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¹ Source: www.gsa.gov/gpg, GPG Program Summary, GPG-031, Aug. 2017, Variable-Speed Direct-Drive Screw Chiller. The GSA study referenced herein does not constitute a product endorsement, recommendation, or preference by the U.S. Government or any agency thereof, or the Pacific Northwest National Laboratory/Oak Ridge National Laboratory. ² Integrated Part Load Value conditions based on ASHRAE 90.1 2016 minimum requirement on select models. ³ Validated by performance testing. ⁴ 0.299 kW/ton on select models. ⁵ Among electric-driven, water-cooled screw chillers as measured at IPLV conditions reported by the DOE/FEMP Energy-Efficiency Study.

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COFFEE BREAK

As the new president of the General Contractors Association of Hawaii, Jay Manzano of Unlimited Construction tells *Building Industry Hawaii* that he is pushing for more affordable housing during his term as head of the 526-member trade organization. The GCA of Hawaii, which was formed in 1932, this year also is targeting the rising cost of construction materials and more federal infrastructure investment.

Where is the residential construction industry heading? Lots of homes are planned and being built at Hoopili and Koa Ridge, but experts tell us those developments won't be enough to meet the demand for housing. With limited land available to build on, experts suggest going vertical could be part of the solution to filling Hawaii's housing shortage.

And longtime builder Greg Thielen shares his thoughts with us on such hot topics as the so-called "monster homes," ADUs and permitting procedures as well as other key housing issues.

Across all of Hawaii's counties, builders are preparing to meet sustainable "green" programs under the guidelines of the 2015 International Energy Conservation Code. In this issue we report on how the new regs will apply to all private sector projects, including renovations of 40 percent or more of a building.

Safe jobsites, says one of Hawaii's top health and safety leaders, "correlate to efficiency and quality." Experts talk about the importance of making safety at the workplace a top priority for contracting firms.

The Martino home on Maui made of mud bricks

And be sure to check out columnist Don Chapman's account of a house made of mud bricks on Maui that was built for a musician by a paragliding racer. 🏠

A hui hou,



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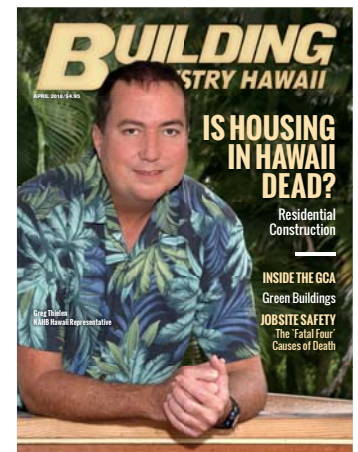
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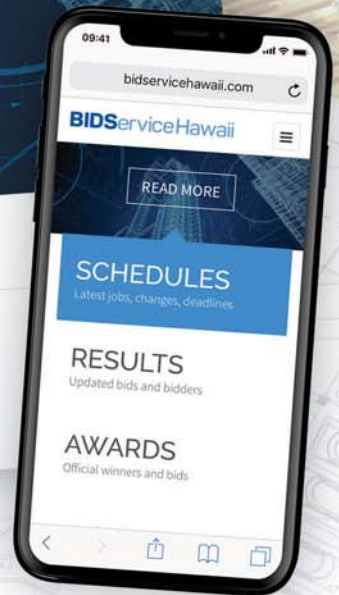
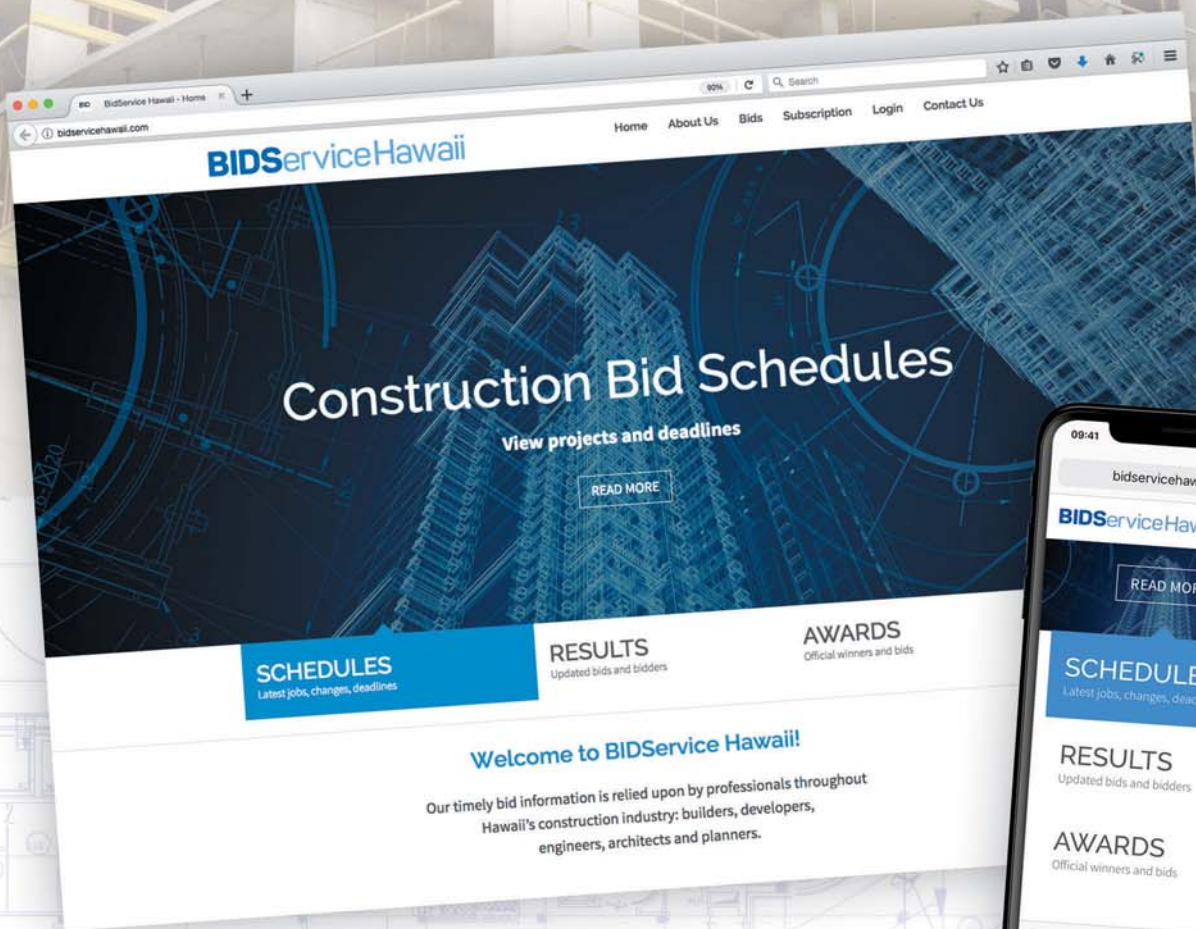


COMING IN MAY

Building Industry Hawaii offers its annual **Military Appreciation** coverage and provides an update on **Infrastructure** projects in Hawaii. Our reports include **Concrete and Concrete Repairs** and **Trucking and Hauling**.

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APRIL 5**PechaKucha: Night of Design Presentations**

The American Institute of Architects Honolulu Chapter (AIA Honolulu) kicks off Hawaii's 12th annual Architecture Month. Enjoy fast-paced shows by leading Hawaii architects, interior designers, educators, fine artists and writers that all celebrate "Community: Design Matters."

5:30-8 p.m. AIA Honolulu Center for Architecture, 828 Fort Street Mall, Suite 100. For more info, email contact@aiahonolulu.org or call 628-7243.

APRIL 6**Architectural 'Firm Crawl' Open Houses**

AIA Honolulu sponsors an illuminating evening at downtown design firms. Print out a map from AIA's website, hop from firm to firm and learn about outstanding projects and professionals.

5-8 p.m. Download map of participating AIA Honolulu firms at aiahonolulu.org. Register at contact@aiahonolulu.org until April 6. For more info, call 628-7243.

APRIL 6**Hawaii Public Radio Pledge Drive Morning Shift**

Join other AIA Honolulu members, have fun and help Hawaii Public Radio by answering phones, taking pledges and raising money for Hawaii's community radio station.

8-10 a.m. Call Hawaii Public Radio at 944-8800 (KHPR) or 941-3689 (KIPO). Go to aiahonolulu.org or contact@aiahonolulu.org for more info.

APRIL 7**Seminar: Building Your Home for Life**

Residential construction firm Graham Builders guides homeowners on home additions and renovations from start to finish: where to begin, how to select a builder, setting a

budget, scheduling, going green and more. Seminar is free and open to the public.

9-11 a.m. Honolulu Country Club, 1690 Puumalu St. Registration required. Limited seating. Call 593-2808 or go to grahambuilders.com.

APRIL 7, 14**Planning and Scheduling (STP Unit 3)**

The General Contractors Association of Hawaii (GCA of Hawaii) presents the Associated General Contractors of America's Supervisory Training Program (STP), designed and field-tested for contractors. Unit 3 covers project plan preparation, creating a critical path, documentation and more. Certificate available after completing course.

8 a.m.-4 p.m. (daily). GCA Conference Room, 1065 Ahua St. Limited seating. To register, go to info@gcahawaii.org or gcahawaii.org, or call 833-1681. Fee: GCA of Hawaii members \$295; nonmembers \$395. No refund after March 23. Substitutions available.

APRIL 9-13**OSHA 5410-OH&S Standards for the Maritime Industry**

Offered by the Building Industry Association of Hawaii (BIA-Hawaii) and UC-San Diego's OSHA Training Institute. Five-day course covers OSHA standards, policies and procedures in the maritime industry. Various credits available.

8 a.m.-4 p.m. (daily). BIA-Hawaii/CTC-Pacific, 94-487 Akoki St., Waipahu. Register online at osha.ucsd.edu or via oshatraining@ucsd.edu. For more info, go to biahawaii.org, or call (800) 358-9206. Fee: \$995. No refunds after March 26.

APRIL 12**YAF Pau Hana: Murphy's Bar & Grill**

AIA Honolulu's Young Architects Forum (YAF) hosts a pau hana at downtown Honolulu's popular pub. YAF Honolulu welcomes professionals

who are nearly licensed, newly licensed, and out to 10 years of licensure.

5:30-7 p.m. 2 Merchant St. Go to yaf.aia.honolulu@gmail.com for more info.

APRIL 16-19**OSHA 3095 Electrical Standards (Low voltage-Federal)**

Offered by BIA-Hawaii and UC-San Diego's OSHA Training Institute. Four-day workshop covers OSHA electrical standards, hazard recognition and applicable sections of the National Electrical Code. Various credits available.

8 a.m.-4 p.m. (daily). BIA-Hawaii/CTC-Pacific, 94-487 Akoki St., Waipahu. Register online at osha.ucsd.edu or via oshatraining@ucsd.edu. For more info, go to biahawaii.org, or call (800) 358-9206. Fee: \$765.

APRIL 16-23**International Energy Conservation Code Training**

The Hawaii State Energy Office and Hawaii Energy present free 2015 IECC training for members of Hawaii's building community. Training covers code changes for Hawaii's public and private sectors.

April 16, 23 (Oahu): 8-11:30 a.m. (public); 1-4:30 p.m. (private). Neal S. Blaisdell Center, Oahu Room, 777 Ward Ave. Go to <http://tinyurl.com/HNLEnergyCodeRegistration>.

April 17 (Maui): 8-11:30 a.m. (public); 1-4:30 p.m. (private). Maui Beach Hotel, Maui Room, 170 W Kaahumanu Ave., Kahului. Go to <http://tinyurl.com/MauiEnergyCodeRegistration>.

April 18 (Kauai): 8-11:30 a.m. (public); 1-4:30 p.m. (private). Lihue Civic Center, Piikoi Conference Room B, 4444 Rice St., Lihue. Go to <http://tinyurl.com/KauaiEnergyCodeRegistration>.

April 19 (Hawaii Island-Hilo): 8-11:30 a.m. (public); 1-4:30 p.m. (private). Engineering Partners Conference Room, Engineering Partners, 455 E Lanikaula St.,

Hilo. Go to <http://tinyurl.com/HiloEnergyCodeRegistration>.

April 20 (Hawaii Island-Kona):
8-11:30 a.m. (public); 1-4:30 p.m. (private). West Hawaii Civic Center, Council Chamber, 74-5044 Ane Keohokalole Hwy., Kailua-Kona. Go to <http://tinyurl.com/KonaEnergyCodeRegistration>.

APRIL 17

Pa'ina Mini Mixer

The Associated Building and Contractors Hawaii Chapter (ABC Hawaii) invites its members to show up for drinks and pupus in their vintage and/or outrageous aloha wear. 5:30-8:30 p.m. Aloha Beer Co., HI Brau Room, 700 Queen St. Limited seating. Register by April 11 via renee@abchawaii.org.

APRIL 17-19

Construction Quality Management (CQM)

GCA of Hawaii, the US Army Corps of Engineers, Honolulu District and the Naval Facilities Engineering Command, Pacific Division present this three-day, joint USACE and NAVFAC training program that is a mandatory certification requirement for appointed contractor quality control system managers (CQCSM). Valid for five years.

Noon-4 p.m. (daily). GCA of Hawaii, 1065 Ahua St. To register and for more information, go to gcahawaii.org. Fee: GCA members \$95; nonmembers \$125.

APRIL 19

NAWIC General Membership Meeting

The National Association of Women in Construction hosts its monthly dinner and membership meeting. Get to know other women in the industry, build partnerships and increase your knowledge.

5:30 p.m. (networking); 6 p.m. (dinner and meeting). Honolulu Country Club, 1690 Ala Puumalu St. For more info, contact Lenie Malapit at EMalapit@sshinc.com. Dinner fee \$35.



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APRIL 19

BIA-Hawaii Networking Night: Hawaiian Electric's New Schofield Generating Facility

Network with your peers, enjoy light refreshments and tour Hawaiian Electric's new biofuel/conventional fuel power facility.

5:30-7:30 p.m. More details TBA. For more info, go to biahawaii.org or contact Carolyn Hyman at cah@biahawaii.org or 629-7503.

APRIL 19

'A Night in Kakaako' Networking Event

The Hawaii Society of Business Professionals (HSBP) invites Hawaii's business people to mix, mingle and enjoy top local brews, cuisine and entertainment. Sponsored by HonBlue, Anthology Marketing Group, American Savings Bank, Bishop & Co. and Ferraro Choi.

4:30-8 p.m. 449 Cooke St. Tickets available through April 17. Register at hsbp.biz. Fee: \$85 for HSBP members; \$120 for guests.

APRIL 20

Construction Safety & Injury Prevention Program (CSIP): Manager/Employer/Supervisory Staff Training

This BIA-Hawaii class targets workers, safety staff, managers and owners. Topics include HIOSH state and federal construction standards compliance and inspections, with a focus on injury prevention.

8 a.m.-2 p.m. BIA-Hawaii, 94-487 Akoki St., Waipahu. Register at biahawaii.org. For more information, contact Barbara Nishikawa at 629-7505 or bln@biahawaii.org.

APRIL 21

UHSAAA Annual Beaux Arts Ball

Enjoy a buffet, DJ, drinks and prizes at a live casino and silent auction at the University of Hawaii School of Architecture Alumni Association's annual gala.

5:30 p.m. Hilton Waikiki Beach Hotel, Grand Ballroom, 2500 Kuhio

Ave. Go to uhsaaa@uhalumni.org or aiahonolulu.org for more info.

APRIL 23-26

OSHA 500-Trainer Course in OS&H for the Construction Industry

Offered by BIA-Hawaii and UC-San Diego's OSHA Training Institute. Students become authorized 10- and 30-hour Outreach Programs trainers and receive other industry credits after successfully completing four-day course and written exam. Verification of Prerequisite Form/other credentials required. No online class enrollment.

8 a.m.-4 p.m. (daily). CTC Pacific, 94-487 Akoki St., Waipahu. Call (800) 358-9206, or go to biahawaii.org or osha.uscd.edu to apply and for more info. Fee: \$765. No refunds after April 9.

APRIL 26

Hawaii Energy Innovation Symposium

Hawaii Energy hosts its first Innovation Symposium featuring national energy experts and presentations on data analysis and audits, benchmarking, improved building performance and more.

8 a.m.- 5 p.m. Sheraton Waikiki

Resort, 2255 Kalakaua Ave. Register at cvent.com/events/hawaii-i-energy-innovation-symposium/ registration. Attendance fee: \$85 (general admission); \$40 (students and nonprofits).

APRIL 27; MAY 4, 12, 18, 19

40-HR Construction Safety Hazard Awareness Training for Contractors Course

Designed specifically for contractors, this GCA of Hawaii 40-hour course provides the additional certification for a Site Safety & Health Officer (SSHO) as stated in the NAVFAC UFGS 1.6.1.1.1, and covers the major revisions to the EM385-1-1. Certification provided after successful testing.

7:30 a.m.-4 p.m. (daily). GCA Conference Room, 1065 Ahua St. Register by April 20 at gcahawaii.org. Fee: GCA members \$500; nonmembers \$750.

APRIL 28

Architectural Walking Tour, Kakaako Area

Celebrate AIA Honolulu's 12th annual Architecture Month with a special guided tour of Kakaako by

**JUNE 8-9
3rd Annual Construction Industry of Maui Home Show**

This popular CIM event showcases products and services from leading builders, remodelers, building material suppliers, financial institutions, and home and landscape specialists. Vendor registration deadline is May 25.

4-8 p.m. (June 8); 9 a.m.-4 p.m. (June 9). War Memorial Gymnasium, 700 Halia Nakoia St., Wailuku. Go to mauiconstruction.org or contact Brad Wells at (808) 280-0772 or constructionindustryofmaui@gmail.com for registration and more info.



Renee DeLima, assistant manager of ecostruktore, and Michelle Turner, CIM board member, at the 2017 Construction Industry of Maui Home Show. PHOTO COURTESY TRISHA EGGE/MAUI WINDOWS AND DOORS

AIA-member architects.

3-6 p.m. Meeting point and staggered tour schedules TBA. For more info, go to aiahonolulu.org, contact@aiahonolulu.org or call 628-7243. Fee: \$15 per person.

APRIL 28; MAY 5

Contract Administration (PMDP Module 2)

GCA of Hawaii and the Associated General Contractors of America present a Project Manager Development Program designed to enhance the performance of novice (less than two years' experience), newly-hired and team-based project managers. "Contract Administration" covers construction law, project contracts, negotiations and more. Certificate available after completing course.

8 a.m.-4 p.m. (daily). GCA Conference Room, 1065 Ahua St.

Limited seating. Register by April 20 at gca@gcawhawaii.org or gcawhawaii.org, or call 833-1681. Fee: GCA of Hawaii members \$395; nonmembers \$495.

MAY 7-11

Primavera P6 Professional Training

Oracle Primavera P6 Fundamentals (May 7-9), Oracle Primavera P6 Advanced (May 10-11). GCA of Hawaii and event partner PMOLink, a technology company, present two training seminars in Primavera project management software. Various credits available.

8 a.m.-4p.m. (both seminars). GCA Conference Room, 1065 Ahua St. Register at pmolink.com or contact Geoff at training@pmolink.com or (985) 674-5968. Fee: \$1750 per seminar.

MAY 16

Identifying Trouble Areas in Residential Buildings & Permitting – May

A BIA-Hawaii workshop for seasoned and novice realtors. A licensed GC covers basic building construction, ADUs, permitting basics and more. Counts for four DCCA 2017-2018 biennium continuing education requirements.

8 a.m.-1 p.m. Honolulu Board of Realtors, 1136 12th Ave., #200. Register online at biahawaii.org or contact Barbara Nishikawa at 629-7505 or bln@biahawaii.org for info and registration. Fee: BIA members \$100; nonmembers \$150; \$75 through available ETF funding.



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The Making of Maui's Mud House

40,000 bricks later, 'craziest' home rises in Wailuku



Tell people you live in a house made of mud and many would imagine a lowly hovel and wonder which of the president's Third World "s-holes" you're from.

Those folks have never met **Greg Martino** or seen his visionary home in the hills above Wailuku, Maui, built with bricks of Maui dirt.



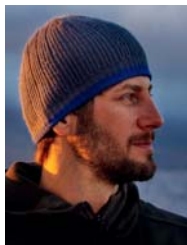
Greg Martino

Make that 40,000 bricks he had a hand in creating.

"It's the craziest thing I've ever done in my life," says Martino, a musician who studied at the prestigious Berklee School of Music in Boston, then spent 30 years in Brazil playing music and "building homes for myself and my friends."

Among the people he enlisted to make his dream come true was—and this should be such an obvious choice (not)—a native of Estonia who is a professional paraglider.

Meet **Igor Merk**, who started in the construction world as a teen in



Igor Merk

Tallinn, a town on the Baltic so beautiful it could have been created by the Disney princess factory, but in fact dates to the 13th century. It wasn't a career choice, more of a necessity after his parents divorced and left him and his older brother Alex mostly on their own. They renovated their apartment, and friends started asking them to do

some work on their places. He continued in construction as he traveled the world chasing his passion for extreme sports. Which led him to Maui.

"I get excited when things get complicated," says Igor.

This also comes in handy when flying a paraglider. He's good enough to have represented Estonia at last summer's world championships in Monte Avena, Italy, racing above the Dolomite peaks with 180 other pilots. A few years ago, he completed a 164-mile race in eastern Washington.

"This is where carpentry and the complicated stuff come in—when you're flying, you have to figure out three or five moves ahead," Igor says. "Flying is easy after work, and work is easy after flying."

Not that there was much easy with a project and a process that had them, as Greg says, "reinventing the wheel every day."

Igor was offered a field manager position by Marty Hearn of Maui Custom Built, a friend from Maui's paragliding community. "Marty said he didn't want to take on this one

alone," recalls Igor, which is exactly what Greg said in bringing Marty aboard.

It's not exactly a new concept—ancient cultures have made mud block for eons, but it was the Babylonians who were the first to make bricks and bake them, thus enabling them to withstand everything from rain to sand storms to enemy weapons. But it's something of a lost art today.

But baking these bricks is not necessary because they devised a mixture of 90 percent fine silt that is dredged from Maui's many irrigation and surface water reservoirs with 10 percent cement—no easy task as they had to hire a welder to create a special mixer.

"We made one brick and it was OK," says Igor. "Problem was, we needed to make 40,000."

Using a \$10,000 hydraulic press air-freighted from Colombia, Greg says, "we got to where we could make 1,000 bricks a day, but at the start we couldn't do 500."

Bricks must then be cured for a month.



The crew manufactures mud bricks for the Martino home.

Igor Merk can be reached at airwaterearth@gmail.com.



The finished home in Wailuku

The structural challenges were almost as great as the difficulty in getting permits from Maui County. Greg used an architect he knew from Brazil for the six-building modular design on a hillside with 20 feet of elevation difference and no electric, water or sewer infrastructure. Finding an engineer was tougher. “None of them wanted to take on the potential liability,” Greg says. Finally, he found an Egyptian engineer in Portland with an interest in the growing field of alternative building materials who was willing to take on the project, despite never having worked with mud before.

“We’re connecting the modern world to the old world.”
—Igor Merk

“What really helped was bringing in **Jim Niess** of the Maui Architectural Group,” says Greg. The respected veteran Maui architect was able to finesse the plans past the permitters.

Bricks are 6 inches by 4 inches and have two notches, so no mortar was used. “It’s dry-stacked,” Greg says, “like big Legos.”

Bricks contain both vertical and horizontal rebar, and have tested out supporting 300 psi.



The builders needed to make 40,000 bricks out of the Maui mud for the walls of the house.

“We’re connecting the modern world to the old world,” Igor says.

When placed, bricks were finally plastered over.

The home spreads across 240 feet of hillside. Design wise, says Igor, “there are always surprises. You come around a corner and, wow, there is the whole North Shore. You make another turn and there’s Haleakala.”

They laid down 10,000 feet of hand-made floor tiles (exterior walkways between buildings are terra cotta).

Igor and brother Alex made the custom bamboo doors.

Looking back at all that went into

creating a beautiful finished product, Igor says, “If you put your mind to it, there’s a way to solve anything.”

Greg and his Brazilian wife **Marlene** have been living there for two years and couldn’t be happier, he says. “We love it.”

But why an earthen home?

“I don’t do well with drywall and temporary structures,” he says. “I call that style disposable architecture. ... I figure this house will still be here a thousand years from now.”

“Sustainable can mean many things,” Igor says. “This house is sustainable

...continued on page 68

Builders Reap Another Record-setting Month

For the second consecutive month, contracts awarded during February by government agencies hit a 10-year high. Awards valued at \$152,816,808 exceeded \$69,036,691 last February, surpassing the previous high of \$98.7 million in 2015.

After two months, 2018 volume stood at \$388,493,247, doubling the volume of \$177,673,649 during the same period last year. At press time,

agency awards for March were also at record levels.

The Department of Education awarded the lion's share of new work—approximately \$96,373,182—while Department of Transportation contracts account for another \$30,181,306.

Alakai Development Kakaako LLC won February's largest award—a \$76 million contract for the design-build

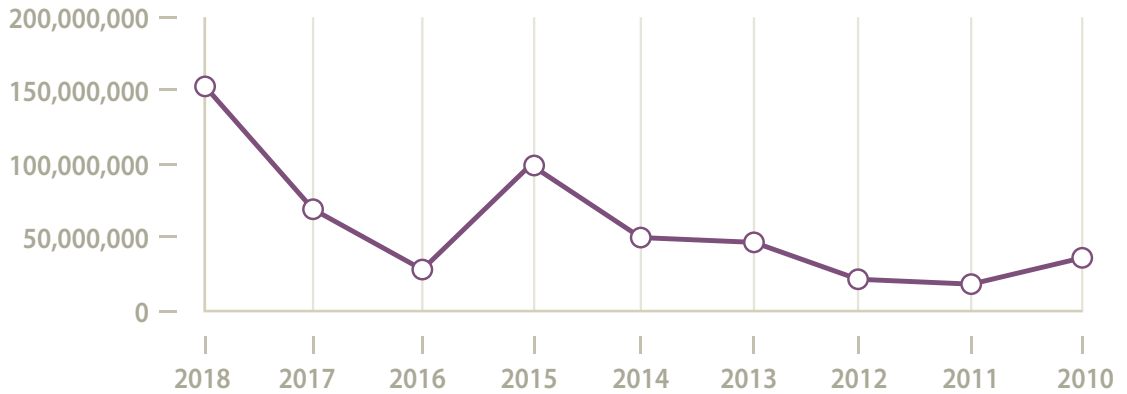
of a vertical elementary school at 690 Pohukaina St.

The next largest contract of \$28,218,191 went to SpeedShuttle LLC for the operation, maintenance and management of the intra-airport passenger transportation system at Daniel K. Inouye International Airport.

Goodfellow Bros. Inc. won the third largest job valued at \$19.6 million for roadwork on the Island of Hawaii.

FEBRUARY AWARDS

2018	\$152,816,808
2017	\$69,036,691
2016	\$30,938,845
2015	\$98,877,318
2014	\$49,722,137
2013	\$46,448,388
2012	\$21,217,983
2011	\$16,083,309
2010	\$35,902,277



Oahu

Alakai Development Kakaako LLC	\$76,000,000
Design and Build Vertical Elementary School At 690 Pohukaina St.	
SpeedShuttle LLC	28,218,191
Operation, Maintenance and Management of the Intra-Airport Passenger Transportation System at Daniel K. Inouye International Airport	
Yamada Paint Contr. dba GW Construction	3,320,000
Pahoa High and Intermediate School, Electrical Upgrade, Hawaii Island	

CC Engineering & Construction Inc.	2,318,000
Central School District Heat Abatement , Mokulele Elementary School, PVAC Permanent Classrooms	
Wasa Electrical Services Inc.	2,064,358
Mountain View Elementary School, Electrical Upgrade, Hawaii	
CC Engineering & Construction Inc.	1,859,700
Nimitz Elementary School, Heat Abatement, PVAC Permanent Classrooms, Central School District	
MEI Corp.	1,495,939
Aiea High School, Miscellaneous R&M FY16	
Constructors Hawaii Inc.	1,376,600
Hawaii Community College, Manono Campus, 391 Electricity Renovate Interior, 391 Electronics/Electricity Reroof, University of Hawaii	

MJ Construction Co.	1,003,500
College of Tropical Agriculture and Human Resources, Waimanalo Research Station, General Repairs and Demolition of Tractor Storage Shed and Locker/Shower Building, UH-Manoa	
Amethyst Builders LLC	935,000
Radford High School, Building O to Renovate to Multimedia	
R.H.S. Lee Inc.	444,000
Waialua High and Intermediate School, Miscellaneous R&M FY17	
Ralph S. Inouye Co. Ltd.	385,000
Waikiki Aquarium, Design-Build Various Concrete and Security System Repairs	

FEBRUARY'S TOP 10 CONTRACTORS

1. Alakai Development Kakaako LLC (1)	\$76,000,000
2. SpeedShuttle LLC (1)	28,218,191
3. Goodfellow Bros. Inc. (1).....	19,600,000
4. Yamada Paint Contr. dba GW Construction (2)	5,810,000
5. CC Engineering & Construction Inc. (3)	4,542,700
6. Isemoto Contracting Co. Ltd. (2).....	2,666,661
7. Wasa Electrical Services Inc. (1)	2,064,358
8. Heartwood Pacific LLC (3).....	1,975,853
9. MEI Corp. (1).....	1,495,939
10. Constructors Hawaii Inc. (1)	1,376,600

Information is summarized from the Contractors Awarded section of *BIDService Weekly*, compiled by Research Editor Alfonso R. Rivera.

AWARDS BY AREA

Oahu	\$121,430,002
Hawaii	28,856,382
Maui	2,530,424
TOTAL	\$152,816,808

AWARDS BY AGENCY

DOE.....	\$96,373,182
DOT	30,181,306
DPWHI	19,600,000
UH	5,661,261
DAGS	567,309
DLNR	433,750
TOTAL	\$152,816,808

Oahu Plumbing & Sheetmetal Ltd.	377,922
Sunset Beach Elementary School, Admin Bldg. A, Install AC	
CC Engineering & Construction	365,000
Campbell Complex (Kaimiloa Elementary School, Ilima Intermediate School and Campbell High School) Heat Abatement, KES, IIS, CHS, Install Chilled Water Disp.	
HSI Mechanical Inc.	355,200
Mokulele Elementary School, Bldg. G, Replace Library AC	
Henry's Equipment Rental & Sales Inc.	315,000
Millilani Iike Elementary School, Miscellaneous R&M FY17	
Heartwood Pacific LLC	276,782
Ernest Bowen De Silva Elementary School, Miscellaneous R&M FY16	
Henry's Equipment Rental & Sales Inc.	173,900
August Ahrens Elementary School, Resurface Parking Driveway and Building I Drainage	
MJ Construction Co.	88,000
Palisades Elementary School Miscellaneous R&M FY16	

Island Construction & Demolition	57,910
Webling Elementary School, Miscellaneous R&M FY16	

Maui

Sita Information Networking Computing USA Inc.	1,326,214
Maintenance of Flight Information System, Public Address System and Gate Management System, Kahului Airport	
Tom's Backhoe & Excavation Inc.	636,901
Honoapiilani Highway, Safety Improvements, Vicinity of Ukumehame to Olowalu, Lahaina	
Certified Construction Inc.	567,309
Maui Community Correctional Center, Lower Campus, Roofing Repairs and Improvements, Wailuku	

Hawaii

Goodfellow Bros. Inc.	19,600,000
Mamalahoa Highway (Route 19) Widening, Mud Lane to Mana Road, South Kohala	

Yamada Paint Contr. dba GW Construction	2,490,000
Keaau Middle School, Electrical Upgrade	
Isemoto Contracting Co. Ltd.	2,276,161
Chilled Water Plant AC Improvements, UH-Hilo	
Heartwood Pacific LLC	1,525,898
Keaau Middle School Miscellaneous R&M for Race to the Top, Zones of School Innovation	
Nan Inc.	1,346,900
Kohala High School, K Gym, Structural Repairs, Kapaau	
F&H Construction	620,000
College Hall AC Improvements, UH-Hilo	
Certified Construction Inc.	433,750
Reroofing at Kalopa State Recreation Area, Hamakua	
Isemoto Contracting Co. Ltd.	390,500
DOE Annex Hilo, Building C, Repair Exterior Stairs	
Heartwood Pacific LLC	173,173
Waiakea Elementary School, Miscellaneous R&M FY10	

LOW BIDS

The companies below submitted the low bids in February for the work detailed. Submitting the lowest bid is not a guarantee of being awarded the job. However, it is a strong indication of future work, and subcontractors can plan accordingly.

Oahu

Kiewit Infrastructure West Co	\$21,262,410
Dowsett Highlands Relief Sewer, Nuuanu Avenue	
57 Engineering Inc.	5,851,680
Waianae High School, Connection of Buildings SP and T	
Nan Inc.	3,998,116
6929 Naio Interior Renovation and Building Reroof, Kapiolani Community College, University of Hawaii	
Maui Kupuno Builders LLC	2,562,811
Rehabilitation of Streets, Unit 73B	
HBM Acquisitions LLC	2,153,000
Kapolei High School, Building L, Replace AC Equipment	
Paul's Electrical Contracting LLC	1,537,700
Aiea District Park, Replacement of Ballfield Lighting System	
Amethyst Builders LLC	1,454,480
Iroquois Point Elementary School, Miscellaneous R&M FY16	
HBM Acquisitions LLC	1,309,000
Kapolei Middle School, Building D, Replace AC Equipment	
Certified Construction Inc.	1,105,582
5988 Imiloa Reroof Building, Windward Community College, UH	
Henry's Equipment Rental & Sales Inc.	880,000
Waianae Intermediate School, Miscellaneous R&M FY08-10	
Certified Construction Inc.	734,149
Waianae High School, Miscellaneous R&M FY08-10	
Amethyst Builders LLC	710,622
Niu Valley Middle School, Miscellaneous R&M FY13	
MEI Corp.	644,163
Iliahi Elementary School, Miscellaneous R&M FY08-11	
Solo Corp.	476,230
Ala Moana Regional Park, Magic Island Outdoor Shower Improvements	
Tory's Roofing & Waterproofing Inc.	399,950
Lanakila District Park, Staff Office Reroof	
United General Contracting Inc.	256,942
Kalama Beach Park, Structural Improvements to Comfort Station	
Tory's Roofing & Waterproofing Inc.	209,060
Ala Moana Regional Park, Reroof Diamond Head Concession	
Henry's Equipment Rental & Sales	202,700
8872A and 8872B Modulars Installation of Fire Hydrants, Honolulu Community College, UH	

Harvey Brothers LLC	192,985
Laie Water Reclamation Facility, Pond Relining	
Castaway Construction & Restoration LLC	188,625
Lihikai Elementary School, Miscellaneous R&M FY14	
United General Contracting Inc.	168,384
Koko Head Regional Park, Koko Head Shooting Complex Phase 2, Department of Parks and Recreation, Storage Shed Improvements	
Tory's Roofing & Waterproofing Inc.	142,000
Heeia Neighborhood Park, Roof Improvements to Comfort Station	
A's Mechanical & Builders Inc.	135,000
Waipahu Intermediate School, Miscellaneous R&M FY14	
Integrated Construction Inc.	79,700
Kalihi Waena Elementary School, Pedestrian Foot Bridge, Spalling and Concrete Repairs	
Road Builders Corp.	77,361
Nenu Street and Honokoa Place Improvements	
Paradise Roofing Corp.	65,479
Mililani Uka Elementary School, Reroof Portables	
Hawaii Works Inc.	64,234
Various Schools, Remove and Replace Roof Hatches	
Bora Inc.	59,518
Leilehua High School, Bldg. R, Gym, Replace Floor Tiles	
Pacific Isles Equipment Rentals Inc.	43,000
Wahiawa Elementary School, Bldg. L, Concrete Walkway	
Pacific Island Fence LLC	40,200
Radford High School, Practice Field Fencing and Ground Cover	
Rons Construction Corp.	34,750
Leilehua High School, Resurface Gym Driveway	
Pacific Star Roofing	18,380
Mililani Waena Elementary School, Reroof Portables	
WJ Hale Construction Inc.	10,587
Shafter Elementary School, Install Cattle Gate	
Alakai Mechanical Corp.	10,031
Salt Lake Elementary School, Install Drinking Fountain	

Maui

Maui Kupuno Builders LLC	4,610,317
HI FTNP Hale 10(2), Haleakala National Park Rehabilitation	

Global Specialty Contractors Inc.	1,599,999
Waiehu Drainline Replacement (Wailupe Drive, Analio Street, Lekeona Loop and W. Hiahia Place)	
F&H Construction	705,000
2226 Nursing Renovate Interior, Maui College, UH	
Betsill Bros.	292,220
Lahainaluna High School, Miscellaneous R&M FY08-11	
Site Engineering Inc.	101,200
Mitchell Pauole Center, Sewer Improvements, Molokai	

Hawaii

Hawaiian Dredging Construction Co. Inc.	17,946,200
HI STP SR 11(1) & SR 11(2), Hilea and Ninole Stream Bridges, Kauai	
Stan's Contracting Inc.	684,300
Hawaii Community Correctional Center, New Intake Unit, Hilo	
Stan's Contracting Inc.	517,300
Hilo Union Elementary School, Miscellaneous R&M FY13	
Stan's Contracting Inc.	371,300
Kaumana Elementary School, Miscellaneous R&M FY16, Hilo	
Site Engineering Inc.	213,300
Kalaniana'ole Elementary and Intermediate School, Building D, Repair Damaged Support/Walls, South Hilo	

Kauai

Shioi Construction Inc.	2,049,600
Cultural Culinary Instructional Facility, Kauai Community College, UH, Lihue	
Maxum Construction of Hawaii LLC	277,983
Kauai Plant Industry Facility, Replace AC Split Units and Mechanical Room Door	
Beachside Roofing LLC	253,632
Reroofing of the Hanalei Police and Fire Station, Hanalei	
Koga Engineering & Construction Inc. ..	95,200
Koloa Elementary School, Miscellaneous R&M FY17	
Maui Kupuno Builders LLC	91,795
Pavement Repair at Various Locations, Island of Kauai	
Pacific Recreation Co. LLC	63,925
Sewer Manhole Liner Removal, Kuhio Highway, Lihue	
Pacific Blue Construction LLC	50,348
Repairs to the Smokey Valley Clubhouse, Waimea	



The entrance and registration desk at Alohilani Resort Waikiki Beach
PHOTO COURTESY NAN INC.

SHOWTIME!

In Waikiki, Nan Inc. wraps up Alohilani Resort

BY BRETT ALEXANDER-ESTES



While pushing the luxurious Alohilani Resort Waikiki Beach to a March close, says Lane Uchimura, executive vice president at Nan Inc., “time was our enemy.”

The former Pacific Beach Hotel was occupied for both phases of the two-year project, Uchimura says. Nan first renovated 839 guest rooms and suites,



Lane Uchimura

then started in on the hotel’s public spaces—the all-new lobby and port cochère, executive meeting/conference rooms, infinity pool deck, retail spaces, Island Club and

Spa, the Morimoto and Momosan restaurants, and the Lychee daily breakfast buffet.

“The fact that the hotel was occupied and fully operational in the two guest towers on each end,” Uchimura says, “raised the level of challenges exponentially.”

To accommodate guests, Nan

imposed sound, dust and time restrictions, and provided new protective pathways for check-ins, tours and other essential traffic. And these “had to be constantly formulated, re-evaluated and implemented on several cycles,” Uchimura says.

The site had other surprises, too.

“As-built drawings and existing conditions were definitely not as expected,” Uchimura says. Some walls hid electrical panels and unknown structural conditions. And “because of the site’s historical significance,” he says, “the project encountered ancestral human remains at different times and locations” while excavating. “This caused a considerable delay in the site work and required the project team to re-sequence and re-design major phases—both interior and exterior—of a very complex master plan.”

But, says Uchimura, Nan’s “can-do” spirit forged ahead.

“We suggested many innovative ways to change structural supports and foundations to avoid digging,” he says. “This facilitated the opening of

the lobby only a few days later than planned, rather than months later.”

Work on Morimoto and Momosan restaurants followed suit, “which helped to get the work on the exterior and interiors moving forward, making up for valuable lost work days,”

Uchimura says.

The tight schedule called for weekly coordination meetings between Highgate, the owner; Rider Levett Bucknall, the owner’s construction representative; and Nan and the designers, says Reginald Coballes, project manager.



Guest suite at Alohilani Resort Waikiki Beach
PHOTO COURTESY NAN INC.



Alohilani Resort's new second floor restaurant overlooks the Oceanarium.
PHOTO COURTESY NAN INC.

SPOTLIGHT ON SUCCESS

Some Nan executive staff had offices on the project site for “quick resolution to issues and alternative work plans,” he says. “Several members were available 24/7.”

Finishes and fixtures also required close attention.

“This project sourced a wide array of materials from across the globe, and

combined them with state-of-the-art systems,” Coballes says. “The pool deck is equipped with cabanas that have individually remote-controlled louver roofs, which allow each guest to set the exact amount of sunlight they desire. The Morimoto Restaurant also includes similar automated sun-control systems in outdoor terraces.”

And lighting levels in all public area fixtures—many of which are custom-built—are synchronized to the time of day by a central control system.

The Oceanarium, Alohilani’s historic 280,000-gallon attraction, “was retained and remains at the heart of the property,” says Ryan Nakaima, Nan Inc. vice president. “Its



Ryan Nakaima

grandeur and open views have now been maximized by the removal of most of the existing lobby’s second floor, creating new heightened ceilings and the towering glass curtain

The new porte cochère at Alohilani Resort Waikiki Beach
PHOTO COURTESY NAN INC.



SUPER SUBS

“Although this project required incredible teamwork from all subcontractors, there were a handful who displayed unwavering resolve and responsiveness to both the project team and the hotel staff throughout the entire duration,” says Lane Uchimura, executive vice president at Nan Inc.

“These team members were key in promptly resolving the significant issues and problems, which seemed to always arise in the most difficult of times, and we would especially like to recognize their efforts and show our gratitude.”

- Wasa Electrical Services Inc.
- Standard Sheetmetal & Mechanical Inc.
- Commercial Plumbing Inc.
- Coastal Constuction
- BF Tile
- Sync Drywall Systems
- Beachside Roofing
- Concrete Coring
- Modern Flooring
- Zelinsky Painting
- JD Painting & Decorating Inc.
- Pacific Aquascapes
- Northshore Exteriors Inc.



Awesome Job!

It was great to work with Nan, Inc. on this fantastic project at the Alohilani Resort Waikiki Beach.

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that was added to line the port cochère. “The new infinity pool deck, which now sits among the very best in Waikiki and, of course, the addition of the Morimoto and Momosan restaurants”

are also standout features, he says. “As we completed each phase of the project, we continuously received feedback that affirmed the client’s goal of developing a new ‘aloha-chic’ resort

and destination,” Nakaima says. “What especially hit home was seeing the reaction from Hawaii-resident guests. “Aside from the various ‘Oohs’ and ‘Ahhs’ overheard as they walked in, the most common words we heard from people who knew the former Pacific Beach Hotel was, ‘Wow, what a transformation!’ ” 🏠

The new business center at Alohilani Resort
PHOTO COURTESY NAN INC.



FINISH LINES

Reginald Coballes, project manager, says Alohilani’s grand design includes 50-plus imported finishes that include:

- Marbles and porcelains from Italy and China
- Column teak cladding from Indonesia
- Ipe from South America
- Eucalyptus ceiling accents from Africa and Australia

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RESIDENTIAL CONSTRUCTION

OUT OF LAND

‘There’s only one place left to go and that’s vertical.’

BY BRANDON BOSWORTH



Koa Ridge is among the last parcels of developable land on Oahu.

When it comes to housing, how can builders and buyers contend with limited supply and strong demand?

“There isn’t much developable land left on Oahu, with the exception of Hoopili and Koa Ridge,” says John Shaw, senior vice president and chief architect with Gentry Homes Ltd. “There’s only one place left to go and that’s vertical.”



John Shaw

Vertical doesn’t necessarily mean affordable. “The cost of building anything over about 10 stories is so high it pretty much dictates a high-end product,” says

Quentin Machida, senior vice president and chief financial officer with

Gentry.

On a smaller scale, many owners of single-family homes are opting to go vertical with their own property.

“I see a lot of additions being built, usually above the carport,” Machida says. “It’s harder to build



Quentin Machida



an addition directly above an existing house. There can be structural problems, especially with older homes. Sometimes it's just more cost-effective to tear down the old property and start over."

Whether building an addition or a new house, the height will be governed by zoning codes. "If it's a single-family home, there is a height limit of 25 feet or 30 feet depend if there is a slope.

**"Interest rates are creeping up but the market looks good. Demand is pretty substantial."
—Quentin Machida**

The temporary ban on "monster houses" signed by Mayor Kirk Caldwell could also affect the construction of multi-story homes on Oahu. Bill 110 limits planned residential structures to no more than 70 percent of lot size and allows for no more than 12.5 bathrooms and two wet bars.



James Keller

When it comes to large-scale vertical projects, James Keller, president of Armstrong Builders LLC, says that even though "the current state of Hawaii's residential construction industry is very strong ... high-rise work in urban Honolulu is slowing somewhat."

He says other segments, such as renovations and new construction, "are picking up."

Evan Fujimoto, president of Graham Builders and 2017 Building Industry Association of Hawaii (BIA) president, sees a healthy remodeling and renovation market as well.



Evan Fujimoto

New Steel Tariffs Threaten Residential Construction

Hawaii might see slight increase in price of new homes

BY BRANDON BOSWORTH

Steel and aluminum tariffs put into place by President Trump last month could pose a serious threat to many industries, with economic consulting group The Trade Partnership projecting a potential of 28,000 jobs lost in the construction industry alone.

"It is unfortunate that President Trump has decided to impose tariffs of 25 percent on steel imports and 10 percent on aluminum imports," says Randy Noel, chairman of the National Association of Home Builders (NAHB), in a statement. "These tariffs will translate into higher costs for consumers and U.S. businesses that use these products, including home builders. Given that home builders are already grappling with 20 percent tariffs on Canadian softwood lumber and that the price of lumber and other key building materials are near record highs, this announcement by the president could not have come at a worse time."

The likely impact on Hawaii's residential construction industry is hard to measure.

Evan Fujimoto, president of Graham Builders, is optimistic. "Most of our homes are constructed with wood framing," he says. "Steel accounts for a small

percentage of the overall material components that go into our homes. Rebar, light-gauge structural connectors such as joist hangers, hurricane ties, etc., are typical. We do not anticipate any significant price impacts on our projects."

On the other hand, James Keller, president of Armstrong Builders LLC, says "we have some very large steel projects coming up this year, which could be affected from a cost standpoint, should the tariffs occur. While we do not object to well-thought-out programs that help the country, businesses should have time to plan and adjust accordingly."

Some islands may be affected more than others. On the Big Island, Mike Fujimoto, HPM Building Supply president and CEO, says "many roofs—especially in East Hawaii—are corrugated steel because of the harsh environment. For our industry, tariffs just increase the cost of the home. It could put a dent in homebuilding if people can no longer qualify for a mortgage or construction loan."



Randy Noel

"The residential remodeling market is booming as many old homes are being renovated and remodeled for multi-generational households, long-overdue kitchen and bath remodels, and aging-in-place improvements," he says. "With real estate prices setting new records, many are opting to remain in their homes and renovate."

When it comes to new construction,

Fujimoto says, "aging-in-place and universal design continue to be drivers in how we conceptualize home designs for families, especially when the needs of elder family members are considered. Zero-step showers, wide hallways and doorways, ramps, minimizing steps, improved lighting and color contrasts in materials are all considered.



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“Basically, homes are seen more as environments that have to be responsive to people’s needs as they go through different life phases. It’s more than a programmatic approach to design and building by simply providing a certain number of rooms and spaces.

“A home’s functionality and utility,” Fujimoto says, “are measured qualitatively: Is the design healthy? Safe? Barrier-free? Are spaces flexible and adaptable? How will people ‘feel’



Seabridge by Gentry
PHOTO COURTESY OF GENTRY HOMES LTD.

Big Island Bouncing Back?

After going through a rough patch, Big Island residential construction might be bouncing back.

“Our peak year was 2006, in terms of building permits for single-family residences,” says Mike Fujimoto, president and CEO of HPM Building Supply. The financial crisis of 2007-2008 changed things dramatically. “We went from about \$59 million in permits issued a month in 2006 to \$14 million a month in 2009. By 2011, it was down to \$12 million. That’s an 80 percent drop.”

Fujimoto says 2011 was the industry’s “low point.” 2015 saw a marked improvement, with around \$33 million in permits per month. It didn’t last, as numbers dropped to \$27 million in 2016 and \$22 million in 2017.

“There are signs permits are starting to improve in 2018,” Fujimoto says. “January was a strong month for permits for the entire island. It was

our highest month in a long time.”

He says the “strongest action” has been in East Hawaii for the past two years.

“There have been more permits issued in East Hawaii, but the value is less than in West Hawaii,” as there has been a decline in the number of permits issued for high-end projects.

Certain features are popular in new Big Island homes. “People want more open spaces,” Fujimoto says. “There are more great rooms that combine kitchens, living rooms and dining rooms. Even in smaller homes people want 9-foot ceilings.”

Fujimoto says customers are savvier than ever. “Customers today are very intelligent and use the power of the internet to do research,” he says. “They are strong shoppers who know what they are looking for.”



Mike Fujimoto

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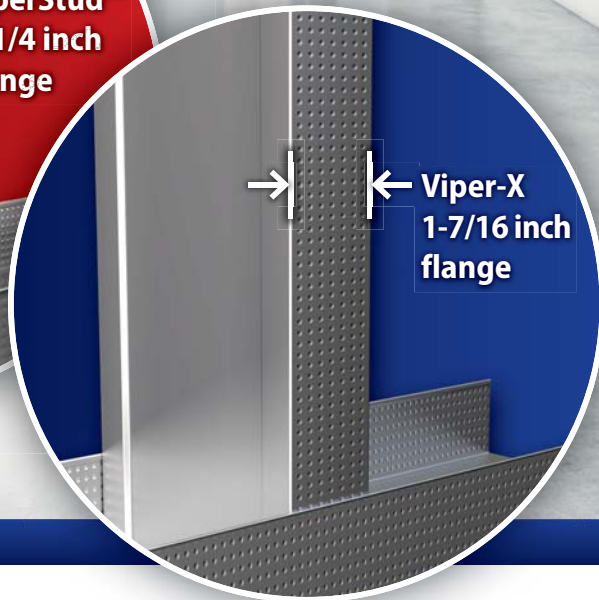
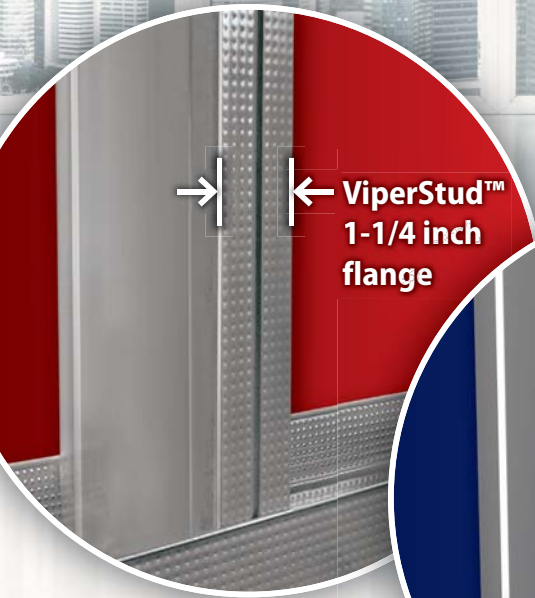


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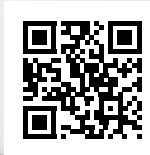
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occupying certain spaces? Is there adequate space for congregating? Easy to maintain? Low cost of operation? Good resale value? These are the criteria people are beginning to consider more than a simple laundry list of number of bedrooms and bathrooms.”

Technology plays an important role in homebuilding.

“Gentry focuses on entry-level home buyers,” Machida says.

“Consumers are looking for value and our company tries to continually improve on that. We do that through energy efficiency and technology such

“The residential remodeling market is booming as many old homes are being renovated and remodeled.”

—Evan Fujimoto

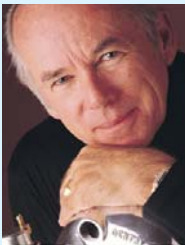
as AirRenew Drywall and windows with UV light filters.

“In the beginning, everyone had window AC units with high electrical costs. Now we have the opportunity to provide a system that will save homeowners money and be more efficient.”

“It’s becoming more and more efficient to operate AC at a very reasonable cost,” Shaw says, “as long as you do what you need to do like clean it and change the filters. PV (photovoltaic cells) can largely offset the cost of air conditioning. Using open cell foam in the walls create a really tight house for

Gentry’s Golden on 50th Anniversary

2018 marks Gentry Homes 50th anniversary of homebuilding in Hawaii. Founded in 1968 by Tom Gentry, the company’s first project was developments in Windward Oahu.



Tom Gentry

“We started as a small company offering affordable and attractive homes 50 years ago,” says Bob Brant, Gentry’s president and CEO. “As of today, Gentry Homes has delivered over 13,000 homes and is especially recognized for the acclaimed master

planned communities of Waipio by Gentry and Ewa by Gentry. We are grateful for each and every new homeowner and for the countless testimonials from families and individuals of all Gentry-built communities.”

Gentry’s efforts have resulted in numerous BIA-Hawaii Parade of Homes awards for the best in residential design, functionality and value; Hawaii Built-Green; and the Honolulu City & County’s Environmental Awards for water and energy conservation.

“My uncle worked for Tom Gentry,” says longtime employee John Shaw, senior vice president and chief architect with Gentry. “I knew him since I was in high school. Tom was very creative and innovative and always on the cutting edge. He was constantly raising the bar. You can identify the homes he built in Enchanted Lake because they are the ones with garages and garage doors. Back when they were built everyone still had carports.”

Why has Shaw stayed with Gentry for nearly 40 years? “I really like the people and the company,” he says.

Quentin Machida, senior vice president and chief financial officer, joined Gentry in 1990. “I really like the entire Gentry family,” he says. “I left for a year but came back.”



1993 aerial survey photo of Enchanted Lake in Kailua, the site of some of Gentry Homes’ earliest projects.



1976 aerial survey photo of Enchanted Lake

“For Gentry, innovation is key. We’re constantly trying to provide value for our customers. We want to provide homes for regular working people. That’s our job every day: To provide people with a home they can afford. We see ourselves as part of the community.”



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A Pauoa home rebuilt by Graham Builders

PHOTO COURTESY GRAHAM BUILDERS/HAWKIN BIGGINS PHOTOGRAPHY

climate control and noise management, but they are still designed so you can open the windows and get a breeze.”

Skilled labor remains a regular source of concern for builders, and

different companies have different ways of dealing with the problem.

“For Gentry, we’re insulated because we’ve been partnered with the same subcontractors for decades,”

Machida says. “We try to maintain a stable environment. It’s hard to have new people coming on to projects because we have lots of requirements.”

“Gentry decided many years ago to be partners with our trades,” Shaw says. “It’s a great policy. We don’t have to retrain with every new project. It works very well for us. Most companies just bid for the lowest price but that isn’t always the best thing to do. We’re very picky.”

There are many new residential projects on the horizon.

“Graham Builders’ larger projects are typically multi-generation homes,” Fujimoto says. “We have two new homes planned for Kaimuki and Pearl City, and several multi-generational additions planned for Mililani, Pearl City and Manoa. Most of our additions involve adding large second-floor areas that come close to doubling the size of the homes.”

Keller says Armstrong has “several residential projects underway across the state. On Maui, we recently broke ground on a new luxury townhouse development, called Makalii at Wailea, and construction is underway on Kalama Kai, a residential workforce housing development in Kihei. We’re also nearing completion on Keala O Wailea, which features 70 private two- and three-bedroom luxury condominium units. Other projects include Hale Alani, a series of custom

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homes within a private residential community at Kohanaiki on Hawaii Island, and several large custom residences on Oahu.”

A major concern statewide continues to be a dearth of affordable housing, which greatly impacts both buyers and sellers.

“Generally speaking, the resale inventory is really low and the market is undersupplied,” says Machida. “Interest rates are creeping up but the market looks good. Demand is pretty substantial. Every sales phase of a project features 10 units, and we always have 50 to 70 families wanting to purchase a home.”

“Due to a chronic housing shortage, we don’t have the same options that people living in places like Arizona, New Mexico and Texas have where they can sell a larger, more valuable home and easily find something smaller for less—many times a lot less,” Fujimoto says. “People in Hawaii want to downsize, but even a very small home can cost an exorbitant amount.”

Shaw doesn’t see things improving



Coral Ridge in Ewa Beach is one of Gentry Homes’ newest single-family communities. PHOTO COURTESY GENTRY HOMES LTD.

soon. “Buyers are going to have to settle with what’s affordable,” he says. “In the ’80s, an ‘affordable’ house was \$100,000. Now it’s \$500,000. I don’t know where young people are

going to live. It’s very difficult to make money with affordable housing, but we are committed to producing what we feel are the best homes for the money.” 🏠

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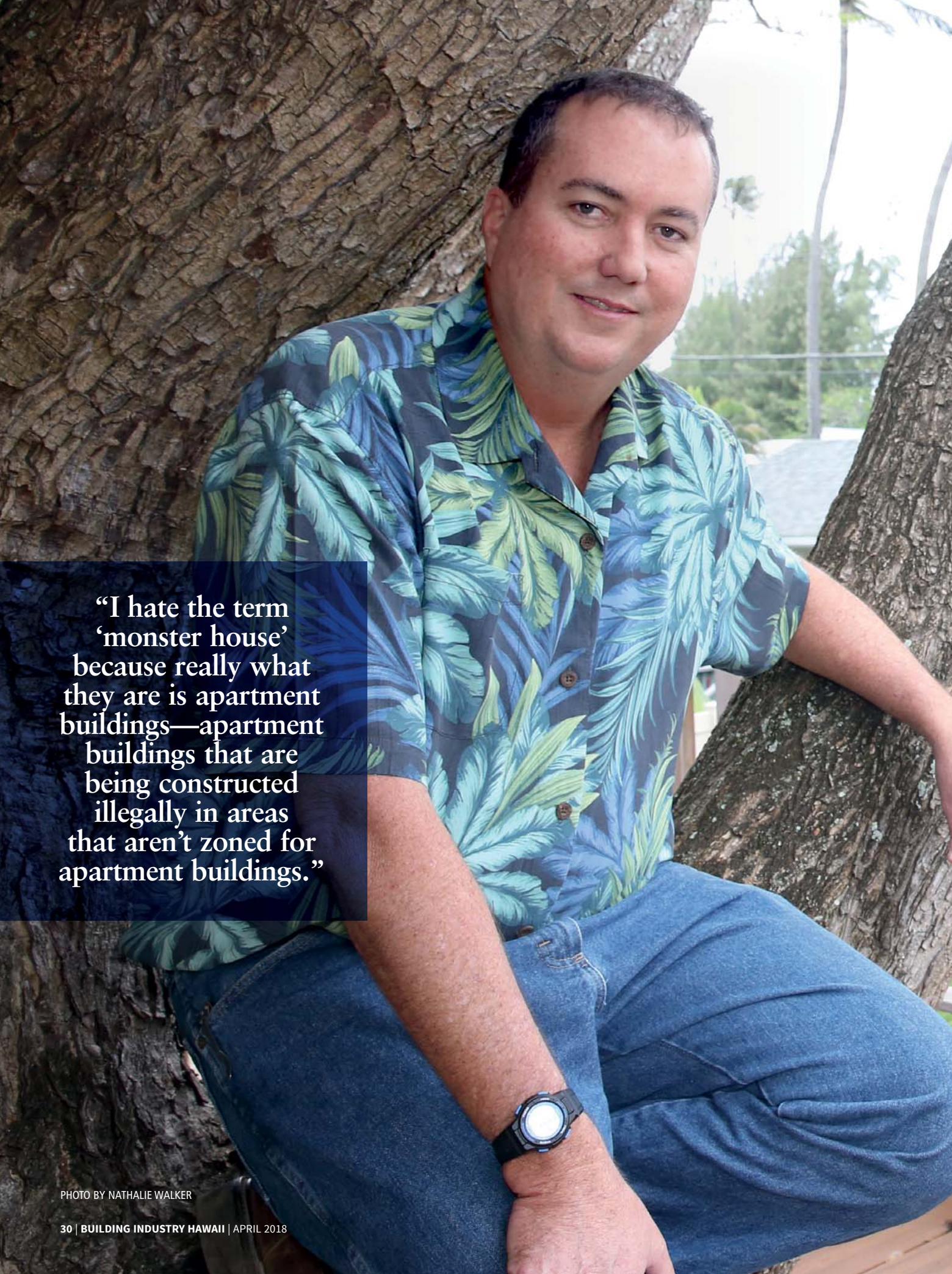








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A man with short dark hair, wearing a blue and green floral patterned short-sleeved button-down shirt and blue jeans, is sitting against the thick, textured trunk of a large tree. He is looking directly at the camera with a slight smile. A black watch with a white face is visible on his left wrist. The background shows a blurred outdoor setting with greenery and a utility pole.

**“I hate the term
‘monster house’
because really what
they are is apartment
buildings—apartment
buildings that are
being constructed
illegally in areas
that aren’t zoned for
apartment buildings.”**

PHOTO BY NATHALIE WALKER



A VOICE OF REASON

NAHB's Greg Thielen calls for the streamlining of impractical permitting processes, and enforcement of increasing code violations

BY DON CHAPMAN

The obvious question for Greg Thielen, president of Complete Construction Services: So why not politics?

His mother Cynthia, after all, has been a Republican member of the state House of Representatives since 1990, representing Kailua and Kaneohe. His sister Laura, a Democrat, has been a member of the state Senate since 2013, representing a district that stretches from Hawaii Kai through Waimanalo to Kailua.

"The women in the family go into law and politics, the men in the family go into construction," says Thielen in his Kailua home office.

Indeed, he followed his father Mickey into the business, starting with Mouse Builders. (Mickey ... Mouse ... right.)

Which led him not into politics exactly, but today Thielen chairs the Building Industry Association (BIA) of Hawaii's Government Relations Committee and also serves as Hawaii's representative to the National Association of Home Builders.

It all started when Mickey moved his family from California to Hawaii in 1967.

"He got a job remodeling the interior of Tripler Army Medical Center," says Thielen, who was born the next year.

"He used to say all the time, 'I don't want any of my children to go into construction, it's a terrible way to make a living.' I think he was half-joking about that."

Greg went off to Southern Oregon State and earned a degree in history. How does that get a guy into construction?

"It was an accident," he says with a

"There are certain things you don't need to get a building permit for. If you're going to re-roof your house, you don't need a building permit. They need to expand that list—they're trying to permit too much."

chuckle. “My dad had a key employee with a very serious medical condition shortly before I graduated. He needed somebody he could trust to watch the books and make sure whoever we hired to do accounting wasn’t robbing him blind—he was paranoid about that. I came back and started working in the office. But it didn’t take up much of my time, so he said I’ve got this small shoe store in Chinatown I have to build, why don’t you become the project manager for it? I’d worked for him before during summers, so I had carpentry experience but no project manager experience. It was 200 square feet down on Nuuanu.”

“How do you think grocery stores would react if they were told to set aside 30 percent of their food for people of moderate income and charge a different price? How would pharmacies react?”

Mickey was pleased that his boy completed the project ahead of schedule and under budget, and “over the next six months I did about 30,000 square feet of tenant improvement work for him,” Thielen recalls. “He said, ‘Hey, you’ve got a talent for this, why don’t you stick around?’ It just grew from there. I think for better or worse, my (style) has always had an organizational bent to it that lends itself to project management. It came naturally to me.”

But he would also come to understand why his father warned this could be a lousy way to make a buck.

When Mickey retired, his son, a Punahou grad, went out on his own.

“I started my own company, GT Pacific, 1997, and I was out of business



Greg and Laura Thielen with Patrick, Anna and the family dog Pepper.

within six months,” he says. “It was a complete train wreck. I did everything wrong. I said I’m only going to do commercial construction, I’m only going to do tenant improvement construction, I’m only going to have these types of clients. People would call and ask if I wanted to do a job, and I’d say no, that’s not what I do. It was a quick way to get out of business. Lesson learned.”

He went to work for Construction Management and Development “for about a year and a half, and got fired. After that I started Complete Construction Services in early 2001. After 9/11 people were pulling back on everything, everybody was terrified, and I was thinking I’d just gone into my third mistake, disaster, whatever you want to call it. But this time I did things very differently.”

He started taking whatever jobs came along, and he made an observation that has guided his work.

“I realized one thing pretty quickly: Homeowners are very different from commercial clients,” he says. “They don’t necessarily understand good-quality construction from bad-quality construction, but they very quickly pick up on bad attitudes, bad work habits, sloppiness, inattention to details, leaving

cigarette butts around the job site.

“When I started this company, I did everything myself—all my own carpentry work, all my labor work. My office was in the living room of the last house we lived in. I couldn’t even afford a cell phone, I had a pager. I worked out of my truck. Every job I got I invested most of the profits into tools, and just slowly built a good reputation for taking care of all the things homeowners understood, as well as doing good construction work. I’d say 2003 was my breakthrough year when I started getting some major projects. Started getting recognized by architects as somebody who really cares about construction and cares about how things turn out.”

Current projects include three custom home builds and one remodel. He employs six people in the field and wife Laura handles the office.

“She’s not Sen. Laura Thielen, that’s my sister,” he says. “She constantly gets called the ‘other Laura Thielen,’ which I think is unfair because she’s the primary Laura Thielen as far as I’m concerned.”

Building Industry Hawaii asked Thielen about an array of problems facing Hawaii’s construction industry, and he has some strong opinions as well as thoughtful solutions. His responses:

PERMITTING

“When you say the ‘permitting process,’ there are so many processes people have to go through. The building permit process, which is what most single-family homes and remodels have to go through, is broken and getting worse. The timeframes that people are going through are staggering. The process here (a new home build in Kaaawa whose plans are spread across his desk) took them 18 months just to get their building permit. If somebody is carrying a mortgage, paying a consultant ... it adds up.

“It’s definitely getting worse, it’s taking longer.

“The building permit process, which is what most single-family homes and remodels have to go through, is broken and getting worse. The timeframes that people are going through are staggering.”

“You’ve heard the term ‘trust but verify’—the city is doing the opposite. They’re trying to get people to comply on paper, with no real-world background checks. They’ve now made it so that homeowners have to hire third-party inspectors to approve the work—building inspectors aren’t really doing it. And the third-party inspectors, in a lot of projects, are the design consultants that were hired by the owner in the first place, usually a structural



Complete Construction Services’ jobs include a remodel project in Nuuuanu.

engineer. In the case of a well-run project, this system works. But in terms of a lot of homes where people are hiring a draftsman who then turns around and pays an engineer for a stamp, that guy never even comes out to the site, and you get to the end of the project and he issues a letter that says, yeah, it was done right. And there’s really no checking of that process. But because they’re so focused on the paper process, and making everybody comply on paper, making it 100 percent accurate on paper, it’s made this really lengthy, labyrinthian process people have to go through to get a building permit. But then once they have their permit, they’re almost free and clear to do whatever they want. The only thing the city still does a good job on is electrical inspections.

“To me, they need to get back to trust but verify. They need to stop obsessing about permits on paper and get back to where they’re actually out in the field looking at what’s really being done, because I believe there’s a lot of really shoddy

construction being done out there. It gets back to the point about the classroom laughing because something is supposed to last 100 years.

“That’s the big picture. Dialing it in a little bit more:

“There are certain things you don’t need to get a building permit for. If you’re going to re-roof your house, you don’t need a building permit. If you’re going to put new flooring in your house, you don’t need a building permit. They need to expand that list—they’re trying to permit too much. And where they can’t expand that list, they need to go to more of an online permit process, which they have currently, but it’s very limited. Things like window replacement or electric meter replacement, you can get an online permit for. They need to expand that, significantly. And they need to stop having all these plans come through and make that process be fairly automatic, and make the responsibility be on the person who is getting that work done and be the one to conform to the building codes, and then get back to that trust but verify concept.”

ACCESSORY DWELLING UNITS

“You have to hire someone to produce a drawing, someone to submit it to DPP, then go through the review process and get a building permit—my guess is that from the day you submit, not the day you start planning, will probably be four months. That’s just dysfunctional. It should be one day. There’s

no reason it needs to go through that level of review and scrutiny and time. DPP will say we just need more reviewers. But that’s just more government and more cost, and they just don’t need to be getting into the middle of that.”

THE 100 YEARS RULE

“I went to a class that focuses on National Association of Homebuilders Green Building standards. The instructor made a statement that the National Association of Homebuilders say that homes built today are intended to last 100 years. And almost everybody in that classroom started laughing. That was really shocking to me, that people thought that kind of concept was a joke. That made an impact on me, and I came away from that and told everyone who works for me that we should be taking the approach that everything we’re building should last 100 years, and that if we’re doing something we know won’t last 100 years, we should point it out to our clients.

“Simple building practices, to me, make a home more durable. We only use stainless steel nails on our exterior trim. It’s not a specification on any of the jobs we get, but it’s our standard. Things like that make a difference.

“But it doesn’t make much of a difference if I’m the only guy with that philosophy.”

state is saying we need to produce 60,000 new units in the next 20 years, and we’re not going to produce even a quarter of that, and that’s just to stay where we’re at today. I made the prediction when I was president of BIA back in 2013 that by 2020 the median cost of a home on Oahu would be a million dollars. And as of today we’re over \$800,000, so I’m feeling like I might actually prove myself right—not that I want to. It’s a terrible situation to be in.”

INCLUSIONARY ZONING

“When you talk about housing in terms of people who produce a lot of housing, developers, there are a number of bills BIA put forth this year at the Legislature that would help that process, all of which got killed. An example: Inclusionary zoning. Say you want to build a small subdivision of 100 homes, 30 percent have to be set aside for certain income levels. We said OK, if somebody is targeting the market of multimillionaires where those homes are all \$20 million apiece, go ahead and make those guys do something. But if somebody is developing to what the average working family is looking to buy, \$500,000, \$600,000, why are we making them pay for this other 30 percent? So we said if someone is targeting 140 percent of the median income and below, it is illegal to exact this inclusionary zoning from them. We’ve tried to get this bill passed for a couple of years now. It hasn’t gone anywhere.

“Another big problem is the duplication between state and county land

happens is that every project comes in on a case-by-case basis. Say we want to change ag to urban, they look at that case by case.

So a project like Koa Ridge, it took Castle & Cooke 12 years to get through the Land Use Commission, because each time they would come through they would get approval, but because it’s a quasi-judicial review, anybody can come in and sue them and say you didn’t comply with this requirement. Sort of like what’s being done with the Thirty Meter Telescope. That’s what happens with every single housing project in the state of Hawaii. So, again, for several years we put forward a bill that says if a county designates an area to be within its urban growth boundary, the state Land Use Commission must reclassify all that land to urban. In one fell swoop, boom, we get done with that duplication. If they’re in the urban growth area, it makes no sense to have them go through the process.

“How do you think grocery stores

“We’re producing such an anemic rate of housing we can’t even match what we were building in World War II. If we can’t build as many homes as we did while going through a world war, something is drastically wrong.”

use review. When the state Land Use Commission was created, it was because the counties lacked the sophistication to do their own land use planning. That’s really not the case anymore. The other thing, it was created with the idea that every five years they would look at what was needed from a land use perspective and redistribute zoning based on that. But they don’t do that. What

would react if they were told to set aside 30 percent of their food for people of moderate income and charge a different price? How would pharmacies react? Yet food and medicine are just as important as housing. So why are we not burdening those industries with this crazy concept? It’s a headscratcher.

“It leads to where we are now—the

MONSTER HOUSES

“I hate the term ‘monster house’ because really what they are is apartment buildings—apartment buildings that are being constructed illegally in areas that aren’t zoned for apartment buildings. The position BIA has taken, and something I feel very strongly about, is that this is a natural outcome of the city’s lack of enforcement and lack of presence in the field. It goes back to that trust but verify thing. What you would need is a survey crew with a transit for half a day. I guarantee you that if you get a survey team with a transit to go out to one of those homes that have been identified in the newspaper and on television, you’re going to find violations of the building envelope.

“The other thing is every home has a limitation on its driveway. Your driveway is not all on your property, the portion outside of it is on City & County property. And the City & County limits you specifically to 25 feet. You go and look at some of these places and it’s solid concrete right up to the blacktop. So why isn’t there a violation for that kind of thing? Make them jackhammer out the concrete. And why aren’t they out there with the news crews demonstrating to people that we’re out here catching people who are breaking the rules?

“And this doesn’t even get into the use of the property—it’s an illegal use. Why aren’t they catching those people?

“If you can’t enforce your rules, why does anybody follow them? And it’s not like they have to catch everybody. They just have to demonstrate that they’re doing something about it. They have to present a credible threat. I mean, why do we not drive triple

the speed limit if we want to? Because there is a credible threat we’re going to get caught and severely punished. It doesn’t mean we get a ticket every time we speed, but as long as there is a credible threat it stops most people from flagrantly breaking the law the way these illegal apartment buildings are in residential neighborhoods.

“From a code perspective, the biggest life-safety threat is that an apartment building has certain

A CORPSE AMONG US

“One of the things I see as an issue is that housing has been everybody’s favorite whipping boy for whatever special interest they serve ... be it advocates for affordable housing, advocates for fire sprinklers in single-family homes, advocates for energy efficiency who want to see homes being net-zero energy.

There’s a huge array of special interests that keep layering and layering things onto housing, which just makes it more and more expensive. And I really feel like we need to step back and say wait a minute, all these other interests, they’re all important things. It’s important that we have agriculture lands for agriculture, but so is housing.

And we need to stop layering these things on top of housing and expect it to be there for us when we want it to be there for us. Which is what we’re experiencing right now.

To me, housing in Hawaii, especially on Oahu, is dead. We just don’t realize it. We keep talking about it like it’s around and it’s



Complete Construction Services handled a commercial tenant improvement project in Kailua.

requirements regarding occupation separation, firewalls, egress in the event of a fire, and none of these buildings are complying with those rules.”

still there, but we’re producing such an anemic rate of housing we can’t even match what we were building in World War II. If we can’t build as many homes as we did while going through a world war, something is drastically wrong.

“The thing that got me involved in all this, we were all sitting around a job site after work, talking about different things, someone asked what is the one thing you want most out of life. And one of my carpenters said, ‘One day I’d like to be able to afford to buy my own house.’ This guy builds houses and he can’t afford to buy a house, and that’s just fundamentally wrong. That’s where we’ve let ourselves get because we keep layering on top of housing all these other special interests that just don’t belong.

“A lot of the things people have to go through, land use review, permitting process, we keep adding requirements, which then adds the need for more people who don’t swing a hammer, all of which adds to the cost of housing.”

Curbing Jobsite Safety Fails

Training, say experts, curbs the 'Four Fatal Flaws' and gets more workers home safely at the end of their shifts

BY DAVID PUTNAM

Hawaii contractors should “envision safety as part of the bottom line, not just something we have to do,” advises the safety manager of one of the state’s largest builders.

Joaquin Diaz, the health, safety and environmental (HSE) director for Hawaiian Dredging Construction Co. Inc., adds that “being safe is more



Joaquin Diaz

than doing the minimum to comply. Safe jobsites correlate to efficiency and quality. When leaders view safety as an important part of the business, then safety becomes equally important.”

According to the Occupational Safety and Health Administration, one in five worker fatalities in the U.S. in 2016 was in the construction sector. OSHA performed



almost four times as many inspections in the building industry that year, and issued over twice as many penalties compared to the next closest industry classification.

Mary Browne, district HSE manager at Nordic PCL Construction Inc., says an effective jobsite safety program helps avoid many workplace injuries.



Mary Browne

“Companies should actively engage with their hourly workers and listen to their ideas on what needs to be improved and how it can be accomplished,” she says. “No worker intentionally jeopardizes their safety and risks getting hurt. They all want to get home safely at the end of each

workday to loved ones.” According to the Bureau of Labor Statistics’ (BLS)



Hawaiian Dredging Construction Co. workers receive safety training on the use of fire extinguishers.

latest report, Hawaii had five worker fatalities in 2016 due to falls, slips and trips, and one death involving contact with equipment or objects. In 2015, Hawaii had three fatalities in the construction industry, down from eight in 2014, according to BLS data.

OSHA reports that from October 2016 through September 2017, it conducted 12,192 construction site inspections nationally and issued 30,101 citations and more than \$89.5 million in fines. OSHA's list of what

it calls its "Fatal Four" causes of death-related injuries nationally in 2016 includes:

- Falls: 384 out of 991 total deaths in construction (38.7 percent)
- Struck by an object: 93 (9.4 percent)
- Electrocutions: 82 (8.3 percent)

• Caught-in/between (workers killed when caught-in or compressed by equipment or objects, and struck, caught or crushed in collapsing structures,

equipment or material): 72 (7.3 percent).

According to the BLS, these "Fatal Four" were responsible for 63.7 percent of construction worker deaths in 2016.

Top Priority

Offering jobsite safety education is crucial to construction companies of all sizes, says Mary Sullivan, president of the American

Society of Safety Engineers (ASSE) of Hawaii.

"Being fair and consistent when applying the rules, and making sure that workers know their safety is your highest priority. Communication is critical, making sure that management is open to hearing about issues that workers see in the field and will do something about it," says Sullivan, who also serves



Mary Sullivan



Concrete Coring Co. of Hawaii's annual safety conference included topics ranging from pre-task planning to jobsite safety observations, lessons learned and using lagging and leading indicators for the evaluation of occupational safety and health outcomes.

PHOTO COURTESY ASSE OF HAWAII

as area safety manager at Penhall Co. and Concrete Coring Co. of Hawaii.

Browne notes that “effective jobsite safety starts with management support—support of safety initiatives, compliance and cost for purchasing the correct tools and equipment workers need so they’re set up for success.

“We must lead by example; demonstrate there are no exceptions when it comes to safety. The rules apply to everyone, from the CEO to the laborer in the field and everyone in between.”

Diaz says “jobsite safety is as good as the leadership. The leaders of any project create the expectations for safety. The workforce generally reflects the vision of the project team and the organization. Expectations must be

expressed, managed and deviations corrected.”



Adam Cotton

Adam Cotton, safety and health director for Hensel Phelps in Hawaii and Guam, says “there are many factors that go into

having effective jobsite safety, but if you do not have executive management’s support it will be an uphill battle. Management must routinely show their presence on the jobsite and be vocal about the safety culture they expect. They need to reinforce positive recognition and hold the project accountable when necessary.”

The safety experts urge Hawaii’s builders to take advantage of training courses that are available and can help them improve their jobsite injury records.

Cotton encourages “sharing each contractor’s best practices that they see on their projects as well as sharing the lessons learned.”

Diaz points out that “construction industry safety is collaborative. General contractors, subcontractors, vendors and suppliers must have a unified vision and approach to safety.

This includes awareness and activism with regulatory changes, taking advantage of HIOSH and OSHA consultation services, providing for a qualified safety staff, requiring project management staff to achieve safety certifications and training, and communicating, through contracts, the safety requirements of a site.”



TOP 10 MOST FREQUENTLY CITED VIOLATIONS

The most frequently cited violations by federal OSHA in fiscal year 2017 following inspections of worksites:

1. Fall protection (construction)
2. Hazard communication standard (general industry)
3. Scaffolding (general requirements, construction)
4. Respiratory protection, general industry
5. Control of hazardous energy; lockout/tagout (general industry)
6. Ladders (construction)
7. Powered industrial trucks (general industry)
8. Machinery and Machine Guarding (general requirements)
9. Fall Protection (training requirements)
10. Electrical, wiring methods, components and equipment (general industry)

SAFETY CLASSES & EVENTS

GCA of HAWAII

The General Contractors Association of Hawaii has five weekly safety training sessions scheduled from late April through May in the Conference Room of its offices at 1065 Ahua St. The course schedule:

April 27, May 4, 12, 18 and 19: Construction Safety Hazard Awareness Training for Contractors

For course information: gchawaii.org

BIA-HAWAII

The Building Industry Association of Hawaii has scheduled safety-related classes in April and May at the Construction Training Center of the Pacific (CTC-Pacific) in Waipahu. The courses include:

April 9-13: OSHA 5410: OH&S Standards for Maritime Industry

April 20: Construction Safety & Injury Prevention for Safety Managers

April 16-19: OSHA 3095: Electrical Standards

April 20: Construction Safety & Injury Prevention for Safety Manager/Employer

April 23-26: OSHA 500: Trainer Course Construction

Industry

May 19: Excavation and Trenching

May 21-24: OSHA 5400: Instructor Training OH&S Standards for Maritime Industry

For course information: biahawaii.org/events

ABC HAWAII

The Associated Builders and Contractors Hawaii Chapter offers a range of health and safety training during the year on such issues as respiratory protection to lead awareness at its offices at 1375 Dillingham Blvd. ABC Hawaii's next course:

July 18: First Aid-CPR/AED

For course information: abchawaii.org

NAOSH WEEK

May 6-12: North American Occupational Safety and Health Week began in June 1997 as an agreement between the United States, Canada and Mexico to focus employers, employees, partners and the public on the importance of preventing injury and illness in the workplace, at home and in the community. For more information, go to naosh.org/english/.

"Weave safety into all aspects of the work, especially early on in the process," Sullivan says. "By anticipating problems and preplanning the work, safety has less negative impact on production. Safe production is the goal."

And, adds Cotton, "trainings must be engaging and get the attention of your employees."

Education is the Key

The list of safety- and health-related training classes for Hawaii builders is lengthy. The Building Industry Association of Hawaii (BIA-Hawaii), for example, has a full slate of OSHA training throughout 2018.

Currently, the General Contractors Association (GCA) of Hawaii has five weekly safety training sessions scheduled from late April through May on Construction Safety Hazard Awareness Training for Contractors. And the Associated Builders and Contractors Hawaii Chapter (ABC-Hawaii) offers First-Aid-CPR-AED training several times a year, with the next class set for July 18.

Firms such as Lawson & Associates and ProService Hawaii also offer construction safety courses. Hawaii OSHA training also is available online at oshaeducationcenter.com.

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Nordic PCL workers undergo training on tool safety.

According to the Associated General Contractors of America, with which the GCA of Hawaii is affiliated, the Islands are among 31 states and Washington, D.C., reporting an increase in construction jobs between December and January. Also, Hawaii's building sector saw a gain of 400 jobs over the past 12 months, according to the AGC report. California added the most during that span, with 11,100 new jobs.

With more construction workers entering today's market, the need for jobsite safety training also becomes more urgent.

"Many times people may place themselves at risk simply because they don't know any better. You don't know what you don't know," Browne says. "Providing training and education is the foundation in maintaining jobsite safety. Following up through regular inspections and coaching is an important aspect of this maintenance program. People forget, so an occasional reminder is a great way to keep everyone on the right track."

Adds Sullivan: "An educated workforce is crucial in assisting with hazard recognition and corrective action on the job. Managers cannot be everywhere, and the workers are the eyes and ears of the site. They know how the work is performed and where hazards exist. Equipping them with the tools to help improve safety is a win for everyone."

Diaz says safety education "is like trade education. Hiring a carpenter with no trade education does not make any sense. An organization needs to invest time and resources to safely train our workforce. An

educated workforce achieves the results envisioned.

"There are many types of training programs available for the industry. Most training can be done internally, through the respective insurance broker/carrier, consultants, or through an education center."

At the forefront of jobsite safety education are programs designed to clarify OSHA's new Respirable Crystalline Silica standard, which mandates that contractors must limit their workers' exposure to silica dust.

"The new silica standard is causing a lot of concern among Hawaii builders because there isn't a lot of clarity providing direction," notes Browne. "The standard alludes to certain requirements but doesn't provide enough details to actually guide contractors on specifics."

Another emerging safety regulation, Diaz says, involves "defining the difference between certification and qualification of crane operators. OSHA has been working on this regulation for several years. We anticipate this regulation to have an impact on employers but are uncertain what it may be.

"I believe employers must do a better job at complying with the current regulations. There appears to be a gap in understanding what the regulations intend and implementation."

Proactive Training

The safety gurus all agree on one thing: safety measures at the jobsite should exceed OSHA standards.

"Absolutely," says Browne. "OSHA standards are minimum requirements to keep workers safe.

6 Tips for Jobsite Safety

- Plan ahead to make sure all the appropriate equipment, tools and safety gear is available and staged prior to starting the day.
- Provide training for any equipment that will be used for both new and current employees. Don't assume new but experienced employees can operate equipment safely. You cannot be certain as to the level of training they received from a previous employer.
- The saying, "a clean workplace is a safe workplace," is not too far from the truth. Promote and enforce good housekeeping practices. A housekeeping issue is often a contributing cause of a jobsite accident, such as a trip-and-fall.
- Enforce and reinforce safety—but there needs to be balance. Top management and foremen need to enforce the rules when they become aware of an unsafe act or condition. At the same time, when you see the crew taking the time to work safely, take the time to recognize their effort.
- Many accidents can be avoided if someone just speaks up. Empower employees to be part of the safety program by encouraging them to report safety concerns to foremen, supervisors or upper management.
- Do not become complacent. Both management and employees need to maintain constant vigilance of their surroundings.

SOURCE: SOCIETYINSURANCE.COM

“Any company that truly believes in keeping their workers safe will train workers on every hazard they may be exposed to. We should be proactive and assess operations and make sure our workers are trained so they understand what risks they may be faced with and, more importantly, what they can do to minimize or abate those risks ahead of time.”

“Compliance is a minimum expectation that may or may not prevent injuries,” notes Diaz. “Safety is about preventing harm to a person or property. We need to go beyond compliance and think about the impact of safety, or the lack of, to a person or property.

“When leaders view safety as an important part of the business, then safety becomes equally important.”

— Joaquin Diaz

“Our company invests many resources and time to provide safety training to assist our project management staff and our workforce about our safety culture. Our company trains hundreds to thousands of our employees and subcontractors about safety. We conduct OSHA '30-Hour' courses every quarter with an emphasis on hazard recognition, prevention and control.”

Sullivan warns that “you can be OSHA-compliant and still have your workers be in danger. OSHA is a minimum standard; it cannot address every eventuality. If a company simply relies on OSHA to keep workers safe, they are missing a great opportunity to improve their program. If you set low expectations, then that’s what you will get in return.”

Cotton agrees. “Reoccurring safety training is crucial to developing a safety culture,” he says. “A company must have a robust training program and make sure that they are routinely evaluating their employees’ competency following training.” 🏠

Safety ‘Buzzword’? Silica

Training and tools needed to adhere to OSHA regulation hike the price for builders

BY DAVID PUTNAM

Though it’s been more than six months since the Occupational Safety and Health Administration’s (OSHA) Respirable Crystalline Silica standard became law, adherence to the rule poses a formidable problem to the construction industry.

The rule, which became effective in September, requires companies to limit workers’ exposure to silica dust and to take additional steps to protect employees.

“Silica is the buzzword today,” says Joaquin Diaz, health, safety and environmental (HSE) director at Hawaiian Dredging Construction Co. Inc. “Contractors across the country are addressing the impact of this regulation.”

Mary Sullivan, president of the American Society of Safety Engineers (ASSE) of Hawaii, says the silica dust standard is presenting builders with a difficult and expensive task.

“This new rule provides guidance on safely performing many tasks that generate silica dust, but is not an exhaustive list. The training and medical clearances required can be daunting, especially for small- to medium-size companies,” says Sullivan, area safety manager at Penhall Co. and Concrete Coring Co. of Hawaii. “The tool retrofits to capture dust can also be very expensive.

“There are resources available to help companies come into compliance, including OSHA, unions and insurance companies.”

The Respirable Crystalline Silica standard, says Adam Cotton, safety and health director for Hensel Phelps, “is a much more stringent standard that requires extensive training, record-keeping and industrial hygiene monitoring. Many companies have been doing



Construction companies are required to protect employees from exposure to the dangers of silica dust.

these practices for years, but there are some additional requirements that might catch some businesses who are unprepared.”

According to OSHA, all construction workers covered by the silica standard are required to:

- Establish and implement a written exposure control plan that identifies tasks that involve exposure and methods used to protect workers, including procedures to restrict access to work areas where high exposures may occur.
- Designate a competent person to implement the written exposure control plan.
- Restrict housekeeping practices that expose workers to silica where feasible alternatives are available.
- Offer medical exams, including chest X-rays and lung function tests, every three years for workers who are required by the standard to wear a respirator for 30 or more days per year.
- Train workers on work operations that result in silica exposure and ways to limit exposure.
- Keep records of exposure measurements, objective data and medical exams.

“OSHA states 90 percent of construction employers have less than 10 employees. They may feel the impact greater, based on economies of scale, than larger employers would,” Diaz says.

INSIDE THE GCA

Standing Strong FOR Construction

Hawaii's General Contractors Association offers positive forecast for builders in 2018

BY DAVID PUTNAM

Affordable housing, the rising cost of construction materials and pushing for greater federal infrastructure investment are among the General Contractors Association of Hawaii's top priorities this year.

And overall, says 2018 GCA President Jay Manzano, the Islands' construction business can look forward to a robust future.



Jay Manzano

"The GCA believes that Hawaii's construction industry will remain strong for the next couple of years," Manzano says, "due to much-needed work on improvements and upgrades to our state and county facilities and infrastructures, affordable

and market rate housing projects, the Honolulu rail project and commercial,

"The GCA believes that Hawaii's construction industry will remain strong for the next couple of years."

—Jay Manzano

hotel and federal projects."

According to the Bureau of Labor Statistics, construction employment

in Hawaii stood at 37,200 in January 2018, a 12-month gain of 1.1 percent, or 400 jobs.

"GCA's membership has also been very strong and consistent over the last couple of years," says GCA Executive Vice President Johnny Higa.



Johnny Higa

The GCA reports its membership includes 140 general contractors, 202 subcontractors, 98 material and equipment dealers and 86 affiliate members.

The organization, which has been representing the construction industry in Hawaii for 86 years, has major goals for 2018 and beyond. For starters, Manzano and the GCA board of directors has approved supporting

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affordable housing initiatives and construction.

“The GCA will continue to work with the state, city and county, developers and labor organizations to expedite the process to develop and construct more affordable housing,” Manzano says.

The GCA also is looking for ways to help ease construction cost escalation. As Higa notes, “price increases have accelerated for many construction materials in the last two years. Newly imposed tariffs on steel and aluminum will create steeper increases that will squeeze budgets for infrastructure and commercial projects.”

The national Associated General Contractors of America Chief Economist Ken Simonson reports that “contractors will be forced to pass these cost increases along in bid prices, but that would mean fewer projects get built. And contractors that are already working on projects for which

GCA'S COMMUNITY OUTREACH

Executive Director Johnny Higa says the GCA of Hawaii has made “giving back” a part of its culture. Annual initiatives include:

- Fundraising for a specific charity chosen by the board of directors. In 2017 the GCA fundraising drive presented the Institute for Human Services more than \$31,000.
- The GCA's Education Foundation annually funds a full-time professor position (\$150,000) at the University of Hawaii to offer construction management courses to students to prepare them for a career in the construction industry.
- In 2017, GCA established a “give back to the environment” program and supported the Ala Wai Watershed Association (\$5,500), the Kokua Hawaii Foundation (\$5,500) and the Pacific Rim Conservation (\$1,500).
- The GCA is a longtime Gold sponsor of the annual Hawaii Construction Career Day (\$5,000).
- Supported the Associated General Contractors of America's (AGC) national initiatives including Warrior Canine Connections (\$5,000), Hurricane Harvey (\$5,000) and Maria (\$5,000) Relief Fund and AGC Education and Research Foundation (\$7,000).



As part of its community outreach efforts, the GCA raised \$5,500 for the Kokua Hawaii Foundation.

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they have not bought some materials are at risk of absorbing large losses.”
The GCA is affiliated with the AGC.
Higa and Manzano also hope to see

“GCA has set up a vast network ... members can join, contribute and tap into the resources of one or more of GCA’s 20 committees.”
—Johnny Higa

Hawaii reap more federal infrastructure investment and financing. “GCA together with the AGC has made it a priority to call on Congress to increase funding and approve long-term



GCA's fundraising efforts benefitted organizations such as the Institute for Human Services.

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2nd Vice President: Leslie Isemoto of Isemoto Contracting Ltd.

Treasurer: Anna Herrera of Kaikor Construction Co. Inc.

AGC National Life Governors: Glenn Nohara of Koga Engineering & Construction, William Wilson of Hawaiian Dredging Construction Co. Inc. and Lance Wilhelm of Koga Engineering & Construction.

AGC National Governors: Glen Kaneshige of Nordic PCL Construction, Gerry Majkut of Hawaiian Dredging Construction Co. Inc., Garrett Sullivan of Kaikor Construction.

Past President Directors: Thalia Choy of Genba Hawaii Inc., Rick Heltzel of Healy Tibbitts Builders Inc., Lyle Moody of Walker-Moody Asphalt Maintenance Ltd. and Rodney Nohara of Jayar Construction Inc.

Board of Directors: Dale Keep of Layton Construction Co. LLC, Emmett Kinney of Healy Tibbitts Builders Inc., Raymond Nii of Grace Pacific LLC, Kimo Pierce of Hawaii Plumbing Group LLC, Greg Uyematsu of Kiewit Infrastructure West and Michael Young of Albert C. Kobayashi Inc.

Executive Vice President: Johnny Higa



Jay Manzano, left, of Unlimited Construction Services, was installed as president of the GCA of Hawaii in January, succeeding Hawaii Dredging Construction Co.'s Cedric Ota, right.

PHOTO COURTESY GCA OF HAWAII

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solutions to maintain and update America's aging and over-burdened infrastructure," Manzano says.

The GCA is focusing on other issues as well. Higa says the Islands are "still experiencing a tight labor market for engineers, project managers, estimators, superintendents and skilled laborers."

The GCA also supports the AGC's efforts for environmental streamlining.

The AGC is working on the federal environmental review and permitting process to reduce inefficiencies in

"GCA together with the AGC has made it a priority to call on Congress to increase funding and approve long-term solutions to maintain and update America's aging and over-burdened infrastructure."

—Jay Manzano

reviewing and permitting that delay projects and increase cost.

Another key effort for the GCA will be continuing to advocate for its members. "GCA has set up a vast network to advocate members' needs and issues. Members can join, contribute and tap into the resources of one or more of GCA's 20 committees," Higa says.

The GCA also is taking members' concerns to state officials.

"The goal this year is to pass GCA bills which focus on amending subcontractor listing requirements to improve procurement efficiency, minimize bid

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protest, and potentially avoid awarding projects to non-low bidders due to technicalities in a submitted subcontractor listing,” Higa says.

“GCA is also actively engaging in other bills that may impact employers, particularly measures that may mandate paid or family leave and other proposals that change the procurement code. Further, this year GCA supported protecting employers’ rights to use medical examinations of injured workers to ensure the injured employees’ progress to recovery is not compromised while controlling costs.”

Last year’s legislative session, he says, “provided progress on GCA-supported bills related to procurement and taxpayer fiscal accountability. GCA also expended resources to educate and encourage the passage of Senate Bill 4 to ensure adequate funding for the full 20-mile completion of Honolulu’s rail project.”

Also in 2017, the GCA conducted 50 classes and events along with 33 webinars for more than 2,500

members and nonmembers. The organization also formed a new GCA HART committee. Co-chaired by Clay Asato and Sam Carnaggio, the committee held its first meeting last March and worked on improving the payment process and the procedures for schedule approvals.

Looking to the future, says

Manzano, “at this time next year, GCA would like to continue having a positive and influential presence in our industry and community, to promote the good works of GCA and its members, to provide services that the industry requires and to represent and be the voice of Hawaii’s construction industry.” 🏠

About the GCA

The General Contractors Association of Hawaii was formed in 1932 by contractors from the state’s four major islands.

The GCA is a full-service construction association serving general contractors, subcontractors, equipment/material suppliers and associate members, and is dedicated to skill, integrity and responsibility.

According to the GCA, its mission is to represent its members and be their voice in all matters related to the construction industry. The GCA aims to provide a full range of services to satisfy the needs and concerns of its members, thereby improving the quality of construction and protecting the public interest.

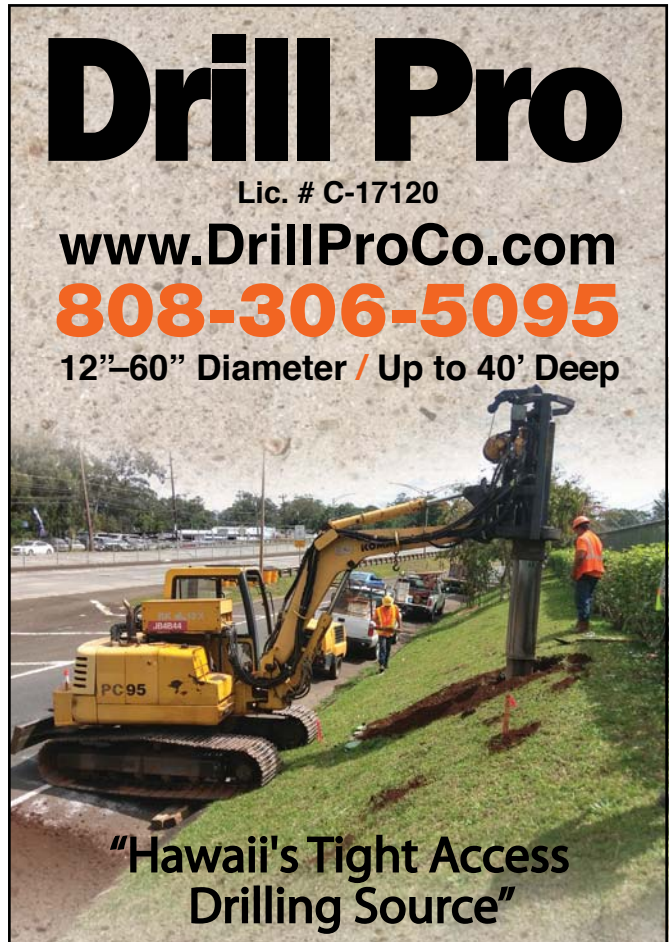


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Manzano Brings Passion for Building

Battling cancer, Unlimited Construction's chief charts an ambitious course as president of the GCA

BY DON CHAPMAN
PHOTOS BY NATHALIE WALKER

It was a powerful moment, one that made Jay Manzano even more proud than usual to have worked as a general contractor for most of his career and to be serving as

president of the General Contractors Association of Hawaii.

“It was at the national Associated General Contractors of America convention in New Orleans in February,

their centennial celebration, and one night they had an auction that was all about getting scholarships to students who want to go into construction. The goal was to raise \$100,000 in one

night,” says Manzano, president of Unlimited Construction Services Inc.

“The industry is pretty vibrant, so it’s difficult to get people both into the field and into management. But there’s a lot of educational courses and programs that stimulate getting more people into the industry, including scholarships. So everybody chips in \$500. But one guy said if you get to \$100,000, I’ll match that. And then another person said I’ll do the same. So in one night we raised \$332,000. I was blown away. It shows there is a lot of passion in people in this industry.

“I had interviews with both A&B and Hawaiian Dredging, had offers from both. A&B was going to send me to Maui to work on a sugar mill and Dredging was offering to educate me in construction.”

“And it’s the same with the local GCA here; we have a program to fund University of Hawaii engineering students and hope they come into our industry.”

If it sounds as if Manzano’s plate is full, what with running one of Hawaii’s busiest construction companies as well as a statewide trade organization with 526 members, and being a married father of three sons, it is. But there’s more.

“On a personal note, I am battling prostate cancer,” he says matter-of-factly. “I went through chemo, radiation, had a surgery, still on



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Despite fighting prostate cancer, Jay Manzano maintains a busy pace as president of Unlimited Construction and leading the GCA of Hawaii.



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hormone therapy, and through all those things we've prepared our management to fill my shoes. Last year I finished treatment. Hopefully by April I can convince my doctor to stop hormone therapy after a year and a half.

“It shows there is a lot of passion in people in this industry.”

“But our structure at Unlimited has already gone through a period where they could fill in for me. So my being GCA president will be less of a burden on my staff.”

(The past year was made even more complicated because the Manzano family resides at the Marco Polo—he was sleeping at the time the fire broke out and had to be awakened by his son. Their unit was not damaged.)

A life in construction was the last thing young Manzano imagined when he graduated from Kalaheo High and

headed off to the Naval Academy at Annapolis.

“My father, Pepe, was 25 years in the Navy. We grew up all over the place,” he says. “So my dad was very excited when I got into the Naval Academy, but I only did two years. That is still one of the hardest decisions I’ve ever made in my life.”

He earned a mechanical engineering degree from the University of Maryland, and after graduation decided to visit old friends in Hawaii.

“With my mechanical engineering degree, I was planning to go to California and interview with Northrup Grumman, maybe with the auto industry. This was December 1985, and I saw the help-wanted ads in the paper, so I said let’s try the interview process over here.

“Our structure at Unlimited has already gone through a period where they could fill in for me. So my being GCA president will be less of a burden on my staff.”

“I had interviews with both A&B and Hawaiian Dredging, had offers from both. A&B was going to send me to Maui to work on a sugar mill and Dredging was offering to educate me in construction. I said I don’t have any construction background, and they said it’s OK, we’ll train you. They said they rotate their engineers to do estimating, scheduling, project engineering, cost engineering, all that. I thought that would be really good for me. At that time, everybody starts with Dredging and then moves on. I actually went to work for the competition, Pacific Construction, after two years with Dredging.”

It was at Pacific that he met his

wife Marie, a Kauai native. Work would take them to Kauai, where Manzano became project manager at the Waiohai resort after it was devastated by Hurricane Iniki: “We won an award—one of the ways we saved the owner a lot of money, we bought a crusher for the old concrete, so rather than putting it in the dump which was already growing because of Iniki,

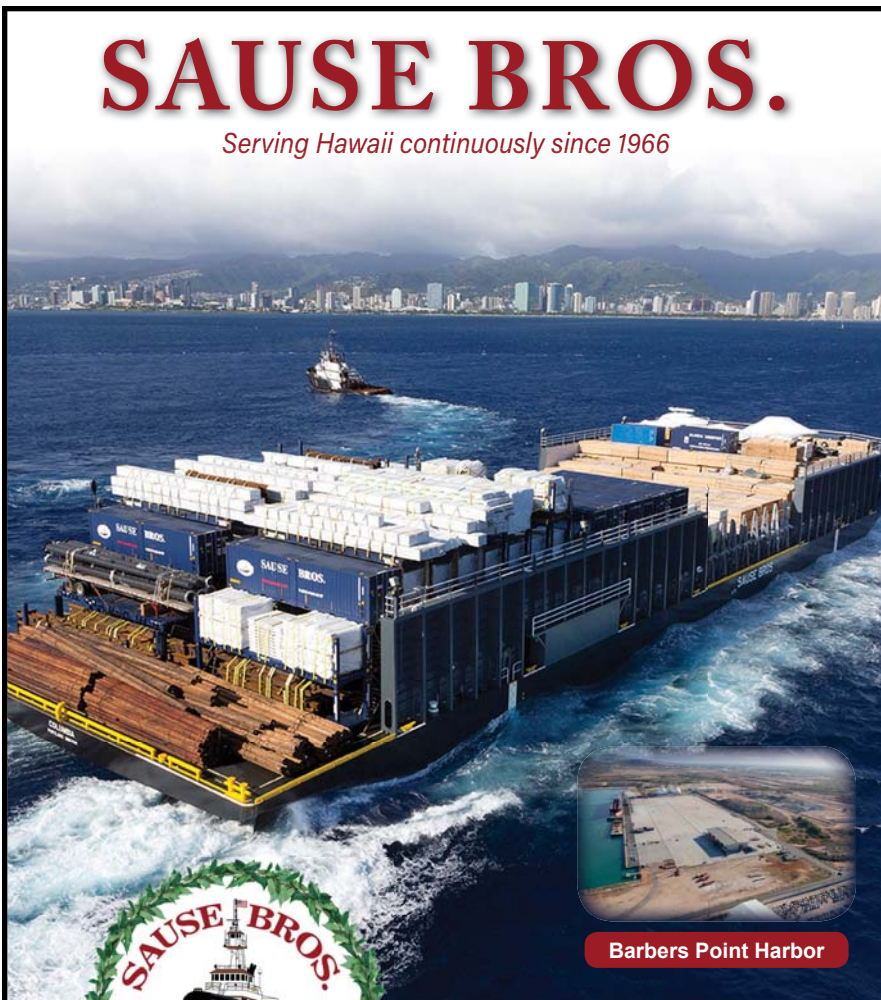
turned concrete into gravel.”

He stayed busy on the Garden Isle.

“I was also project manager at the Kauai Judiciary Building and Waipouli Beach Resort. My last project was the Westin Princeville Ocean Resort. It’s still one of our biggest projects, \$136 million. We were working from the ground up, in a rainy area and, knowing that, we prefabricated these

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wall panels at our yard in Lihue, where it's much drier, and just trucked them out to Princeville."

About the time Waipouli was finishing, he got an offer from Bob Griffith and Tim McMonagle at Griffith Consulting, and committed to the move. But when he told his boss Randy Findlay, Unlimited countered with an offer that included ownership.

"I had to choose between going into construction management and what I had been living and breathing all my career. It would have been easy to stay as a general contractor, but one of my goals was to be a business owner. They sweetened the pot and I became a partner. That's a good feeling. At the start of 2018, I became the majority partner, 49 percent. Brett

Schmauch (Unlimited's vice president) is the next guy in line."

The company has grown from a resort builder on Kauai, having used the downturn of 2008 to make "a concerted effort to get on more islands," resulting in building Kamakana Villages at Kona and converting a sixth of the Hyatt Waikoloa hotel to timeshare. On Oahu, there's the \$120 million Moanalua Hillside apartments for Douglas Emmett Inc. Later this year, Unlimited will be starting an affordable housing complex in Kapolei, adjacent to the Kroc Center.

With all that, there is GCA, whose activities include promoting the industry at City Hall and the Legislature.

"One of my goals was to be a business owner. They sweetened the pot and I became a partner."

"One of our big efforts, this past year we were able to help push for funding of the rail," Manzano says. "We also get involved at the national level. I went to D.C. to help our national organization push the tax reform bill, which is good for our industry. The national lobbyist was able to work with legislators to preserve continuing support for affordable housing tax exemptions, because they were going to do away with some of those."

"I made that my platform (as GCA president), to help affordable housing in Hawaii and to work with the mayor and the governor and everybody, because we need it. Even Unlimited Construction, we have been building a lot of affordable housing, and it's greatly needed. We can't build it fast enough, we really can't."

"With contractors, developers and government working together, that's the way." 🏠



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Green Light

Hawaii's new energy code is now in effect on state projects

BY BRETT ALEXANDER-ESTES

Currently estimated at about \$200 million, a new high school in Kihei, Maui will be the Department of Education's first completely net-zero school in Hawaii.

The project's \$80 million Phase 2 likely will be put out for bid in June, says Charles Kaneshiro, project architect and president/COO of G70,



Charles Kaneshiro

a leading Hawaii design firm. "If it goes well," he says, "by January of next year they should be starting construction."

A "green" project like Kihei's new

school is standard practice for G70, a longtime proponent of sustainable programs. But builders who are unfamiliar with these programs or the 2015 International Energy Conservation Code—a "green" building code adopted by the state last year—might want to prepare for the opportunities ahead.



At final build-out, the DOE's new high school in Kihei, Maui will total 200,000 square feet and encompass about 80 acres. RENDERING COURTESY G70

New Code Workshops

Builders can learn about the 2015 IECC at free International Energy Conservation Code Training workshops held statewide on April 16-23.

All state building designs are now 2015 IECC-compliant, says Roderick K. Becker, comptroller at the state's Department of Accounting and



Roderick K. Becker

General Services. The state is required to meet the new code one year after its adoption on March 31, 2017, he says. "The counties are required to amend, adopt and

update Hawaii state building codes no later than two years after the adoption of codes by the state."

Once adopted by the counties, the 2015 IECC will apply to all private sector projects—commercial and residential—and to all renovations that cover 40 percent or more of a structure.



The new Kihei, Maui high school's library/cafeteria will likely break ground sometime next year. RENDERING COURTESY G70

“Codes training is necessary, and important for planners and developers to prepare for new requirements,” says Ramsey Brown, resource acquisition manager at Hawaii Energy, which sponsors the IECC training workshops along with the Hawaii State Energy Office. “Awareness and understanding of changes in the energy code is key to both achieving compliance and realizing vital energy-savings benefits.”



Ramsey Brown

Benefits Start Immediately

If all counties immediately adopt the new code with Hawaii amendments, says Carilyn O. Shon, energy program administrator at the Hawaii State Energy Office, Department of Business, Economic Development & Tourism, the estimated net savings is:



Carilyn O. Shon

- 12,962 MWh in 2016;
- 1,083,590 MWh in 2026 (year 10);
- 1,991,059 MWh in 2030; and,
- 4,702,738 MWh in 2036 (year 20).

“These savings could power 707,391 homes for one year in 2036,” Shon says.

“Commercial buildings would achieve a 35 to 40 percent energy

saving by adopting the base 2015 IECC, with references to ASHRAE 90.1-2013,” Shon says. “Amendments under consideration by the Hawaii State Energy Office will further

Confused by Codes?

Are all “green” codes the same? Which one (or two, or three) will be used on your next project? Peter Stone, principal at Green Building Hawaii, and Charles Kaneshiro, president and COO of G70, offer some tips on keeping current energy codes straight.

The 2015 IECC: Updates the 2006 IECC, the state’s previous energy code.

LEED: “Provides for a ‘performance’ method in determining energy portion compliance,” says Stone. “There are a number of ways to design a system that may meet the percentage energy consumption reduction required without necessarily meeting all the prescriptive requirements laid out in the IECC.”

HI-CHPS: Hawaii’s “performance” building code for schools. “Both LEED and HI-CHPS have recycle

content credits and construction waste management,” says Kaneshiro. “And both have energy and water-type credits, water savings and energy savings. It’s just formatted a little differently.”

Net Zero: Annually, a net-zero building consumes the same amount of energy as it produces on-site. Example: a building completely powered by solar.

Energy Star: A federal program that rates the energy efficiency of everything from appliances to homes, buildings and industrial plants.

The State of Hawaii 2045 Clean Energy Mandate: “The mandate is a very broad-strokes goal for Hawaii to achieve 100 percent of its energy needs from ‘clean’ energy by 2045,” says Stone. “It does not really pertain to individual buildings/codes or projects.”



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increase potential energy savings.

“Fully-conditioned 2015 IECC residences would achieve a 6 to 9 percent improvement in energy efficiency.”

Materials and Methods

Many new codes for materials and equipment will likely dovetail with today’s projects, which often specify energy-efficient, locally available products.

For example, Carrier’s WeatherExpert 50LC Single-Packaged Rooftops HVAC units “exceed ASHRAE 90.1-2013 and Energy Star efficiency levels, as well as Consortium for Energy Efficiency (CEE) criteria,” says John Arizumi, president of Carrier Hawaii.



John Arizumi

Code-compliant material and equipment, however, does not necessarily equal a 2015 IECC code-compliant project, says Peter Stone, principal of operations at Green Building Hawaii, a consulting and training company. The new code,

Stone says, includes these elements in a larger equation: “Is that equipment you’re putting into that building appropriate in size and efficiency?”

New construction methods may also factor in, says



Peter Stone

John Bendon, Green Building Hawaii founding principal. Contractors installing an HVAC unit to code, for example, “should work to install equipment and duct systems to minimize air leakage.”



John Bendon



Phase 2 of Kihei’s new high school includes two “classhouses.”

RENDERING COURTESY G70



Daylighting at the new high school in Kihei
RENDERING COURTESY G70

Perhaps the biggest change for Hawaii projects comes with 2015 IECC thresholds. “They’re starting to require things to be put in differently and to meet testing thresholds,” says Stone. “The proof is in the testing.”

For residential, he notes, “installed equipment will need to be well-sealed to prevent air leakage in order to pass the testing. Whereas previously the code did say that cooling equipment must be well-sealed, it did not have a mandatory testing requirement to prove how well-sealed it was.”

Shades of Green

The state’s adoption of the 2015 IECC parallels the US Navy’s energy policy, which achieves savings through LEED certification programs. Hawaii public sector projects also use LEED.

Current big-ticket DAGS projects that are aiming for LEED certification include the Kona Judiciary Complex (valued at \$80.4 million) and the Hawaii State Hospital, New Patient Facility (contracted for \$140 million).

Code Phase-In

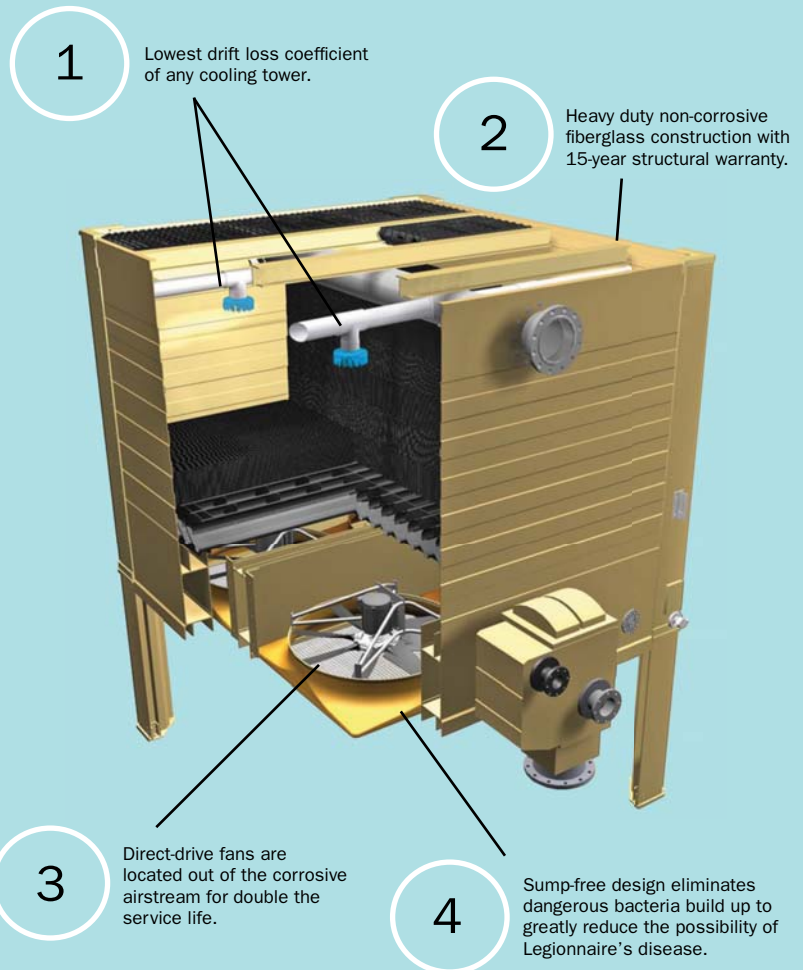
Roderick K. Becker, comptroller at the state’s Department of Accounting and General Services, says the 2015 IECC is being phased in as follows:

March 31, 2018: State building designs become code-compliant.

March 31, 2017 to March 31, 2019: The two-year window for Hawaii’s counties to amend, adopt, and update the 2015 IECC.

“If not adopted by the counties within two years, the codes become applicable as an interim county building code,” Becker says.

“Therefore, this code would take effect at the county level no later than March 31 2019, even if it is as an interim county building code.”



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Hawaii's Department of Education uses the Hawaii Collaborative for High Performance Schools (HI-CHPS) program for new schools. HI-CHPS is similar to LEED, but more strict.

State LEED and HI-CHPS projects will now also meet the 2015 IECC.

"We're trying to adopt the most current energy codes," Kaneshiro says of Kihei's new high school, which is also a HI-CHPS campus. "There's no space age materials being used. It's predominately metal structure, concrete block, aluminum windows. If you've done a LEED project, then



Exterior of Kihei's new high school library/cafeteria
RENDERING COURTESY G70

International Energy Conservation Code Training April 16-23

- Free 2015 IECC training • For government employees, contractors, subcontractors, engineers, architects and other members of Hawaii's building community • Offered by the Hawaii State Energy Office and Hawaii Energy
- Offered statewide for Hawaii's public and private sectors • Includes residential and commercial building code requirements and updated checklists

ISLAND	DATE	TIME	LOCATION	REGISTRATION
Oahu (Honolulu)	4/16 Monday	8-11:30 a.m. (public sector) 1-4:30 p.m. (private sector)	Neal S. Blaisdell Center, Oahu Room	https://www.eventbrite.com/e/new-2015-international-energy-conservation-code-for-hawaii-oahu-2-sessionsday-am-for-public-tickets-43459067240
	4/23 Monday	8-11:30 a.m. (public sector) 1-4:30 p.m. (private sector)	Neal S. Blaisdell Center, Oahu Room	
Maui (Kahului)	4/17 Tuesday	8-11:30 a.m. (public sector) 1-4:30 p.m. (private sector)	Maui Beach Hotel, Maui Room	https://www.eventbrite.com/e/new-2015-international-energy-conservation-code-maui-2-sessionsday-am-for-public-sectorpm-for-tickets-43463736205
Kauai (Lihue)	4/18 Wednesday	8-11:30 a.m. (public sector) 1-4:30 p.m. (private sector)	Lihue Civic Center, Piikoi Conference Room B	https://www.eventbrite.com/e/new-2015-international-energy-conservation-code-for-hawaii-kauai-2-sessionsday-am-for-public-tickets-43464374113
Hawaii (Hilo)	4/19 Thursday	8-11:30 a.m. (public sector) 1-4:30 p.m. (private sector)	Engineering Partners Conference Room	https://www.eventbrite.com/e/new-2015-international-energy-conservation-code-for-hawaii-hilo-2-sessionsday-am-for-public-tickets-43464009021
Hawaii (Kona)	4/20 Friday	8-11:30 a.m. (public sector) 1-4:30 p.m. (private sector)	West Hawaii Civic Center, Council Chamber	https://www.eventbrite.com/e/new-2015-international-energy-conservation-code-for-hawaii-kona-2-sessionsday-am-for-public-tickets-43463552656

HI-CHPS will be just like riding a different kind of bicycle. Very similar.

“We’re incorporating all of the net-zero and HI-CHPS requirements in the specifications, so there won’t be any mystery as to what contractors need to do.”

Stone says the new 2015 IECC is no mystery, either. Take insulation: “If you look at the installation guidelines,” he says, “the way that the manufacturers tell you how to do it is exactly what the IECC is asking you to do.”

“There will be the guy who figures out, ‘I can get more jobs if I do it for less, and I’ll do it right.’ ”

—John Bendon

Combining training from the upcoming code workshops, product guidelines and from energy specialists like Green Building Hawaii, says Bendon, may “become a competitive thing ... eventually, there will be the guy who figures out, ‘I can get more jobs if I do it for less, and I’ll do it right.’ ”

In the final analysis, Kaneshiro says, “green” codes are not just about certification. “It’s about how well you can create an integrated, energy-conserving machine out of the same common materials that all of us are building with in Hawaii,” he says. 🏠



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Swinerton Begins Work on \$41M Campbell HS Building

General contractor Swinerton Builders began construction on a 27-classroom building at James Campbell High School (JCHS) on Feb. 28 in Ewa Beach.

The \$41 million project at the state's largest high school, which has more than 3,000 students in grades 9-12, is expected to be completed in Spring 2020.

The facility, designed by architecture firm G70, comprises five connecting structures that will include general education classes, five science labs, a culinary arts lab and herb garden, Hawaiian studies classroom, two faculty centers, an outdoor performing space and meeting spaces and offices.

"This campus has undergone a lot of heat abatement work, and we're happy to begin construction for a state-of-the-art, sustainable classroom

building that is designed to be energy efficient," said Dann Carlson, assistant superintendent for the Hawaii Department of Education's Office of School Facilities and Support Services. "We've been working on securing this project for many years now and it is much needed to better serve students."

As part of its heat abatement program, the DOE has made upgrades in many of the classrooms at JCHS to lower temperatures. The improvements include installation of tinted windows, air conditioning, night-time heat flushing fans, ceiling fans, solar AC and battery units for the portable classrooms, fan installation in the cafeteria and an awning installation over O Building's courtyard.

DOE's plans for JCHS include additional facility upgrades, such as restroom renovations in O and D buildings.

Swinerton Rebrands Image, Logo

Swinerton, one of the nation's largest commercial construction companies with offices in Honolulu, in January unveiled a new brand identity and logo as part of its 130th anniversary celebration.



"This rebrand represents one of the most strategic initiatives that Swinerton will undertake in the coming years, and we are proud to unveil this new chapter in the story of our organization," says Jeff Hoopes, CEO of Swinerton.

Swinerton's refreshed logo, which features its familiar "pointing" builder and architect, positions both "outside the box" to represent the company's innovative building strategies. The new logo will appear on all company assets, from hard hats to trucks.

The company has also released a new website, swinertonbrand.com.

Hawaii Energy To Hold Innovation Symposium

Hawaii Energy, a local nonprofit that promotes energy conservation and clean energy programs, will hold its inaugural Hawaii Energy Innovation Symposium on April 26.

Presentations include energy data analysis and audits, benchmarking, improved building performance, stakeholder buy-ins and innovative energy technologies by nationally recognized experts such as Wendell Brase, first associate chancellor for sustainability at UC Irvine; Greg Baker, energy efficiency engineer; and Steve Mesh, IESNA, whose lighting projects include New York City's Carnegie Hall Towers and Rutgers University.

Also presenting will be Hawaii energy experts including Eric Au, area

director of engineering at Starwood Hotels & Resorts; Amy Brinker, sustainability manager at Kamehameha Schools; and Brian Kealoha, Hawaii Energy executive director.

The symposium introduces new energy techniques and training for Hawaii's facility managers, engineering and maintenance staffs, resident managers, architects and engineers as well as contractors, equipment manufacturers and energy efficiency professionals. Exhibits from Hawaii Energy's Clean Energy Ally companies will also be on display.

The symposium will be held on Thursday, April 26, from 8 a.m. to 5 p.m. at the Sheraton Waikiki Resort, 2255 Kalakaua Ave. More details



Wendell Brase

available at HawaiiEnergy.com/symposium. Register at cvent.com/events/hawai-i-energy-innovation-symposium/registration. Attendance fee: \$85 (general admission); \$40 (students and nonprofits). Sponsorships available.

G70 Donates \$50,000

G70, a leading Hawaii design firm, in December presented \$50,000 in G70 Foundation funds to 10 Hawaii organizations and nonprofits.

"The G70 Foundation Fund was created by individuals of G70 who wanted to demonstrate their commitment to building better communities throughout Hawaii beyond our firm's professional services," says Cami Kloster, senior planner and associate at G70 who oversees the foundation. "Through the Foundation, G70 employees are offered a unique opportunity to create a legacy of giving in the workplace."

The grant's statewide recipients include 808 Cleanups, Assistance Dogs of Hawaii, Beach Environmental Awareness Campaign Hawaii, HUGS/Help-Understanding Group Support and Volunteer Legal Services Hawaii. Recipients by island include Accessurf Hawaii Inc. (Oahu), Honolulu Theatre for Youth (Oahu), Hawaii Bicycling League (Oahu and Maui), Hookuaaina (Oahu) and the Self-Help Housing Corporation of Hawaii (Oahu and Kauai).



MJ Construction Repairs Waianae Complex

MJ Construction Inc. began work in March to repair the leaking roof and replace water-damaged facilities at the Shinyei Nakamine Gymnasium Complex at Waianae District Park.

The \$548,000 project includes reroofing, repairing water damage to the second floor and replacing the gym's power roof ventilators and 48 light fixtures.

The project required closing the gym's second floor. According to

plans, the ground floor of the facility remained open during this project. The project is scheduled to be finished in the summer.

The second floor of the gym was closed three years ago after the leaking roof continued to cause damage to the gym, and the gym's second level was discovered to contain asbestos. An abatement project to address the asbestos was finished in July 2017.

Park Named Senior Project Manager

Ruth Park has been named senior project manager at CBRE's assessment and consulting services (ACS) business line for the Hawaii region. Her appointment is part of CBRE's expansion of ACS services in Hawaii.

In her new position, Park will audit construction costs, perform property condition reports, assess environmental sites and provide other ACS services. With more than 13 years' experience in the architectural, engineering and construction industries, Park has led due diligence assessments in the acquisition of skyscraper buildings and property portfolios with values ranging from \$300 million to \$2 billion.

Previously, Park worked at architecture firms in the Los Angeles area. Her projects include the San Francisco State Performing Arts Center, the LeMay Car Museum, One Santa Fe Development and the Jet Propulsion Lab office building in Pasadena.

Nichols Joins Whitespace Architects

Kimberly "Kim" Nichols has joined WhiteSpace Architects as office manager, overseeing all administrative and operational functions. She also provides general support to the firm's seven architects and designers.



Kimberly Nichols

Most recently, Nichols was a

project manager at HDEP International, a Honolulu business-information firm. Previous positions include psychological operations specialist at Fort Bragg, North Carolina.

Nichols received a bachelor's degree from Westminster College and a master's in business administration from the College of William & Mary.



Rachel Shaak

Shaak returns to G70 as an associate and senior planner. Previously with G70 from 2005 to 2014, she will be responsible for environmental and urban planning products. Shaak holds a bachelor's degree from Elizabethtown College and master's degrees from the Pacific School of Religion.

Dominguez joins as project manager, and is experienced in corporate, hospitality, residential and mission-critical projects. She will expedite projects through design, permitting, bidding and construction.



Carla Dominguez

been better to buy a \$40,000 hydraulic press upfront rather than the one for \$10,000."

Adds Igor, "And this is a process that really depends on cheap labor to make it efficient. I personally stacked half the bricks."

By the way, Igor relocated to Oahu in February after 12 years on Maui, in large part because of the paragliding

Ruth Park



Four Join G70

G70, a leading Hawaii design firm, has hired Rachel Shaak, Carla Dominguez, Libby Norris and Jordan Sakumoto.

She holds a bachelor's degree and a master's of architecture from the University of California, Berkeley.

Norris joins as architectural designer. She will assist G70 teams with a variety of projects and coordinate building drawings and plans.



Libby Norris

Sakumoto joins as civil engineer with experience in highway and industrial infrastructure.

He will assist G70 teams with project permitting and with developing designs and master plans. He holds a bachelor's degree in civil engineering and an MBA from the University of Hawaii at Manoa.



Jordan Sakumoto

community and opportunities, but also to expand his construction opportunities. "It's a big move, but I like difficult things," he says. He's currently working on a couple of small projects with friends. 🏠

...continued from page 13

because it will last for centuries. Walls are a foot thick—you could shoot bullets at it and it will last forever. Dirt stays dirt."

So does this represent a new model for modern construction?

"Not with the permitting process the way it is," says Greg. "And the engineers have to be on board. And what I learned is that it would have

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www.wrmeadows.com



Utility Vehicle

Kubota Tractor's RTV-XG850 Sidekick utility vehicle comes with a 48-horsepower gasoline engine and can reach speeds of up to 40 mph. Equipped with a continuously variable transmission with centrifugal clutch (CVT Plus), the Sidekick can carry up to 15.2 cubic feet or half a ton in a steel cargo box with optional electric hydraulic lift for dumping. With a standard trailer hitch, towing capacity is 2,000 pounds on level terrain and 1,550 pounds on inclines.

www.kubotausa.com



PDCA Installs Board

The new board of directors for the Painting and Decorating Contractors Association of Hawaii were recognized at an installation banquet on March 10 at the Halekulani in Waikiki.

Above: Members of the PDCA of Hawaii's board of directors are, from left, Shawn Kurihara, Glenn Shiroma, Geraldine Lee, Jaime Dominguez, Dean Nagatoshi, Victor Wyman, Lari Bloom, Ronald Yanagi.



Installing the new board of directors



Michael and Vanessa Izumi



Joe and Sarah Hubbard, John Bloom



Kaili Taniguchi, Brandon Zelinsky



Jeff, Kathleen and Clyde Tateishi



Enalyn and Freddie Gregorio, Dan and Rae Whitford, Cory Tani



Elena and Stanley Tangonan



Ronald Yanagi (second from left) and Dean Nagatoshi (fourth from left) and members of Kapena: Lilo, Kelly Boy, Kapena, Kalena



Ed and Elsie Nitta



Danielle and Keith Boudreau, Lawrence and Florence Calica



Sydney, Desaree, Saige and David Kurihara



Dean and Yvonne Nagatoshi, Carie Anne and Daniel Kobayashi



Namoi and Glenn Shiroma



Lari Bloom, Kenneth and Hap Zelinsky



Ronald and Teri Yanagi, Elmira and Ben Fukumoto



Cheryl and Victor Wyman, Ross and Tara Purgatorio



Shara and Nick Sonoda, Tina and Darren Yamasaki



The Question: To Tweet, or Not to Tweet?

Over fine wine, my virtual girlfriend Amanda and I spent a lot of time tweeting while enrolled in a college media program together. After class, I sipped Merlot in a Tennessee restaurant and tweeted my delight at hooking up with the teacher's pet. From her deck at home 500 miles away in North Carolina, she said she was enjoying a glass of Cabernet, and having fun learning to become a social media expert.

At the time, only 12 percent of American adults could be found on Twitter. Amid a rapidly changing media landscape, 67 percent of Americans in the 18-49 age group are now tweeting, according to the Pew Research Center. Nearly 70 of all adults hang out on at least one of five popular social media sites, nearly doubling the 36 percent of us who were learning the ropes back in 2010.

More than a few professional contractors and developers are among those who embrace Twitter. With approximately 38,000 followers, one firm—CMD Group, formerly Reed Construction Data—typically tweets once per hour, aggregating construction, architecture and building news from a variety of sources.

Likewise, Equipment Today's account, connected to the ever-popular forconstructionpros.com website, lures nearly 30,000 followers with an array of economic information and services aimed at the construction industry. Caterpillar's YouTube video featuring contractors who lip sync to a rap tune promoting a new bulldozer—the Cat D6N—was viewed more than 22,000 times after its debut on Twitter two years ago.

These days, Amanda and I stay in

touch via Facebook, where 78 percent to 81 percent of adults from ages 18 to 49 are regulars. Amanda's growing Facebook community appears mesmerized by her myriad adventures as a world traveler. Mostly, I post photos of Tiberius, my cat.

But for news junkies, Twitter is a great place to set up personalized news feeds. Of 140 million tweeters, I'm following The New York Times, CNN and, of course, Amanda. Just a quick glance at my smart phone any time of day and I'm apprised of latest updates and breaking news from around the globe.

The most challenging aspect of social media if you're in business can be buying it. Advertising generally involves developing strategy and measuring ROI; however, "likes" and "followers" are difficult to tie to business objectives. Many experts who have allocated budgets for social media struggle to justify their actions:

"Right now," they say, "we are mostly on social media because it seems like a bad idea not to be on social media."

With Twitter, you can buy promoted tweets, promoted accounts and promoted trends. "If you're looking for massive exposure in a short amount of time," writes one blogger, "promoted trends are your best friend. You receive guaranteed placement in the Trends section. The price tag? \$200,000 per day."

Here are the best reasons to plunge into social media:

1. It's mostly free, and easy to pick up. Participation is possible from almost any device from almost anywhere.

2. The potential for huge audiences and massive impact always exists. The right post at the right time of day can go viral and connect you with the whole world.

3. Conversations are more personal and intimate than most communication, other than face to face. A deeper level of engagement and greater loyalty can translate to worthwhile payoffs.

Here are top reasons to avoid diving in:

1. It takes a lot of time, all the time. Costs can be minimal but without a steady, sustained commitment nothing happens.

2. Misinformation and disinformation are rampant. Bad news and fake news can stem from your activity and spread like wildfire because there are no checks on what is posted.

3. Despite the wealth of data available to social media marketers, too often it merely tells you how popular you are—and, that popularity might not even be among your target audience.

Meeting Amanda in person over a real-life dinner during her family's recent vacation in Hawaii was as much fun for our spouses as it was for the two of us. It wasn't easy, however, to engage with her two sons--teens who were both riveted to content on their iPhones. 🏠

Schooled in mass communications and technology by leading corporations and top universities, Ken Berry is the CEO of Trade Publishing Co.



Manage Your Risk, Part II

The first installment of this two-part series in *Building Industry Hawaii's* March issue reviewed insurance, bonding as well as warranties and liabilities as particular areas of focus for a contractor to manage risk.

Project Risk

A number of factors affect the risk profile of a project, but perhaps the biggest risk variable is the type of project under construction. The delivery system utilized, the complexity of the construction and the aggressiveness of the schedule are factors to be considered. Consider the risk difference between a design-build project with complex systems and high finish versus a simple “big-box” traditional low finish design-bid-build project.

The planned profit on a project should be considered based on the project risk profile as profit is the reward for the risk being taken. Establishing a basic risk profile is part art and part science. In the early stages of a job, there is more uncertainty and more risk. As such, if a contractor is committed to a higher price at an early stage such as in design-build, the profit should be much higher.

A helpful technique is to brainstorm with seasoned team members to help identify and provide coverage for certain risks. Once these risks are identified, these should be excluded from the contract. Alternately, an owner allowance can be included in the contract or a contingency can be added to the bid. In general, the more unknowns that exist when construction starts, the more risk the company is exposed to and undertakes.

Documentation

Knowledge of the scope of work as defined by the construction documents is one of the most important issues in managing risk. A second equally important factor is a thorough knowledge of the contract scope and its impact on the schedule and cost of

a project. Changes in the contracted scope of work are caused by variation in the plans, specifications and other written project documents. While you may choose to charge for every single small change, it is critical to keep track as these small changes can add up to a large amount which is known as “scope creep.”

Excellent documentation as a risk management tool is a control system where the standard is the contracted work. The budget to perform work is monitored by job cost reports, verbal and written change directives. The project management team must be timely in submitting information and estimates for the additional cost(s).

As a quick check on the effectiveness of your company documentation system, ask yourself:

- Do all members of the job team from the foreman to the project manager have a clear understanding of the project documents and scope of work?
- Does the company have a robust system for accurately reporting conditions in a timely manner?
- Does your company have the ability to compare actual performance with the expected performance?
- Does your company have a method for taking corrective action when necessary?

If the answer is “no” to any of the above, it is time to recalibrate your documentation system.

Employee Conduct

Think about the types of risk than arise from human behavior and conduct rather than the execution of a project.

- Are those risks managed differently?
- Are behavioral risks harder or easier to manage than project risks?
- What is your company process for dealing with an employee who is exposing the company to risk through drug or alcohol use, discriminatory actions, or harassment of team members?

It goes without saying that all contractors need to have policies in place and strictly enforce the following:

Drug Policy: Drug and alcohol use on a construction site puts the life and safety of the workers and general public at risk. Drug testing should be random, and conducted frequently and conducted after any severe accident. Contractors working on federally funded projects are required to have a drug-free policy in place.

Discrimination/Sexual Harassment Policy: It is against the law to discriminate based on race, color, national origin, religion, age and disability. Additionally, employers should not permit a “hostile working environment.”

Hostile environments are caused by unwelcomed sexual advances, requests for sexual favors and other verbal or physical conduct of a sexual nature. It is important to remember that sexual harassment is determined from the victim’s perspective.

Employee Handbook with Code of Conduct: Every employee should be provided and trained with the Employee Handbook on the first day of employment. The Handbook should include the expected Code of Conduct. After the training is completed, it should be acknowledged in order to easily facilitate the dismissal any employee violations.

All policies should be reviewed on a regular basis through training and visual aids posted in appropriate locations.

Contracting is inherently risky and consistently focusing on managing your risk in a systemic manner will help to ensure your company’s continued success. 🏠

Garrett Sullivan is president of Sullivan & Associates Inc., a company that helps contractors clarify, simplify and achieve their goals and vision. Contact him at GSullivan@SullivanHi.com or 478-2564.

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