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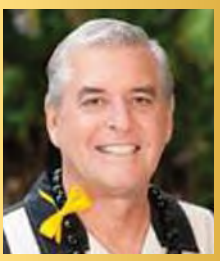

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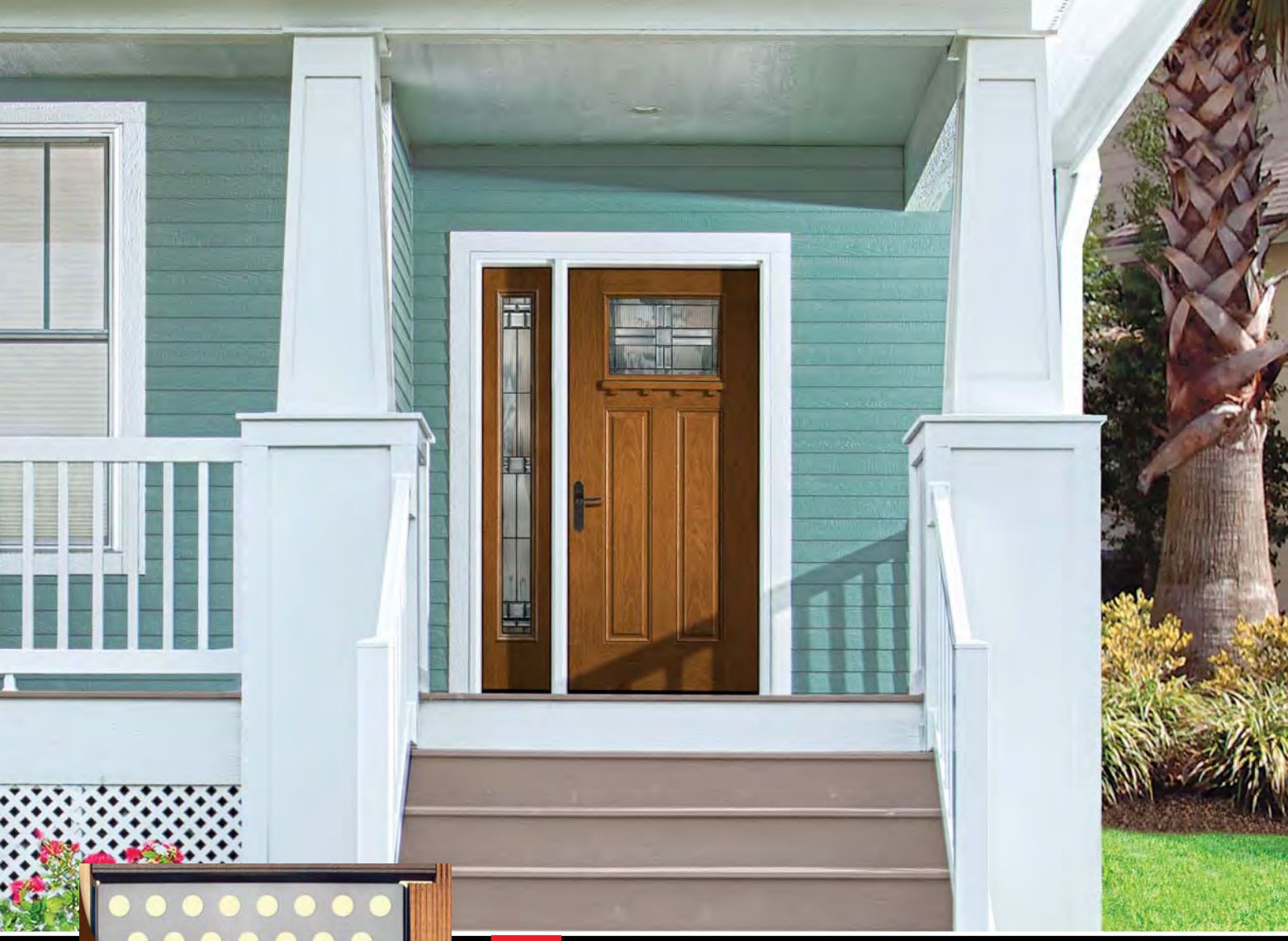

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— **SHANNON NODA-CARROLL,**
Board President, 1717 Ala Wai

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June-July 2016 | Volume 32 | Number 4

SOLAR & PHOTOVOLTAIC

RAILINGS & STAIRS

IN THIS ISSUE

Founded by Trade Publishing Company in April 1983, *Building Management Hawaii* is a statewide trade magazine serving Hawaii's commercial, industrial, and residential facility management industries.

Building Management Hawaii (BMH) invites all professional associations and foundations involved in the management of commercial, industrial, and residential properties in Hawaii to submit articles, news releases, photographs, and artwork for publication in a future issue of BMH. Please send submissions via e-mail to bmh@tradepublishing.com or mail to: Trade Publishing Company, 287 Mokauea Street, Honolulu, Hawaii 96819.

TRADE
PUBLISHING & PRINTING

287 Mokauea Street, Honolulu, Hawaii 96819 | Phone: (808) 848-0711 Fax: (808) 841-3053

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Learning from the Past

Hurricane season begins on June 1 and in this issue we look back at the damage caused by Iniki in September 1992 at the Lawai Beach Resort. Lessons learned from that natural disaster hopefully will help us all when the next major storm reaches Hawaii's shores.

This is part of *Building Management Hawaii*'s continuing coverage from the special May issue of *BMH* dedicated to informing the public how to prepare and recover from hurricanes.

Homeowners associations and their boards will want to read what our experts say about planning their budgets, from items like new roofing to updating the property's fire alarm system and some timely tips on how to stretch your HOA's money.

In our energy-efficiency section, contributing writers discuss ways to cut costs and use less energy, such as monitoring hot water usage and taking advantage of the lower cost of using gas-fueled appliances.

On the topic of energy, we discuss the importance of cleaning and maintaining a solar photovoltaic system, how to choose the best PV system to suit your building and how it can boost the value of the property.

Before deciding on a contractor, we're told for our report that a resident manager must perform their due diligence and make sure the chosen vendors are licensed, bonded, insured and have local references.

If your property is ready for a new set of stairs, our experts remind RMs in this issue that stairways—new or repaired—can make a much better first impression on potential occupants.

Got something you'd like to share with *BMH* and our readers? Let us know!

Aloha,

david@tradepublishing.com

Kim Lord, Kit Millan, Kathy Camp, Frances Okazaki, Sharon Gi

Matt Bickel, Marni Murdock

Craig Washofsky, Gladys Quinto Marrone

Kukulu Hale Awards

PHOTOS BY HAWKINS BIGGINS

The 2016 Kukulu Hale Awards, hosted by NAIOP Hawaii, were presented on May 6 at The Royal Hawaiian hotel. For a complete list of winners, see page 10.

Dylan Nakawo, Ryan Nobriga, Kathie Kagawa, Mitchell Imanaka

Larry Heim, Chris Duechar, Carol Marx, Matt Bittick, Ralph Mesick

Josh Magno, Karen Sakamoto, Lee Hopkinson, Cheryl Walthall

Lester Corpuz, Jon Wallenstrom, Cayenne Pea

Shawn Rush, Matt Gilberson, Diana Wehrly

James Brown, Steve Wattenbarger, Greg Skelton, Caroline Certocha

Tim Freson, Scott Eden, David Soong

Lester Ng, Bettina Mehnert, Lisa Rapp

David Kaahaaina, Jen Camp, Mark Tacazon

Nicole Lemas, Casey Skelton, Lisa Skelton

George Atta, Lorraine Minotoshi, Jerri Ross, Geoffrey Bannister

Leta Price, Charlie Price, Charles Fasi

KUKULU HALE AWARDS

Camp Named Developer of the Year

Christine Camp

Christine Camp, president and CEO of Avalon Development, was named Developer of the Year at NAIOP Hawaii's 19th annual Kukulu Hale Awards, which recognize excellence in the state's commercial real estate industry.

Camp launched Avalon Development 17 years ago with a nine-unit, single-family housing project on Nehoa Street. The company owns and manages a $350 million portfolio of properties across Hawaii.

George Atta

Other major awardees announced at the May 6 event were The Queen's Health Systems, recognized with the Holo Pono Award for Lifetime Achievement; George I. Atta, director of the City and County of Honolulu Department of Planning and Permitting, Outstanding Service Award; and Mark D. Bratton, senior vice president of Colliers International Investment Properties Division, named Commercial Broker of the Year.

Mark Bratton

Special recognition was given to Nicole Matsuo, vice president and commercial real estate loan officer with Bank of Hawaii, who was selected as NAIOP Hawaii's Member of the Year; and developer The Howard Hughes Corporation, which was named Member Company of the Year.

The awards recognize accomplishments in Hawaii's commercial real estate industry, including recognition for new and renovated commercial and public projects statewide. Nine projects received Awards of Excellence:

NEW PROJECT AWARDS

• Commercial/Other 40,000 square feet or Less: 143 Hekili

Entrant: Philip White Architects. Developer/Owner: A&B Properties Inc. Lead Design Firm: Philip White Architects.

• Commercial/Other Over 40,000 SF: Kapolei Lofts

Entrant: Forest City Hawaii. Developer/Owner: Forest City Hawaii Residential Inc. Lead Design Firm: KTGY Architecture + Planning.

• Commercial/Other Over 40,000 SF: The Plaza at Waikiki

Entrant: Wattenbarger Architects. Developer/Owner: MW Group Ltd. / Sound Health Hawaii Ltd. Lead Design Firm: Wattenbarger Architects.

RENOVATION AWARDS

• Commercial/Other 40,000 SF Or Less: Kewalo Apartments

Entrant: Hunt Companies Inc. Developer/Owner: Pacific Development Group. Lead Design Firm: Basis Architecture & Consulting.

• Commercial/Other Over 40,000 SF: Waterfront Lofts at Aloha Tower Marketplace

Entrants: Group 70 International Inc. & Swinerton Builders. Developer/Owner: Hawaii Pacific University. Lead Design Firm: Group 70 International Inc.

PUBLIC/GOVERNMENT PROJECT AWARD: Aiea Public Library

Entrant: CDS International. Developer/Owner: Hawaii State Public Library System. Lead Design Firm: CDS International.

NONPROFIT PROJECT AWARDS

• Kolopua Princeville

Entrant: Unlimited Construction Services Inc. Developer/Owner: Kolopua Partners LP. Lead Design Firm: hi•arch•y llp (dba Hawaii Architecture LLP).

• The Queen's Medical Center - West Oahu Campus Renovation

Entrant: RIM Architects LLC. Developer/Owner: The Queen's Health Systems. Lead Design Firm: RIM Architects LLC.

GREEN BUILDING AWARD: Kapolei Lofts

Entrant: Forest City Hawaii. Developer/Owner: Forest City Hawaii Residential Inc. Lead Design Firm: KTGY Architecture + Planning.

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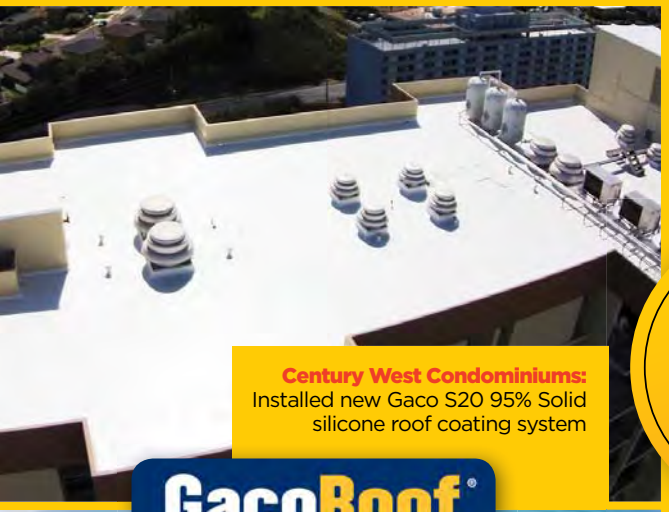

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Lessons Learned:

Hurricane Iniki and the Lawai Beach Resort

BY BRETT ALEXANDER-ESTES

September 11, 1992 9:30 A.M.

On a hot summer morning, Kauai's horizon is dark.

James Kennedy, an Island television personality, is filming the approaching hurricane near the Lawai Beach Resort on Poipu Beach.

"The tide is at its lowest right now," he says. "Look what it's doing."

Gray and white water tears at his feet and gushes up the beach into the grass. "Already we got the waves co ming over the road here, right next to the Beach House," Kennedy says.

A few hours earlier, sirens wailed in the pre-dawn darkness: Iniki, a Category 4 hurricane with expected winds of 120 miles per hour, is due at 2 p.m.

Nearby at the Lawai Beach Resort, all of the resort's 165 occupied rooms have been emptied.

"We evacuated the property of all guests and staff members by 8 a.m.," says Noe Hookano, the resort's manager.

At 7:30 the night before, when Kauai Civil Defense issued its first hurricane warning, the resort's 60-member staff was notified of the order to evacuate and called in, says Hookano. "The evacuation plan was reviewed and supplies were picked up, such as

Noe Hookano

The Lawai Beach Resort after Iniki
PHOTO COURTESY REED SAXON/ASSOCIATED PRESS/ACCUWEATHER.COM

water, canned foods and batteries."

Directions to shelters were copied and handed out to occupants, she says. Gas cans were filled and stored in a safe place.

The resort was given approximately six hours to evacuate. "The evacuation was executed by resort staff only," Hookano says.

The resort's occupants and staff drove to shelters in their own vehicles, carrying "pillows, blankets, food items, water, most of their luggage and airline tickets."

11 A.M.

Civil defense sirens sound again. "File cabinets were turned to the walls, computers were taken to higher floor storages, currency was placed in the property safe," Hookano says. Few rental cars and other parked vehicles remained, she says, and these were in the resort's parking facility on the higher floors.

Kennedy, still covering Iniki on the South Shore, says "all the sand crabs are up on the road. They know something's gonna happen."

Fifty-five mph gusts are reported in Poipu and the wind is beginning "to hum in the wires now," Kennedy says,

Iniki Video

James Kennedy's video documentary, Hurricane Iniki—The Piercing Wind Before and After, is on YouTube at https://www.youtube.com/watch?v=Bh-dTKh3tbA

glancing at the power lines overhead. "It's picking up fast."

Iniki is now about 130 miles southwest of Lihue, with maximum winds of 145 mph and gusts to 175 mph.

1 P.M.

Hookano, who says that high winds at the resort were followed by high surf and rain, has evacuated to the local high school in her hometown of Waimea.

Back at the Beach House, winds of 80 to 100 mph have arrived.

A few windows shatter. The wind pours in and all the restaurant's glass explodes. The roof rears up and flies into the air. Nearby, strips of roofing peel off the Alii Building and sail over the grounds.

3:30 P.M.

Maximum tide levels are recorded at Port Allen a few miles away. A 16- to 18-foot storm surge roars through Poipu and demolishes the Beach House and the lower floors of the Lawai Beach Resort.

The Aftermath

Hookano returned to the Lawai Beach Resort three days after Iniki.

"More than half the roof was torn off of the Alii Building," she says. "Road pavement was torn up in front of the resort—some of it was in the resort grounds. Units were torn through, lanai glass doors were shattered or totally removed, furniture was pushed through entire units piling up at the entry. No landscaping."

According to reports, a huge boulder weighing several hundred pounds was found in the middle of the Beach House.

Aid from government and the military began to arrive on Sept. 12, and Lyle Otsuka, the resort's general manager, took command. Resort owners and guests who could not get flights out of Kauai were able to stay in the resort's one building that had escaped damage.

The first order of business, Hookano says, was to clean up. It was a daunting task.

"The Alii Building had the most damages—65 percent of the roof was

The Lawai Beach Resort in 1992 before Iniki
PHOTO COURTESY THE LAWAI BEACH RESORT

torn away, all of the first-floor units and the end units to the third floor were damaged extensively," Hookano says. "The fourth-floor units got a lot of water damage due to the rain that followed and no roof."

From September though Nov. 30, the resort's staff and hired construction crew cleaned the property. A week later, on Dec. 7, 90 percent of the resort's staff was laid off. The following week, some resort owners and construction workers returned to the Coral Building. Construction and repairs continued through 1993 with a limited executive, administrative and maintenance staff on site.

In October 1993, the Alii Building and the resort reopened for business. Hookano was "exhilarated—

Pool and Alii Building at the Lawai Beach Resort today
PHOTO COURTESY THE LAWAI BEACH RESORT

we could now bring back the staff members we were forced to lay off in December."

Plan for the Worst

After experiencing Hurricane Iniki, Hookano says, "we are now better prepared. Each year, just prior to the season, we review and refresh our emergency supplies, which include water, canned foods, batteries, flashlights, and toiletries items. We review our evacuation procedure with our staff members. Our management team continuously works together to monitor any potential storms in the area and keep communications open. When an active storm is in the area, we also communicate information to our staff and owners/guests."

A special May edition of *BMH* provides a guide on preparing and recovering from a hurricane. Pick up a complimentary copy at City Mill (Nimitz location only) or the American Red Cross on Diamond Head Road. Visit us online at www.tradepublishing.com.

Use a System

Peter Hirai, Honolulu City & County Department of Emergency Management deputy director, encourages hospitality and multi-unit property managers to prepare for a disaster as thoroughly as possible.

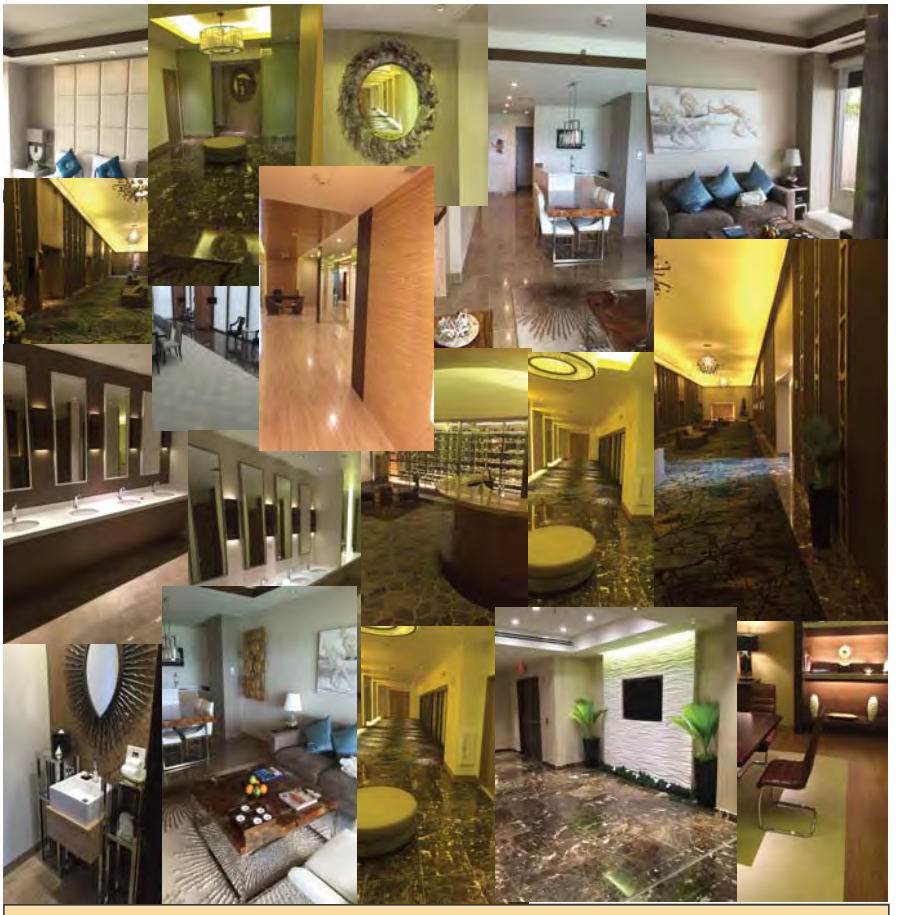
When a hurricane approaches, Hirai says, managers' first and most critical task is to provide updated information to building occupants.

"Have a system, whether it's posting news bulletins in common areas or making announcements over public address systems," he says. "Residents will need to know when or where to evacuate based on your facility plan. They also need to know if they can rely on the property to provide protective sheltering, provisions or any services."


Peter Hirai

Hirai also stresses that it is the responsibility of the public—including property managers with their multiple responsibilities—to be prepared.

"We ask the public to have at least seven days of disaster supplies to stay self-sufficient until the government can get back on its feet," Hirai says. "Government cannot and will not be there to take care of all the public's needs immediately after a disaster."



How to Communicate in an Emergency

Along with radio and TV, social media tools can help you stay tuned to the latest storm information

BY CATHY CRUZ-GEORGE

Before, during and after a natural disaster or crisis, you'll want to keep tabs on the most up-to-date information. Your local radio talk-show host, however, doesn't have to be your only source. By diversifying your media, you can keep tabs on new developments and contact your friends and family—who may be trying to reach you. Here are some tips:

Don't use your phones, tablets, laptops and other mobile devices unless it is an emergency.

The Hawaii-based Pacific Disaster Center offers a free app called "Disaster Alert" to warn of earthquakes, tsunamis, hurricanes, volcano eruptions and other weather-related disasters. And because the app connects to multiple agencies across the region, users receive alerts before the mainstream media disseminates the information on their own channels. "Disaster Alert" is free and downloadable on devices with Android or iOS platforms.

Some of the most popular social-media apps allow people to track one another during disasters. In 2014, Facebook launched "Safety Check," a tool that helps users tell family and friends that they are safe. Here's how it works: After a major catastrophe (like a terrorist attack or earthquake), "Safety Check" pinpoints the geographic location of Facebook users, and asks if they are safe. When users click "yes" or "no," friends receive immediate alerts from Facebook.

Similarly, the "Person Finder" service by Google allows anyone to post updates and search for missing friends and family affected by disasters. Google's constantly evolving technology offers a slew of services—from public alerts to crisis maps—to aid the public in the event of an emergency. For details, visit google.org/crisisresponse/about/resources.html.

You don't need an app to keep tabs on emergency-related news.

BEFORE AN EMERGENCY

- Charge all wireless devices such as cell phones, laptops and tablets.
- Own a radio and/or television that either is solar-powered, hand-crank or battery-operated. Keep their spare batteries in an emergency kit.
- Have a landline at home or in the office, and keep back-up batteries for the phone in case of power failure. An old-model landline phone doesn't need electricity.
- Consider purchasing a satellite phone; it does not use cellular networks to operate.

Cell phones and mobile devices can be programmed to receive Wireless Emergency Alerts, which are messages sent by authorized-government alerting groups. In the event of a national crisis or extreme weather condition, Wireless Emergency Alerts appear on cell phones like text messages, but free of charge by the wireless carrier.

Send a Text

In the aftermath of a disaster, however, networks might slow down due to high levels of data usage. Wireless carriers suggest these steps to avoid "clogging up" their networks. First, don't use your phones, tablets, laptops and other mobile devices unless it is an emergency. Instead, send text messages, which do not slow down the networks the way phone calls do. And shut off your mobile devices if your network carrier's signal bars disappear—to conserve the batteries.

If you need to use your phone, and your network service is unreliable, there are technologies to bypass networks. One of these is the award-winning device, "goTenna," which combines digital radio and an app to help people send messages and share their GPS locations with other users. The goTenna works via Bluetooth.

Power Source

What if your cell phone's battery is low, and its wall-attached charger is inoperable (due to power failure)? A solar-powered charger, available for purchase online for as little as $20 each, easily solves that problem. As a backup, it is always a good idea to

DURING THE EMERGENCY

- To save the battery on a cell phone, and to avoid "tying up" wireless networks, take these steps: Text message instead of call; do not use the phone unless absolutely necessary (no video streaming or surfing the web); dim the phone's screen; close certain apps and features; and turn off the phone if the network's wireless signals disappear.
- If you must use your cell phone in an emergency, wait at least 10 seconds before redialing a call to prevent "congesting" the networks.

SOURCE: Federal Communications Commission, ready.gov and wirelessweek.com

own a television or radio that either is battery-operated, solar-powered or hand-cranked. Keep these devices in your emergency kits in the car, office and at home.

Now, if a tsunami destroys power lines, or if Category 5 hurricane disrupts cellular services, most landlines, radios and mobile phones won't work. And there also is no guarantee that cell-phone providers will set up ad-hoc networks (such as mobile cellular towers) in your geographic district.

That's when a satellite phone might be necessary. These specialty phones function via satellites above the Earth and are typically used by emergency responders, and by the aviation and maritime industries. Over the past decade, an increasing number of people have realized the benefits of the technology, despite the high costs. Satellite phones range from several hundred to several thousands of dollars apiece and can be purchased online or through specialty retailers.

A house with stone-coated metal roof (left) stood through a hurricane in Florida without losing a single tile while the house next door had damages to its concrete tile roof.

A Storm Is Coming—Are Your Assets Covered?

Managers must protect the property and tenants' treasures from the top down

BY BRADEN HAMMOND

Nobody can predict the outcome of a major storm and the effects that it can have on us. Meteorologists can predict when a storm is coming, past data can be used to predict what type of damage a storm can incur, but no one can predict the exact magnitude of harm and loss that a storm can bring to us. The only thing we can do is take heed and prepare.

Located in the Central Pacific, where four or five tropical cyclones occur each year, impact from major storms is inevitable for Hawaii. Of course, not every storm to pass through the Islands is a Category 4 hurricane like Hurricane Iniki, which hit Kauai in 1992 destroying 1,400 homes, severely damaging 5,000 others and amassing $1.8 billion worth of damage. However, smaller storms like Hurricane Iwa, a Category 1, are capable of devastation. Iwa hit the Islands in 1982 and tallied over $300 million in damages (equivalent to $750 million in 2016).

Property managers and owners need to ask themselves: "How can I prepare so I am ready when a storm hits?" Let's take a look at yout most valuable asset: your property.

With so much depending on protecting the property, the most essential thing you can do to prepare for a storm is to make sure the property is ready to face the fury. Let's start at the top: the roof. Damage to the roof can make or break a building, whether it's a house or a multi-floor tower.

Stone-coated metal roofing was developed more than 50 years ago with the original intent of holding up against typhoon weather. In fact, the roofs were originally called "typhoon tile." The strongest stone-coated metal panels are fastened at the nose, making them a unique, watertight fortress on top of your house built to hold up against the nastiest of storms and wind.

In 2007, a South Florida home and a 10,000-square-foot barn were struck by the 125 mph winds of Hurricane Wilma. "We were in the eye of the storm for 40 minutes, yet both of my Gerard roofs look like they were installed just yesterday," says homeowner Victoria McCullough. "I look around and I'm surrounded by a sea of destruction and here sits my house in perfect condition." The six-year-old roof was unscathed by the hurricane.

You might think, "Well, that's why I have insurance." Sure, if a storm hits your building you may have insurance coverage for all of the damages inflicted. Your property's tenants might be reimbursed for their flat screen TV, or fancy paintings and expensive furniture, but what about possessions that

continued on page 21

DISASTER PLANNING 101: Expect the Unexpected

First step in implementing a plan is identifying what is most important for recovery

BY SHANNON HURLEY

Disaster strikes without warning. A sudden storm or fire occurs can occur at any moment. Are you prepared? If a pipe bursts in your building with water pouring from the ceiling, would you know who to call first?

Creating a disaster plan for your building may be a challenging task, but when an emergency occurs, you will grateful that you took the time to prepare. You'll be glad that you don't have to turn to a phone book at 2 a.m. when you have several inches of water on the floor.

Pre-planning is essential to your disaster recovery process. Everything can't be first, and identifying your recovery goals and priorities allows you to focus on the critical areas and prioritize the recovery process. Engage your team in the planning process and ask them, "What are their mission critical areas in your building?"

During this planning process, select and pre-qualify your recovery partners. Make sure to include the following partners in your recovery plan: computers/data recovery, telephone system relocation/repair, and restoration contractor.

Buyer Beware

Choosing the right company to handle your disaster recovery can be troublesome. Contractors may give you the impression that they can handle the job, but if they are not experienced property damage specialists, you may find yourself with an even bigger problem. How do you select the right restoration contractor? Asking the right questions can help ensure that they are the right recovery partner for you. Here are some key questions:

- Are they considered experts? Do they have disaster experience? Are their technicians well-trained? Do they adhere to IICRC S500 Industry Standards for professional water damage? Are they trained in the science of drying and in psychometrics?
- Can they survive the disaster? If they are impacted by the disaster, your recovery stops.
- Are they available 24/7? Holidays? Weekends? After-hours?

Aside from selecting a qualified restoration company, one of the most important steps to a successful recovery plan is actually practicing the disaster plan with your team. Try either a tabletop exercise where you create a scenario and run through your plan or a full-scale disaster drill involving the tenants and team. By performing these exercises, you will identify weaknesses or overlooked steps in your plan. Also, make sure to routinely practice these drills because team members and roles change.

Similarly, ensure that your master service agreements with your recovery partners are in place prior to an emergency. In taking a proactive approach to master service agreements, you can help minimize long-term interruption to your recovery process.

Familiarize yourself with your building. Learn the locations for gas and water shut off valves, determine space access and staging areas for your recovery provider, and maintain tenant contact information. Plus, have evidence of insurance for your tenants.

For example, renter's insurance policy information so you are aware that there has been no lapse in insurance and your tenants still have their policies in place. This is important when working on a claim with your insurance carrier, especially in a case where the damage was caused by the tenant and your insurance carrier might need to subrogate the claim to the tenant's insurance carrier.

Recovery

All of your planning comes to fruition and pays off after a disaster happens. The most important priorities are life and safety issues. If an evacuation has occurred, first-responders should help determine if the building is safe to re-enter. After the safety and integrity of the building has been determined, the restoration company

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10 Tips for Safely Using a Portable Generator

Property managers must know when and how to power up correctly during storm season

Portable generator safety becomes a hot topic each year as we enter storm seasons, such as the current hurricane season which officially began June 1. However, safety is a year-round concern to be heeded whenever you start your generator.

Here are tips, provided by gentent.com, on how to safely operate a portable generator:

Never run a generator in wet weather without a covering, such as a generator tent, to avoid electrocution and generator damage.

Water and electricity create both an electrocution and generator damage hazard. Water seeping into the electrical outlets or electrical panel area can create a short circuit to the frame (and many generators are self-grounded to the frame), creating a static charge on the metallic areas. Further, plugging into or out of a wet generator can cause an electrical arc that can cause serious injury or death.

Never operate indoors or in a garage, even with the door open, or carbon monoxide (CO) poisoning may result. Always run it outdoors at least 20 feet from any buildings.

CO kills and kills quickly. CO is odorless and colorless and weighs more than air. It collects and builds up in any structure. Open the garage door? This does not guarantee that CO will be taken out of the garage; in fact, if the wind is blowing inward it can cause the CO to get into your home through any opening in door or window seals. Have a detached garage or shed? CO can linger for hours and be present in a strong enough density that you can be overcome when simply refueling. According to research, CO levels from portable generators are 1,500 times higher than modern automobile engines. Don't chance it, keep those portable generators outdoors and well away from structures.

To prevent overheating, never fully enclose the generator.

Portable generators produce significant heat: 600 degrees Fahrenheit at the exhaust is not uncommon. Open framed generators dissipate heat on all four sides. In tests in 20-degree outdoor temperatures with snow on the ground, it took less than 30 minutes to melt the snow in a six-foot radius around the generator. Fully enclosing a generator decreases the life of the generator because the generator runs too hot. Further, if it is enclosed within meltable or flash-flammable materials, fire and serious injury can result.

Avoid creating a circuit through your body by using only one hand when touching your generator and always wear rubber-soled shoes.

Don't help electricity move into places it shouldn't, like your body. When you approach a running generator, touch the metallic surfaces with only one hand. Also be sure to wear rubber-soled shoes—no open sandals, especially if the ground is wet. Electricity flows through the least resistant path possible—don't let it be your body.

Don't run your generator in hurricane force winds (60-70 mph).

Let's be practical. Hurricane, tornado and cyclone force winds cause heavy objects to move. Portable generators are no exception. Why risk having a running portable generator moving around or being lifted during the height of the storm? Wait until the winds subside.

Never stand over the hot muffler area while refueling.

The part of gasoline that ignites are the fumes—small droplets of gasoline that are mixed with air. The safest bet is to give the generator muffler a chance to cool for 10 minutes before refueling, and certainly don't stand over the hot muffler side of your generator to refuel.

Avoid fuel clogging. Shut off the fuel valve and run the generator until it stalls to keep fuel from clogging the carburetor or fuel injectors. Use fresh fuel and use fuel stabilizer if storing the generator for long periods of time.

You need your generator to be ready to go at a moment's notice. The most common reason it won't start is fuel-related. Gasoline breaks down and can gum up the works when it sits too long. The best scenario is to run the generator completely dry of gasoline before storing it, but this isn't always practical. The next best thing is to turn the fuel supply valve off and let the carburetor (or fuel injectors) run dry. The generator will stall and this way you'll know its dry. Then add a fuel stabilizer to the rest of the gasoline in the tank. These simple steps, along with running the generator at least every three months, will minimize start up issues when you need the portable generator the most.

Turn off the generator main switch before plugging in your generator or starting. Then once it has started and is idling, turn the main switch on.

Most portable generators built in the past five years have a main on/off switch. Be sure the switch is off when starting the generator and before stop-

ping the generator. The switch should always be off whenever plugging in or unplugging cords at the generator's electrical panel. These steps ensure your safety and also ensure the generator is ready to take the load. During start up or shut down the electricity the generator can create can have amperage and voltage spikes and dropouts, all of which can damage any appliances or electronics that are connected.

Never operate in floodwaters.

Another common sense tip—don't put your portable generator in an area that can flood. As floodwaters rise, the probability of damage to your generator, or injury to you, also rise.

For emergency backup power to a home or building, always use a transfer switch.

A properly installed transfer switch isolates the circuits that will get electricity from the portable generator. First, it ensures that electricity doesn't backfeed onto the powerlines. Backfed electricity can instantly kill line workers. Second, it helps keep the generator from being overloaded (if you do a little bit of planning and are aware that perhaps not all of the circuits should be turned on the same time). Along these lines, create a sequence of which circuits get turned on in which order. Give each circuit some time to settle in before turning the next up (5-10 seconds typically). This is because many devices, like the motors that run pumps in your water, heating, cooling and refigeration, require a spike in wattage to get going.

For more information on GenTent Safety Canopies LLC, call (781) 334-8368 or go to gentent.com.

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might not have a large dollar value, but hold great sentimental value, like the picture their 5-year-old daughter drew with crayons and gave to you for Mother's or Father's Day. Or the pile of photo albums with hundreds of memories. Some things can't be replaced with insurance reimbursement money.

Before the storm is at its fiercest, and tearing against your building, make sure your roof is covered with the best materials available. Because when the damage leaves the house vulnerable for the rain to start pouring inside, it won't be the new stereo that's most at risk, but rather all the little, priceless, sentimental items being saved in a shoebox under the bed.


Braden Hammond

Braden Hammond, 24, is a product manager and marketing specialist for the Headwaters Roofing Group that includes Gerard Roofing, which manufactures roofing materials.

Take the Bull by the Horns

Tackle your property problems with the help of the Community Association Institute of Hawaii

BY BRETT ALEXANDER-ESTES

Are any of your association fees delinquent?

Does your property lack funds for a new roof or plumbing?

Are some residents skirting your property's "no pets" rule with the Fair Housing Act's provision for assistance animals?

The Community Association Institute (CAI Hawaii) helps many property management professionals find effective solutions to these and other challenges.

Leadership Development

CAI Hawaii's six yearly seminars and frequent lunch-and-learn meetings keep members abreast of industry issues and successful coping strategies.

On June 25, the organization's annual ABCs – Board Leadership Development Workshop "is a basic course for association leaders," says Carol Rosenberg, CAI Hawaii's 2016 treasurer and a Honolulu attorney. "It provides a comprehensive review of community association operations and problem-solving techniques."

Carol Rosenberg

Long-time property management professionals say the eight-hour course is an ideal foundation for new board members and managers and is a good refresher for seasoned association leaders.

According to Keven Whalen, CAI Hawaii's past president and Touchstone Properties vice president, the course "provides a comprehensive review of organizational structures,

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Suzuki joins Hawaiian Properties, Ltd. with more than 11 years of experience in managing associations. He has successfully managed townhome complexes, single family homes, and high rise condominiums representing more than 6,000 units. In addition to managing associations, Suzuki previously handled vendor relations and company events; he also managed the covenants compliance inspection and resale division from 2006 to 2010. Suzuki's wealth of knowledge, diverse experience and dedication to his clients make him a huge asset to Hawaiian Properties.

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Keven Whalen

financial management, budgets, problem solving techniques, conflict resolution and insurance."

Group interaction, he says, encourages attendees to practice "how other associations handle conflicts or other issues. We have multiple facilitators so the participants also hear professional perspectives."

2016 Topics

CAI Hawaii's upcoming 2016 seminar topics include:

- Avoiding director recalls
- Medical marijuana
- Fair Housing Act and Hawaii Civil Rights Commission issues
- The role and duties of an association's board of directors

CAI Hawaii also presents a Legislative Update, "which provides information on the laws affecting Hawaii's community associations that became law in that year's legislative session," says Rosenberg.

Strength in Numbers

"CAI Hawaii currently has 417 members," says Rosenberg, and notes that 103 of the total are community association volunteers—mostly board members and some homeowners.

Leading Hawaii firms are on CAI Hawaii's roster of 63 member companies—including Associa Hawaii-Oahu, Allana Buick & Bers Inc., Commercial Roofing and Waterproofing Hawaii Inc., Hawaiiana Management Co. Ltd., Insurance Associates, Motooka & Rosenberg LLLC, Oceanic Time Warner Cable Inc., Outrigger Hotels & Resorts and Servpro, among many others.

CAI Hawaii also has the backing of CAI National, its parent body. "CAI National provides support, resources and guidance to CAI Hawaii," says Rosenberg.

Network Perks

CAI's national and Hawaii networks offer property manager certification courses and a host of other internet resources and publications.

"The CAI Hawaii website (www.caihawaii.org) has information about all the seminars being offered, links to the CAI National website, and a Resource Center with links to the Legislative Center providing information about legislation affecting community associations, and CAI Hawaii newsletters, which contain articles addressing various issues facing community associations," Rosenberg says. "CAI National also puts on an annual Law Seminar with sessions that cover many of the pressing legal issues for community associations."

Rosenberg also recommends the national website (www.caionline.org) for its "wealth of information."

Even a simple directory is a resource, Whalen says. "CAI Hawaii's annual membership directory provides a network of its business partner members who provide assistance to community associations on a regular basis."

Blue-Chip Partner

"CAI Hawaii has and will continue to partner with the Real Estate Commission to put on the educational seminars leading into 2017," says Rosenberg. "The seminars are entirely or partly funded by funds from the Condominium Education Trust Fund (CETF), for condominium unit owners whose associations are registered with the Real Estate Commission." Rosenberg notes the CETF is administered by the Real Estate Commission which is attached to Hawaii's Department of Commerce and Consumer Affairs through the Professional and Vocational Licensing Division.

A Lasting Relationship

Whalen, a nine-year CAI Hawaii member, says many Hawaii AOAOs feel pressure from association members to keep maintenance fees low despite the need to adequately fund reserves and operating budgets. "Maintaining this balance and educating boards on the need to properly fund their association is always a struggle," he says. "CAI Hawaii's seminars cover many of the hot topics relevant to our industry, which has helped me to resolve many issues with the associations I manage."

CAI HAWAII
ABCs – Board Leadership Development Workshop

June 25, 8:30 a.m.-4 pm
Neal Blaisdell Center, Oahu Room

CAI's one-day workshop for Hawaii association leaders and homeowners covers:

1. **Governing Documents and Roles and Responsibilities (Donna LaFrance)**
2. **Communications, Meetings and Volunteerism (Kanani Kaopua)**
3. **Fundamentals of Financial Management (Rocksford Takamatsu)**
4. **Professional Advisors and Service Providers (Alan Takumi)**
5. **Association Rules and Conflict Resolution (Milton Motooka)**
6. **Insurance (Sue Savio)**

For more information and mail-in registration form, call 488-1133 or e-mail caihawaii@hawaiiantel.net.

CAI Hawaii members: $130 ($120 with June 17 postmark)
Nonmembers: $140 ($130 with June 17 postmark)
Includes continental breakfast, lunch and workbook.

Mail completed registration form and payment to:
CAI Hawaii, 1050 Bishop St. #153, Honolulu, HI 96813.
Or register online at www.caihawaii.org.

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Get Up to Speed on New Roofing Code Requirements

Energy code changes can impact replacement costs for your property

BY LARRY YOUNG AND RICHELLE THOMASON


Attic space with radiant barrier

Homeowners' associations and property managers are urged to re-evaluate their reserve study and make necessary adjustments to their roof reserve in compliance with draft amendments to the Hawaii Energy Code.

At the 2016 Hawaii Buildings, Facilities & Property Management Expo, guest panelist Howard Wiig, an analyst from the Hawaii State Energy Office, discussed the impact the HEC would have on roofing. He expressed optimism that the amendments—relating to Section R503 and Section C503—will be adopted and enforced this year for both residential and commercial properties.

The state distinguishes residential buildings as one to three stories and commercial buildings as four stories and above. While the counties of Hawaii, Maui and Honolulu are still operating under the 2006 International Energy Conservation Code (IECC), Kauai is operating under the 2009 IECC. With the adoption of the HEC, all counties will conform concurrently.

For example, a recent project involved reroofing an 84-unit (six buildings) townhome project on Kauai, which resulted in added costs totaling approximately $85,000 to comply with the 2009 IECC. The job included insulating each unit's attic space and, while there are a few insulation options available, the most economical insulation method was used. Because Hawaii, Maui and Honolulu are still operating under the 2006 IECC, properties are not required to comply with the 2009 IECC.

HOAs have already been performing two-thirds of the reroofing option as outlined in the draft amendments. In the case where an overlay is possible, the energy code would not apply if the sheathing is not exposed per the code amendment. However, it is not clear whether community associations who have restricted architectural guidelines would be excluded

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DRAFT AMENDMENTS TO 2015 IECC

December ~~8~~ 28, 2015

SECTION R503 ALTERATIONS

R503.1.1 Building envelope Building envelope assemblies that are part of the alteration shall comply with Sections R402.1.2 or R402.1.4. Sections R402.2.1 through R402.2.12, R402.3.2, R402.4.3 and R402.4.4

Exception: the following alternations need not comply with the requirements for new construction provided the energy use of the building is not increased:

~~5. Roofs without insulation in the cavity and where the sheathing or insulation is exposed during reroofing shall be insulated either above or below the sheathing.~~

5. When un-insulated roof sheathing is exposed during alteration two of the following shall be installed:

Energy Star compliant roof covering
Radiant barrier
Attic ventilation via solar attic fans or ridge ventilation or gable ventilation

DRAFT AMENDMENTS TO 2015 IECC

December ~~8~~ 28, 2015

SECTION C503 ALTERATIONS

~~**C503.3.1 Roof replacement** Roof replacements shall comply with Table C402.1.3 or C402.1.4 where the existing roof assembly is part of the building thermal envelope and contains insulation entirely above the roof deck~~

C503.3.1 Roof replacement. When uninsulated roof sheathing is exposed during alteration two of the following shall be installed:

Energy Star compliant roof covering
Radiant barrier
Attic ventilation via solar attic fans or ridge ventilation or gable ventilation

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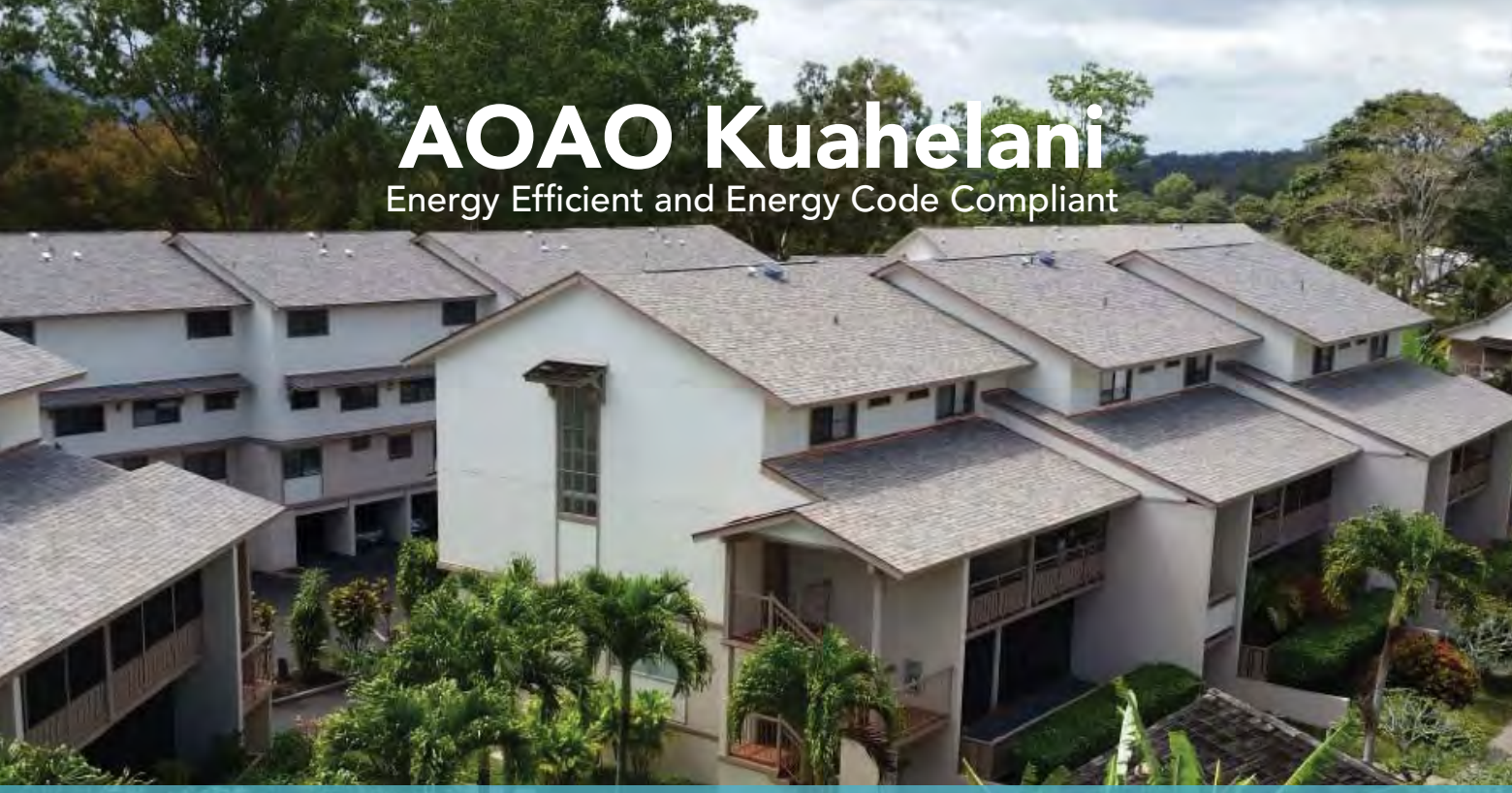

"We chose the Malarky Ecoasis Premium not only for appearance but for the solar reflective shingles, rain seal protection and an enhanced wind warranty. To enhance the cooling factor of the roof we included radiant barrier plywood and ridge vents, with an optional solar fan. We interviewed a dozen companies and although CRW was not the least expensive they were competitively priced and chosen for a variety of other factors, such as excellent safety record and extensive background in large projects.

The Board has received only positive responses from our tenants and owners about the roofing and CRW."

~ Eric Brown, President of AOAO Kuahelani Apartments

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How Can Your HOA Stretch Its Dollars?

12 steps to help form a realistic budget and properly funded reserves for your property

BY AL DENYS

For many associations, budget season is just around the corner. Every community association in America is concerned about its fiscal well-being, and every year the question the association's board asks itself and its managing agent is: "How can our HOA stretch its dollars?"

This year many boards will spend a lot of time and effort trying to figure out how to do this, and it is not an easy task. Every year, property managers and boards suffer from "sticker shock" as the cost of managing the associations increases across the entire spectrum, especially as our buildings' infrastructure ages.

Unless you have found that elusive pot of gold and money is of no concern, then you are good to go. However, for the majority of managers, every dollar is important—and unfortunately we sometimes forget that it's the owners who pay the bills through monthly maintenance fees.

Many of us live on fixed incomes and paycheck-to-paycheck. Every dollar is budgeted, and any extra cash these days is a luxury.

To stretch that dollar, every board needs to be proactive vs. reactive, which usually means levying a special assessment on the ownership because of poor planning and oversight. So let's be proactive.

Here's a dozen actions that property managers, owners and board member might want to consider:

1. Start your budget planning cycle early.
2. Closely review this year's budget against your latest monthly financials, especially the variance reports and make the necessary adjustments up or down on each line item on your new budget.
3. Factor in the rate of inflation and cost of living increases projected by the vendors for contracted services (i.e. cable, refuse removal) and utilities.
4. Ensure that your reserve study line items and projected capital expenditures are accurate and doable with either the reserve funds on hand or via other options such as financing a capital improvement loan.
5. Plan to have a professional reserve study done at least every five years, with annual updates done in-house.
6. Work with your management team and in-house staff to develop a comprehensive preventative maintenance program.
7. Identify which tasks can be effectively done in-house and those that could be outsourced to a vendor, which either way could save the association tens of thousands of dollars annually.
8. Don't cut corners by deferring repairs and maintenance as it will cost you even more in the long run.
9. Avoid unnecessary liabilities by using only licensed and insured contractors.
10. Consider bulk purchasing programs such as the Purchasing Hui of Hawaii which offers lower prices for goods and services to its members.
11. Take advantage of Hawaii Energy rebate programs if planning to do any energy-related projects such as a water pump replacement or lighting replacement.
12. Most importantly, closely review your monthly financials to include all accounts payable and accounts receivable ledgers (delinquencies) and react accordingly.

There is no question that every HOA can stretch its dollars without sacrificing property values and diminishing the quality of life of its residents with a little hard work and prior planning, resulting in a well-thought-out and realistic budget along with a properly funded reserve study.


Al Denys

Al Denys is a vice president for governmental affairs and a senior property manager with Hawaiian Properties Ltd. with more than 40 years of personnel and property management experience in both the private and federal sectors. After retiring from the U.S. Army, he started a career in community association management and has worked in the property management field in Hawaii for 22 years.

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from the energy code.

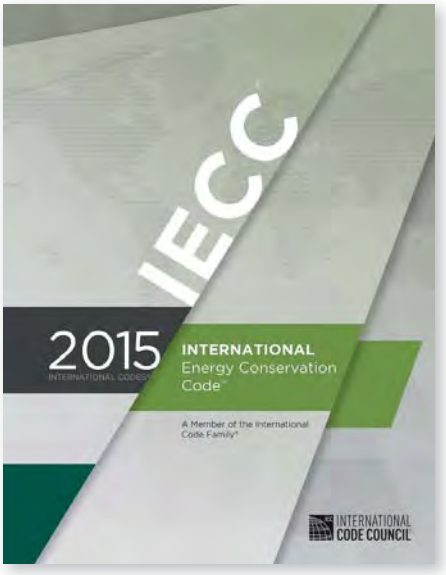
For commercial buildings (four stories and above) the insulation R-value requirement will be changing from R-15 to R-38, potentially increasing the overall project cost by 30 percent to 50 percent.

What are the Options?

HOAs who need to re-roof but do not have adequate reserves to comply with new code requirements have other options, such as a bank loan or special assessment. However, those are not the only options available.

Associations can have their roof thoroughly inspected and determine what it will take or cost to extend the life of the existing roof until the reserve fund is adequately funded. Comprehensive roof management programs provide the client with a thorough roof inspection for recommended action items needed for immediate, remedial and long-term maintenance.

Customized maintenance plans should support access to archived historical data available for tracking purposes and, ultimately, decision-making for repairs or re-roofing.



The IECC booklet covers the entire building envelope. For more information on the 2015 IECC or to order a copy of the book, go to http://www.iccsafe.org/Pages/default.aspx

Larry Young

Larry Young is vice president at Commercial Roofing & Waterproofing Hawaii Inc. and Richelle Thomason is director of business development and client relations. CRW is a full-service roofing and waterproofing contractor with operations in Hawaii, Guam and the Philippines. The company offers technologically advanced clean-energy systems and efficient products to reduce carbon footprints, including solar-reflective specialty coatings and a new generation of PV energy systems.

Richelle Thomason

BUDGET ITEM: Update the Fire Alarm System

Bringing older high-rise buildings up to code requires careful planning

BY RODNEY HATANAKA

A code-compliant fire alarm system that is operating properly is key to the life safety of the occupants of a high-rise building. Property managers must be aware that if their high-rise apartment or condominium building is 15 years old or older, then the fire alarm system may not meet current fire code requirements.

Budgeting to replace a non-code-compliant system would be prudent planning. It is not a matter of if it will be required, but a matter of when.

The fire code has changed throughout the years—technological advances have paved the way for more sophisticated fire alarm systems which improve life safety. In the past, the Honolulu Fire Department has allowed high-rise building managers and owners to do a "one-for-one" replacement of the fire alarm system's devices. This may have been permitted since upgrading the fire alarm system to meet current fire code requirements was a costly endeavor.

Now, however, the HFD is requiring high-rise buildings to meet current code requirements, especially in the area of fire alarm system audibility. HFD believes audibility is particularly important when high-rise residential buildings do not have sprinkler systems—and many of the older buildings do not.

Audibility for a fire alarm system is its sound level that is a minimum 15 dB above ambient noise levels in all occupiable spaces. Virtually all high-rise apartments or condominium buildings more than 15 years old will not meet this requirement since these structures usually have audible notification appliances (bell or horn) only in the common corridors. Although the sound level in these common corridors meets the audibility requirement of 15 dB above ambient noise levels, the sound level in the bedroom with the door closed and the apartment/condo unit door closed does not meet this audibility requirement.

There are other fire code compliance issues, but the issue with audibility is the most costly. The only method to meet this audibility requirement for "all occupiable spaces" in the units is to install an audible notification appliance in the units.

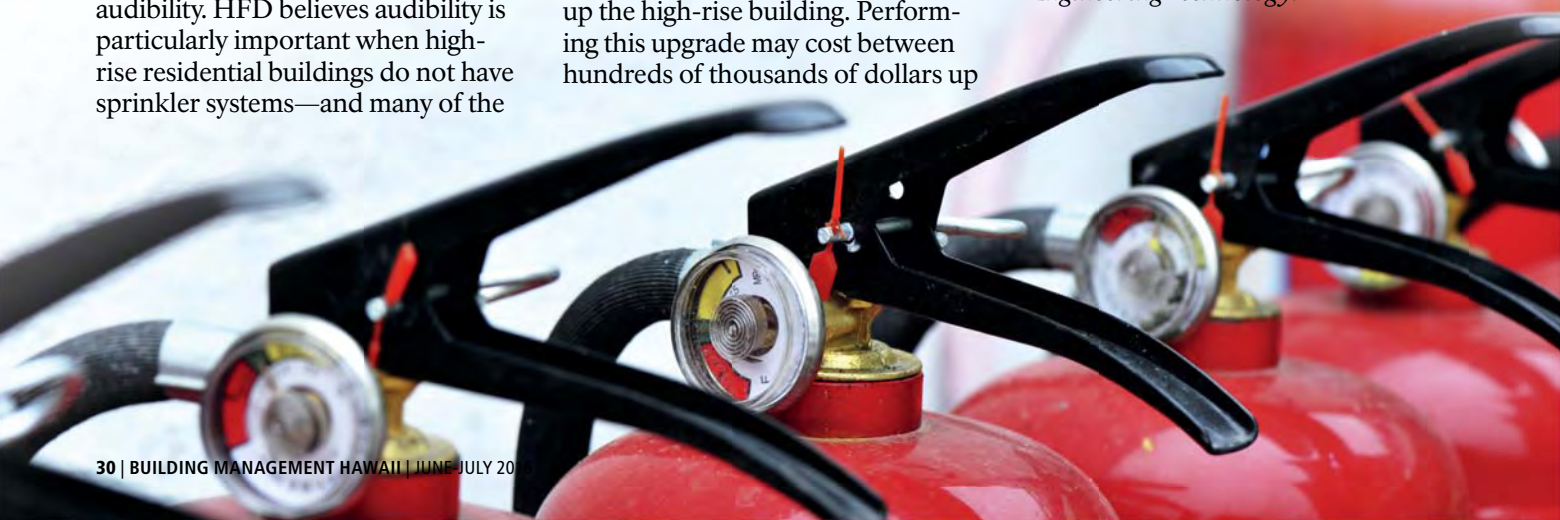
This installation requires new cables and wires be installed in new raceways and conduits to each unit from the fire alarm control panel. This installation requires coring new risers up the high-rise building. Performing this upgrade may cost between hundreds of thousands of dollars up to more than $1 million, depending on the height of the building and the number of units.

The HFD is willing to work with building owners and to provide time for buildings to meet the requirements, possibly in phased-in efforts.

Spending hundreds of thousands of dollars to upgrade or replace an old non-code-compliant fire alarm system may seem unnecessary, especially during these tough economic times. However, consider: What is the benefit of a fire alarm system if the occupants cannot hear it to evacuate safely? What is the value of a life that is unnecessarily lost?

A properly operating code-compliant fire alarm system is vital to the life safety of the occupants of your high-rise building. Budgeting to replace a non-code-compliant system ensures that these occupants are suitably protected.

Rodney Hatanaka is president and general manager for ProTech Fire & Security LLC, a low-voltage electronics system contracting company that specializes in fire alarm and mass notification systems. He has over 20 years of experience in the industry and holds the highest available certification, Level 4, from the National Institute of Certification in Engineering Technologies (NICET) for Fire Protection Engineering Technology.



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Additives Boost Benefits of Painting Projects

Protect your property with products that battle mold, mildew and even bad odors

BY MEL ROSARIO

Summer is the perfect time to plan on painting your property. Painting will not only improve the curb appeal for most properties, but it also helps to protect the property owner's investment from the everyday environmental hits that can cause noticeable wear and tear.

There are a variety of additive products on the market that will not only enhance your painting project, but will also add value and may extend the life of the paint job itself. If painting is on your property's "to-do" list, the following tips may be just the boost your painting project is looking for.

Anti-mildew and Anti-mold Additives

Mold and mildew are real problems in Hawaii, especially in areas that tend to stay moist year-round. There are a variety of products available that can be added directly into interior and exterior paints to help prevent mold in moisture prone areas. These products state that the additive will not affect the color, performance or durability of your paints; however, it is always best to check with the manufacturer before adding anything as it may alter the chemistry of the paints or void any warranties that may be offered.

If you are uncertain about adding this type of anti-microbial products into your paints, anti-mildew paints can be purchased off the shelf. Several brands already have included the anti-mold component. Consult with your painting professional to see if this is an option for you. Your painting professional should also explain

Flakes can be added to an epoxy coating.

that prep work, such as a thorough washing before painting with bleach and an anti-mildew mixture, will help to rid your surfaces of as much of the mold as possible.

Solar Reflective Additives

Solar reflective paint products are popuar in efforts to make less of an impact on the environment and reduce cooling costs. There is a variety of products that include the use of ceramic heat reflective agents in their paints. These paints help reflect the sun's rays away from your property and also help prevent the sun's heat from being absorbed by its surfaces. Also, UV reflective additives can be mixed into the paint primer and finishes. Again, refrain from adding anything into your supplies without first consulting a professional.

Brands that include the reflective technology in their paints may be cost more, but are worth the expense if the overall cooling spending is decreased. Clients on a tight budget should choose only to paint the walls of the property that will be impacted by the sun the most, instead of the entire exterior. It will help improve the amount of heat being absorbed, and also help to prevent fading of specific areas that need it the most.

Scent Additives

When doing interior work, a fun product is available to add scents and fragrances into the paint. These additives also help to eliminate common household odors caused by cooking, smoking and pets.

Fragrances range from fruity to floral, and the additive is mixed directly into primers and finishes, without disturbing the paints color or composition. The fragrances can last from a couple of months to up to a year, so choose your scent wisely.

Epoxy Coatings and Non-skid Additives

Another painting option is to add an epoxy coating with non-skid addi-

tives to areas such as garage floors and concrete walkways. Epoxy coatings will help to protect surfaces from damage caused by heavy foot and vehicle traffic and will increase the value of the property. Adding non-skid aggregate into the finish will also help to prevent unnecessary slips and falls.

Epoxy finish coatings are versatile since the finished product can be suited to each client's personal preferences. Finish options might include the application of a high-gloss clear coat over one's favorite color paint or stain. It may also include the use of varied colored flakes followed by a high-sheen finish.

Recently, a property owner wanted to create a "man cave" in his garage by coating a realistic football field on the floor and sealing it with an epoxy finish.

Keep in mind that epoxy coating work takes about a week to cure, once the finish is laid down. Heavy vehicular or foot traffic should be kept to a minimum during the curing process. It is best to allow ample time in your project schedules to account for the type of work.

An epoxy coating

Mel Rosario

Mel Rosario oversees the painting department at David's Custom Roofing & Painting Inc. He has been in the painting industry for 13 years, from field work specialist to project superintendent, and currently holds his waterproofing and painting contractor licenses.

continued from page 19

can take immediate action to secure the premises and prevent any further damage by performing emergency response services such as water extraction and structural drying.

Act fast—emergency recovery should begin as soon as possible. In the event of a water loss, water extraction and climate control are crucial first steps and should be performed within the first 48 hours. Work with your restoration contractor to establish a timeline for recovery and get cost estimates for emergency service and final repairs.

Knowing these things in advance will help bridge communication with tenants and owners, calm their anxieties and boost their overall confidence in management. Designate one team member to be their go-to person who can address their concerns, handle their requests and help to maintain customer satisfaction.

You will also need one person who can handle external communication with media outlets and third-parties so that information communicated publicly is correct.

Disaster planning is a process that is consistently evolving. Practice and planning are essential elements of a proactive plan. The more you know about your recovery partners and their capabilities, the more prepared you will be when you need them.

By identifying what is most important for recovery, and implementing an effective disaster plan, you will be able to react quickly, keep expenses under control, and improve your chances for a full recovery.

Shannon Hurley

Shannon Hurley is the account manager for BELFOR Property Restoration – Hawaii, a single-source provider for all aspects of disaster recovery from a water loss to a fire. She has earned her Certified Apartment Supplier (CAS) designation. She can be reached at Shannon.Hurley@us.belfor.com or 858-847-9886

Paint for a Prolonged Service Life and Asset Protection

From prepping to the finish coat, here's a step-by-step process for maintaining your building

BY JESSE TAYLOR

There comes a time in every building's maintenance schedule when painting becomes necessary. Some view painting only from an aesthetic standpoint—and as an opportunity to change a building's color scheme or freshen up the existing one.

While this may be the case for interior spaces, there is a much more important reason for exterior painting. Many in our industry refer to this as "asset management" and "service life." Asset management is protecting your building from naturally occurring environmental factors such as corrosion, UV exposure and salt air. Service life refers to how long the coating system could last.

The process of painting typically begins well before any coating is applied to walls. Identifying the scope of work for painting contractors is based on the expectations of the owner, board members or property manager. At this stage, many properties will solicit the help of a coatings manufacturer or consultant to prepare a specification and scope of work for painting contractors.

There are a number of considerations that help in determining the most appropriate products for the project.

Surface Prep

Projects may have a different type and level of surface preparation required prior to painting. Proper surface preparation can help deliver a successful project that will take the property to, or beyond, the next scheduled repaint without issue.

Many buildings are in good shape and don't require extensive surface preparation beyond the normal cleaning, spackle and caulking, while others may require more extensive repairs such as spall/crack repair, paint removal or addressing moisture intrusion. Proper surface preparation

is needed for any coatings system to reach or surpass its typical service life.

Picking a Coating

After determining the amount and type of surface preparation, it is now important to select a proper coating system to protect your building. There are various substrates or building materials such as concrete, CMU, wood, EIFS and steel that are painted. Most substrates can be painted with a wide variety of coating systems. The choice of primer and paint will determine the typical service life of the coating system. Primers can affect the overall performance of the topcoats. It is not uncommon for a painting contractor to utilize a multi-purpose acrylic primer that can be applied to a variety of substrates like the ones listed above. In most cases that can be a good option but there are instances when a specialty primer can assist in the prolonged service life of a coating system.

A common example is steel railings

that have been prepared for painting. A common multipurpose acrylic primer may be an option, but a better choice would be a primer with corrosion inhibitors in an acrylic or epoxy form. Corrosion inhibitors can help to decrease the corrosion rate of the steel.

Wood is another substrate where there are many options for a primer. In many instances a multipurpose acrylic primer is a good choice, but sometimes if the wood is weathered and has a dry appearance, a slow-drying oil primer will tend to penetrate the wood better during the drying process, creating a better bond with the substrate.

Another common issue is older paint that has a chalky appearance. This is often an indication that the existing coating has started to deteriorate and should be repainted. Chalky substrates can be cleaned, then primed with a surface conditioner which will result in better adhesion of the finish paint.

The Finish Coat

The finish coat plays a large role in the service life of a coatings system. It is the final coat that is applied and will be the first layer exposed to the elements. Many times asset owners default to the cheapest option, either because of budget constraints or personal preference.

The adage, "you get what you pay for," also applies to paint, but some-

times it is challenging to determine what makes one paint better than another. For example, it is common practice to look at the percentage solids of a paint and use it as indicator of quality. In many instances, a higher solids percentage will indicate a better quality acrylic finish paint. Keep in mind solids should not be used as the sole criteria when selecting paints as recently many manufacturers have incorporated new technologies into coatings that can provide a more durable, longer-lasting finish in a lower solids product.

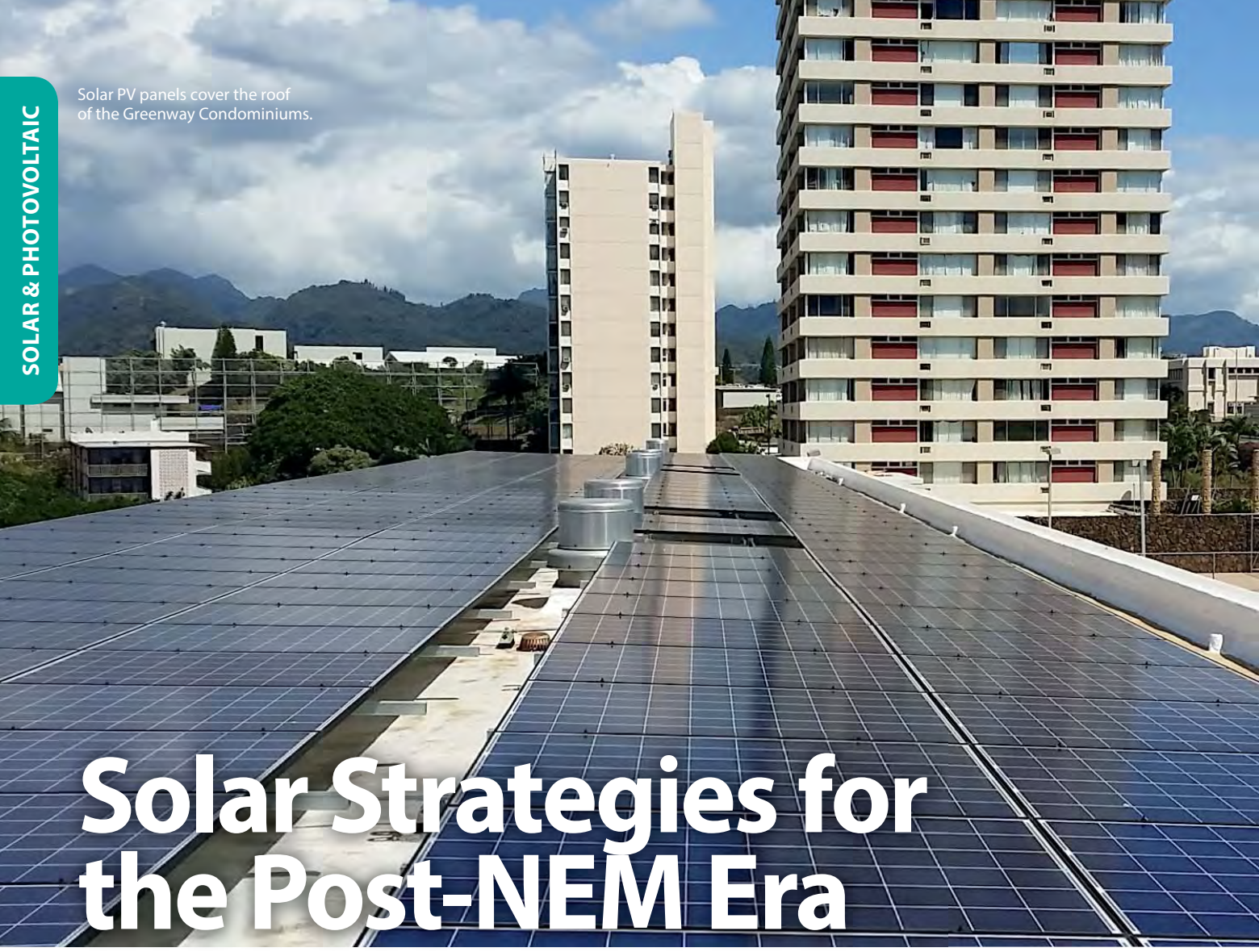
An example of a higher-cost system providing a longer service life would be when painting metal. An epoxy primer with a polyurethane finish will have increased service life when compared to a traditional acrylic finish.

Before starting any painting project, take into consideration that not all buildings are typical, and yours may have a specific need or issue that should be addressed. A good coatings system can help with this while also extending its service life, which will better protect your building in the long run.

When you are considering painting your building, seek assistance from a consultant who specializes in property repaints, a coatings manufacturer or a reputable painter as they have a vested interest in completing a quality project.

Jesse Taylor

Jesse Taylor is an estimator at JD Painting. He can be reached at (808) 269-9754 or at Jesse@JDpainting.com.



Solar PV panels cover the roof of the Greenway Condominiums.

Solar Strategies for the Post-NEM Era

Options remain available for PV project development—and how to make the best choice for your property

BY CHARLES CHACKO

Hawaii's solar industry received a jolt on Oct. 12, 2015 with the Public Utilities Commission's decision that net energy metering (NEM) was immediately being withdrawn. The NEM program was replaced with two interconnection programs, customer grid supply (CGS) and customer self supply (CSS).

The industry, however, has come up with creative project development strategies to continue adoption of solar technologies as one of the proven methods to achieve 100 percent renewable energy goal across the Islands. Hawaii still maintains its position as the highest utility cost state in the nation, with good potential for solar energy and energy-efficient technologies that will work with the current programs in place.

Programs available today include:

Net Energy Metering

The NEM program allowed solar customers to produce power during daylight hours, and any excess power to be stored as kWh credits with the utility. The utility carried this kWh credit over a period of 12 months for the customer to withdraw and utilize as a 1:1 kWh wash.

- **Eligibility:** Those with applications in the queue on or before Oct. 13, 2015 are good, continue on with project development.
- **Credits on exported power:** Yes, with a 1:1 kWh wash.

TIP: Be careful not to apply to increase the NEM system size applied/approved as it could slip into the CGS program. NEM approvals need to be renewed annually and requests should be received by the utility prior to the annual expiry date and there is only one time extension for final 180 days.

Customer Grid Supply

The CGS program is similar to NEM, except that the exported kWh is credited during the month of export, at the set rate of 15 cent/kWh in Oahu, 17 cents/kWh in Maui, 24cents/kWh in Molokai and 28 cents/kWh in Lanai. All credits not used during the month to offset the cost of electricity bought from utility will be lost with no carry-forward. Maximum PV system size under CGS

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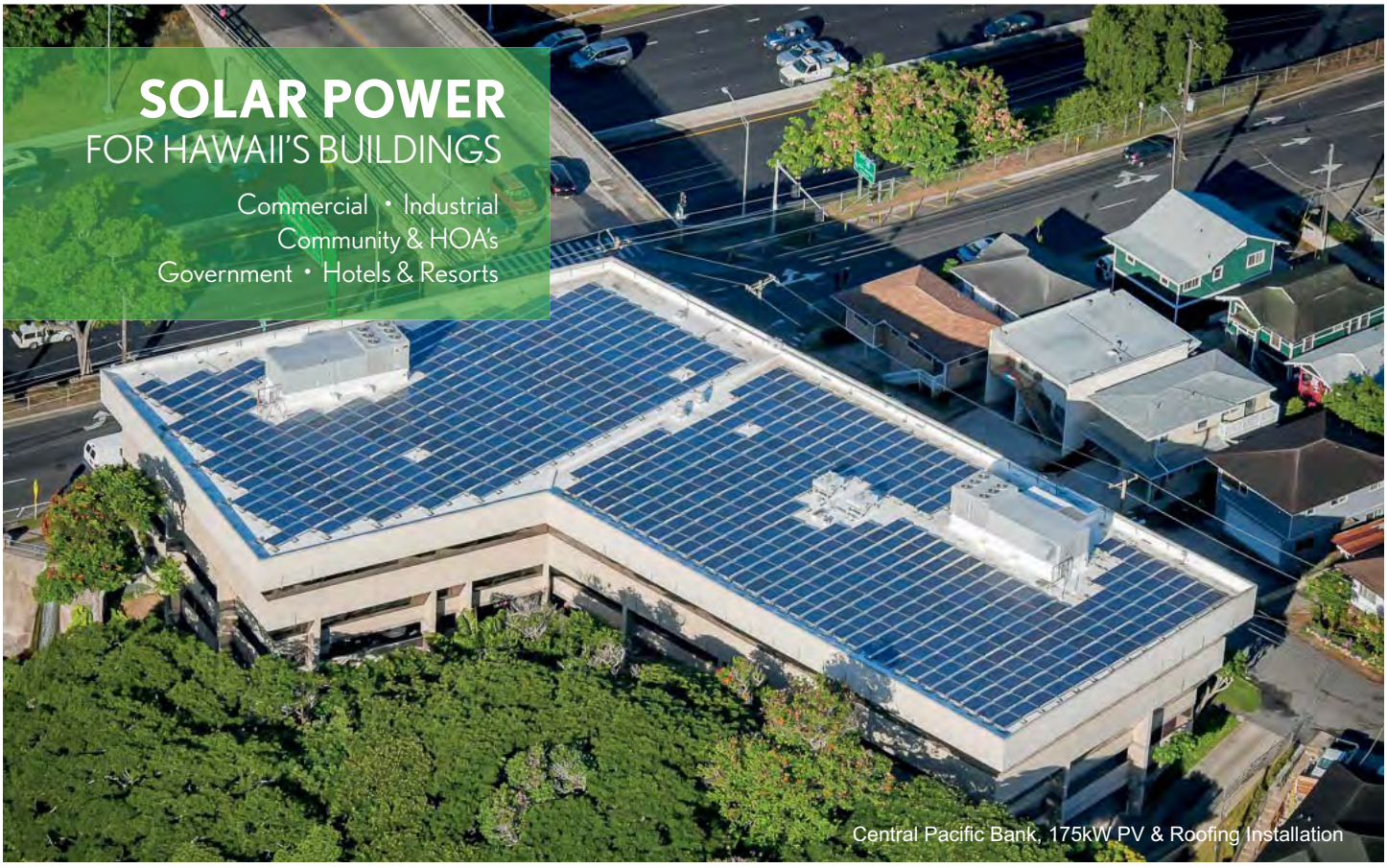

Central Pacific Bank, 175kW PV & Roofing Installation

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is limited to 100kW AC per customer meter. This program has an overall cap of 25 MW for Oahu and 5 MW each for Maui and Hawaii and available on a first come first served basis until exhaustion.

• **Eligibility:** All utility customers.

• **Credits on exported power:** Yes, with a fixed rate per kWh.

TIP: Design PV system size after analyzing the existing demand load of the customer. Think of the reduced rate received on exported kWh as going towards subsidizing electricity bought from the utility.

Customer Self Supply

The CSS program works for PV customers who are not planning to export any power by self-usage or by adoption of energy-storage technologies such as batteries. Considering the high cost of electricity in the state, a battery-based PV system is still viable in most cases. There are no utility level capacity restrictions on this program.

• **Eligibility:** All utility customers.

• **Credits on exported power:** No, there has to be in built mechanism which prevents any export of power to the utility.

TIP: Design PV system size after analyzing the existing demand load of the customer. The size of the PV system and battery bank should be based on existing demand levels during the daylight hours and otherwise. Try and keep the depth of discharge in battery banks to lower and more consistent level so as to prolong the life of batteries.

Standard Interconnect Agreement

The SIA program is for PV systems of any size that can be installed without any export of power. There is no utility level capacity restriction on this type of interconnection. Commonly used by large power consumers to develop PV projects.

• **Eligibility:** All utility customers.

• **Credits on exported power:** No.

TIP: Be aware that any exported power produced will not receive any credit but is suitable for large-scale customers with a high constant demand load during daylight hours.

The industry is now moving to a phase of maturity, sustainable project return, and payback as comparable to other industries.

TAKE A LOAD OFF

Before you invest time and resources into developing a solar project for your business or home, be sure to take a look at other energy efficient applications that can lighten your existing utility load. Here are some of the common options being adopted and successfully integrated to conserve energy:

• **Solar Hot Water:** no utility approval, relatively cheap to install, and rebates/ tax incentives available

• **Energy Efficient LED lights:** save on energy costs, and eligible for rebates

• **Energy Star / Cool Roofs:** All Energy Start rated or Cool Roof products installed as your roofing system reduces the air-conditioning load and is also available for incentives.

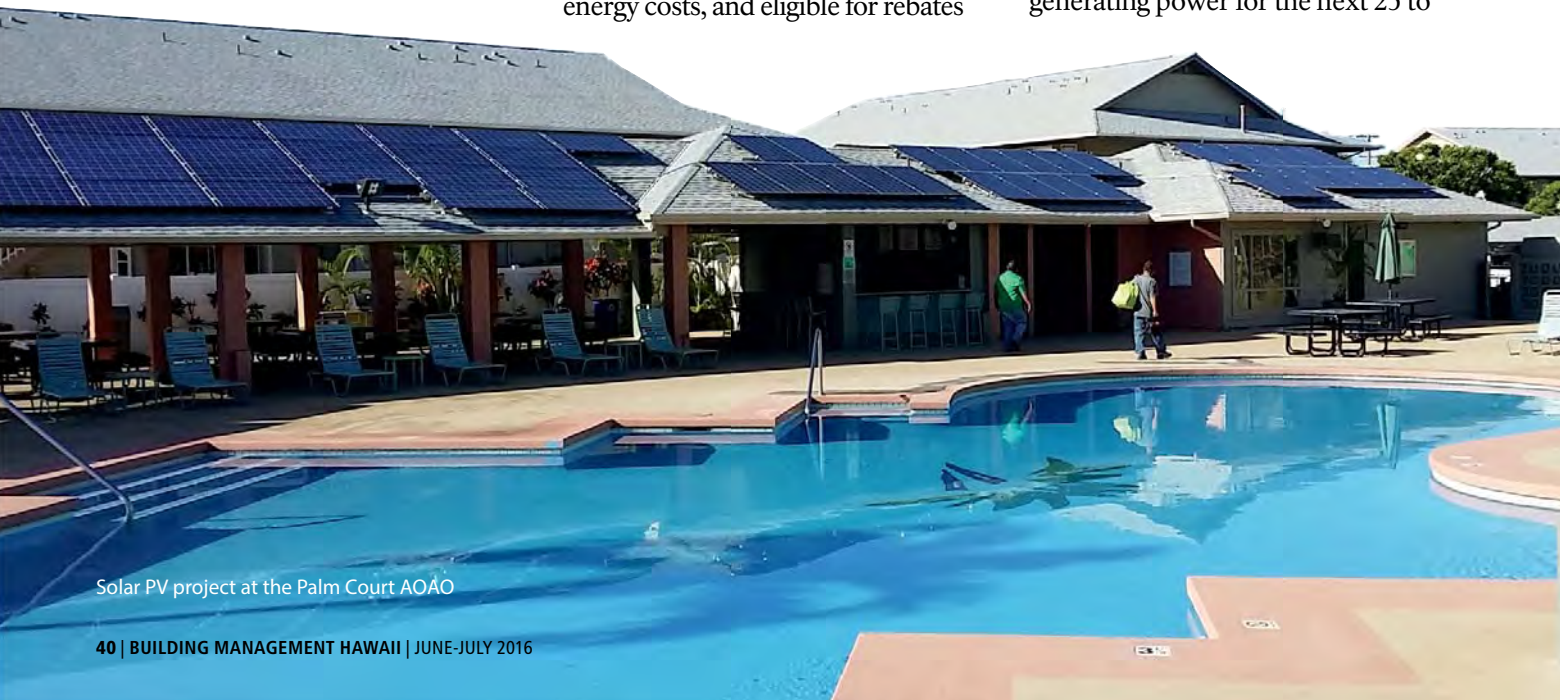
• **Solar Powered Air Conditioning:** no utility approval, reduces air-conditioning load during daylight hours, reduces energy costs significantly and avail tax credits

• **Load study reports:** This exercise will aid in designing an appropriate sized PV system as well as identify loads which can be reduced or rearranged to significantly shave off your peak demand charges

• **Sub-metering:** Instituting submetering systems to homeowners and tenants would significantly reduce overall energy consumption as power consumers become aware of their actual electricity consumption and cost.

LONG-TERM VISION

The current relatively low cost of electricity also makes customers adopt a short sighted approach to immediate adoption of solar energy. However, if you consider the fact that a PV system acquired today with the aid of tax incentives will keep on generating power for the next 25 to



Solar PV project at the Palm Court AOAO

35 years, and if you consider historical data for electricity cost in the state, the current low cost of electricity might only be a short-term phenomenon.

Greenpath Technolgies' LEZETi solar-powered air conditioning system

Third-party financed PPA PV systems are still feasible as long as proper load study is done to form baseline demand data to appropriately size PV systems. The continuing trend for lower PV system cost will also help project developers in offering attractive PPA rates to the end customer.

Solar project development is here to stay in Hawaii in spite of the demise of the NEM program due to the inherent strengths of the solar proposition. The solar industry and its customers will have to be cognizant of the changes in the utility interconnection requirements and other codes to adapt their operations and finances accordingly.

The extension of the federal tax credits for a period of five or more years also provided added investment stability in developing solar projects. Solar customers in Hawaii were blessed with a package of high investment tax incentives and high electricity cost which in turn ushered in unsustainable project return and payback. The industry is now moving to a phase of maturity, sustainable project return, and payback as comparable to other industries.

Finally, Hawaii has a thriving solar industry which has gained much experience due to its adoption of solar technologies with one of the highest per capita installation of PV systems in the country. This valuable experience of the Hawaii solar industry will also help it to be on the look-out for opportunities all over the world where solar adoption is fast catching up as one of top sunrise industries.

Charles Chacko

Charles Chacko is the vice president of Greenpath Technologies Inc., which offers turnkey solutions in renewable energy for commercial, industrial, government, military, residential and nonprofit customers. GPT engineers advanced photovoltaic solar systems and distributes and installs such solar-centric products as solar-powered air conditioners and portable power systems.

Inspect and Maintain Your PV System

Photovoltaic systems are an investment, and require routine upkeep for best performance

BY FRED BROOKS

Photovoltaic systems are more common than ever, with more people understanding they help with energy reduction. An area that is not as common is the basic maintenance that should be done to help maintain a system and help if there is the need for a warranty claim.

Photovoltaic inverter and panel manufacturers all have installation guides and each of them has a recommended maintenance check for the product. Most of the manufacturers recommend a minimum of once a year for the inspection and cleaning of the product. This is an investment and it needs to be protected, and simple system checkups can help prevent any major issues from happening.

In Hawaii, once something starts to rust, it does not take long for it to completely go.

There should be a scheduled plan of maintenance in place for these systems and a record kept on the work being done. This helps if there is a warranty claim or other type of installation issue.

There are several types of basic maintenance. The easiest to be completed is a check on the monitoring system and see if there are any major or significant changes. This should be done on a monthly basis. The installer should have gone over the monitoring software, but not all monitoring systems have great video.

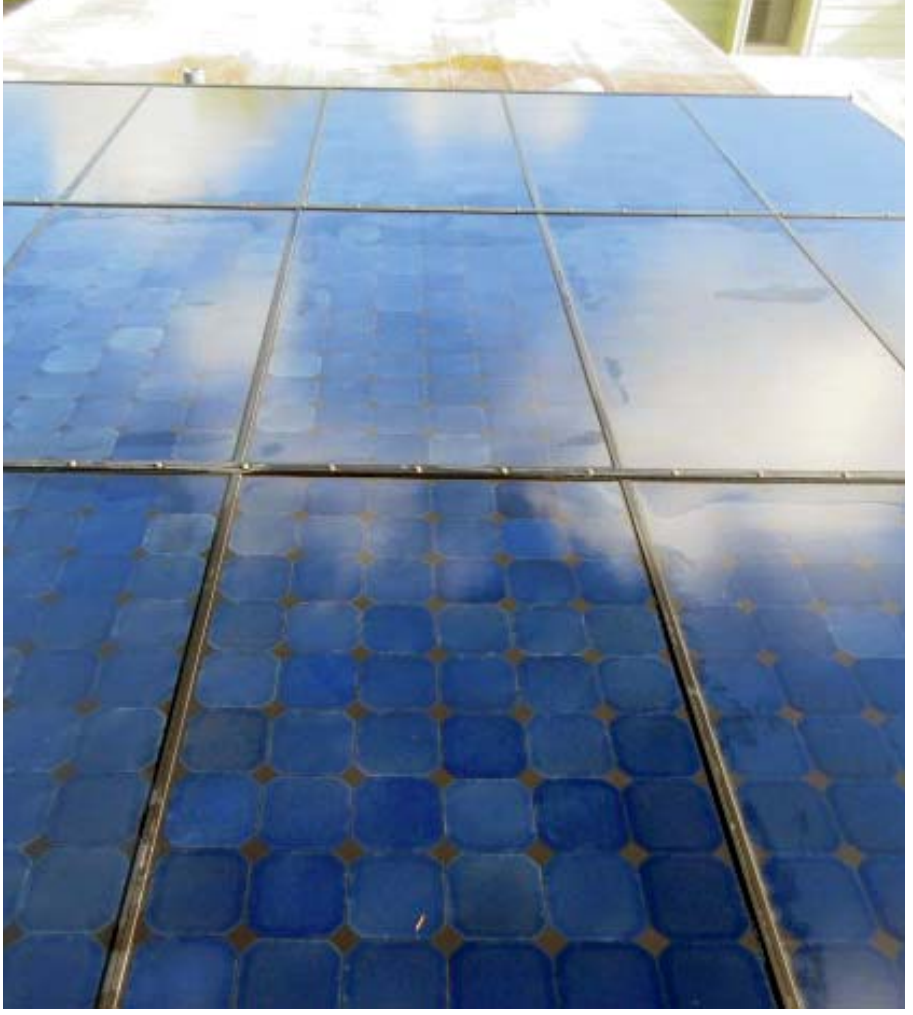
The second step in a maintenance schedule is system visual inspection. This shpuld be done semi-annually to keep abreast of how the system is looking and if there are signs of corrosion issue. In Hawaii, once something starts to rust, it does not take long for it to completely go.

For the visual inspection it is exactly that: You will go and look at the system. On the inverters, you are ensuring they are operating, and most inverters will have a green light telling you it is working, or other color lights indicating a problem. If there is a problem most of the inverter manufacturers have it set to display a code or show exactly what the problem is on the front of the screen.

You would also be checking to make sure there is nothing blocking the units or causing poor ventilation as a hot inverter does not operate as intended.

The panel visual inspection consists of looking at the panels to see if there is physical damage to the system, checking to make sure birds are not nesting and making sure the wiring is in good order and not hanging out and exposed to the elements.

During the visual you can see minor items such as zip-tying back-up wires



Solar panels, before and after cleaning

that have fallen. You can also see if there is damage on any of the conduit or piping holding the electrical equipment. This will also give you time to look at the roof where the system is penetrating and see if it is showing any signs of wear or is still in good condition. Spotting a possible leak before it happens is always a good thing.

This walk-through can show if there are any items that can lead to potentially worse issues.

Next would be to clean the panels. Most panel manufacturers have a recommended method of plain water and non-abrasive cloth or material to wash off the dirt and grime. After the system is cleaned, a visual inspection should be conducted again.

Testing of the fuses and the strings on the combiner boxes should be performed each. This is important if the system monitoring is not a string level monitoring system.

Another annual item that can be conducted and can reveal some of the most items would be a thermal scan of the panels preferably by a certified thermographer. This will show if there are any anomalies in the panel or on the equipment that is not seen by the human eye. This will show if there is a problem inside of a panel, loose connections and items that are supposed to be torqued down but are not set to the suggested torque specifications.

Having a photovoltaic system operating at its peak level is the goal, and conducting routine maintenance checks on the system will help ensure it is operating correctly and at peak efficiency.

Fred Brooks

Fred Brooks is a certified thermographer for Pacific Panel Cleaners LLC, a solar cleaning and maintenance company. The company performs monitoring system maintenance and work. For more information visit www.pacificpanelcleaners.com.

Control Energy Costs for Maximum ROI

Optimizing the production of energy increases the value and attractiveness of the property

BY JIM WHITCOMB

Since the early 1970s, energy costs have become a major problem for building and property managers. Starting with the first oil "shock" in 1973, the price we pay for energy has had a steady upward trend. Although there have been periods when the price has declined overall, energy costs have seen dramatic increases.

Nowhere is this more evident than in Hawaii. Since 1973, the cost of energy has increased more than 600 percent. Property owners and managers have had challenges in maintaining a targeted return on investment (ROI)—it is not easy to simply raise rents to cover these costs. Taxes, interest rates, labor burdens, health costs and many other costs often are out of property owners' control.

The cost of energy in Hawaii has increased more than 600 percent since 1973.

One cost—energy—can be managed and controlled.

Starting in the 1970s, energy conservation and renewable energy took on a new importance. By the turn of the century both of these have become mainstream goals, and most property owners have an agenda which embraces the use of both strategies.

Energy conservation can be accomplished by designing a building from the beginning with elements that keep energy costs to a minimum. Generally, all such design elements pay for themselves in relatively short timeframes and provide an excellent ROI to the property owner, especially when financed as part of the building costs. Retrofitting a property for energy conservation also provides an excellent ROI and can have pay back periods as short as one year. Almost all energy conservation products will pay for themselves in five years or less.

Computerized monitoring and control systems, LED lighting, variable frequency motors, occupancy sensors and motor starters are some of the most commonly utilized products. In addition, most energy conservation products have third-party financing options. These options are financed with the savings from the energy conservation products, with no out-of-pocket expenses to the property owner.

Making Energy

A new trend is to install energy production facilities on-site. Solar energy systems, both solar hot water and photovoltaic (PV), are being installed across America. In Hawaii, this is especially true. In the past five years, PV

solar systems have become commonplace, due to the quick payback and the proliferation of third-party financing.

It is possible to install a PV system with no money down and achieve exceptional savings. With no expenditure, the property owner can permanently lower energy costs and increase net cash flow. These financing options also include service and maintenance of the system at no cost to the property owner. It is like getting the utility company to give you a discount. In some cases the property owner can realize a net/net savings on energy costs exceeding 35 percent. Third-party financing plans generally have terms from three to 20 years.

The relentless rise in energy costs has spawned a huge increase in products and services. It is critical that property owners and management companies utilize firms with experience in the services being considered. And most of the energy conservation and solar products will need licensed contractors to install the equipment.

In many cases engineers may be needed to help design systems which need to interface with existing buildings infrastructure. Most systems or equipment will need service and maintenance work to keep them operating at peak efficiency.

Funding the Project

There are many different third-party financing programs available, and finding the right one is also critical to achieving the best ROI. So where to begin?

Depending on the size of the property and the scope of the work, one can achieve a good ROI by looking at all items that consume electricity or gas and seeing if there is any immediate changes to equipment that will lower energy costs. For instance, changing lighting fixtures and bulbs is usually the fastest most cost effective way to achieve energy savings. Adjusting thermostats to make sure that the property is comfortable while cutting back slightly on energy consumption is a commonly overlooked area that is as easy as trying to see if customers or tenants complain after making small adjustments. This technique must be done in tiny increments so as to not alienate the users of the property.

But for most energy conservation or energy production equipment or systems it is imperative that experienced professionals help plan and design the right system and financing for each different property. A vertically integrated company which can provide engineering, contracting, service and maintenance and also provide the financing should always be considered.

There are companies which provide package arrangements. In these situations an analysis of the energy bills is accompanied by installing meters to accurately measure the amount of energy being consumed. sometimes on a fixture-by-fixture basis. A comprehensive plan to maximize energy use and/or energy production is then designed.

Finally, after the best financing options have been evaluated and a decision is made, then the project is installed. Properties which have optimized the production of energy have a higher value, produce higher ROI and are more attractive to potential tenants.

There has never been a better time to take advantage of all of the opportunities available to property owners.

Jim Whitcomb

Jim Whitcomb is founder and CEO of Haleakala Solar, one of the largest solar and energy storage contractors in Hawaii.

Finding the Best Paving Contractor

4 steps property managers can take to choose the right company for their project

Does your property's parking lot need to be repaved? As the property manager, do you have certain requirements imposed by the homeowner association's board or by the building's owner or a specific criteria that must be met when selecting a paving contractor? Maybe the decision is totally in your hands?

Choosing a paving contractor can be overwhelming. Here are four recommendations for property managers, as posted online at dominionpaving.com, when deciding on who will be completing your next project:

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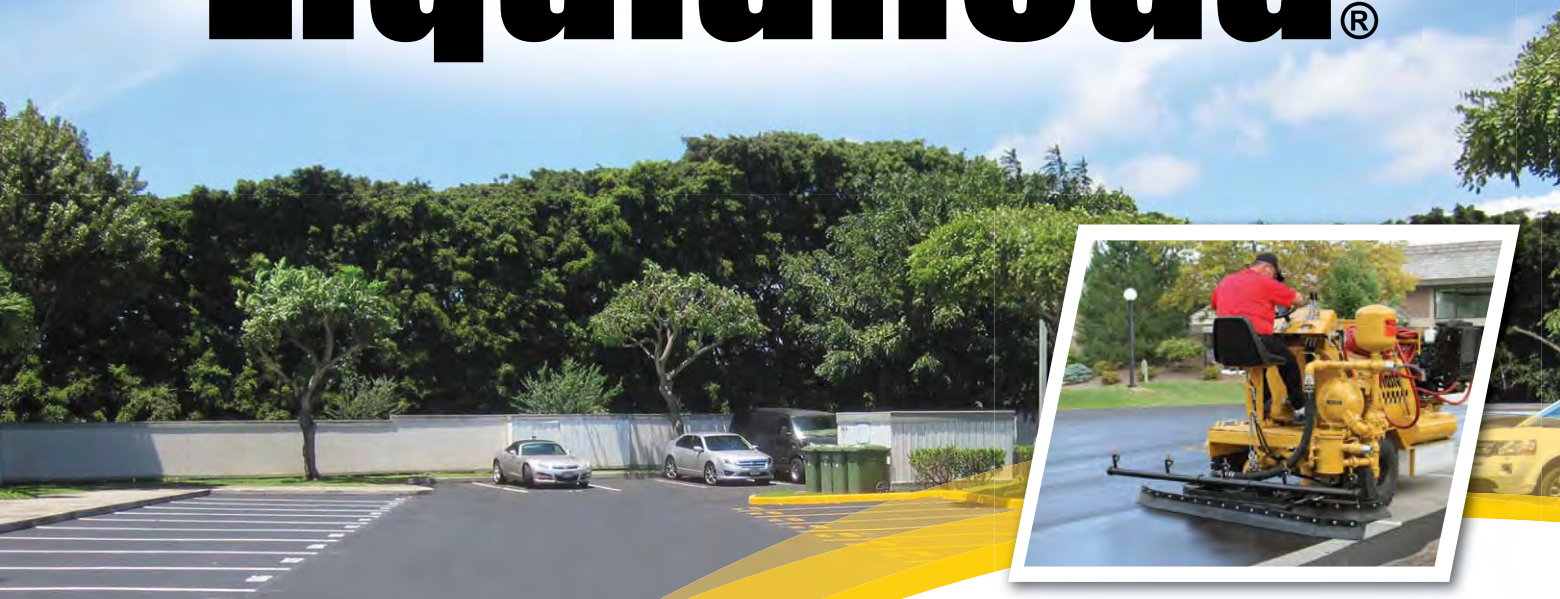

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ASK: Inquire on most recent projects, portfolio and references. If you don't feel they are qualified, ask for references. Are they reputable and experienced? Have they been around for a while? If a company has history, there is more of a chance they will be around for the future. However, just because a company has been in business for a while, doesn't necessarily mean they do good, quality work. Make sure to check on their insurance, warranties and how they handle issues or "go backs." A great contractor will take the time to educate you, answering any questions or concerns you may have.

SCHEDULE: Take advantage of free. Schedule an appointment or free evaluation if offered. Most companies do offer free evaluations or estimates. Have a representative from the company meet you at the property to go over exactly what you want done. This way you are able to outline what you want done and you can go over any of your questions and concerns.

This is a great opportunity for the representative to recommend what should be done in their "expert" opinion.

PRICE: The cheapest quote is not always your best bet. Compare the pricing and scope of work. Make sure to check quantities and measurements. If you get an extremely low estimate, there is probably a good reason why. Compare "apples to apples."

A great contractor will take the time to educate you, answering any questions or concerns you may have.

There are many factors to consider when selecting a paving contractor. Hopefully, following these pointers will aide in choosing a vendor that is right for your property and project.

Help Your Stairs Make a Good First Impression

Hint to property managers: **Don't put off inspecting treads and stringers**

BY BRUCE BUCKMAN

Curb appeal is important. Despite the deferred maintenance, this Kaneohe condo was able to use the existing stringers, cutting costs in half.

It usually takes 10 to 20 years for failure of your stairs to occur. Causes of the problem include exposure to rain and sun, deferred maintenance or poor initial design and installation.

Ask your contractor whether treads that need replacing also need a complete tear-out of the stringers. Try to avoid this if possible. Problems often arise where they fasten to the slab, wicking up moisture. Poke with a screw driver to check for dry rot.

Expensive surprise?

Two innovative ways to avoid stringer replacement:

• Rebuilding the lower rotted portion with Bondo—the same as used in auto repair.

• Injection of a special free-flowing epoxy in the problem areas. This could save the stringers and avoid a permit which can double the cost. New handrails and pickets are required, plus closed or semi-closed riser treads, rather than open treads. And pickets, like treads, must be close enough to reject a four-inch sphere.

By using modern, reinforced precast concrete treads, painting is eliminated. They come sealed, so consider another quick seal coat in two to four years. They are guaranteed against breakage or cracking, and with galvanized hardware should outlast your buildings.

Remove spills the same day, and occasionally medium-low power wash. Strive for curb appeal.

Exposed aggregate is non-slip, wet or dry, and noticeably quieter than wood. Non-treated rebar is no longer used for reinforcement, so rust, spalling and cracking does not happen with most modern precast stair treads.

So when you have visitors, friends, a prospective buyer or renter or an appraiser, be proud of the first impression you're creating: owner pride.

An example of a stringer beyond repair.

Bruce Buckman works for Building Systems Hawaii. Contact him at (808) 885-0987 or go to www.buildingsysytemshawaii.com.

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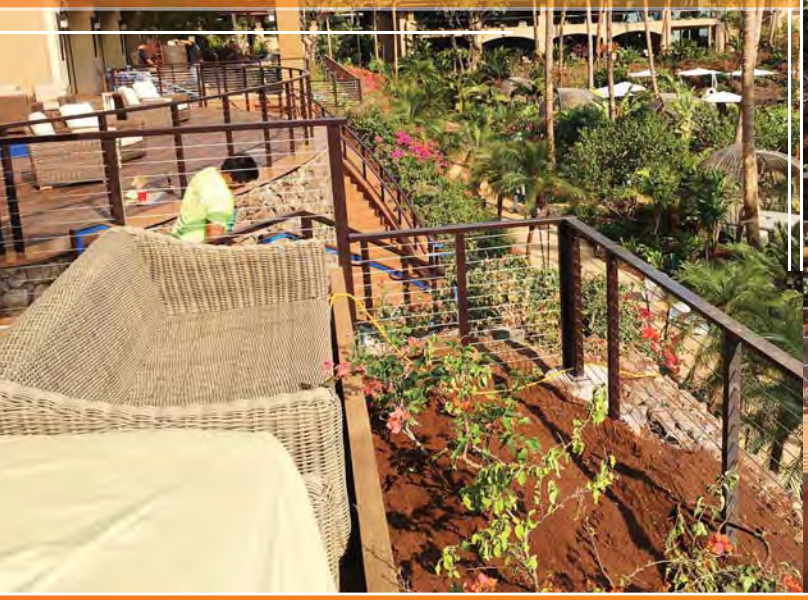

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ALUMINUM RAILING SYSTEMS

Benefits of Installing Multicolored Railing Systems

New materials allow for stronger replacements while maintaining the original appearance

BY SARAH T. LIGHT

Railing systems are generally designed to include picket and glass panels. Sometimes, however, railing systems are designed with aluminum infill panels.

The railing system being installed on a building at 509 University Ave. near Iolani School is unique in that the railings are multicolored with an aluminum Kynar coated infill panel. A close looks reveals that the posts and frame consist of a clear anodized aluminum color, the top cap consists of a medium bronze anodized aluminum color and the infill panel is Kynar painted with a tan color.

One reason this is unique is that railing systems traditionally are installed as one color. The railing system at the project in the example is multicolored because the building was constructed in the 1960s with clear anodized aluminum posts,

painted wooden infill panels and 2-inch by 6-inch painted wooden top cap.

For the project, the Planning and Permitting Department required a railing system be installed that looks identical to the original construction railings. The design team was able to come up with custom extrusions for the posts to make the 2-inch by 6-inch-wide top cap look very similar to the original railing system.

The materials being installed today are much stronger and will last longer than the original railings.

The railing system needed to be designed to withstand wind gusts of up to 150 miles per hour and engineering calculations for the wind speeds can be resolved with the help of a local engineering firm.

The building at 509 University Ave. is currently under renovation, undergoing concrete repair, painting, window replacements, lanai deck waterproof coating and guardrail and railing installation.

Sarah Light

Sarah T. Light is the manager of projects for Elite Railings & Windows, which specializes in window and railing replacement on condos, hotel and commercial buildings.

Gas-Fueled Solutions

Boost your facility's energy efficiency and lower costs and emissions

BY AARON KIRK

Gas energy offers numerous advantages for commercial property managers, including greater energy efficiency, lower energy costs and reduced greenhouse gas emissions.

Using clean, efficient gas energy can greatly reduce energy consumption. The direct use of gas energy in appliances is three times more efficient than using electricity derived from fossil fuels—saving energy and dollars. In addition, gas consumed directly in appliances for heating and cooling, water heating, cooking and clothes drying can cut carbon emissions nearly in half.

Cooking with Gas

When it comes to cooking, nothing brings out the flavors in foods like cooking with gas—whether it's propane or natural gas. Gas cooktops and ovens provide instantaneous heat, more precise temperature control and faster cooking times than their electric counterparts, making gas the preferred choice of professional chefs and commercial kitchens for cooking, grilling and baking.

Drying with Gas

High-efficiency gas dryers dry clothes more quickly and thoroughly, and use less energy than electric models. Many gas dryers sense when loads are dry by measuring heat and moisture levels throughout the drying cycle, and automatically shut off when the load is done—saving energy and reducing fabric shrinkage. Hotels, hospitals, laundromats and other facilities with high-demand drying needs greatly benefit from gas dryers.

Marvin Buenconsejo Jr., of Hawaii Gas Maui County, and Tony Krieg, executive director at Hale Makua Assisted Living Facility, look at the company's gas dryers.

Heating Water with Gas

Gas water heaters provide an efficient, reliable source of hot water for showers, faucets, washing machines and dishwashers.

Today's gas water heaters provide more hot water in less time and consume less energy. A commercial gas water heater can heat twice as much water per hour than an electric model, providing an immediate, dependable source of hot water when it's needed. New features, including improved insulation, efficient burner design and precise temperature controls, enable gas water heaters to consume about one-third less energy than they did just a few years ago.

Newer technologies like tankless gas water heaters produce on-demand hot water in high volume to meet the most intensive applications, while conserving energy and saving money on operational and lifecycle costs. With no storage tank to heat and reheat water, they use substantially less energy than traditional tank water heaters by heating water only when it is being used. In addition, the technology has fewer parts that can wear out, and some products have a lifespan much longer than traditional models.

Glen Takenouchi, Hawaii Gas Kauai general manager, checks the control panel of the tankless gas water heater system at Kilohana Plantation.

Gas-Fueled Technologies

Heating and cooling systems are the largest consumers of energy in buildings. Installing high efficiency gas-fueled technologies, including gas boilers, chillers and heat pumps, can help your facility lower its total cost of energy, increase reliability of energy supply and reduce carbon emissions. Many technologies feature added efficiency benefits like variable engine speed for part-load performance.

Energy efficient gas boilers, chillers and heat pumps are supported by the U.S. Department of Energy and the U.S. Environmental Protection Agency and are a key part of sustainability plans for facilities that have significant electric and thermal loads, including hotels, hospitals, condominiums, office buildings, colleges, malls and restaurants. Efficient gas-fueled tech-

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Are You Monitoring Your Hot Water Usage?

Maintaining control over your property's consumption can lead to major savings on utility bills

BY DAVE FELICE

In Hawaii, which has the highest costs in the nation for electricity and natural gas, the ability to effectively manage operational costs is critical in maintaining an AOAO's financial stability. There are many energy-efficient methods to achieve lower costs and improve operational efficiency, such as LED lighting, solar PV, HVAC upgrades and solar hot water.

But little focus has been given to energy efficiencies within the hot water environment.

After an analysis of the Lele Pono condo building, GreenBox Energy provided a strategy to reduce the heat pump operation during low-usage periods to save approximately $20 a day.

Typically, a building will set the aquastat (target set point), at a desired temperature and the heat source will chase that temperature until it is satisfied, regardless of building demand. This is inefficient, because every building has its own unique supply and demand curve, and those loads vary by day of the week, as well as the makeup of the tenants.

In Hawaii, there are typically two demand periods: When people are getting ready for work, and when people come home at the end of the day, do laundry, wash dishes and other household chores.

During these peak periods the facility must have enough hot water available to meet these demands. Conversely, during the off-peak periods there is an opportunity for energy savings provided it is managed properly and there is enough lead time prior to peak needs.

With proper monitoring of your hot water environment, operational visibility can be achieved as to how and why your facility is performing the way it is, where your facility is strong and where it is weak. Once realized, a strategic plan can be designed that when implemented, will provide cash flow positive savings without any adverse impact to your water delivery temperatures and your residents.

The benefits are not only reduced utility expenditures, but improved and documented operational temperatures and costs. And there is the added benefit of a direct reduction in your system maintenance costs—if the system runs less, it requires less maintenance and will have a longer useful life.

Hot water in Hawaii is different, but why?

The cost of living is higher in the Islands than other places in the country, and that includes the utility rates. When a high utility bill comes in, it is often taken for granted because it is Hawaii and we are used to these costs.

Another factor is that many of our buildings are 30 to 40 years old—some with adequate reserves, others without. Over this span of time many changes have occurred in the buildings because of leaks and repairs, equipment changes and upgrades, emergencies or implementation of solar, and with each of these changes comes a performance as well as economic impact to the building's hot water system.

Because some of these changes were not always planned and some were emergency repairs, it is not always the case that the best or most efficient solution was implemented. This creates some interesting and unique scenarios.

Monitoring: A Case Study

Building A was originally plumbed for gas and converted to heat pumps years ago. Hot water is not an issue as everyone has ample hot water and there were rarely complaints. For as long as anyone can remember, the average monthly expenditure for hot water ranged between $4,800 and $5,400. With effective hot water monitoring in place, each component of the facilities hot water system could now be analyzed for performance, effectiveness and economics.

The findings: The small backup heat pumps were running as the primary source and bypassing the more efficient main heat pump. With cost and operational data, an operating change was made to shift the load, requiring the main heat pump to do most of the work, with the backups acting as backups. The result was an immediate cost reduction of 50 percent, and a more consistent temperature delivery.

Now, with effective monitoring, control and analysis in place, the property knows exactly how their system is operating and if a deviation occurs it can be promptly addressed. These savings, $2,500 per month can now be used for other projects or to strengthen the reserve fund.

A Powerful Tool

In Hawaii, most hot water systems are master metered, which means such common area items as lighting, gas stoves, BBQs, Tiki torches, laundry areas and elevators contribute to the facility's overall consumption. As a result, it is difficult to isolate the expenditures

Ron Komine, general manager of 1350 Ala Moana installed a hot water monitoring and control system at his building. "The data and insight allowed me to fine-tune my operations and generate sustained savings of 23 percent in my hot water operations," he says. "Now, we are also better able to monitor the system and be proactive in our maintenance and repairs."

directly related to hot water generation. And, until now, tt also has been difficult to develop a methodology that is flexible enough to handle the myriad hot water environments in Hawaii.

Property managers should reach out to a company that has developed a cost-effective hot water monitoring and control system that gathers detailed operational information on the hot water system and accurately calculates the amount of gas or electricity being used to generate hot water. The capability allows you to break out hot water generation costs and provides a more detailed understanding of the building's economics in more detail.

Another benefit of a hot water monitoring and control system is the ability to evaluate and validate service and repair work that is performed on your hot water system. If you can determine costs for hot water before repairs or maintenance are performed and determine costs after the work is performed, you can now calculate a return on investment for the work performed.

This can be an extremely valuable tool when working with a building's executive board. The ability to validate the cost of work performed can be a powerful tool to assist AOAO boards in making the right decision to maintain and repair equipment.

Through effective analysis, your AOAO board and maintenance teams can now plan and act upon actual facts that exist in your environment, and implement technologies and methodologies that will result in operational improvement.

Hot water monitoring and control should be a part of every building's operational and energy-saving goals. Until now it has been a hidden part of building operations and difficult to manage—but it does not have to be.

Dave Felice

Dave Felice is the head of sales for GreenBox Energy Hawaii, an industry leader in hot water monitoring and control systems. He can be reached at 808-295-8446 or dave@greenboxenergy.net.

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nologies can also help facilities maximize the number of points earned for LEED certification.

Partnering with Solar, Other Renewables

When thinking about cost reduction through adding renewable energy, solar PV has been Hawaii's go-to technology. Oftentimes, however, due to roof size constraints or high costs, solar is not able to offset your entire electricity bill. Converting high electric loads, such as dryers, boilers, cooking and hot water, to natural gas substantially reduces electricity consumption, allowing PV to offset the remainder. This creates not only an economic advantage but also a much more environmentally friendly option.

Add a natural gas generator into the mix and you have clean, reliable backup power to keep you operational through emergencies or blackouts.

Consult a Professional

There are many types of gas appliances and gas-fueled technologies to fit your needs, usage demands, space requirements and budget. Talk to an experienced gas energy professional who can help you determine the right type of appliances and technologies for your facility.

Gas professionals provide energy efficiency audits and perform energy solutions engineering and analysis of energy alternatives to meet your energy needs. Gas energy engineers and technicians work alongside developers and architectural and engineering consultants to provide technical expertise for new gas projects.

Gas service technicians are trained in industry safety standards in compliance with state and federal regulatory laws, and can work with you to establish your gas service and provide ongoing maintenance to ensure safe, efficient, reliable service.

When considering gas appliances and gas-fueled technologies, explore applicable energy efficiency rebates and tax credits to help defray costs as you improve your facility's efficiency and reliability and contribute to cleaner air in our communities and a healthier environment.

Your gas energy provider is your partner who can help you make safe, cost-effective and efficient choices for your business.

Aaron Kirk

Aaron Kirk is vice president of sales and marketing at Hawaii Gas. For over a century, Hawaii Gas has provided clean, reliable gas service to businesses and residents statewide and is committed to advancing Hawaii's clean energy future. For more information go to HawaiiGas.com.

Taking the Sting Out of Hiring Vendors

Property management experts offer the best practices for getting the job done right

BY PRISCILLA PÉREZ BILLIG

Property managers are often tasked with hiring vendors for projects ranging from minor repairs to major renovations. Depending on the type and scale of a project, hiring a vendor may require not just a contractor but also a project manager to oversee progress and pricing.


Craig Richter

"Make certain that vendors are licensed, bonded, insured and have local references," says Craig Richter, director of property management for Hawaiiana Management Co.

Sunshine Hatto, Hawaiiana's director of Kauai operations, recommends that a thorough scope of work or request for proposal be prepared in advance. She says this ensures that all vendors are bidding on the same exact specifications and enabling an "apples-to-apples" comparison when all proposals are received.

Ryan Nitta, assistant vice president and senior property manager at Hawaiian Properties, says hiring a good contractor will make a world of difference and save a lot of headaches.


Ryan Nitta

But how do you select a good contractor with so many out there? Nitta offers advice on important things to consider before selecting a contractor:

• Get at least three written estimates for the project, which contain the same scope of work and material. A well-written and detailed request for proposal will help achieve this. If bid amounts vary significantly, ask, "Why?"

• Verify the licenses of the contractors and subcontractors with the Hawaii Department of Commerce and Consumer Affairs and check their complaint history.

• Ask the contractor for references and to provide a list of subcontractors they will use for the project.

• Request a copy of the contractors' insurance certificate and verify that they have liability and workers compensation insurance and ask them to add the Association as additionally insured.

• Get any promises, guarantees and warranties in writing.

• If any permits are required, ensure it is written into the contract.

• Review the contract and ensure you understand all the terms and conditions and that the price, as well as start and stop dates, are listed.

"Once work starts, you should periodically check on the status and conduct a walkthrough at the end of the project to take care of any punch list items as soon as possible," Nitta adds. "Payments should be arranged so that you pay as you go to avoid paying too much up front."

In some cases, such as spalling concrete, the contractor may not know the degree of spalling damage until a diagnostic inspection is actually done and the spall is opened, Richter says. "This can lead to change orders and budget over-runs. Boards may want to include a contingency fee to address this potential issue."


Sunshine Hatto

Some vendors may request the total dollar amount of the project budget prior to quoting. Hatto recommends not revealing this information.

Kealoha Takes Reins at Hawaii Energy

Brian Kealoha was named executive director in May of Hawaii Energy, the energy conservation and efficiency program for Hawaii, Honolulu and Maui counties.

Kealoha's more than two decades of experience in the energy sector includes stints at Pacific Gas & Electric, Avista Utilities and Maui Electric Co., and most recently, as regional director of OpTerra Energy Services/Chevron Energy Solutions.


Brian Kealoha

"I am excited to join the Hawaii Energy team to help the state achieve its clean energy goals." says Kealoha. "Lowering energy demand from energy efficiency and conservation is the first and most cost-effective step. I look forward to collaborating with our community and energy stakeholders to help facilitate innovative solutions for Hawaii."

Kealoha replaces **Ray Starling**, who is retiring after seven years at Hawaii Energy.

Hawaiiana Promotes Ekimoto, Wilson

Hawaiiana Management Co. Ltd. has promoted **Lois Ekimoto** to vice president of training and **Allen Wilson** to vice president of government affairs.


Lois Ekimoto

Ekimoto has been with Hawaiiana since June 2000, and was director of training. Previously she was administrator for the 360-unit Olaloa Retirement Community.

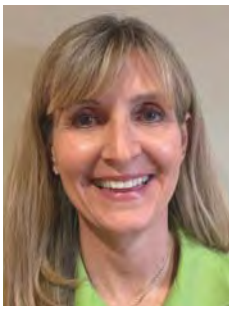
Wilson, a former member of the New Hampshire House of Representatives, joined Hawaiiana in 1999 and served as a senior management executive and then as director of property management prior to his new position.


Allen Wilson

Shewalter New CEO at Office Pavilion

Wendy Shewalter has been promoted to CEO at Contract Furnishers of Hawaii Inc., dba Office Pavilion.

"My daughters have purchased the company, and my oldest daughter Wendy will guide the company with her leadership, as one of Hawaii's largest women owned companies," says Gerri Hayes, former CEO of Office Pavilion. "I will continue to consult and serve on the board of directors."


Wendy Shewalter

Shewalter joined the company in 1988 and most recently was president of sales.

BOMA GETS BILLS UPDATE

State Sen. Mike Gabbard was the guest speaker at the Building Owners and Managers Association of Hawaii meeting on May 10 on bills before the Hawaii legislature. Among these attending at the Hawaii Prince Hotel were, from left, BOMA President Brennan C. Kalani Maike, Carlie Woodward Dela-Cruz, Sandra Bollozos-Fraticelli, Melissa Teves Pavlicek, Gabbard and Jarrett Walters.

PHOTO BY BARRY REDMAYNE

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