and the clear expectation that the behaviors stop. Naysayer? Challenge them to come up with a workable solution. Peer or supervisor? Focus on the impact the behavior has on the success of a shared goal or effort.

The author also notes that coaching interactions can inform the manager on how best to support their strong performers, as strong performers do not require less managerial attention than others, only a *different* type of attention. By acting as a sounding board, advocate, broker, and cheerleader on issues of career development, organizational resources, and culture, the mentoring manager helps the employee, but also yields more corporate information, greater loyalty, and a more innovative and cohesive team.

Coaching, Counseling and Mentoring lays out clear rationale—as well as helpful instructions, descriptions, scripts, and resources—for holding regular “checking in” conversations, addressing less than satisfactory performance appropriately, and helping strong performers become even stronger. When done effectively and efficiently, as prescribed by the authors, these interactions truly can be the best use of time for everyone involved.

Leading Change Toward Sustainability; A Change-Management Guide for Business, Government and Civil Society, by Bob Doppelt, Greenleaf Publishing, Sheffield, UK, 2003, 260 pages, softcover, \$24.76.

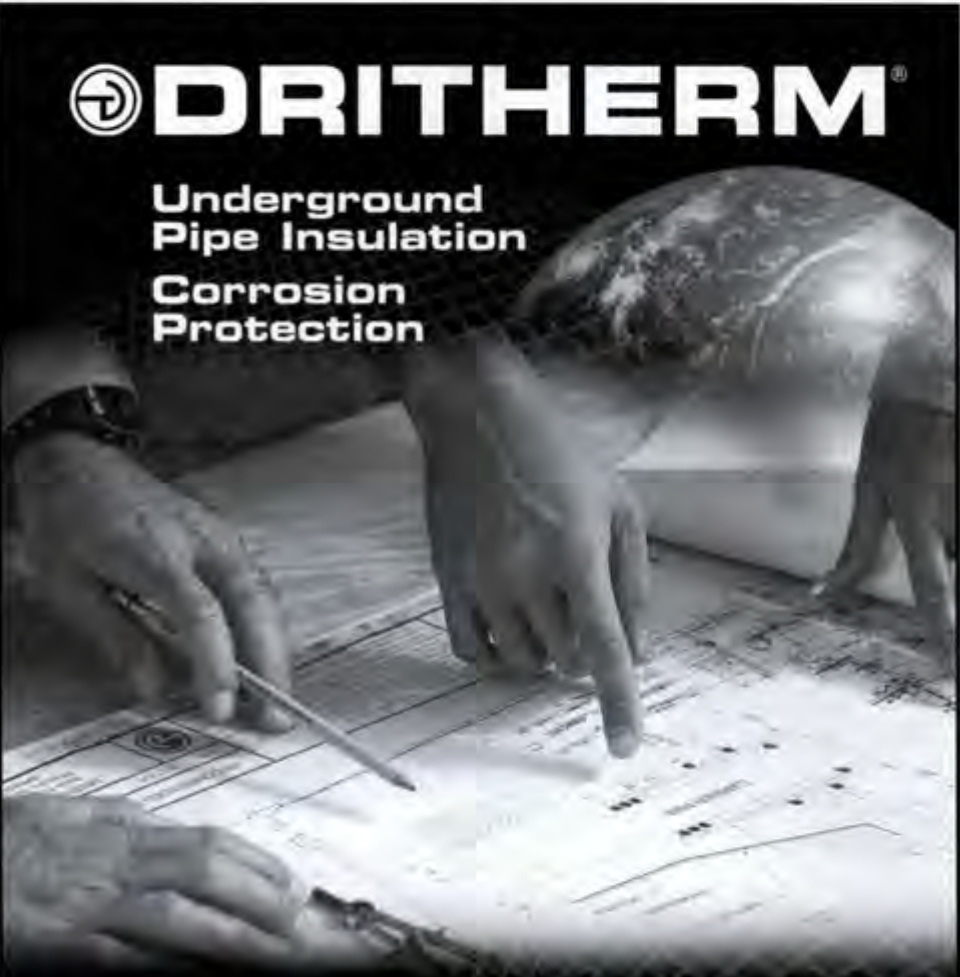
Reviewed by Theodore J. Weidner, Ph.D.,
PE., AIA

There are annual conferences for higher education on the issue, it is in the news, and there is increasing pressure from students/faculty/staff, but why do we seem to have difficulty becoming more sustainable? *Leading Change Toward Sustainability* opens with sev-

eral scenarios where organizations attempted to enact sustainability but failed, and the reasons why they failed. Doppelt explores several reasons, including lack of administrative buy-in, lack of grass-roots buy-in, lack of understanding of the time commitment, attempts to change the process without changing the organizational structure appropriately, and so on.

DRITHERM®

**Underground
Pipe Insulation
Corrosion
Protection**

- 
- Over 300 miles of Piping Protection Since 1967
 - Closed Cell - 100% Hydrophobic Product
 - Creates Dry, Stable, System Environment
 - Ideal for New Piping Systems/Repairs/Tanks
 - Engineered Design for System Reliability

 **DRITHERM
INTERNATIONAL INC.**

339 Changebridge Rd. - Suite 1B • Pine Brook, NJ 07058
Phone: (973) 808-2255 • (800) 343-4188
www.dritherm.com

Read in part while I was attending, and speaking at, the Smart and Sustainable Campus Conference this spring, I became reoriented on what was needed to increase my university's sustainability. It is not about no-strums, combining the successes of others as presented at a conference, or even talking about sustainability more frequently. Those approaches


"This management focus fills an important gap for those organizations desiring to become more sustainable."

simply result in the failures described above. So how does this book succeed?

The author has identified a "wheel of change toward sustainability" which parallels many change techniques for management. The wheel has seven spokes that must be addressed to ensure the change toward a sustainable organization—a checklist. The author describes each item on the checklist in separate chapters providing examples, steps and sub-steps, and a final checklist of actions, which must be accomplished to complete the spoke. Most of these are standard management change practices with a focus on sustainability.

Many facilities organizations have completed several of the spokes identified. We have design guidelines which may help "adjust the parameters" of designers and clients; mandatory procedures that "restructure the rules of engagement;" and strategic plans which "alter the goals" but we still have four other spokes to complete: "change the dominant mind-set," "rearrange the parts," shift the information flows," and "correct the feedback loops." These are not always obvious nor are they all within the control of the facilities organization.

Leading Change Toward Sustainability is written in a way to permit an organization to hopscotch among the seven spokes, avoiding those completed (assuming they have really been completed) and tackling those which are incomplete. It is a good source for development of a sustainable program, while not answering the detailed elements of the LEED program or other sustainability initiatives. This management focus fills an important gap for those organizations desiring to become more sustainable. ▲



Creativity. Innovation. Passion.

TRIVERS
EDUCATION DESIGN STUDIO

Stephens College
Lela Raney Wood Hall
Rolla, Missouri

www.trivers.com

Squeeze us in!



**Come join us for some “fun in the sun” at
I.E.H.A.’s 41st Educational Conference & Convention
in Orlando, Florida!**

Educational topics will include:

- | | |
|--|--|
| ✓ Training a Diverse Workforce | ✓ Get a First Look at Tomorrow Today |
| ✓ Right Focus, Right People, Right Execution | ✓ Certification Industry Management Standard |
| ✓ Don't Eat the Marshmallow Yet, the Secret to Sweet Success in Work and Life Negotiations | ✓ Managing People Conference Workshop |
| | ✓ and many more! |

**For additional information, or to register
for the event, please visit www.ieha.org,
or call the Association Office at
(800) 200-6342.**

We look forward to seeing you there!

New Products

New Products listings are provided by the manufacturers and suppliers and selected by the editors for variety and innovation. For more information or to submit a New Products listing, contact Gerry Van Treeck, Achieve Communications, 3221 Prestwick Lane, Northbrook, IL 60062, 847-562-8633, gvtgvt@earthlink.net.

Cat Lift Trucks introduces the P17500 – P33000 series diesel pneumatic tire lift truck. Featuring a new turbocharged engine, a hydraulic fingertip control system and ergonomic styling, the new series continues to provide the solutions and support that Cat Lift Truck customers have come to expect. With six different capacities ranging from 17,500 to 33,000 lbs., these trucks are ready to tackle the most demanding customer applications. For optimal performance, the P17500 – P33000 relies on the turbocharged diesel engine equipped with a common rail fuel delivery system that assures even and high-pressure fuel delivery to all six cylinders, allowing for swift acceleration, low noise, and reliable performance. For more information call 800-CAT-LIFT.



AERCO expands its award-winning Benchmark family with the introduction of the Benchmark 3.0 Low NOx (BMK 3.0LN) condensing full modulation boiler. The BMK 3.0LN brings the field-proven design of the Benchmark series, as well as an exceptionally small footprint, to projects requiring 3 million BTU/hr. The new BMK 3.0LN employs the same fuel-saving technologies, design principles, and key components that have been used for a decade in the field as part of the Benchmark 2.0 boiler line. To deliver the extra capacity, the BMK 3.0LN incorporates its proven stainless steel, heat exchanger design. The BMK 3.0LN also incorporates the company's C-More™ unit controller and AERCO's patented air/fuel delivery system, which enables the boiler to achieve an unmatched 15:1 turndown, resulting in maximized operating efficiency and seasonal fuel savings. For full details call 800-526-0288.



Hickory Hardware's Flat-Free solid utility tires look and perform like rubber air-filled tires, but can support heavier loads. Ideal for industrial and construction equipment, including hand trucks and wheelbarrows, these Flat-Free tires are two times stronger and last three times longer than

traditional rubber tires and are much lighter than foam-fill or solid rubber alternatives. Their tough outer skin, formed using a centrifugal casting process, provides increased chemical and UV resistance and is non-marking for indoor applications. Hickory Hardware's Flat-Free tires are available in a variety of sizes and assemblies, including casters, as original equipment or replacement. For more information call 800-322-7539.



Extech Instruments offers a comprehensive line of InfraRed Thermometers for instantaneous non-contact temperature readings. The IR line provides temperature measurement solutions for HVAC/R, plant maintenance, automotive, electrical, and food handling/preparation applications. Extech's IR thermometers are available based on temperature range, distance to target ratio, and fixed or adjustable emissivity. Also offered are specialty IR thermometers for data logging and wireless data transmission, as well as a broad range of measurement devices with integrated IR thermometers. For additional details visit www.extech.com.



Bird-X, Inc. introduces Woodpecker PRO a species-specific woodpecker repeller that creates a danger zone using actual recorded distress cries of flicker and downy woodpeckers, yellow-bellied sapsuckers, and more. The unit also uses the natural calls of four predators to scare the woodpeckers even more. All cries are programmable for volume, time-off periods, hours of operation, and random or sequential play. This combination of options makes it virtually impossible for woodpeckers to get used to any one constant pattern. For more information call 800-662-5021. ▲



Continued from page 9

Evaluations are in progress. For more information, contact Holly Judd at holly@appa.org.

Jones Lang LaSalle Receives Alliance to Save Energy Award

The Alliance to Save Energy recently named Jones Lang LaSalle a 2007 Star of Energy Efficiency for its leadership, innovation, and commitment to energy efficiency. Jones Lang LaSalle will also receive the Chairman's Award at a gala event in Washington, D.C. in September.

Specifically recognized for its Energy Management Program, Jones Lang LaSalle helped decrease greenhouse gas emissions by 89,856 tons which resulted in savings of \$33 million

in energy-related utility costs.

The Alliance also commended Jones Lang LaSalle's establishment of a policy mandating that all client facilities managed by the company participate in the recommended energy management practices of the ENERGY STAR program.

Duquesne Introduces MBA Program Emphasizing Sustainability

This fall, Duquesne University will launch a new Masters of Business Administration in Sustainability infusing financial, social, and environmental responsibility into the hard-skills classes of more typical MBA degree programs. This new approach responds to a realization in industry that businesses can best be profitable, competitive, and endur-

ing when they are mindful of their responsibilities in social and environmental areas as well as financial ones. The three pillars of business—financial, social, and environmental capital—are incorporated into every course presented in the MBA degree in Sustainability.

Free Work Site Safety Resources

The Scaffolding, Shoring & Forming Institute (SSFI) offers free online resources to help keep work sites safe. These include information on standards, product testing, technical documents, and safety education. These resources enhance the protection of individuals who work in high-risk conditions and heighten safety awareness. Download free materials at www.ssfi.org.

You're in another world. No car alarms.
No angry voices. Because wall carpet
muffles sound and protects walls.
Rated Class A for resistance to flame and smoke.

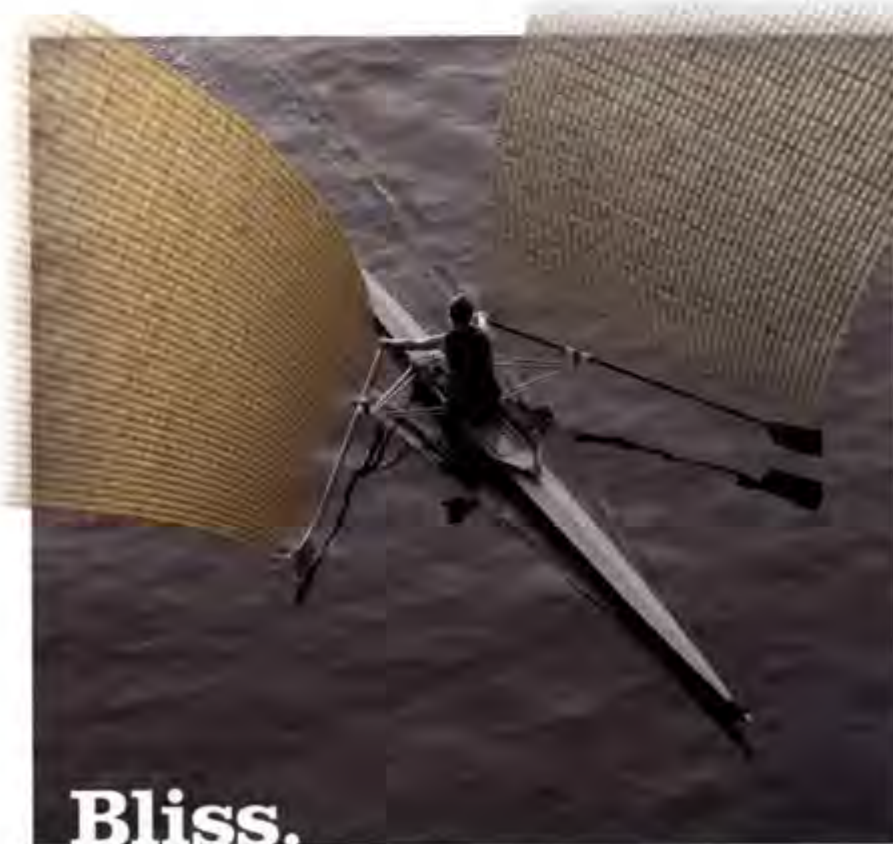
Lanai (shown), compact linear design, 8 colors.

Concourse, flatweave, 19 colors.

EUROTEX

Exploring surfaces
Uncommon solutions for floors and walls

800.523.0731 | specuorotex@prodigy.net | www.eurotexinc.com



Coming Events

Coming Events

For more information on APPA's educational programs, visit www.appa.org/education, call 703-684-1446, or e-mail education@appa.org. Visit our website's interactive calendar of events at www.appa.org/applications/calendar/events.cfm.

APPA Events - 2007

Sep 9-13—*Institute for Facilities Management*. Phoenix, AZ.

Sep 9-13—*Supervisor's Toolkit: Nuts and Bolts of Facilities Supervision*. Phoenix, AZ.

Sep 14—*EFP Credentialing Prep Course*. Phoenix, AZ.

Sep 14 & 15—*EFP Credentialing Exam*. Phoenix, AZ.

Other Events - 2007

Sep 3-7—*22nd European Photovoltaic Solar Energy Conference & Expo*. Fiera Milano, Milan, Italy. www.photovoltaic-conference.com.

Sep 20—*Stars of Energy Efficiency Awards Dinner: Alliance to Save Energy*. Washington, DC. Visit: www.ase.org/dinner.

Sep 25-28—*Association of University Interior Designers (AUID) Annual Conference*. University of Louisville. Louisville, KY. Contact: majohn01@louisville.edu.

Oct 4-5—*College & University Science Buildings 2007 Conference*. Albuquerque, NM. <http://www.tradelineinc.com>.

Oct 28-31—*NACAS 39th Annual Conference*. National Association of College Auxiliary Services. Las Vegas, NV. Visit: www.nacas.org.

Nov 7-9—*Greenbuild 2007*. Chicago, IL. Visit: www.greenbuildexpo.org.

Nov 11—*Energy Efficiency Global Forum and Exposition*. Washington, DC. Visit: www.eeglobalforum.com.

Nov 14-16—*Construction Owners Association of America (COAA) Fall Owners Leadership Conference*. Las Vegas, NV. Visit: www.coaa.org.

Dec 3-4—*Academic Medical Centers 2007*. San Diego, CA. www.tradelineinc.com/conferences.

Index of Advertisers

Adams FM [®] (www.adamsfm2.com)	11
Appaluse Distributing, Inc. (www.applusedistr.com)	9
Bartlett Tree Expert Company (www.bartlett.com)	33
Barton Malow Company (www.bartonmalow.com)	13
BRIC Partnership, LLC	21
Carl Walker (www.carlwalker.com)	14
Carrier Rental Systems (www.hvacportablesystems.com)	44
Donleys (www.donleyinc.com)	16
Dorlen Products Inc. (www.watralert.com)	22
DriTherm International (www.dritherm.com)	47
EMG (www.emgcorp.com)	19
EnergyCAP Software (www.energycap.com)	37
Eurotex (www.eurotexinc.com)	51
FAMIS Software, Inc. (www.famis.com)	Cover 4
Gale (www.galeassociates.com)	41
Georgia-Pacific Corporation (www.gp.com)	7, 9
Gilsulate International, Inc. (www.gilsulate.com)	30
Hoar Construction (www.hoarpm.com)	26
IEHA Convention (www.ieha.org)	49
Informed LLC (www.contractron.com)	27
Ingersoll-Rand Co. (www.ingersollrand.com)	3, 5

Lerch Bates & Associates (www.lerchbates.com)	23
Maximus (www.maximus.com/assetsolutions)	8
McCourt Manufacturing (www.mccourtmgf.com)	32
McDonough Bolyard Peck, Inc. (www.mbpce.com)	18
Nature Corporation (www.nature.com)	42
Professional Grounds Management Society (PGMS) (www.pgms.org)	29
RenoSys Corporation (www.renosys.com)	31
SchoolDude.com (www.schooldude.com)	Cover 3
SolarOne Solutions (www.solaronelight.com)	35
Solar Turbines Incorporated (www.solarturbines.com)	40
Spirotherm, Inc. (www.spirotherm.com)	43
Stanley Consultants Inc. (www.stanleyconsultants.com)	38
TAC/Tour Andover Controls (www.tac.com)	15
Tennant Company (www.tennantco.com)	39
Tero Consulting Ltd. (www.tero.com)	25
Thermal Science Technologies (www.thermalsciencetech.com)	34
TMA Systems (www.tmasystems.com)	Cover 2
Trivers Associates (www.trivers.com)	48
Van Deusen & Associates (www.vdassoc.com)	45
WFF Facility Services (www.wffservices.com)	46

2006 2007 APPA

SERVING EDUCATIONAL
FACILITIES PROFESSIONALS

ANNUAL REPORT

President's Report

— Christopher K. Ahoy

As APPA's 92nd president, I have had the unique opportunity to meet colleagues and make friends locally, nationally, and internationally. I have been very happy to share APPA's value propositions. My deep appreciation goes to my wife, Ruth, and to my institution, Iowa State University, for providing the time I needed to make the necessary three-year commitment for this APPA leadership journey. It has been my privilege and honor to represent APPA at many venues and to make presentations, contacts, and connections.

Administrative Activities

- **Strategic Alliance Partnerships:** The Council of Higher Education Management Associations (CHEMA) is an informal, voluntary assembly of 35 management-oriented, higher education associations in the United States and Canada. The association provides a platform for sharing information and comparing experiences and opportunities. This allows for us to work collectively on projects of common interest. I attended the CHEMA conference this June in New Orleans with Alan Bigger. It was a very productive meeting.



- **Collaboration with Students:** I gave an Overview of APPA presentation to student chapter members at Brigham Young University and a presentation on Leadership in Educational Facilities Administration at their Thursday morning facilities management class. Both sessions went well.

- **Credentialing and Certification:** A new board of directors was established in January 2007, with goals and objectives surrounding the development of two credentials – Educational Facilities Professional (EFP), and the Certified Educational Facilities Professional (CEFP).

- **The Thought Leaders Summit:** This meeting germinated from a need identified in the 2005 Stratton Report. Under the astute leadership of Lander Medlin, we have received interest and funds from two sources (Carter Burgess and IBM). This new initiative started in 2006 to increase the body of knowledge for senior facilities officers. I am pleased and fortunate to have been a part of the second 2007 Thought Leaders Summit.

International Collaborations

- **Singapore International Chapter:** My trip to Singapore in September 2005 sowed the seeds for the establishment of a new Singapore International APPA Chapter. A Memorandum of Intent was signed in Chinatown, San Francisco, California, after the COTF Conference. This was followed by an official MOU signature ceremony by President-Elect Alan Bigger and David Ng, National University of Singapore Director of Estate in September 2006 at the NUS campus.

- **HEFMA Conference:** My October visit to the Higher Education Facilities Management Association of Southern Africa (HEFMA) Conference in Kimmeldrift, Pretoria, South Africa, was well received. It was a great honor to be the opening keynote speaker, as well as an elective session speaker. President du Plessis and I signed a memorandum of understanding to foster collaboration between HEFMA and APPA. During the next three years, both organizations will mutually explore detailed actions around the basic goals and objectives in the MOU.

- **AUDE Conference:** Representing APPA at the 2007 AUDE conference at the University of Bath campus this spring was a delight. I visited University College Dublin in Ireland. It was good to catch up with old friends as well as the World Heritage City of Bath, UK. Thanks to our host Patrick Finch, Director of Estates, and his world-class personal assistant, Jayne Eyles, for their hospitality and conference at University of Bath. Rod Mallinder, AUDE secretary, is coming to Baltimore in place of Chair, Peter G. Kerr, MRICS, Director of Estates Building Services, Heriot Watt University, Edinburgh.

Regional and Chapter Meetings

- **PCAPPA Regional Conference:** My first visit as APPA President to a regional meeting was in San Jose, California. Thanks to the PCAPPA leadership team for the warm Pacific Coast welcome, and for inviting me to be present at their Board meeting. I had the honor to install the incoming PCAPPA 2006-2007 officers at the banquet.

- **SRAPPA Regional Conference:** My second visit as APPA President was to the SRAPPA Region's 55th annual conference. Thanks to SRAPPA for the warm southern welcome, hospitality, and for making me feel at home at the SRAPPA Board meeting. I was deeply honored to be asked to install the SRAPPA incoming officers.

- **FLAPPA Conference:** The Florida chapter leaders and their team made me most welcome and asked me to introduce the keynote speaker, APPA Executive Vice President Lander Medlin, whose opening session keynote on "The Association of Choice, Serving Educational Facilities Professionals," had the audience of approximately 197 attendees in stitches. I gave presentations on "Ownership in Sustainability," and "APPA's 7 Key Strategies" at elective sessions. I joined the panel in the general session roundtable on the subject, "Is There Value in Value Engineering?" The highlight was installing the new officers of FLAPPA at the banquet ceremonies.

- **GAPPA Conference:** I attended the 42nd annual meeting of the Georgia APPA chapter (GAPPA) in Jekyll Island, which is the former playground of the 54 multi-millionaire's who formed a club in the early 1800s to get away from the winters in the eastern seaboard cities. President David Smith and his team gave us a warm welcome. As the APPA international President, I was

privileged to install the incoming 2007-2008 officers at their banquet. Lander Medlin was the keynote speaker giving the closing breakfast remarks on the last day and asked me to give them an update on the 7 Key Strategies and their importance in aligning our organizations at the chapter, region, and international levels.

Progress of 7 Key Strategies

APPA has faced extraordinary challenges and made major accomplishments. With every new challenge comes new opportunities for us to build a stronger, more prosperous APPA community.

Thank you to all APPA members, Board members, regional representatives, regional and chapter leadership, international colleagues, and APPA staff for your unflinching support and confidence. Thank you for allowing me to lead in the work to create the association of choice, encompassing our vision to become global partners in learning, to achieve our mission to support educational excellence with quality leadership and professional management through education, research, and recognition.

APPA's Key Strategies

1. Develop and execute a branding initiative.
2. Develop and implement an enhanced website to become the "go to" resource for facilities questions.
3. Expand research to build credibility and visibility by senior institutional officers.
4. Engage in symbiotic and collaborative partnerships.
5. Engage young facilities professionals.
6. Provide targeted, cutting-edge educational programs.
7. Establish credible and valued credentialing programs for individuals and institutions.

Immediate Past President's Report

—Jack K. Colby



I am pleased to submit this report on my activities as APPA's Immediate Past President. It has been a very exciting year to be associated with the APPA Board, as we have made tremendous progress towards realization of the 7 Key Strategies and APPA's vision to be the Association of Choice for Educational Facilities Professionals.

Professional Certification Program

In February 2006, the APPA Board approved the recommendation of the Certification Task Force to move ahead with the development of a two-step process of credentialing. The first step would be a knowledge-based credential, the EFP or Educational Facilities Professional, which would be delivered to the membership in September 2007. The second step would be to full professional certification through the CEFPP or Certified Educational Facilities Professional designation and would require a knowledge base and also an experience component.

In the 12 months that followed, the interim Board for the certification program worked diligently to create bylaws, operating procedures, articles of incorporation, and tax status for the new organization. We selected names for the program and for the two designations. Eligibility requirements and selection criteria were established. Most importantly, a consultant, Prometrics, was selected to guide us through the process of creating the examinations based on the body of knowledge of our profession. On January 5, 2007, the APPA Educational Facilities Professionals Certification Board was formally established. Board members were selected, officers elected, a budget was adopted, and the new organization was finally a reality.

Since January, great progress has been made to meet the targets of delivering a preparatory course at the APPA 2007 meeting and administering the first exam at the September APPA Institute in Phoenix. A group of APPA's best "subject matter experts" have met to provide their knowledge of our profession to the effort. We are on track to successfully meet the targets and begin to develop the full professional certification in 2008. The new program has already created a great deal of anticipation from Institute grads and attendees at APPA's educational programs. Meeting the needs of APPA's young professionals is our primary goal. The time for an APPA certification program is NOW.

First Thought Leaders Series Monograph

In May of 2006 APPA brought together a distinguished group of higher education leaders to identify the major driving forces that were changing the landscape of higher education today and in the future. From these forces, the group was able to forge the top 10 facilities issues that our organizations will face and how we should prepare to meet them. In October, after a tremendous amount of work to synthesize all the information and to add value to the discussion, the results were assembled in a monograph that was widely distributed to our membership, our sister organizations, and to our strategic alliance partners. The document has been a major success and has set the stage for an ongoing series of publications. Lander Medlin, David Cain, and Steve Glazner should be recognized for their tireless work to make this valuable tool available to our membership to better prepare them for the challenges ahead. Also, the sponsorship of our partner Carter Burgess has made the Thought Leaders Series possible.

APPA Nominating Committee

Beginning in July 2006 the Nominating Committee, comprising the senior regional representatives to the APPA Board, began its work to identify a slate of nominees to become elected officers of APPA. We were fortunate to have an exceptional list of nominees submitted for consideration. When the committee met in February, the decisions were difficult given the high quality of the entire list of nominees. I am certainly appreciative of all the work of the Nominating Committee and also the willingness of APPA's best to step forward and seek office. Thanks to all those that participated and congratulations to our new APPA officers.

Second Annual Thought Leaders Series

The second Thought Leaders Series meeting was held in April 2007 at the Carter Burgess headquarters in Fort Worth. The focus of the discussion by the group centered around two topics that came out of the first Thought Leaders session: technology and changing stakeholder expectations. Both topics and their impacts on higher education were examined in depth. The effects of competition in higher education on each topic were examined. All the discussion content was used to develop the potential impacts on facilities and provocative questions that should be asked by the leadership of each campus. The meeting was a great success with a second monograph expected in September 2007.

APPA Facilities Data Benchmarking for UNC System Institutions

In North Carolina our 16 institutions are involved in an initiative to promote effectiveness and efficiency in the way we run our universities. As chair of the Facilities Management work group, I was able to move forward with an initiative to utilize the APPA Facilities Core Data Survey and the resulting Facilities Performance Indicators to benchmark the facilities organizations at each campus. This effort will not only benefit the campuses but will add 12 institutions to the survey. APPA will be asked to deliver training to campus teams and to facilitate the input of data, thus creating a model whereby other systems may implement FPIs and benchmarking for their institutions.

Thought Leaders Series Presentation to the Senior Facilities Officer Summit

At the Senior Facilities Officer Summit in July, I had the opportunity to present outcomes of the Thought Leaders Series to SFOs as a part of a panel on APPA initiatives. Our goal was not only to provide SFOs with new information on the driving facilities issues in higher education, but to re-engage them to be aware of how APPA can help their organizations.

It has been a tremendous pleasure to represent APPA in many capacities over the past 12 years that I have served on the Board. Our association is indeed blessed with a clear vision, inspired leadership, a gifted staff, and a spirit of collegiality and professionalism that I have yet to witness in any other organization. I encourage all of you to consider serving your chapter, region, or the international organization. The rewards and benefits will make it an experience that you will always remember. My personal thanks go out to all the APPA members that I have had the pleasure to meet and work with over the years. Thank you for giving me this opportunity to serve you.

President Elect's Report

—Alan S. Bigger



The past year has been an exciting and hectic one. Thanks to APPA, I have had the opportunity to visit Singapore, Australia, New Zealand, Rocky Mountain APPA (RMA), MAPPA (even though it was a short visit), and the West Virginia chapter of APPA. I also had the opportunity to visit a student chapter of APPA at Brigham Young University. All of these visits reinforced that being a part of APPA is an incredible honor and APPA is what it is today because of fantastic members and a highly dedicated office staff.

Years ago I was stationed with the United States Air Force near Rapid City, South Dakota. Many military members did not really wish to go to South Dakota, preferring more moderate and less extreme climates. When I arrived and saw the beauty of the Black Hills and experienced the way South Dakotans lived, I realized that an assignment to Rapid City was really one of the best-kept secrets in the Air Force. It was a wonderful assignment, however to many Air Force members it was a story that really went untold.

Like Rapid City, APPA's story has long gone untold. In 2006, APPA President Jack Colby, the Executive Committee, and Board thoroughly evaluated the perceptions of APPA by the membership and developed 7 Key Strategies to be implemented over the next few years. It became quite apparent from the feedback of the

membership that APPA really does need to tell its story more effectively and to position itself as the front runner of all facilities management associations. APPA has world-class, cutting-edge programs; however, these need to evolve, over time, to keep APPA at the head of the pack. In a very real sense, we all have to tell APPA's story today so as to position ourselves for tomorrow.

Jack Colby helped to pave the way and started the implementation of the seven strategies. Chris Ahoy, our current president, has sought to solidify the strategies throughout the APPA organization and to ensure that there is alignment between the members, the regions, and APPA at the international level. Thus, APPA is in an exciting position to tell its story to the world and to seize the day – if we do not, many facilities managers will miss one of the best assignments available, membership in APPA.

Three terms or phrases probably best summarize the vision and theme for my term in office, and working together at all levels we can exceed the vision of any one person: *carpe diem*, *renovare*, and *kaizen*.

Carpe diem, meaning seize the day, indicates a state of urgency as we move forward. Over 30 percent of APPA's senior institutional members will retire during the next five to seven years. We know that this turnover is going to occur, so now is the time to address the issue. If we really have a wonderful story to tell, are we telling it to our executive leadership? Are we mentoring and encouraging those that work with and for us to become involved in APPA?

As the membership changes we must provide cutting-edge programs that are of value to the current and evolving membership. APPA's surveys clearly indicated the need for ongoing certification and credentialing programs, and the start of these programs will kick-off in Baltimore at APPA 2007. However, if we build the programs, will people come? They will, if we get out and tell the story and involve tomorrow's leaders today.

Now is the time for all in APPA to seize the day. Our involvement will determine the success of any strategies. The clarion call is to act today, tell the APPA story. It is imperative that the seven strategies be carried from concept to fruition. For the next year we need to seize the day, *carpe diem*.

Renovare, meaning "to make new," is a call for all of us to become involved in the renewal of APPA. APPA has been in existence for over 90 years, and the days ahead are exciting. During these 90 years APPA, through the foresight of previous presidents and boards, has renewed itself to face the challenges of the day. Today, APPA is faced with the challenge of providing meaningful programs to all its constituents worldwide. As the marketplace of ideas evolves, APPA needs to be renewing itself each day. It is critical that as we "make new," we also become involved by renewing ourselves, planning and attending APPA programs, and

telling the story of these programs to fellow members and those outside of APPA. The demand today is for cutting-edge programs, cutting-edge websites, webinars, podcasts, credentialing, and research. These are just some of the areas that APPA can continue to “make new” – renovare. In the next year, we need to apply the spirit of renovare to ourselves and all levels of APPA.

Kaizen, meaning “continuous and orderly improvement,” is a gradual process that implies that individuals and organizations should strive to improve. Even as we embark on the 7 Key Strategies and seek to “seize the day” and to “make new” it is imperative that APPA implement processes throughout the organization to strive for continuous and orderly improvement. We, as members, need to actively support the APPA Executive Vice President, the APPA staff, and the various APPA committees as they strive to develop APPA into a world-class organization. All APPA programs should be able to clearly demonstrate that they match or exceed industry benchmarks, not only within comparable cohort groups, but also with other world-class programs, both “inside” and “outside” of the box.

APPA should set the benchmark for excellence in all that it does and improve in a continuous and orderly manner to provide increasing value to the membership. We cannot sit on our laurels – all that will do is crush them. We need to have the most dynamic membership program possible so that the organization will flourish and grow, and not remain flat. We need to tell our story in such a way that all of our education and credentialing programs are sold out. We need to develop the best research in the facilities world so that people will clamor for the research. Our website should be such that it wins national awards for its effectiveness. Every aspect of APPA should be demonstrating orderly improvement each and every day. APPA cannot survive in a “business as usual” environment. All that we do should be business as unusual that clearly demonstrates Kaizen in action. For the next year, all elements of APPA need to concentrate on kaizen, continuous improvement.

Jack Colby, Chris Ahoy, the APPA Executive Board, the APPA Board, APPA regions, and the APPA international office have outlined seven exciting strategies for the organization to implement. Taking the strategies from concept to successful implementation will require the involvement of all stakeholders in APPA to **carpe diem** – seize the day; to **renovare** – to make new; and **kaizen** – to show continuous and orderly improvement in action. No single entity can make all of this happen. It can only happen if we work together. The implementation and fulfillment of the meaning of “carpe diem,” “renovare,” and “kaizen” will position APPA for its second successful century as the organization of choice for facilities professionals worldwide.

Secretary-Treasurer's Report

—Robert J. Carter



APPA is in the midst of a three to five-year implementation of the 7 Key Strategies in an effort to position APPA as the association of choice for educational facilities professionals. To effectively achieve this, significant resources have been identified and reflected in a five-year business plan.

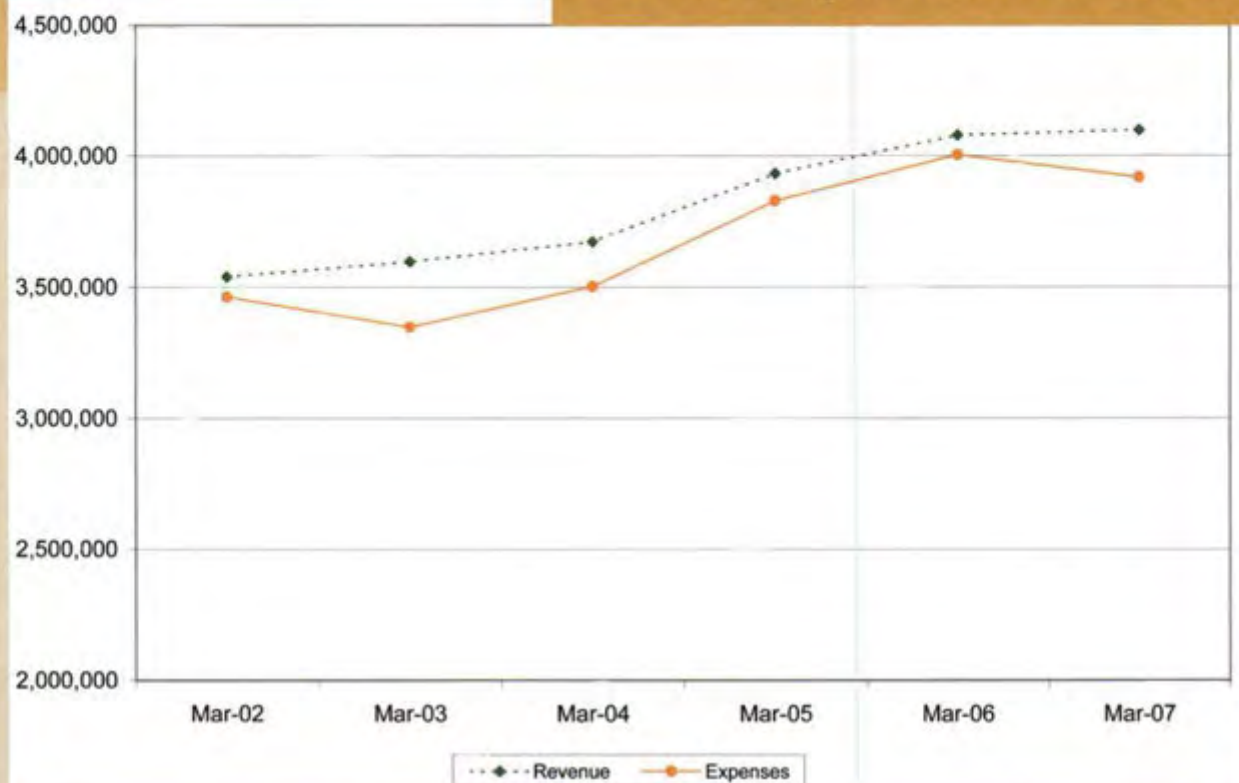
In the fiscal year ending March 31, 2007, we have completed the year with a substantive surplus of \$180,342 (\$151,438 from the operation; \$28,904 from an equity investment gain), even with the continued outlay of some significant expenditures. This surplus will exceed the zero-sum budget approved for the prior year by the Board. Of the surplus, \$50,000 was contributed to the operating reserves with the remainder being held in current operating funds. These reserves now stand at \$973,000 (excluding the equity gains in long-term investments) or 86% of the \$1,147,000 goal that represents 25% of the operating budget and 10% of the estimated replacement value of our physical assets. The APPA headquarters building was assessed for approximately \$2.1 million in February 2007 by the City of Alexandria, and the building is fully paid.

Graph 1 on page AR-6 shows the six-year history of revenues and expenses for APPA. Graph 2, also on page AR-6, shows the year's revenues and expenses by activity category. Membership expenses, totaling \$491,133, reflect the direct cost of membership department salaries; benefits; travel and outreach efforts; printing, production and mailing of promotional materials and the membership directory; and other program supplies and equipment needs. However, membership dues support the direct cost of many APPA activities such as website and database management; research and development; and a portion of office operation and governance. Revenues and expenses are planned and monitored by staff and the APPA Board to achieve APPA's mission to support educational excellence with quality leadership and professional management through education, research, and recognition.

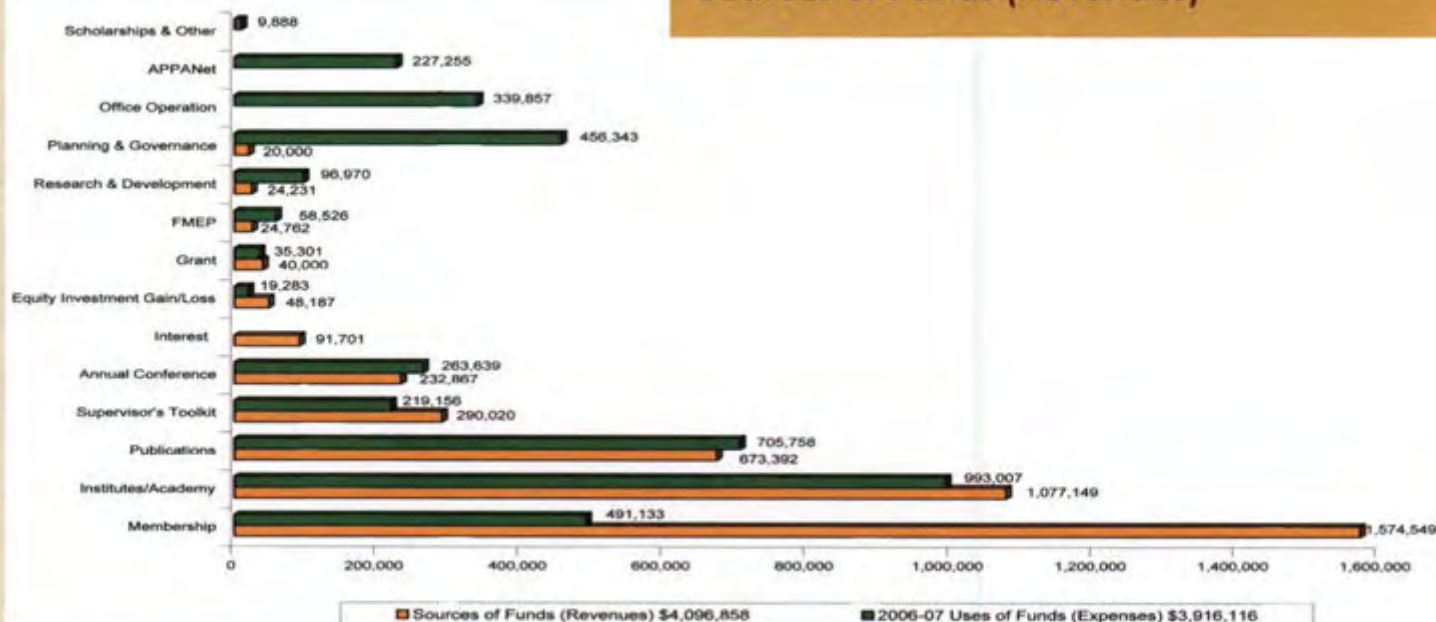
APPA's equity investments have achieved another positive overall return as a result of continued strong market conditions. The investment objective for this portion of the reserve is long-term capital appreciation, so fluctuations in the magnitude of returns from year to year will occur.

The APPA staff continues to do an excellent job in controlling expenses and managing the entire budget. On behalf of the membership I would like to offer my sincere appreciation.

GRAPH 1:
APPA'S History of Revenue & Expenses



GRAPH 2:
2006-07 Uses of Funds (Expenses) & Sources of Funds (Revenues)



Membership

It was a very productive year for the Membership Committee as it built on the initiatives that were identified over the past few years.

Recruitment of Young Professionals

The APPA Membership Committee had lengthy discussions surrounding how to communicate and engage young facilities professionals. Several initiatives are underway:

- Attendees to the Supervisor's Toolkit are shown the APPA informational CD and receive materials from APPA. This was done for the first time at the January Supervisor's Toolkit in Orlando, Florida, and will continue.
- Education program attendees (regardless of membership status) began to receive *Inside APPA* in February 2007.
- A new column, "Career Corner," will appear this fall in *Inside APPA*. It will focus on the career and professional development needs of educational facilities professionals, especially younger facilities professionals.
- As part of the dues renewal process, APPA will send a form to member organizations asking them to list additional staff members they would like to receive periodic electronic updates and information.
- Creating a flyer that promotes the professional development aspects of APPA to younger facilities professionals. The flyer will be distributed to attendees at our various education programs.

Recruitment of Institutional Members & Marketing Penetration

The APPA Membership Committee discussed some of the various methods and tools that people can use to approach non-members in their own geographical areas. The template developed includes the following:

- Begin an e-mail relationship with a non-member out of a need on your own campus (solicit advice).
- Build the relationship before introducing membership.
- Customize the approach to the geographic area or organization.
- Invite a non-member to an upcoming chapter, region, or APPA event.
- Get a business partner to sponsor a lunch for non-members.

The committee decided to conduct outreach to some large schools that are members of both NACUBO and SCUP but not APPA. A list of 24 medium to large non-member institutions that belong to NACUBO and SCUP (but not APPA) was compiled. Each region has three to five schools. The APPA Membership Committee has received this information are working with their respective regional boards and volunteers to conduct outreach to these non-member institutions in 2007.

Committee members will think long-term and cultivate a relationship with these schools and involve other member schools in the surrounding area in the relationship-building process. They will also track whether contacts are made; the degree of responsiveness; if the schools attend a chapter, region, or APPA event; and if they join APPA.

The committee also established a plan to recruit prospective members from institutions that are regional members but not APPA members (this only applies to those regions who do not require regional members to be APPA members as well). Lists were sent to the appropriate regions and the regional Membership Committee representatives, along with their regional boards and volunteers, will identify three or four schools to recruit in 2007.

We developed an APPA/Region PowerPoint/video presentation to present at several regional meetings last fall. Based on feedback from the regions, APPA is working to update this presentation to include region-specific information and to be more compatible with standard computer equipment.

Alignment of APPA and the Regions

The committee believes it is critical to include APPA regions and chapters in the rebranding process so we can create a unified brand. The regions are being encouraged to ensure that their websites contain an area that visually identifies the region as being part of the APPA organization, such as placing the APPA logo on their homepages. Another recommendation is to list APPA's regions on APPA's homepage.

Vice President for Educational Programs

—Polly Pinney



The Educational Programs Committee and Annual Meeting Subcommittee, along with the deans and faculty of our Institute for Facilities Management, Leadership Academy, and Supervisor's Toolkit have worked hard to improve and enhance the educational offerings of this splendid organization. Without their creativity, talent, and extraordinary dedication, our work could not go forward.

The Educational Programs Committee, working under a new committee charge, created a new evaluation form for programs, mapped out the needs and demographics of our participants, and discussed next steps in further collaboration with our regions. We have combined their considerable talents to produce change and great progress. I am honored to be able to work with them and applaud their dedication and efforts.

Supervisor's Toolkit – Nuts & Bolts of Facilities Supervision

APPA's first step in the professional development continuum, Supervisor's Toolkit, experienced a surge in popularity

throughout the United States and Canada. The program welcomed new qualified trainers who helped achieve the program's goal to advance supervisors into the next phase of their careers.

We developed new protocols and evaluations to provide seamless accessibility for individuals and regions to offer the Toolkit program and aide individuals who are the onsite preparation group with their duties. This program is unlike anything else in the professional development arena and really is the best value out there to take our frontline supervisory teams to new heights of excellence. Our Master Trainers continue to ensure that the material being offered is cutting edge, and several qualified trainers have provided this training throughout our regions since the inception of the program. I thank these groups for their time and talent.

Institute for Facilities Management

As APPA's premier educational offering, the Institute continues to provide a solid professional development tool to the membership. Our most recent program, held in Orlando, Florida, in January was marked by sold-out attendance of nearly 500. The Institute continues to welcome nearly 1,000 participants annually for top-notch training in the facilities profession. Thank you to the faculty who gave of their time, talent, and valuable skills for each Institute.

Leadership Academy

April marked a sold-out offering of the Academy in San Jose, California, with more than 140 professionals from across the United States, Canada, and England. The energy and commitment of the participants was positively palpable at the graduation ceremonies, and I know that these individuals carry this home to their institutions with a renewed commitment to excellence.

SFO Summit

APPA has seen growing evidence that our educational offerings may not be adequately addressing the needs of senior facilities officers (SFOs) who seek an opportunity to network and discuss challenges and issues with their peers. The issues experienced by SFOs are long-term, often abstract, and require innovative and creative solutions. These solutions have often been discovered by networking with peers who have faced similar issues. Based on feedback from our membership, we have created APPA's *Senior Facilities Officers Summit*, to address the needs of our most senior members.

The Summit was designed by a task force of SFOs from the APPA membership. The program will feature national and international speakers on topics specifically concerning SFOs and includes sessions that explore specific areas identified by attending SFOs. We are encouraged that this invitation-only event will address the needs of this facet of APPA's membership and provide an arena to network with colleagues and determine the future of facilities on their campuses.

APPA 2007

Utilizing survey instruments and lessons learned from last year's Campus of the Future joint conference, a dedicated team of your colleagues has crafted a new opportunity for our membership to gather and recharge this summer at APPA 2007: Back to the Future, in Baltimore, Maryland, July 15-17.

APPA 2007 features experts who will infuse our minds with creative and innovative thoughts about the future solutions to our most pressing issues in three key areas: energy strategies, workforce demographics, and emerging technologies. The enhanced framework will consist of daily opening plenary and general sessions, followed by panel sessions and breakout sessions designed to provide practical tools and technologies to use on current and future projects on your campus.

Final Notes

All of these activities would be impossible without the incredible support of the APPA staff, most notably Suzanne Healy, director of educational programming. She, and each member of APPA's staff, takes multitasking to new levels. Their talent and dedication are truly awesome to witness.

Many thanks also to the members of the Educational Programs Committee, Institute and Leadership Academy deans and faculty, Supervisor's Toolkit master trainers, the SFO Summit Subcommittee, and conference presenters.

And finally, I want to express my gratitude for the incredible opportunity to serve APPA. It is truly an experience of great enrichment. I look forward to the next year, confident that, with the talented and dedicated individuals I work alongside, great things are in our future.

Vice President for Information and Research

—Michael J. Sofield



This has been another very busy year for the Information and Research Committee.

The committee worked from July to December to finish refining and testing the online version of the Facilities Performance Indicators (FPI) reports and the associated dashboard indicators prior to the release of the results in February.

This year's Facilities Core Data Survey (FCDS) data collection opened last August and closed in mid-December. The survey

instrument was again refined in response to the many comments received in the latest survey. Planning is underway to open this year's survey later this summer and produce the FPI reports by early spring. This cycle allows for data entry after fiscal reports have been completed on campus, with the FPI reports available during budget development time in the early spring. We are currently preparing FCDS/FPI workshops for the regional meetings this fall.

An executive summary of the 2006 Facilities Performance Indicators report will be published and distributed to all members. Some 165 member institutions completed some or all of this year's survey. There has been increasing interest in the survey and reports from a number of state systems, and planning is underway to provide training for at least one system this year.

We recently launched the new Web-based version of the FPI, which includes graphic dashboard indicators. The continuous improvement for the survey and reports is facilitated by Maggie Kinnaman, to improve the survey instrument and make it a relevant planning tool. The annual survey will open in August. If you completed the current survey, your data will be pre-populated, so you will only need to update those areas that changed during the year.

One of the recent developments from Information and Research is a work in progress to create a graphic dashboard that displays key indices from the FPI report. Members can customize the display of data by plotting a goal value to display along with their relative position on each "dial."

APPA continues to pursue comprehensive publications for our members. *Facilities Manager* magazine remains a leader in our industry and has attracted a vibrant advertising base, along with a wide variety of timely and in-depth articles.

The magazine is supplemented with a monthly electronic newsletter – *Inside APPA*. This e-newsletter contains breaking news and information to keep members current on changes in our profession. Publications recently published and/or currently in development for future release include:

- *The Impact of Facilities on Retention and Recruitment of Students* by David Cain & Gary Reynolds (an executive summary that appeared in March/April and May/June 2006 issues of *Facilities Manager*, CFaR, April 2007)
- *Buildings... The Gifts That Keep on Taking: A Framework for Integrated Decision-Making* by Rodney Rose, with contributions by David Cain, Jack Dempsey, and Rich Schneider (CFaR, July 2007).
- *Sustainability Anthology* by Walter Simpson (December 2007)
- *Space Planning & Utilization* by Ira Fink Draft (co-publication of APPA and SCUP, January 2008).
- *Facilities Reinvestment* by Harvey Kaiser (January 2008)
- *Leadership in Educational Facilities Administration* by Chris Ahoy (July 2007)

Facilities Management manual revision (fourth edition): Work is now underway to produce the fourth edition of our benchmark guide to facilities management. Maggie Kinnaman is leading this task as we review the core body of knowledge, identify key areas to update, and determine new ways to make the information available across all mediums. This is a major undertaking that will involve volunteers from across APPA's committees and membership at large.

APPA Web

This year, a small task force of I&R committee members – led by Norm Young – has been working with APPA staff to develop an enhanced APPA website. Content issues are being reviewed as well as form and functionality. These efforts are linked to several of APPA's 7 Key Strategies and promise to make the site a virtual warehouse of facilities management information. It will also serve as the repository for member's "MyAPPA" information, education, and publications needs.

Center for Facilities Research (CFaR)

CFaR is producing outstanding studies and reference material for your use. At the Campus of the Future conference last summer, CFaR formally released two significant original research studies, *Asset Investment Strategies* and *Facilities Impact on Student Recruitment and Retention*. These studies were featured presentations during the COTF sessions and were the subjects of a press conference. Several follow-up articles were subsequently published in *Facilities Manager*.

This year we will again recognize the student research projects conducted at Brigham Young University. The student research competition process has evolved within the CFaR framework and will lead to expanded opportunities for students in the years to come.

Final Notes

I am amazed at the results produced by this committee and we remain focused on disseminating new FCDS and FPI data for members. Congratulations and thanks to this hard-working group; they exemplify the best of APPA. My sincere thanks and gratitude to: Norman Young, ERAPPA; Dan Young, SRAPPA; Jeri Ripley King, MAPPA; Terry Major, CAPP; Lorenzo Cotton, RMA; Richard Storlie, PCAPPA; and Maggie Kinnaman, UMD-Baltimore; Darryl Boyce, Carlton University, both At-Large; and Steve Glazner, APPA's staff liaison to the Information and Research Committee. Special thanks also goes to Laura Long, LTL Collaborative, and our business partner ARCHIBUS, for their continued support in launching and refining the FCDS, the FPI, and the dashboard.

Vice President for Professional Affairs

—Dan Johnson



One of the most rewarding duties of the Professional Affairs and Awards & Recognition committees is reviewing APPA's institutional and individual awards programs. The commitment of the committee members to reading, evaluating, and then meeting to discuss the awards process is highly commendable. The submissions for awards for this year are as follows:

Award for Excellence

APPA's highest institutional honor – the Award for Excellence in Facilities Management – provides educational institutions with the opportunity to receive national and international attention for their outstanding achievements in facilities management.

There were seven submissions and five recipients of this award. In my seven years in working with PAC, I've never seen seven submissions. My most sincere thanks to the PAC committee for managing the site visits, especially those who did two site visits.

Effective and Innovative Practices Award

APPA's Effective & Innovative Practices Award recognizes programs and processes that enhance service delivery, lower costs, increase productivity, improve customer service, generate revenue, or otherwise benefit the educational institution. Entries can describe either a new program or significant restructuring of an existing program or process.

This award includes a cash prize that is given to no more than five programs each year. There were 23 submissions for this award. The Effective and Innovative Practices awards are underwritten by Sodexo and each institution will receive a cash award of \$4,000. We thank Sodexo for their ongoing commitment to this program.

APPA Fellow

While most awards recognize past achievements, the APPA Fellow designation brings with it both recognition of specific accomplishments to date and expectations for continuing involvement in APPA's leadership program through research and mentoring. This is APPA's highest individual achievement award.

Individuals must be active members of APPA for a minimum of 10 years; must have graduated from APPA's Institute for Facilities Management; have completed APPA's Leadership Academy; have presented research at an APPA or other higher education or facilities management organization conference; have completed an approved research project under APPA's Center for Facilities

Research; and must provide two letters of recommendation from colleagues. There were no submissions for the Fellow designation this year, but there are Fellow projects in the pipeline for next year.

Meritorious Service Award

Each year APPA members bestow the Meritorious Service Award upon the individual member or members who have made significant contributions to APPA and to the profession of educational facilities management. APPA's highest award for individual service, the Meritorious Service Award is given to no more than three individuals each year. There were four submissions for this award, and the maximum three were awarded.

Pacesetter Award

First given in 1999, the Pacesetter Award is designed to encourage further participation in APPA among those who have already made significant contributions at their regions or chapters. Up to seven Pacesetter Awards will be given each year. There were 10 submissions for this award, and six were awarded.

In addition to the awards:

- PAC is reviewing the current criteria for the Facilities Management Evaluation Program (FMEP) to ensure that criteria are consistent with and comparable to the criteria for the Malcolm Baldrige National Quality Award Program. We thank the numerous FMEP evaluators that have provided us feedback for this process.
- Code advocacy continues to thrive thanks to the hard work and advice of Brooks Baker (University of Alabama at Birmingham). We are in the process of recommending placement of code bodies to ASHRAE and later NFPA.
- APPA continues to reach out to other professional organizations and the synergy of these alliances and strategic partnerships has a meaningful impact on the value of APPA membership. APPA currently has more than 10 alliances that enable our organizations to network and cross-fertilize ideas and programs.
- APPA continues to work with the International Sanitary Supply Association in a collaborative manner.

Thanks to the APPA's Executive Committee and APPA Board for their support. Exciting times lie ahead as PAC, A&R, and all committees strive to meet the 7 Key Strategies. PAC and A&R look forward to working with President Bigger and President-Elect Elvey as we move ahead to accomplish the seven strategies.

Executive Vice President's Report

—E. Lander Medlin



Enrollments are increasing, state and federal appropriations are flattening or decreasing, and although one-time construction money is flowing, annual recurring funding still lags with little change in funds for periodic renewal of the facilities and utilities infrastructure. It is difficult to comprehend how long we can sustain these business practices. Given the continued escalation of state entitlement program obligations and federal defense spending, implications of the student loan scandal, and pressure for greater transparency and accountability from the Spellings Commission report, state and federal support is in flux and cannot be relied upon to solve the significant funding challenges facing higher education at this time.

Fortunately, APPA has received strong support from its membership, and a tangible, visible measure of that support is our financial stability. Our diverse portfolio of professional development programs, leadership growth opportunities, and a myriad of resources and services continues to serve us well. This solidifies APPA as the association of choice for educational facilities professionals.

Under the excellent leadership of President Chris Ahoy, we are continuing to implement our 7 Key Strategies over the next three to five years, aimed at the desired outcomes of competency, collaboration, and credibility for our members.

Competency

The guidelines and standards established by members over the past several years remain invaluable tools for resource allocation and strategic planning. APPA is the nucleus of publishing forward thinking books, periodicals, and reports on issues relevant to the educational facilities manager. The APPAinfo list is one daily tool more than 1,000 of our members use to keep a pulse on key issues and find effective solutions to various challenges.

The Center for Facilities Research (CFaR) fills a vital need by integrating the development, collection, and delivery of research in the education environment. Active participation in and involvement through CFaR by facilities professionals; allied associations and agencies; and other education community stakeholders is increasing the quality and quantity of credible data and information institutions need to make knowledgeable and informed decisions.

It is just this type of research that will help brand APPA as the "go to" resource for educational facilities questions. And, it is through these research findings and thought-provoking summits that we

will increase the awareness of the facilities profession with senior institutional officers and enhance the credibility of the facilities professional.

The content and appeal of APPA's vast array of educational programs (the Supervisor's Toolkit, Institute for Facilities Management, and the Leadership Academy) continue to provide members with the professional and personal growth needed to compete and collaborate effectively in today's environment. These educational programs are truly cutting-edge. And, to meet your continuing education/licensure requirements, CEUs and PDHs are available for many of the courses offered.

We have a new strategic approach for APPA's annual conference. The combination of experts speaking on solutions to the industry's most pressing issues and interactive panel discussions and breakout sessions strengthens the value of the conference in a number of ways. It also ensures differentiation from regional, state, and chapter meetings. Another new offering is a distinct program strictly for senior facilities officers — the Senior Facilities Officers Summit. The annual conference and targeted summit serve the continuing professional development needs of both mid-level managers and senior facilities officers.

To add to this continuum of professional development opportunities APPA's Board of Directors approved the development and execution of a certification program comprising two credentials. The first credential — Educational Facilities Professional (EFP) — is a knowledge-based credential targeted to the new educational facilities professional. The second credential — Certified Educational Facilities Professional (CEFP) — will be a full certification for the experienced educational facilities professional.

Collaboration

Strategic collaboration and partnering continue to occur on a number of fronts, increasing the depth and breadth of research and information and ultimately the value of APPA membership. APPA's latest work with National Association of College & University Business Officers (NACUBO), Society for College & University Planning (SCUP), and the Environmental Protection Agency (EPA) through the Smart & Sustainable Campuses Conference and the Higher Education Associations Sustainability Consortium (HEASC) is expanding the collective knowledge and network for institutional sustainability programs.

Last year's joint conference — the Campus of the Future: A Meeting of the Minds (COTF), planned with NACUBO and SCUP — was truly a unique collaborative event and highly successful by all accounts. These strategic alliances and partnerships help APPA leverage its resources to provide cost-effective programs, ensure an increased information flow, and provide opportunities for more meaningful engagement by young facilities professionals.

Credibility

Environmental issues and compliance concerns remain an important part of our public policy agenda. APPA is one of six organizational members of the EPA College & University Sector Initiative that is focused on reforming the hazardous materials regulations and establishing better environmental performance measures and systems. This alliance consists of the ACE (American Council on Education), NACUBO, CSHEMA (Campus Safety, Health, and Environmental Management Association), HHMI (Howard Hughes Medical Institute), and C2E2 (Campus Consortium for Environmental Excellence) and continues to drive our efforts to create and maintain a substantive dialogue with the EPA. Significant progress continues to be made regarding regulatory change in hazardous materials/waste compliance.

Our efforts with Sebesta-Blomberg through the energy benchmarking survey are proving fruitful as a pathway to a meaningful EPA Energy Star rating tool and recognition program. The data elements and insights uncovered so far are being incorporated in our *Facilities Core Data Survey*.

I cannot overemphasize the importance of APPA's role in increasing the awareness of the facilities profession with senior institutional officers. Our brand identity in education is reflective of this goal and its ongoing attainment. Our commitment to programs, information, and services that improve the educational facilities professional's competency remains unparalleled. By coupling competency with our collaborative strengths, the credibility of our members, and the profession is further enhanced.

Our competitive advantage in this rapidly changing and challenging world is the fact that our members actively engage in our programs, find our products and services of great value, and continue to choose active membership. The decisions faced and priorities made by our members must be strategic. APPA is pleased to be part of the strategy for our members' individual professional development, the training and development of educational facilities staff, and for continuous institutional improvement.

Our efforts to focus on the grassroots of this organization will continue in the coming year. We will remain diligent in our efforts to fully implement the 7 Key Strategies to focus and direct of the profession and the association.

The challenges we face well into the future will require our best collective and collaborative efforts. Each member's contribution is essential in helping to shape the future of education. APPA's contributions will be the key voice for strategic institutional issues in the educational facilities profession.

2006 APPA BOARD OF DIRECTORS

President

Christopher K. Ahoy
Iowa State University

President-Elect

Alan S. Bigger
University of Notre Dame

Immediate Past President

Jack K. Colby
North Carolina State University

Secretary-Treasurer

Robert J. Carter
University of Guelph

Vice President for Educational Programs

Polly Pinney
Arizona State University

Vice President for Information and Research

Michael J. Sofield
Smithsonian Institution

Vice President for Professional Affairs

Dan Johnson
*California State University,
Monterey Bay*

Senior Regional Representative

Mark Shively
University of Wyoming

At-Large Member

Mark Valenti
The Sextant Group

Ex-Officio Member

E. Lander Medlin
APPA Executive Vice President

CAPPA

Senior Representative
Ronald N. Smith
*Texas A&M University
of Corpus Christi*

CAPPA

Junior Representative
Darrel Meyer
*Metropolitan Community College-
Kansas City*

ERAPPA

Senior Representative
Leon MacLellan
St. Francis Xavier University

ERAPPA

Junior Representative
Glenn Smith
Bryn Mawr College

MAPPA

Senior Representative
Greg Fichter
*Indiana University/
Bloomington*

MAPPA

Junior Representative
Becky Hines
The Ohio State University

PCAPPA

Senior Representative
Towny Angell
Reed College

PCAPPA

Junior Representative
Scott Burns
San Diego State University

RMA

Senior Representative
Mark Shively
University of Wyoming

RMA

Junior Representative
Tommy Moss
Colorado State University

SRAPPA

Senior Representative
Robert E. McMains
Emory University

SRAPPA

Junior Representative
Joseph Fisher
West Virginia University

Dude...

What's Your Problem?

SchoolDude has the solution!

Our suite of web-native technology, facility and business operations software has helped our more than 2,600 education clients turn problems into Success Stories!

Visit www.schooldude.com/success to see how our affordable, easy to use solutions can transform operational challenges into successes!



Online tools for managing schools.™

- **ITAMDirect** – technology asset management system
- **ITDirect** – technology help desk management system
- **MaintenanceDirect** – work order management system
- **UtilityDirect** – utility tracking and analysis system
- **PlanningDirect** – capital planning and budgeting system
- **FSDirect** – facility usage scheduling system
- **TripDirect** – trip planning and management system
- **PMDirect** – preventive maintenance scheduling system
- **InventoryDirect** – inventory tracking and management system
- **CommunityDirect** – peer networking for educational professionals



**SCHOOL
DUDE
.com**

Save money. Manage operations. Look good.

Visit www.schooldude.com/seminars to learn more in a free online seminar!

Best and Brightest



Dartmouth College. University of Southern California. University of Texas at Austin. Iowa State University. Dalhousie University. University College London. The Best and Brightest from over eighty prestigious schools throughout the world are using FAMIS as their Integrated Workplace Management System of choice. Why? Hard, quantifiable ROI from a standards-based, web-architected platform. The ability to handle the entire facilities life-cycle with a single suite of state-of-the-art, service oriented software. The power to innovate, integrate and adapt to change with a system created by facilities management professionals for professionals. It takes the best and brightest to succeed in this endeavor and more and more the best and brightest are using FAMIS.

The Best and Brightest use FAMIS.

famis[™]

FAMIS Software, Inc: 4 Plaza, Suite 1000 • Irvine, CA 92614 • 800-774-7622 • www.famis.com

Facilities Management • Maintenance & Operations • Real Estate • Project Management • Performance Management