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INSIGHTS

21ST CENTURY SCHOOLS



INSIDE:

BETTER SCHOOLS FOR
A BETTER FUTURE

What Makes a 21ST CENTURY SCHOOL?

The world is changing quickly and, in turn, so are the demands of educating our children. The educational environment today is as different from the 20th century as penmanship is from 3-D printing. As technology continues leaping ahead and educational innovations advance, we have to design our educational facilities to keep pace or risk leaving our children behind.

Facilities that incorporate the latest advances, called 21st century schools, combine the best practices in sustainable, people-centric design and pedagogical progress. Flexible learning spaces, adaptable classroom layouts, an embrace of technology and a reconsideration of the relationship between schools and the communities they serve are all hallmarks of 21st century schools. By advancing beyond the staid, rote concepts and their supporting facilities we are familiar with, 21st century schools hold the promise of vast benefits to education quality, neighborhood vitality, economic growth and the well-being of Hawaii’s children.

BRINGING 21ST CENTURY SCHOOLS TO HAWAII

Alan Oshima, president and CEO of Hawaiian Electric Company, Inc., became the catalyst for 21st century schools in Hawaii after he saw the power of community engagement to beautify Roosevelt High School, where his kids went to school. But he knew that Hawaii’s public schools, with an average age of 70 years, needed more than a facelift. And so began the work of the Hawaii Institute for Public Affairs (HIPA), of which Alan is a board member, to convene experts, build support, research and innovate financing and advocate for 21st century schools in Hawaii. Those efforts have culminated in HIPA’s 21st Century School Initiative, funded by grants from the Ford Foundation, a philanthropic organization dedicated to the advancement of human welfare, as well as several local non-profit organizations. HIPA will release the first of four reports this fall.

“When I grew up, we felt attached to the school in our neighborhood. That’s where we have to get back to.”

– Alan Oshima, Hawaiian Electric Company, Inc.

1/ OPEN, CIRCULAR SEATING

facilitates collaboration and encourages participation.

2/ GREEN BUILDING MATERIALS

are environmentally friendly.

3/ SMARTBOARDS,

wi-fi and tablets connect teachers and students.

4/ FLEXIBLE FLOOR PLANS

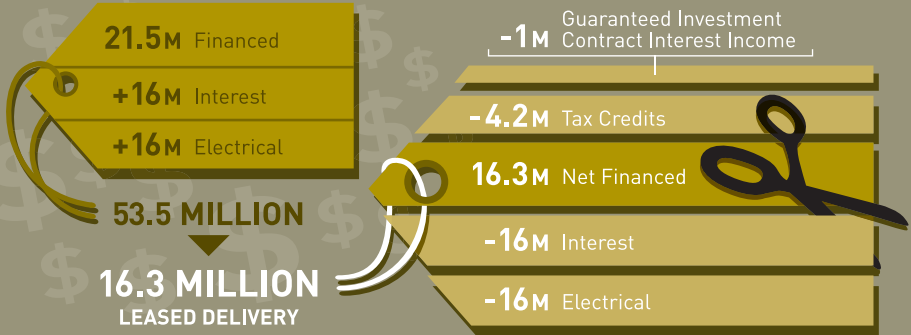
accommodate team teaching, cooperative and project-based learning.

5/ NATURAL LIGHTING

enhances learning and health.

PUBLIC-PRIVATE PARTNERSHIP: HOW A SCHOOL DISTRICT SAVED \$37.2 MILLION

Hoke County School District in North Carolina found itself in a quandary; it needed a new middle school, but estimates showed the annual cost of servicing the debt and paying the electric bill would be more than three times its \$450,000 annual budget. So the district got creative by working with a private partner, SfL+a Architects, to lease a building that would have no monthly electric bill.



SfL+a designed the campus of Sandy Grove Middle School to be net-positive, oversizing its photovoltaic (PV) installations to produce more energy than the school uses. The extra energy was used to create a revenue stream and eliminated \$16 million in projected energy costs over 40 years.

The school’s lease – which saved another \$16 million in debt-service interest payments – came from Firstfloor, SfL+a’s turnkey development branch. Firstfloor

could access incentives only available to private entities to reduce the amount financed. As a result, Firstfloor secured \$4.2 million worth of state and federal tax credits and a guaranteed investment contract for school construction that earns roughly \$1 million in interest.

Overall, the leased project came in at \$16.3 million, compared to \$53.5 million if it were completed without the public-private partnership.

On the policy front, Act 155 (2013) authorizes the Hawaii Department of Education (DOE) to investigate the optimal use of public school lands as a financing mechanism for 21st century schools. The DOE is in the process of selecting up to five sites for three pilot programs to turn underutilized DOE facilities into revenue generators with market- and community-driven, economically viable development. The pilot programs will then serve as a guide for system-wide expansion in the future.

We talked about building 21st century schools with David Waggoner, vice president of Heery International, an international professional services firm specializing in architecture, engineering and construction management, and past chair of the Council of Educational Facility Planners International (CEFPI). A non-profit association whose sole mission is improving places where children learn, CEFPI provides support, advocacy and certification programs for professionals involved in the creation and operation of 21st century educational facilities.



David Waggoner
Vice President, Heery International



Expert Q&A

DAVID WAGGONER

HEERY INTERNATIONAL

Q: WHY SHOULD WE BUILD 21ST CENTURY SCHOOLS?

DW: We have a great body of knowledge that tells us children learn in different ways, and schools need to reflect that. For example, there's more project-based, group learning, when a group of three to 10 children are tasked with a project that requires collaboration. Instead of sending them off to this corner and that corner of a room, new schools may have a conference room-type space with tables where children can work together.

On the other hand, some students learn best with a one-on-one approach. That may not happen very effectively in a large classroom with lots of other things going on. 21st century schools have little niches where one-on-one instruction can take place. And those are just two of several learning styles these schools are built to accommodate.

There are many other elements that bring value to a quality learning environment. 21st century schools are characterized by lots of daylight and flexible floor plans. They're very technology rich with wi-fi in different places, and not just a white board or a projector on one wall, but technology infused throughout the building.

In summary, research shows that children learn better in better learning environments.

Q: HOW DO PUBLIC SCHOOL DISTRICTS FUND 21ST CENTURY SCHOOLS?

DW: Typically, the most favorable financing option for a school capital improvement program is to either pass a bond referendum or a special purpose local option sales tax (SPLOST) in states that allow that financing vehicle.

But when a school system doesn't have the tax base to support a school and/or chooses not to seek public financing in a bond referendum or voter-approved tax, they look for alternative ways to finance the school programs. A trend we're seeing with schools seeking alternative funding is public-private partnerships. Sandy Grove Middle School is an example of a project that the Hoke County School District in North Carolina decided to do in this fashion (see the case study on page 2).

There are several public-private models. Sometimes the developer or private entity operates the building, and sometimes not. It's determined by the needs of the schools, the incentives available for the builders and the flexibility of the partnership.



Integrated Communities

FITTING 21ST CENTURY SCHOOLS INTO
INTEGRATED COMMUNITIES



Nexus Partners/dsk, concordia, MKThink

Have you ever noticed how public schools often resemble ghost towns after hours and on weekends? Letting prime public space go unused is a wasted opportunity, especially in island communities where resources and space are limited. In Hawaii, the largest percentage of publicly owned land capable of being redeveloped is our schools. Instead of letting it idle as empty space, we need to optimize every element in our communities.

That's the aim of groups like Concordia, LLC, an architectural design, community planning and community capacity building firm. Concordia has revitalized communities across America with its nexus philosophy, which considers the physical, cultural, social, economic, organizational and educational elements in refining and streamlining neighborhoods. Their approach to public schools offers powerful insights into building 21st century

schools that will fit into and complement the surrounding communities.

It goes without saying that our public school learning environment should make it easier to learn for all students, and many of the physical changes outlined on pages 2 and 3 do just that. But instead of fenced-in campuses that are off-limits when school's out, our public schools can also be safe, secure centers of community activity. Imagine a community gathering like a neighborhood festival or farmer's market on the beautiful grounds of McKinley High School. We could utilize empty classroom space for community classes like senior well-being or neighborhood watch meetings. For families that work late without daycare options in the evening, we could have safe places for kids after A+ closes. Creating those kinds of opportunities requires collaboration early, in the planning and design process,

to engage teachers, students and their families as well as business, government and community leaders so that we make the most effective use of resources and maximize flexibility.

Whether it's in the area of education facilities, complete streets or developing a mix of housing options, bringing collaborative, efficient, holistic decision-making to community-building is what we envision when we talk about building integrated communities. We want to secure a better future for Hawaii. It's more than just building homes close to transit – it's about a 360-degree approach that considers every facet of communal life to make sure that we take advantage of every opportunity to adapt, improve and integrate elements that add up to a greater whole. It leads us from treating our public schools as partial-use facilities for students to creating multi-functional public spaces for all. ●



Contractor Profile

GLEN KANESHIGE

NORDIC PCL CONSTRUCTION, INC.

Glen Kaneshige started in 1984 as a project engineer with Nordic Construction, Ltd. and thereafter advanced to other management positions until he became president in 1999, and retained the position after Nordic became a wholly-owned subsidiary of Denver-based PCL Construction Services in 2008. His firm has completed a number of high-profile, innovative school projects over the past 10 years, including: a new middle school for Kamehameha Schools’ Kapalama Campus; Iolani School’s Sullivan Center for Innovation and Leadership (featured on the cover and on pages 2 and 3); and Ewa Makai Middle School, the largest Department of Education project in recent history. Earlier this year, Nordic PCL broke ground on a new classroom neighborhood for grades 2-5 at Punahou School.

COMPANY:
Nordic PCL Construction, Inc.

GENERAL CONTRACTOR:
Commercial, Retail, Hospitality,
Education, Healthcare, Multi-
story Residential, Institutional

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Better known for commercial buildings and high-rise residential construction, Nordic PCL’s resume also reflects their depth of experience in building 21st century schools. To long-time President Glen Kaneshige, the most striking contrast in new schools designs is the open floorplan that allows the flexibility for students to collaborate.

“The traditional model was compartmentalized classrooms of around 900 square feet, where the teacher would lecture at the front with a blackboard behind them,” he explains. “Today’s classrooms are open spaces that are demarcated by smart boards and furniture. For example, Iolani’s Sullivan Center has large open areas of ‘flex space’ for learning through group interaction.”

“We see more high-tech multimedia equipment and electronics for teaching. The students are ‘plugged in’ so they may communicate with each other using smartphones and iPads,” says Glen.

Another popular design feature of 21st century schools is natural lighting. “With Iolani’s Sullivan Center and other recent school projects, natural daylight is used

as much as possible. Large glass facades and skylights are typical in these modern buildings,” says Glen. “Furthermore, 21st century schools are designed to be ecologically sensitive by incorporating recycled and green building materials and striving for LEED certification.”

“Renewable systems like storm water retention for landscaping irrigation are implemented in Punahou’s new buildings,” he adds. “Designing and constructing their new facilities as green buildings provide schools like Punahou and Iolani the opportunity to educate their students early on the importance of being environmentally conscientious,” says Glen. ●



The Sullivan Center for Innovation and Leadership, Honolulu

Afterword

JOHN WHITE
EXECUTIVE DIRECTOR, PRP



INVESTING IN OUR KEIKI
IS INVESTING IN THE FUTURE

Why do Hawaii parents sacrifice so much to send their kids to private school? There are many reasons, but I’d argue that the most prevalent is to give children the life opportunities that are more likely to accrue from a high-quality education.

You can get a high-quality education from Hawaii’s public schools, of course, but it’s a scandal how little we invest in making it easier, more likely, and even universal.

If a business lags in efficiency, we invest in productivity growth; if a road becomes impassable from potholes, we repave it. But our kids’ education is the most important driver of future economic potential (not to mention well-being), yet Hawaii is last in America in terms of money spent on public school repair and maintenance. We have a crushing backlog of construction needs and truly miserable conditions in far too many classrooms. We’re 15 years into the 21st century; it’s well past time to invest in 21st century schools.

The obvious obstacle is funding. Given the backlog, how can we possibly afford to build new learning spaces? The answer is that we have to do things differently. By using the best of what we’ve got - acres of underutilized public school grounds - we can optimize Hawaii’s public spaces in a way that will tie communities and public schools closer together, strengthening both while securing the benefits of modern educational facilities for our kids for generations to come. It’s in all of our interest to invest in our schools, in ourselves, in our future, in our kids. Private schools are a great option for some, and a great example of how empowering a high-quality education can be, but I believe that in Hawaii, you shouldn’t have to go to private school to have a decent chance at opportunity.



Learn more about Integrated Communities

We’d like to visit your office, trade association or other group to share a short, powerful presentation by John White about integrated communities and their importance for the future of Hawaii. Please email Cheryl Walthall at cwalthall@prp-hawaii.com for more information or to schedule a visit.



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