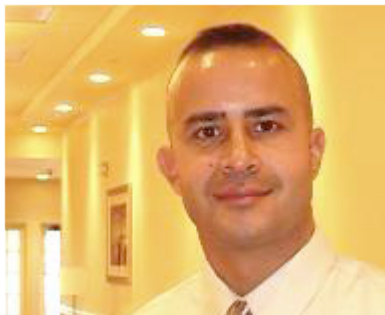


1ST PERSON

We would like to introduce you to Manny Higazi, Chief Engineer of the Crowne Plaza in Monroe, New Jersey. Our interviewing process found that Manny probably has a lot in common with many of you. He will be sharing his outlook and experiences with you here. Maybe many of you would like to share with him as well. You can reach Manny at: articles@nahle.org.

ASSOCIATIONS —*Their Existence and Our Expectations*

I am so grateful for an opportunity to write to my peers in the hospitality engineering industry. We will now have a forum to share our resources, thoughts and opinions, where new ideas and directions can come to light—all to help us operate our hotels more efficiently. Your association should be more than just a membership, it should give you resources, direction, and training all designed to make you better at your job. It should be a home base for all levels of lodging engineers. While all associations probably have the same goal, I have visited many that lack just what I

(cont. on pg...15)

Introducing NAHLE

The National Association of Hotel & Lodging Engineers

By Robert Elliott

I am proud to announce the formation of the National Association of Hotel & Lodging Engineers (NAHLE) and our new website: www.nahle.org. This trade association has been developed to serve you and your staff and will grow over time with your input. So, please write and express your thoughts and opinions. Together we can make this association the single source for information, training and peer networking for both you and your staff. And remember, getting involved means everything!

To stay competitive in today's lodging industry, a property must have a success-

ful maintenance program in place that maximizes a hotel's profit. A successful maintenance program requires continuing training and education of the engineering / maintenance staff, as well as a common understanding of maintenance problems by upper management. Many factors influence the maintenance program ranging from providing guest satisfaction to maximizing the useful-life of capital improvements. Owners and hotel operators realize they cannot be experts in all the fields of maintenance, such as HVAC, plumbing, electricity, pest control, roofs, laundry, etc., and rely on your judgment, the property's chief engineer. So how does one survive?

(cont. on pg...3)

featured in this issue

What Do You Call a Snooping Chief Engineer? **P.5**

Moisture Surveys Are a Plus in the Roofing Business **P.5**

Designing a Maintenance Program for Marble and Stone Floors **P.8**

Hotel Maintenance: The Basics **P.12**

The Green Machine **P.18**

Going Green in Orlando **P.20**

Upcoming Industry Events **P.20**

The Paper-less Office—Myth or Reality **P.21**

CONTENTS

- 1 INTRODUCING NAHLE: THE NATIONAL ASSOCIATION OF LODGING ENGINEERS** Robert Elliott, NAHLE's Executive Director and former American Hotel and Lodging Association Vice President, discusses the formation and benefits of the National Association of Hotel & Lodging Engineers and its new website.
- 1 1ST PERSON: ASSOCIATIONS—THEIR EXISTENCE AND OUR EXPECTATIONS** Manny Higazi, an active full-service property chief engineer, speaks his mind on his expectations of a new trade association for hotel engineers.
- 5 MOISTURE SURVEYS ARE A PLUS IN THE ROOFING BUSINESS** Roofing expert, Kerry Garner of Coatings Application and Waterproofing (CAW), discusses how you can save energy and reduce re-roofing costs by combining a little modern technology and some common sense with your next roofing project.
- 5 WHAT DO YOU CALL A SNOOPING CHIEF ENGINEER?** NAHLE contributing author, Manny Higazi, takes off his tool belt and writes about his experience visiting his own property as a "Manager on Duty."
- 8 DESIGNING A MAINTENANCE PROGRAM FOR MARBLE AND STONE FLOORS** Fred Hueston, a foremost authority on natural stone and consultant to hotels worldwide, outlines what your marble and other stone maintenance programs should include.
- 12 HOTEL MAINTENANCE: THE BASICS** August Craanen, hotel engineer, consultant and member of AH&LA's Engineering and Environment Committee, discusses the common elements of Guest Room Maintenance Programs and provides a sample Room Maintenance Program Checklist.
- 18 THE GREEN MACHINE** Art Attaway, NAHLE contributing author and hospitality expert, suggests the green hospitality train is leaving the station and you're either on board or you'll be left at the station.
- 20 GOING GREEN IN ORLANDO** Tim Arwood, CEOE and Director of Engineering for Sheraton Orlando Downtown Hotel, speaks to the local "Green" movement and future trends.
- 20 UPCOMING EVENTS** NAHLE provides a calendar of noteworthy events of interest to fellow hotel engineers. Would you like to see your even posted? Contact NAHLE if you have an event you would like to see posted.
- 21 THE PAPER-LESS OFFICE — MYTH OR REALITY?** Robert Elliott suggests computer technology allows offices to go 'paper-less' and demonstrates a business model for going green at corporate HQ.
- 23 ADVERTISERS AND SERVICE PROVIDERS**



Serta
WE MAKE THE WORLD'S BEST MATTRESS.™

For more information call Lee Tinsmon at 407-862-7600 or email at LTinsmon@sertanational.com.

*Two-Sided Mattress
Easy-Flip*

*One-Sided Mattress
Non-Flip*

THE DECISION
IS *Yours!*

- Serta is #1 in the hospitality industry.
- Serta offers you a choice.
- Serta is the only major supplier who provides both one-sided, non-flip and two-sided, easy-flip (a sleeping surface on both sides can prolong the life of the mattress).

THE *Best* INVESTMENT
IS SERTA®



Third Party Water Proofing Consultants!

(850) 837-1336
www.watermc.net
stopwater4u@watermc.net

295 Azalea Drive, Suite 2 Destin, FL 32541



Water Management Consultants & Testing, Inc.

WMC&T, Inc. is an independent third party consulting, inspection and testing firm dealing with numerous issues related to water intrusion and its effects on all types of buildings.

- PLAN REVIEW
- NEW CONSTRUCTION
- RECONSTRUCTION
- FORENSIC TESTING METHODS FOLLOWING ASTM GUIDELINES
- IN-HOUSE MAINTENANCE PROGRAMS
- STORM DAMAGE ASSESSMENTS

LODGING ENGINEER reports about people, events, technology, public policy, practices, study and applications relating to hotel and motel engineering, maintenance, human communication and interaction in online environments.

CONTACT

P.O. Box 30844 • Alexandria, VA 22310 • Tel. (703) 888-3731 • website: www.nahle.org

Editor-in-Chief

Robert Elliott (robertelliott@nahle.org)

Art Director

Debbie Shaw (debbie.shaw@gmail.com)

Contributing Writers

Manny Higazzi • August Craanen • Fred Fredricks • Fred Hueston • Art Attaway • Tim Arwood
 (Address all correspondence to articles@nahle.org)

Administrative Issues

admin@nahle.org (all submissions, editorial matter, artwork, subscriptions, address changes)

Advertisements

See www.nahle.org or call (703) 888-3731

Internet Uniform Resource Locator of current and archived issues: http://www.nahle.org/Lodging_Engineer
 All opinions and views are solely those of the participants, writers or editors and are not necessarily the views of the newsletter or its sponsors.

Contents Copyright © 2008, 2009 NAHLE, LLC or by the author and may not be re-distributed in any form or stored for the purpose of serving through any other information retrieval system, except approved mirror sites, without the expressed permission of the publisher and author. Hypertext links to the magazine material may be made freely. No guarantee or warranty, expressed or implied, is made about the value or stability of the information or links made herein.



NATIONAL ASSOCIATION OF HOTEL & LODGING ENGINEERS

www.nahle.org

JOIN NOW! ONLY \$39.95

TAKE ADVANTAGE OF OUR SPECIAL INTRODUCTORY OFFERS

MEMBERSHIP FEES:

PROPERTY ENGINEERS, HOTEL STAFF, GMS, ASSET MANAGERS
\$39.95 GOOD THRU 2009

VENDORS / CORPORATE SPONSORS
\$385 / YEAR

JOINING IS EASY USING THE SECURE ONLINE SERVICES OF PAYPAL

www.nahle.org/Join



Introducing NAHLE

Continued from page 1

The field of hotel engineering and maintenance is vast and survival is best handled by a combination of leadership, knowledge, and experienced personnel all targeting one goal: engineering excellence.

The primary goal of this association, the National Association of Hotel & Lodging Engineers, is to provide its membership, you the lodging engineering professionals, with services that will enhance both your professional development and contribute to a property's successful maintenance

program. I am really excited to be a part of this, so let's get started.

Listed below are our membership services that are currently available or under consideration for future development. ■

nahle membership services

CURRENT MEMBER SERVICES

Newsletter

Lodging Engineer. Members can download our electronic newsletter featuring articles, current affairs and product / service advertisements specific to hotel engineering and maintenance.

Job Bank

A single source for looking for and posting job openings.

Blog

A forum to discuss newsletter articles and other current issues of concern.

Calendar

Listing of upcoming events, seminars and local chapter meetings.

Institute

A searchable archive of past newsletters and articles and new eBook training manuals and e-Videos.

Buyer's Guide

An electronic guide which lists product manufacturers and service vendors via the Internet with company website links. Search capabilities by zip code, company name and keyword.

Links

Links to frequently visited websites including trade associations that produce industry standards and building codes and

federal regulations such as OSHA safety or MSDS.

MEMBERSHIP SERVICES IN DEVELOPMENT

Warranty / Permit / License Management

An online document management system that tracks your warranties, permits and licenses for you in one spot and sends you an email of impending expirations. This system should assist you in recommissioning your hotel as suggested by EPA's Energy Star program.

Online Educational Training

Engineering and maintenance modules in all disciplines. Completing training leads to a Chief Engineer Certification, which will be brought to you by our Educational Institute.

MEMBERSHIP SERVICES UNDER CONSIDERATION FOR FUTURE DEVELOPMENT

Seminars

Regional meetings and seminars for certification as a Chief Engineer and / or education.

Trade Show

A national trade show showcasing products, education, and peer networking.

Student Chapters

Energy Management Software



MOISTURE SURVEYS ARE A PLUS IN THE ROOFING INDUSTRY

By Keary Garner www.cawco.com

A nuclear moisture survey or an infrared thermal scan can reduce reroofing costs and is considered an environmentally friendly approach to reroofing.

Thermal Imaging

If a building has only one existing roof, the nuclear or infrared scan can determine the amount of wet insulation that is present. Depending on the percentage of wet insulation, it is usually more economical to replace the wet insulation with new and then install a layer of new insulation and roofing membrane over the entire roof area.

Maximize Your Roof's R-Value

This method of reroofing will allow owners to maintain the "R" value that exists in the present roofing system and allows additional "R" value at the time of reroofing.

The environmental plusses would include far less trash and debris being hauled to landfills, less fuel consumption due to the trash hauling, encapsulation of existing felts that may contain asbestos materials, and added "R" value that would cut costs in heating and cooling.



What Do You Call a Snooping Chief Engineer?

If you answered a **Manager on Duty**,
then you are correct.

By Manny Higazi

Yes I say snooping because how often do we get to snoop around and take part in other department's operations? Many times we as engineers only know engineering language— not Chinese or well done, medium well, etc. jargon. For me, I want to know only about engineering things when it comes to fixing, taking things apart or just breaking them. I did not mean to say break, but anyway we do it often without getting caught. When it is time for me to become someone other than an engineer it actually transforms my views on many things regarding operations of my hotel. We tend to focus on our daily responsibilities as engineers and not really pay mind to other daily operations that complete a successful day.

I like when I say snooping because it is a privilege given to me for a short period of

time to get the feel in other departments operation from a different view as Manager On Duty. This opportunity has opened my eyes by actually stepping out of the box of engineering to interacting with other departments with a different title. My experience to see the operation from within each de-

***"As Manager On Duty
you get to go behind the
scenes and interact with
many team players."***

partment has taught me a lot about teamwork. My day-to-day activity is making repairs in engineering. I never had the chance to see all the hard work that contributes to our success. As Manager On Duty you get to go behind the scenes and interact with many team players. The great part I like is having a meal at YOGI's All American Grill and Sports Bar. We get served like regular guests and we write our report about our experience.

I look forward to my next scheduled date as Manager On Duty. Overall this program

gives us a great idea on where we need to improve or where we stand with the services we provide. We know that it is better that we catch our failures before the company inspector does. This is the only day I get to show off, so I dress up to look important. When I interact with our hotel guests they have no idea I am their engineer in disguise. You can actually learn a lot from behind the scenes. On many of my tours I take that pertain to my department, I sometimes wonder how we missed that. For example every morning I go to get coffee and walk through the kitchen then back to my office. What did I observe? Nothing really. I had tunnel vision, I wanted my coffee and that was all. When I was Manager On Duty I snooped around all areas of the hotel and found myself in the kitchen, watching the operation. I found a few minor repairs that were overlooked for some time by me of

course.

Next with our program we get to stay at the hotel. This experience has given me a better view of our product up front. Every day I deal with these rooms but never got to know them. What I mean is that my experience staying in one of the rooms actually gave me the real feel of what we have to offer our guest. I spend no more than 20 minutes in any given guestroom, now with this program and spending more hours in the room, it opened my eyes to what guests really see. You really get to know more about a room and know more about each unique feature. I will explain. One room, the location was nice and quiet. The other was nice and quiet as well, but you could hear slightly our water booster pump on the lower floor when it comes on. I will go in a room closer to the roof and hear the bathroom vent, but in the room closer to the ground

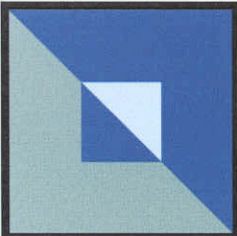
floor you hear a whisper. While in your room you can hear all doors from guest entering their rooms slamming at different speeds because of different tensions on the spring loaded hinges. You have the idea on what can be learned, just minor tweaks and turns that need attention. Next part I like is ordering room service breakfast from once again YOGI's All American Grill and Sports Bar. This is part of our evaluation on presentation and service. I will say that from my experience here at the Crowne Plaza in Monroe New Jersey I give it a thumbs up, not because I work here, but to know that all of our team players give it their all to make it a success. Yes, I will gather my notes from what I have observed as Manager On Duty and as I fix what needs fixing I will be more observant in the future as Chief Engineer. ■

Selecting A Contractor

There are several items to consider when selecting a contractor or a roofing system for your building. As an owner or owner's representative, I would pay attention to the contractor and/or consultant that recommends or actually performs a moisture survey prior to submitting a reroofing bid or writing a specification. This would tell me that they are gathering as much information as possible to give the owner the best and most economical roofing system available. ■



Reroofing provides environmental plusses and allows owners to maintain the 'R' value that exists in the present roofing system



CAW®

**Coatings Application &
Waterproofing Co.**
5125 N. 2nd Street
St. Louis, MO 63147

Toll Free:
866-278-4440
800-510-0080

Email: caw@cawco.com
Website: www.cawco.com

Hotel / Resort Restoration

Tile Roof & Facade Restoration

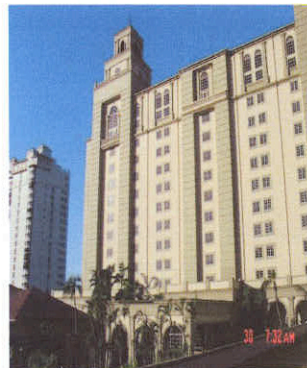
In 2004 & 2005 Hurricanes Charlie and Wilma swept across south Florida causing severe structural damage throughout the area. One of the properties that suffered such damage was the **Ritz Carlton Beach Resort** in Naples, Florida. This 14 story massive structure had a tile roof, which had been severely damaged during the hurricanes. Also damaged was various areas of the building's façade. Most of the damage to the façade was due to flying debris.

CAW was given the difficult task of the complete roof and façade restoration to include: tile and decking removal, replacement to the 150 foot high resort structure, repairs to the lower tile roofs, along with cleaning and repairs to the façade structure. One of the major challenges was utilizing one staging area to minimize the impact on hotel guests.

This project required a unique personal fall protection system that would accommodate a 40

man crew. A debris fall prevention system had to be set in place to prevent any of the 500,000 tile roof pieces and 1,200 sheets of deteriorated plywood that was removed from falling over 150 feet to the occupied courtyard and public ground areas.

In spite of the record rain fall during the 4 month project time, CAW rose to the challenge and successfully completed another almost impossible project.



Ritz Carlton Beach Resort
Naples, Florida



Roof top hydraulic hoisting stage area.



Ground staging area. Used for loading and un-loading roof.

**Restoration
Specialists**

**Thermoplastic
Roofing Systems**

**Modified Roofing
Systems**

**Spray Polyurethane
Foam Roofing
Systems**

Epoxy Injections

**Wall Sealants &
Waterproofing**

**Window Glazing &
Caulking**

Deck Coatings

EIFS Repairs

Wall Coatings

Planter Restoration



View of roof top hoist area



Installing new decking



Ramp access to other roof areas



Installation of safety systems



Overall view



View of low roof areas



Newly completed tile roof



Newly completed tile roof



DESIGNING A MAINTENANCE PROGRAM FOR MARBLE AND STONE FLOORS

By Frederick M. Hueston PhD

Natural stone was the first building material used by man. Its care and maintenance is one of the oldest tasks performed by our ancestors. The following guidelines were developed as a result of many years experience working with this beautiful material. Identifying and implementing a proper maintenance program for your marble and stone surfaces will ensure you many years of unsurpassed beauty and elegance.

Marble, granite and other stones are now being used in almost all hotel facilities. How to maintain them properly to maximize their life and appearance can present some confusion. Which cleaners do you use? How do you polish it? When do you call in a professional? These are questions that challenge many hotel

managers and engineers. The following are some essential guidelines that will help clarify the issue and help you design a program to maintain your stone floors in a like new condition.

Evaluation and Assessment

Step 1. A good maintenance program starts with proper identification of the stone. Is it granite, marble, quartzite or limestone? If it is marble, is it soft or hard? What type of finish does it have—polished, honed, flamed, etc.? Is the type of stone appropriate for the traffic? If not, maintenance costs will be higher. If the answer to these questions is unknown, I suggest you contact a reputable stone supplier or restoration company to find out. A complete understanding of your particular stone's characteristics is an absolute must for designing a proper maintenance program.

Step 2. Once the stone's characteristics are identified, determine the quality of the installation. Are the tiles flat and even? Do they contain lippage (uneven tiles)? If so, proper maintenance may prove difficult until these problems are resolved. The floor should be ground flat, honed and polished by a professional restoration contractor. Are there any cracked tiles? Dirt will have a tendency to accumulate in these cracks. Cracked tiles should be replaced, or if replacements are not available, at least filled with a polyester filler.

Step 3. What is the present condition of the stone? Has it been coated with waxes, acrylics, urethane or other coatings? If so, these coatings need to be chemically stripped or ground off to determine the condition of the stone. I have seen stone floors that appear to be in relatively good

shape until the coatings were removed to unveil a pitted, scratched mess. If a poor condition is found, a complete restoration is necessary before a successful maintenance program can begin.

Step 4. Once the stone is restored to like new condition, then and only then will a maintenance program provide optimal results. This applies not only to the following program but any program.

Protecting the Stone

If the stone will be exposed to water, coffee, spills etc., an application of a good quality impregnator is recommended. Impregnators are designed to penetrate into the stone without leaving coatings on the surface and still allow the stone to transpire (breathe).

Daily Maintenance

The three most important tasks that can be done on a daily basis to keep the stone looking new and extending the time before restoration is required are: Dust Mop, Dust Mop and dare I say it, Dust Mop. The most destructive material to most stone is sand, dirt and miscellaneous grit. If these substances could be eliminated, maintenance of the stone would be almost non-existent. A stone floor can never be dust mopped too often.

Use a clean, non-treated, dry dust mop at least two to three times a day in high traffic areas and less often in low traffic areas. Walk off mats placed outside and inside an entrance will also eliminate a good portion of sand, dirt and grit. It takes approximately seven steps to remove all

loose dirt from the bottom of one's shoes. Keep this in mind when purchasing walk off mats. Remember if sand, dirt and grit are eliminated there will be nothing left behind to scratch and dull the stone.

Cleaning

All natural stone, both polished and unpolished should be cleaned daily in high traffic areas and less often in lower traffic areas. A clean rayon or cotton string mop should be used with cold to warm water with the addition of a quality neutral cleaner. Neutral cleaners are defined as surfactant type detergents that have a pH of 7. Acidic and alkaline cleaners should not be used on a regular basis. Be sure to follow the directions very carefully. Too much cleaner may leave a film and cause streaking, and too little will not be adequate to thoroughly do the job.

Polishing

The application of waxes, acrylics or any other 'sacrificial' coatings are not recom-

mended to maintain the highly polished surface of most stone. For the most part, sacrificial coatings increase the required maintenance of most stones. (In certain situations a coating may be necessary. Contact a reputable stone maintenance professional for advice.)

How do you maintain the highly polished surface if you are not using coatings? The answer is quite simple and surprisingly inexpensive. We turn back the hands of time, add a little modern day technology and we have what is known as the Natural Polishing Process.

First, you must understand how stone shines.

How Stone Shines

All stone is taken from the earth in a raw block form. This block is cut into slices that we call slabs. The slabs are then cut further to a smaller size such as a tile or countertop. It is then polished using a series of abrasive materials. The mechan-

So, where do you go to locate qualified stone restoration and maintenance contractors?

www.stoneandtilepros.com. It is not only an excellent resource for locating qualified stone contractors (each of the contractors listed must meet stringent requirement to become a Certified Stone & Tile PRO Partner), it is a great resource for finding answers you might have regarding natural stone and tile.

www.marble-institute.com. For over 60 years the Marble Institute of America (MIA) has been the world's leading information resource and advocate for the natural dimension stone industry. MIA members include marble, granite, limestone, sandstone, and other natural stone producers and quarriers, fabricators, installers, distributors, and restoration and maintenance contractors around the world.

ics are relatively simple. A piece of stone is rubbed with an abrasive starting with a course grit size followed by finer and finer grit sizes. The scratch pattern left behind from one grit is removed by the next grit creating finer and finer scratches. This process is continued until the scratch pattern becomes microscopic. The process is similar to refinishing a piece of wood—starting with a course sandpaper and ending with a fine sandpaper. A highly reflective shine is achieved by continuing this abrading process using very fine powders.

Polishing Procedure

In order to maintain the high degree of shine, all that is needed is to abrade the surface of the stone to remove the damage caused by the sand, dirt and grit. The material needed to accomplish this task is what is commonly called polishing

powders. A polishing powder is an abrasive powder (aluminum oxide, tin oxide, etc.) that is worked into the stone using a buffing machine and a floor pad. The process is relatively simple albeit requiring a little practice. There is no need to purchase expensive equipment. All that is needed is a 175 rpm buffing machine, a few buffing pads (white or hog hair pads work fine on most stones) and polishing powder which is available at most marble supply companies. For large areas an automatic scrubber can be used.

About one tablespoon of powder is placed on the stone, along with a small amount of water and the mixture is worked into a slurry with the pad under the buffing machine. Some experimentation with the ratio of powder to water may be necessary. Some stones may polish with a very wet consistency and others may require al-

most buffing till dry. This polishing process should not be used to repair worn traffic areas. The frequency will depend on the type of stone, the amount of traffic and how good a job you are doing dust mopping the floor. A small facility may only require polishing once a year where a large hotel may require daily polishing.

One of the questions I am most often asked about this process is, If we are abrading the stone, won't we eventually wear the stone until there is no stone left? The answer is a simple no. The amount of abrasion is so fine that most stone can be polished in this manner every day for a very long time and still not wear the stone significantly.

This process is very simple, inexpensive, time saving and most important will keep the stone looking like it should without any harmful coatings. This process

Stone Forensics

INSPECTIONS • CONSULTATION • EXPERT WITNESS • SLIP / FALL TESTING

The Natural Stone, Tile & Grout Experts

Specification Writing
Failure analysis
Project review and analysis
Job problem analysis
Installation inspections
On site testing
Destructive and Non-destructive testing
Repair Feasibility Studies

Owner representation / supervision of installations
Restoration & maintenance procedures and recommendations
Stain removal testing
Façade inspections
Training
Historic preservation and conservation
Expert witness testimony
Slip / Fall testing and prevention programs
Hazcom Programs

(888) 314-9077

www.stoneforensics.com

works. There are numerous high traffic hotels and office buildings currently using this system with great success.

Please keep in mind that there are many types of stone and numerous factors that will determine the best maintenance program for a given situation. It is strongly advised that you consult a stone maintenance expert prior to trying this on your own.

CAUTION: The polishing process described above should be performed by individuals familiar with commercial buffing machinery. Proper training is required. You may also want to consider hiring a professional if you don't have the time or the skilled labor to perform this task.

Restoration

Periodically the stone will need to be restored. Perhaps you have not followed a proper maintenance program or the type of stone you have is not suited to the conditions it receives. Perhaps deep scratches occurred, or acidic spills etched the stone, or for whatever other reason it is not responding to maintenance. When

this occurs, restoration is required. How often restoration will need to be done is difficult to determine. Generally if all the precautions above are followed, restoration may only be needed as often as once per year or as seldom as once every five years or so. The restoration process involves re-honing the stone to remove deep scratches followed by repolishing. Do not attempt the re-honing process yourself. This requires a great degree of skill and experience. Please call a reputable restoration company for this task.

Keeping it Safe

Keeping your stone lobby floor clean and polished is not the only thing you need to be concerned with. Keeping it safe and slip resistant is extremely important. As an expert witness who has been called in on many slip fall cases, I have seen hotels involved in huge lawsuits. In one such case a lady was awarded 5 million dollars. The hotel lost the case not because the floor was unsafe, but because they could not prove it. The most important step you can take in making sure you can document to a court that you are

not negligent is to keep accurate maintenance records and make sure that Slip/Fall Coefficient of Friction (COF) readings are taken and recorded. Ideally, an independent company should be contracted to take these readings. Look for future articles addressing slip/fall programs in more detail. ■

Fred Hueston is a world renowned expert in stone and tile maintenance, fabrication, restoration and design. His firm, Stone Forensics, has consulted on many high profile projects including the White House and the US Capitol as well as many hotel projects, theme parks casinos, etc. He writes for numerous trade magazines around the world. He is the 'Go-to Guy' for This Old House magazine whenever there is a stone issue. He has published over 30 books on the topic of stone and tile and has appeared on TV and Radio. For information please visit www.stoneforensics.com



**Your stone and tile
reflect your image...**

*Don't trust it in the hands of just anyone.
Look for the sign of true craftsmen...*



Locate quality fabricators, maintenance,
restoration and installation PROS

www.stoneandtilepros.com

Hotel Maintenance: The Basics

By August H. Craanen

Preventive and scheduled maintenance are needed for protection of the building's / owner's assets. This includes the structure from the facade or building envelope to the integrity of the floors, walls, ceilings and all of the furniture, fixtures, and equipment (FF&E) contained therein. In addition, poor maintenance will influence the guest's perception of the property and will be a factor in the guest's deci-



sion to return to the property on another occasion (repeat business).

Many hotels, both chain and single operations have Preventive Maintenance and Work Order Software in place. This combined with proper execution of the maintenance and repairs should keep costly breakdowns to a minimum, however in many hotels the execution of the preventive/scheduled maintenance and repairs leaves much to be desired.

Inspections in several hotels industry-wide, reveals increasing evidence of poor and declining maintenance both for equipment and guestrooms.

Possible reasons for the poor / declining maintenance:

- Preventive maintenance program lack detailed instructions for tasks to be performed
- Inadequately trained maintenance staff
- Inadequate supervision / quality control
- Understaffed

used as a management tool. This program should provide a set schedule and routing tool for the preventive maintenance of the guest rooms / suites, eliminating potential guest complaints and aggravations.

Use of the room maintenance program will increase employee productivity since tools and materials required for the repairs are in the R.M.P. cart. Time spent locating parts, waiting for elevators, chasing tools, is an area of expense, seldom considered, frequently overlooked, or just considered as a built-in factor. The

'go-get it time' almost always involves

“Inspections reveal increasing evidence of declining maintenance for both equipment and guest rooms.”

Surely, there are more reasons that can be added to this list. It is essential that the above listed reasons are corrected. In future articles we will review the individual items and suggested ways to correct them.

Guestroom Preventive Maintenance

Inspections in several hotels have revealed that there is “significant” evidence of lack of maintenance in the average guest room / suite. To combat this unfavorable condition, a “ROOM MAINTENANCE PROGRAM (R.M.P.)” is to be

wages for more than one person.

The R.M.P. Program / Checklist

The program can be set up in one of the following methods, or both:

- A Crash-Type where 20 or more rooms are blocked at a time on a given floor, opening all doors, assigning a task force to perform general cleaning, painting and maintenance.
- A systematic, preventive maintenance plan where maintenance persons are scheduled on a room-to-room basis, eventually complet-

ing the entire house. When the last room is completed, the cycle will possibly be started again, enabling him / her to thoroughly inspect and perform maintenance where needed in each room twice a year.

A standard R.M.P. checklist contains in most cases 50 to 70 items, depending on the type of room and / or hotel. A sample list is shown at the end of this article, which should be modified to fit the hotel's operation and room configuration.

Another option is to start with a modified checklist containing approximately five to ten items based on the most frequent guest complaints. At the end of the first cycle, guest complaints should again be reviewed. The original top five to ten complaints will have substantially been resolved. The checklist should be expanded to include the next five items.

When completing the third cycle through the rooms, guest complaints are usually dramatically reduced.

The R.M.P. person.

The R.M.P. person / maintenance person(s) should have knowledge of all preventive guest room maintenance and depending on his or her skills might need to be trained in some of the phases of the work. He / she should always look presentable and should be able to handle him / herself well with the guests.

Summary

Like any Management Tool or Program, there has to be a follow-up and training. The chief engineer should go through several rooms completely with the R.M.P. person / maintenance person(s), prior to letting him go on his own, and should periodically spot-check the results. In

some situations it might be advisable to have the R.M.P. person / maintenance person(s) trained by an outside consultant. The biggest advantage of this program is that the guest rooms get a thorough inspection and the necessary repairs at the same time. ■

In addition to 7 seven years in the Dutch Merchant Marines, August Craanen has over 31 years experience of facility management and project management experience with companies such as Hilton International, Sheraton, Four Seasons Hotel, and Manhattan East Suite Hotels and has worked in USA, Europe, the Middle East and the Far East.

SERVICES OFFERED BY CRAANEN TECHNICAL SERVICES, LLC



DEPARTMENTAL REVIEWS

- Prepare policies and procedures for engineering / maintenance departments
- Emergency & contingency planning
- Review of job descriptions
- Staffing schedules, competency evaluation
- Training need assessments
- Maintenance contracts review

DEVELOPMENT & TRAINING

- Review and preparation of job descriptions
- Development profiles and training

EVALUATION OF PROPERTY MAINTENANCE CONDITIONS

- Review preventative maintenance programs
- Review of work order and maintenance request procedures
- Evaluation of maintenance programs
- Property maintenance inspections
- Maintenance contracts review

SURVEY INVESTIGATE AND INSPECT PROPERTIES

To determine capital improvements required for physical plant, guest rooms or tenant spaces and equipment

- Condition surveys
- Determine useful life of equipment and systems
- Prioritize system and equipment replacement (prioritize expenditures)

ENERGY CONSERVATION

- Staff training
- Energy walk-through evaluations
- Energy management programs
- Energy conservation training
- Energy audits

ENVIRONMENTAL AWARENESS PROGRAMS

ACQUISITION INSPECTIONS

OUTSOURCING EVALUATIONS AND OUTSOURCING CONTRACT REVIEWS.

Craanen Technical Services, LLC | Westbury, New York | Tel: (516) 782-7280 | E-Mail: consulting@craanen.com



R.M.P. Check List (SAMPLE)

Please note that the following list should be extended and adapted to the different room / suite types found at your property and is shown here for demonstration purposes only. This list is not all inclusive and you should develop your own list to match your property and its rooms with your R.M.P.

ABC Hotel Engineering / Maintenance Dept.
Preventive Maintenance: Room Checklist

Room / Suite #: _____ Type: _____ Date: _____ Completed by: _____

LIVING ROOM:

Check all switches, outlets and cover plates. (*All covers have to be the same color*) _____
 Check drape shade, blackout and inspect for repair _____
 Open / close all windows, test lock and tighten screws as needed _____
 Inspect sofa, bed, and chairs for damage and loose legs _____
 Center pictures and mirrors and secure properly _____
 Check all lamps (*for single, 3way bulbs & fluorescent*) _____
 Check telephone faceplate (dirty, etc.) _____
 Check telephone ringer and message light _____
 Test T.V., remote, programming and connectors _____
 Check movie box (On Command etc.) _____
 Check all furniture drawers for damage & handles for repair _____
 Check closets and lubricate door _____
 Check HVAC unit operation and clean filter _____
 Check smoke alarm _____
 Check front door lock, lubricate hinge and check doorbell _____
 Make sure all doors have doorstoppers _____
 Check back of the front door for posted signs _____
 Check latch guard for proper operation _____
 Check entrance ceiling fixture (*60 watt clear or sufficient lumens / brightness*) _____
 Check dining room table and chairs for damages _____

Additional Comments: _____

KITCHEN:

Check refrigerator temp. (*set at 5*), bulb, door seal and shelves _____
 Check sink faucet for leaks and loose handle _____
 Check sink drain and make sure it has a strainer _____
 Check stove pipe for leaks and stove knob for damage _____
 Check cabinet doors for alignment and tighten knob _____
 Check switches, outlets and cover plates (*All have to be the same color*) _____
 Check ceiling fixture _____
 Check dishwasher _____
 Check electrical breakers _____

Additional Comments: _____

BATHROOM:

Check sink & tub faucets for leaks and loose handles _____
 Check sink & tub drains and make sure they have stoppers _____
 Check spout and shower head(s) for leaks _____
 Check toilet for leaks, check toilet seat and secure properly _____
 Check shower rod and clothes line _____
 Check towel racks & bars for damages, etc. _____
 Make sure mirrors are properly secured _____
 Check medicine cabinet for damages, etc. _____
 Make sure medicine cabinet door is working properly _____
 Check cabinet door(s) under sink _____
 Check light fixture(s) _____
 Check switch(s) _____
 Check GFI outlet _____

Additional Comments: _____

BEDROOM:

Check all switches, outlets and cover plates. *(All covers should be the same color)* _____
 Check drape shade, blackout and inspect for repair _____
 Open / close all windows, test lock and tighten screws as needed _____
 Inspect bed frame, casters, legs, head-board and center support _____
 Check all furniture for damage & handles for repair _____
 Check all drawers for proper working (guides etc.) _____
 Pictures and mirrors secured properly and centered _____
 Check all lamps *(for single, 3way bulbs & fluorescent)* _____
 Check telephone faceplate (dirty, etc.?) _____
 Check telephone ringer and message light _____
 Check movie box *(On Command, etc.)* _____
 Check smoke alarm _____
 Check entrance ceiling fixture *(60 watt clear / sufficient lumination ?)* _____
 Test T.V., remote, programming and connectors _____
 Check HVAC unit operation and clean filter _____

Additional Comments: _____



This R.M.P. sample form and other future maintenance checklists can be accessed by members at the following url address:

<http://www.nahle.org/documents/view/maintenancechecklists>

ASSOCIATIONS / EXPECTATIONS

continued from page 1

need. For example, many trade associations exist that touch on what we do for hotels or motels, but not one focuses specifically on what I want from a trade association.

I personally have been involved with an association for hotel engineers in the past and found myself disappointed by the limited professional growth I received as a member. As a chief engineer of a full service property, I find that what I have learned over the years at my

hotel can be applied in many different ways by engineers at both small and large properties. Yet, my involvement in trade associations has left me frustrated and continually seeking more. Do you get what I am explaining? So with

my years of experience is there an association out there that I can say Wow? not really. I have at times contacted associations and expressed my opinions to what I feel and what I am looking for. I can say that they did not react, maybe they think I am just one little guy without a home. Yes maybe I am one guy, but this one guy has other engineers that share the same opinions and views. I have written articles in the past with many responses from engineers. They expressed how these articles really touched them, because as they read them it was describing them having the same experience at their property. I didn't even know these guys but we shared common experiences. It

feels good to know you have readers out there that tell you yes, we are here, we exist and we listen. Now with our expectations of an association, let's think out loud. What do we want? We want a single resource where we can find training and educational tips on repair and maintenance and current articles relating to the job of hotel engineering. We want to be knowledgeable of new products and trends within the industry and we want to know where we can find both local and national products and services. We also

“We want a single resource where we can find training and educational tips on repair and maintenance and current articles relating to the job of hotel engineering.”

need a single resource for employment opportunities. And, I personally want to know my peers as professional friends as we benefit from our sharing of information. I don't know of any single association that brings unity to our profession, is current with forward thinking leadership and has as its primary focus hotel engineering.

We need an association that represents us all as one. I have great expectations. I don't want to visit 3 or 4 associations, I want to visit only one that can give me what I want and when I want it. Yes we are willing to pay a membership fee, but a fee that we can say is well worth the money spent. I have been a good listener

to my readers over the years and I tried to create a plan on what I want an association to offer and how it should be structured. This plan I put on the side because it was just growing and growing with ideas. I figured one day that I can have it implemented with an existing association that wants to start with fresh ideas and new direction. I for myself can say what I expect. I want to see an association that is universal and recognizes every level of engineering, from general maintenance to director of engineering.

From little properties to yes, Las Vegas size properties.

My property is not so little as it is a full service hotel with 150 rooms. I expect a magazine in place that should have articles and resources for each and every level of a hotel's engineering staff to

read and use. I have seen many magazines that only focus on large size hotels with no interest to the little guys like me. I have written many articles that have been published with you, the engineer of a smaller hotel, in mind. I wanted all levels of engineering to be able to read an article where they can say I understood what I read, I can relate to it and most importantly, I can apply some aspect of the article to my everyday job experiences. I have read articles in the past that I did not understand, because the topics were too high for me or they were topics that I don't use at my property level.

I am asking that once you have read this article take a minute and write back, send



emails and tell me about your views and thoughts. I want you to be heard and recognized. As I write this article I am taking part in a new role with a new association where I can take our ideas and make them work for all of us. The new association is the National Association of Hotel & Lodging Engineers (www.nahle.org). I feel that this new association has an open mindset and will go in a new direction where all of us will feel at home.

I challenge each and every one of you to join NAHLE and to accept your role as a new and contributing member. As the first member engineer of NAHLE and soon to

be active contributor and participant, I believe NAHLE will represent us as the single voice for our profession and professional development. As a contributing member, I am committed to listening to your ideas and applying that input to help grow and shape this association to become your association.

Through our support of a single trade association we bring national unity to our profession of hotel engineering and maintenance. I kind of like this saying I came up with, "*Unity in One, Many in Unity.*" I will take this to the association's Advisory Committee and see if we agree. Remem-

ber we can make this work. Always express your thoughts with any association you decide to join in order for them to best meet your expectations. I myself will listen to you and strive to be your voice with this new association. Send me an email, tell me what you expect, what you want to see and how we can make it work for you. Thank you for reading my article and I look forward to writing to you as a fellow member of the National Association of Hotel & Lodging Engineers. ■



Congress Commerce Center
601 N. Congress Ave., Suite #308
Delray Beach, FL 33445

Pool automation at the touch of a button... For any commercial pool cleaning solution.

www.aquatron.us

info@aquatron.us
Fax: 561-455-0257

Tel: 561-455-0252 (ext. 110)



- Totally independent from pool system
- Can clean any size or shape pool
- No installation required
- Saving energy costs by reducing run time of the pool system
- Positive image for hotel guests.
- Help follow CDC codes for commercial pools.
- Can perform cleaning on site while engineering staff can perform other ground duties.



The Green Machine

By Art Attaway

The “Green” movement in this country really began during the late 60’s, and was led by the “hippies” that wanted peace and love and organic food, although the Europeans have led the way for many years, and have since been more pro-active. This movement slowly evolved in the U.S., primarily as a way to limit pesticides and VOC’s (volatile organic compounds), and was measured accordingly. VOC’s are present in almost every manufactured product, and present themselves in our daily lives in everything from cleaning products to our carpet (dye and backing and adhesives for padding). Floor waxes and sealers, really any chemical, outgas VOC’s for years.

The movement has recently expanded, no...*exploded*, to include aspects of recycling and waste management, energy efficiency, limits on consumption of natural resources, alternative energy, voluntary and involuntary automobile fuel efficiency, water and forestry consumption, air quality, food preparation, and so on. The only national publication I have not seen mention GREEN is Cigar Aficionado, and I am sure it is coming. Even a recent issue of “Wine Spectator” had

the cover in “GREEN”. Waste management companies are sending stock offering solicitations touting how they provide Green. Grocery stores have entire sections set aside for “organics”. Entire food store chains have even cropped up. It is literally everywhere.

In addition to Europeans, “Eastern” culture has had great influence to this movement in areas of personal health, stress management, and food consumption. Perceptually, if you are a martial arts practitioner, you are more mentally healthy than if you participate in a local sport like bowling. Feng Shui and acupuncture have become common elements of our society. Sushi is a better diet than what we grew up with.

Realistically, architects, designers and operators are considering these items in the design and building process. Hotel, real estate, and commercial building owners have dedicated annual conventions and trade shows to address “Green”! National trade publications have focused editorial sections and buyers guide categories. But the big focus for us is the environment. With possible limited natural resources to sustain humanity, what will we do to preserve these resources? And the secondary is how will it affect us financially? With globalization, this is not

just a domestic issue any more.

Much ado about nothing?

I don’t think so. This is no fad, and the movement is here to stay. Now, how does this affect us as hotel operators? Over the recent years it has given great change to the industry at large. The value of our water supply changed our guest from expecting fresh towels with daily cleaning and turn known service to accepting no clean sheets for days, and hanging their towels to dry.

Hotel management companies found ways to replace lost PBX revenue with a recycling center on their loading dock. Energy management systems and more efficient equipment are reducing energy consumption and adding profit to the bottom line. The government has and is imposing additional standards on indoor air quality. Designers are specifying low/no VOC carpet, vinyl wall covering, and paint. New lighting systems save energy (and money) and provide full spectrum lighting, a healthier environment for guest and employee populations alike.

So, how do we position ourselves as operators of hotel and lodging properties?

There are several aspects of this movement, and they include social responsibility, competitive edge consideration, rea-

sonable care, environmental protection, and cost savings to us. Until recently, the responsibility aspect of the equation gave cause for us to spend funds that were not necessarily recoverable to participate in the trend, and address these aspects of social responsibility and reasonable care. But saving water with laundry saved millions in energy, labor, and supplies.

We have figured out how to cut expenses by recycling. And now we have many options for saving energy, which results in great financial savings for us. There are energy management systems for HVAC, more efficient light bulbs and fixtures, and wind turbines and solar panels to supplement our energy use. Waterless urinals and water supply restrictors, smaller toilet tanks, etc., are all excellent ways to reduce consumption of perishable resources, and add profit dollars to our bottom line.

I was recently with Bill Nye "The Science Guy" at a conference in California where he was the guest speaker. He explained to us how he actually had his home electric meter going in reverse, and was receiving a check from the power company instead of a bill. If you don't think the use of solar panels and wind turbines on commercial buildings is imminent then I urge you to do more research.

With the new administration in the White House, these focuses are going to take center stage. The good news is that, with the enormous cost of energy, and the expectation of continued rise in this cost, these products are now cost efficient as

With the new administration in the White House, these focuses are going to take center stage.

well as energy efficient. The Return on Investment (ROI) for many of these items is 18 – 24 months, and then the realization of a 25% to 40% reduction in energy consumption, all falling to the bottom line at current market value, has a great probability of saving us even more in the future. Recently, tax incentives, deductions, and credits have all been on the table and will only increase with the new administration.

Be aware and change

I have lived in Detroit for the last decade and, in amazement, watched the "big three" car companies and their labor union arrogantly ignore what was going on in the world around them, and let foreign car manufacturers take over the industry, all because they were unwilling to be aware, and change. Change is im-

minent in this circumstance, and I believe we should look for the responsible ways to embrace it. And there are ways to do so without it "costing an arm and a leg", and that is where our focus should be. Not only for social responsibility but because saving money is, or soon will be, within the current definition of the word "GREEN". Money had joined the "endangered" natural resource category. In fact, the original definition in the U.S.

for money was Green...Greenbacks, the color of money!

There will be many elements to consider as we ponder our direction and next steps. The availability of capital, the culture of management, the needs of the guest and employees, social responsibility, and competitive advantages. Timing is another consideration, and when will technology give even further cost savings for the same products we could buy today? Is it a need or a want? Will 'me' decisions make a difference? What are the right products and how do I find them? Is this movement sustainable? All questions are valid, and I am sure there are many more. But, in my opinion, change is coming and we need to get a ticket for the train, or we will be left standing at the station or walking to our destination. ■



SHERWIN-WILLIAMS

You need a trustworthy source that helps properties **stand out**. You need Sherwin Williams unparalleled product selection, nationwide support network and trademark services.

joseph.p.booth@sherwin.com
(407) 948-4671

Going Green in Orlando

By Tim Arwood, CEOE

Director of Engineering, Sheraton Orlando Downtown Hotel



Every decade has had its significant contributions to history. The 50's picture perfect Beaver Cleaver society was followed by the rebellions of the 60's. The 70's and 80's were times of economic change. The 90's seemed to herald the end of the Cold War. The first decade of this new century is going to be remembered as the decade that environmental aware-

ness became mainstream and began to grow exponentially.

Many states have begun to usher in this new movement by creating programs known as "Going Green," which economically reward participants committed to become more environmentally friendly. For instance, the state of Florida has developed a program designed to promote hotels and resorts that adapt greener practices and Orlando seems poised to lead the charge. Florida's Green Lodging Program (<http://www.dep.state.fl.us/green-lodging/default.htm>) is one of the nation's pioneering efforts to reduce the hotel industry's environmental impact on state landfills

and resources. The Program requires that each hotel design a personal Environmental Guideline, which is intended to reduce each hotel's environmental footprint. The guidelines serve as a blueprint for each department within the hotel facility to follow to achieve the property's goals for recycling and conservation.

The 'Green Industry' will bring energy conservation, waste management, and recycling into a new era. Recently on a trip to the west coast of Florida, I noticed several hotels flying the Green Lodge flag, as several certified Orlando properties proudly do. Many hotels had added very large signs by their entrances with the Green Lodge logo signifying (and boasting a little) that they have achieved a "One Palm" rating, the first designation in the state's 3 tier program. I believe this is only a small preview of what will soon become a true industry standard that will be incorporated into our nation's infrastructure.

What's next for the Green Program? I think in the not so distant future that sunshine states, such as Florida and Arizona, will see solar cells popping up on the tops of hotels and other commercial buildings with large flat roofs. So stay tuned for further developments!



UPCOMING INDUSTRY EVENTS

FEBRUARY

NRCA - International Roofing Expo

Exhibits & Conference: February 3-5, 2009
Mandalay Bay Convention Center Las Vegas, Nevada

MARCH

Hotel Compliance with Laws, Regulations and Permit Requirements

Fri, March 6th, 8:00 am

Everyday operations require that hotels comply with laws, regulations and permit requirements. There are literally hundreds of permits and licenses which must be obtained and renewed every single year. Keeping track of intricate testing, record keeping and red tape is a daunting task. This program explores a guide of effective solutions for hotel engineers, general managers, and directors of property op-

erations to follow in maintaining compliance. Friday, March 6th 8:00 am to 10:00 am Hilton New York 1335 Avenue of the Americas Room: Concourse G

National Facilities Management & Technology Conference / Expo

March 10-12, 2009 - Baltimore Convention Center

ICC 2009 CODES FORUM

March 23-25, 2009

International Code Council's Education Forum
Over 25 educational sessions offered w/ CEU credits.
New Orleans, Louisiana

***Would you like to see your event posted here?
Contact NAHLE at (703) 888-3731***



The 'Paper-Less' Office —Myth or Reality?

By Robert Elliott

Creating a paperless office is probably closer to myth than reality, but creating an office that uses “less paper” is technologically feasible, cost effective and improves environmental performance through efficient use of resources. Do you print paper unnecessarily? Most hotel engineering offices don't, but maybe you know someone or some department on the big team that does.

The average American office worker uses a sheet of paper every 12 minutes, one ream of paper every two and a half (2-1/2) weeks and disposes 100-200 pounds of paper every year. The U.S. is by far the world's largest producer and consumer of paper. Per capita, U.S. paper consumption is over six times greater than the world average. The number of pages consumed in U.S. offices is growing by about 20 percent each year and expected to grow by half again by 2010.

Reasons Why Workers Print

41% cite the need to share documents with others for review, 35% say they are complying with company rules, 31% do not like to review documents on the screen, 19% (one in five workers) want to keep hard copies for their own files, 12% print off documents to review while



World consumption of paper has grown 400% in the last 40 years. Now nearly 4 billion trees or 35% of the total trees cut around the world are used in paper industries on every continent.

traveling, and 7% make revisions to hard copies that they then hand over to their secretaries.

Understand Printing Habits

Only 47% of office workers say they are careful about printing documents and avoid unnecessary printing. 23% of workers admit to giving little thought to printing off documents, and 13% do not worry about how many documents they send to print as long as they recycle them.

Estimated Corporate Cost for a Ream of Paper

The cost of buying a ream of paper on a volume basis is about \$2.00. Add in the costs of procurement, storage, printing, copying, filing, postage, disposal, and recycling and indirect costs can easily add up to 31 times the initial purchasing cost, and a \$2 ream of paper costs an estimated \$62 from cradle to grave (including disposal).

Reducing Paper: Good for the Environment and Business

Let's look at an average hotel management company: ABC Hotel Corporation has a Headquarters staff of around 3000 employees and manages over 3000+ properties. An estimated 10% reduction of paper would produce an annual savings of 1,000,000 lbs or 500 tons of pa-

per and 49,000 tons of various production related resources which equates to a corporate savings of over \$12 million per year.

Reducing Printing Costs

Printing and copying can represent as much as 5% of a business' total revenue.

Few companies have any centralized

function taking responsibility for their printer environment. Few businesses have an accurate picture of how much their printing is costing them. Better management of consumables, maintenance and support, and implementing an electronic document management system can reduce business printer/copying costs by as much as 40%. ■

Seven (7) GREEN Steps To Paper Reduction Success

1. Reduce paper use in your hotel by increasing printer default margins. Set defaults for copiers and printers to 2-sided. Developing paper-reducing publication guidelines (e.g., no title pages, no cover pages, no blank pages) empowers employees to identify and eliminate other paper waste. Print Guest Folios on recycled double-sided paper.
2. Establish a base-line of current paper usage and cost. Use your base-line (metric) to track progress in reducing consumption and costs.
3. Implement an electronic records/document management system.
4. Ask your purchasing department and paper suppliers to switch to 30% (or higher) post-consumer recycled copy paper.
5. Adopt an annual supplier evaluation process that can be used to track your paper suppliers' environmental performance over time.
6. Communicate to senior management and the public results of your efforts.
7. Develop a policy that fits your corporate profile. An explicit paper reduction policy can help you set goals and measure your progress.

THE PROBLEM:

Rising Energy Costs
are taking a **BIG BITE**
out of **PROFITS!**



**TOTAL
ENERGY
CONCEPTS**

THE SOLUTION:

- Reduce your energy usage by **15%-30% GUARANTEED!**
- Protect your equipment from **power surges including lightning**

100% Money Back Satisfaction Guarantee
State of Florida Green Lodging Partner
Lease to Purchase Options Available
Low ROI Program Pays for Itself

NO NEW \$\$\$ OUT OF POCKET REQUIRED

Call for a FREE facility survey!

888-530-8877

www.totalenergyconcepts.com

ADVERTISERS AND SERVICE PROVIDERS

Click on the web address for direct link to company website

BATHROOM / ADA PRODUCTS

Wingit Innovations Patented fastening systems, ADA bathroom accessories, shower seats, curved shower rods, structural towel bars, new designer platinum series grab bars, incredible selection of grab bars (in-stock) at great prices! (877) 894-6448 www.wingits.com

BEDDING / MATTRESSES

Serta Providing both one-sided non-flip and two-sided easy flip mattresses for the hospitality industry. (407) 862-7600 www.serta.com (SEE DISPLAY AD ON PAGE 2)

CONSULTATION

Craanen Technical Services, LLC. (516) 782-7280 www.craanen.com (SEE DISPLAY AD ON PAGE 13)

Stone Forensics Natural stone and tile experts. Problem solvers. (888) 314-9077 www.stoneforensics.com (SEE DISPLAY AD ON PAGE 10)

Water Management Consultants and Testing, Inc. (850) 837-1336 www.watermc.net (SEE DISPLAY AD ON PAGE 4)

ENERGY CONSERVATION

Total Energy Concepts Reduce your energy usage by 15-30%. Call for free facility survey. (888) 530-8877 www.totalenergyconcepts.com (SEE DISPLAY AD ON PAGE 22)

GENERAL CONTRACTING

United Construction Group (305) 229-4050 www.unitedconstructiongroup.com (SEE DISPLAY AD THIS PAGE)

Water Management Inc.

From initial analysis to final measurement and verification, Water Management designs and implements every type of water conservation project for your property.

For more information, visit us at <http://www.watermgt.com/phas.html>

800-394-5325

United Construction Group

8000 SW 117 Avenue, Ste. #204
Miami, FL 33183

Christian Magluta
cm@unitedconstructiongroup.com
305-229-4050
www.unitedconstructiongroup.com

- Complete interior and exterior hotel renovations.
- Serving the entire United States and Caribbean.

Does Your Property Look This Good... Everyday?
Ours DO....and for less than you think!

Grout Too!
BEFORE AFTER

Member
MARBLE INSTITUTE
of America

Stone, Tile & Grout Restoration, Care & Maintenance

Dull Marble, Worn Granite or Ugly Grout?
We Deliver... Consistent Quality Clean Appearances
in a Budget Challenged Environment

We'll Make YOU Look Great... Everyday!

Call 866-653-9737



www.marblelife.com

ADVERTERS AND SERVICE PROVIDERS

Click on the web address for direct link to company website

NATURAL STONE AND TILE RESTORATION AND MAINTENANCE

CENTRAL FLORIDA *Elite Stone and Tile Care* Our claim to fame? We maintain your floors without the need of restoration. Call us for all your Natural Stone, Tile and Grout needs. We service floors, vanity tops, countertops and shower walls. (866) 712-5066 www.elitestoneandtilecare.com

MIAMI - FT. LAUDERDALE - *Colonial Floor and Stone Care* Our reputation was originally built on being the terrazzo experts but we have since rebuilt our reputation as the terrazzo, natural stone and concrete polishing experts. (954) 566-4555 www.colonialfloorandstonecare.com

ORLANDO - CENTRAL FLORIDA - *SRS Central Florida* The premier stone restoration and maintenance company for all natural stone surfaces serving Orlando and Central Florida. Toll Free (877) 761-3777 www.srscentralflorida.com (SEE DISPLAY AD THIS PAGE)

SOUTHEAST FLORIDA - *MARBLELIFE of Southeast Florida* Natural stone, tile and grout. Cleaning, sealing, polishing, maintaining and repairs. From Jupiter to the Keys. (888) 362-7607 www.marble-seflorida.com

TAMPA - *MARBLELIFE - Tampa* Natural Stone, Tile & Grout Restoration & Maintenance - We service Tampa, St.Petersburg, Clearwater (813) 661-4866 www.marblelife-tampa.com

PAINTS / WATERPROOFING / FLOOR AND WALL COVERINGS

The Sherwin Williams Company. (407) 948-4671 www.sherwin-williams.com (SEE DISPLAY AD ON PAGE 19)

Coatings Application and Waterproofing Co. (CAW) (866) 278-4440 www.cawco.com (SEE AD PAGE 7)

POOL CLEANING

Aquatron, Inc. Automated pool cleaning the hospitality industry. Save energy costs and reduce run time with Aquatron robotic systems. (561) 455-0252 www.aquatron.us (SEE DISPLAY AD PAGE 17)

WATER CONSERVATION

Water Management Inc. We specialize in the design and implementation of water conservation projects for the hospitality industry. 800-394-5325 www.watermgt.com (SEE DISPLAY AD PAGE 23)



SRS is the nationwide supplier of quality stone restoration, repair, cleaning, and maintenance. We are capable of servicing your needs in any state in the continental U.S., and SRS has offices in Detroit, Denver, Las Vegas, Orange County, Central Florida, and offices opening soon in Atlanta, Washington DC, and Charlotte.

We "UNCONDITIONALLY GUARANTEE" our work.

SRS is a "GREEN" company and never uses any chemical processes that may damage your stone and diminish the quality of the environment.

Reflecting your image...



www.stonerestorationservices.com (248) 568-0352