

2014
Exhibition of
School
Planning and
Architecture



Kamehameha
Middle School
Kapalama Campus
Kamehameha Schools
Honolulu, Hawaii

Kamehameha Middle School

Kapalama Campus



EXECUTIVE SUMMARY

The Kamehameha Schools Kapalama Campus Middle School is a new state-of-the-art educational facility for Native Hawaiian 7th and 8th graders. It was designed to facilitate collaborative teaching using ideas from students, teachers, and staff who participated in a design charette. It also incorporated many sustainable design features.

This project was part of a five-part, three-year \$118 million “Ke Kupu Malamalama,” the master redevelopment plan, which would be the largest single construction project undertaken in the campus’ history.

Located at the Kapalama Campus, the school will serve 720 seventh and eighth grade students. It was designed to provide flexibility and interdisciplinary team teaching, utilize sustainable design criteria, and provide a nurturing and exciting academic environment.

Shaped by the vision of the present students, staff and teachers, Kamehameha Middle School will emphasize an exploratory curriculum as an integral part of the vision of the school. The design of the school will provide opportunities for grouping of students into different teams or learning clusters. The heart of the school is the “Piko”. A major theme prevalent in the design of the school is sustainability or Ahu’ Puaa.

BUDGET: Construction budget for this new middle school is \$38,000,000. (Not to be published)

SCOPE OF WORK

The redevelopment began with the hazmat abatement and demolition of nine existing structures of the old Middle School, followed by the construction of a new classroom, administration building, and chiller central plant. "Keli'imaika'i" is a 74,210 sq. ft., 3-story open-learning (without walls) classroom building with a library in close proximity of classrooms. "Ka'oleioku" is a 37,705 sq. ft., 2-story administration building with offices, the Kalama dining center, performing arts and elective classrooms.



COMMUNITY ENGAGEMENT PROCESS

In 2002, Kamehameha School initiated a master planning process for their Middle School. In 2006, a "mini" master site plan was developed and the school continued with the process by developing their educational specifications and educational plan to guide the design of this school. In 2007, a charette began the visioning process. A three week long charette process was conducted.

In 2008, a steering committee was formed to assist in the design charettes.



This committee formulated a very unique educational plan, different from strategies discussed during the original master planning and educational edspec process. In addition, because of the involvement of the students, staff, and teachers, the design of the school was guided by their beliefs and values. The program developed by the committee drove the design of the school, allowing form to follow function.

COMMUNITY ENGAGEMENT PROCESS...

The charette included:
Stakeholders: Staff, teachers and students were included in the planning process. The existing middle school was based on traditional educational models. Both staff and students were not familiar with the 21st century educational ideas, technology and learning. The Architects conducted school tours of other newer school facilities to guide the process. The resulting new Middle School incorporates many of the 21st century school ideas.

CHALLENGES

- Challenges included building on a very tight and existing sloping hill side site.
- Professional staff development of teachers who were not familiar with the newest technologies and way of teaching and learning. The Principal was very knowledgeable about 21st Century learning and helped guide the planning process.
- Designing and constructing the work on an existing school site campus. A plan to build a temporary school while the new school was being built had to be considered. An entirely new temporary facility had to be in place for about two years while the new school was being built. Phasing of work around the construction and among students was very difficult.



VALUE OF PROCESS

Involvement of the stakeholders early in the process brought great value to Kamehameha Middle School's eventual design.

These benefits include:

- Customer satisfaction
- Validation of scope
- Consensus of design decisions
- Functional design product outcome is formulated

AVAILABLE ASSETS

The main asset of this new school is the people and culture of Kamehameha.

Their vision is: ***"Kamehameha Schools is a dynamic and nurturing learning community committed to educational excellence. We assist people of Hawaiian ancestry to achieve their highest potential as good and industrious men and women."***

This vision guided the design throughout the design charette process. The Architects and Planners reminded the staff and students of this vision while the school progressed through the design process.

EDUCATIONAL ENVIRONMENT

The resulting design achieved all of the program requirements for a school for the 21st Century.

There were many “Firsts” accomplished to meet the needs of 21st Century Learning as follows:

- Creativity and Innovation: All of the core classrooms open to allow flexibility and multi-disciplinary team teaching. Science rooms are located at the core of each classroom building
- Critical Thinking and Reasoning: The school is designed as a teaching tool. The building provides students with the ability to explore it. Projects to allow students to use their critical thinking and hands on real world applications.
- Communication and Collaboration: Three classroom wings are located on two floors and open up to learning hubs allowing student and teacher collaboration. The classrooms can be broken up or down via furniture placements for small, medium or large group instructions.
- Technology: All classrooms have wireless technology and interactive smart boards. The design and room layouts incorporate smart board technology throughout the school.

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PHYSICAL ENVIRONMENT

Program and Building Requirements:

Site Concept:

- Situated in the previous Middle School site. One of the first program requirements requested by the school was to solve the difficult circulation problem that was currently existing. The Architects and Engineers designed a more efficient circulation system into the new design.
- Although the original master plan envisioned a “village” type of plan, due to the limited constraints on the site, the design evolved into a two building scheme with a variety of outdoor learning areas.
- Entrances to the school are off landscaped plazas with special paving, accent palms and an exterior amphitheater type of gathering area called the “Piko.”

Program Requirements:

- Architects followed the Kamehameha educational specifications, which were developed in 2007
- School was to follow the idea of Ahu’Puaa or sustainability
- School is a learning tool
- Smaller learning communities, flexible learning environments, multi-disciplinary teaming within the learning studios
- Teacher collaboration and planning areas incorporated and near students
- Incorporation of outdoor performance areas and outdoor learning areas
- Safety, security and a quality environment to be provided for both staff and students

PHYSICAL ENVIRONMENT...

Keli'imaika'i

A three story, 74,210 s.f. classroom building housing the entire seventh and eighth grades with various elective classrooms at the lower floor.

- Lower floor houses many of the elective classrooms and labs such as the art room, vocational tech lab, home economics, some resource classrooms and the library and media center.
- The second and third floors house the learning studios, learning hubs, and science classrooms. These are setup to allow interdisciplinary team teaching.
- Teacher collaboration and planning rooms are also located on these classroom floors which is important in 21st Century learning styles.

Ka'oleioku

A two story, 37,705 s.f which houses the Administrative Suite, Kalama dining hall and various offices and elective classrooms.

- The lower floor houses the band and music room, ensemble rooms, hula and chant rooms, student activities and various other offices.
- The upper floor locates the Administrative Suite and is located at the front entry of the school.
- Kalama Dining Hall was designed as a multi-used space with a permanent stage. Besides student dining, the hall can be used as a performing arts space.
- A full service preparation kitchen is located adjacent the dining hall.
- Other spaces in this building are student services, a health center and student activities.



PHYSICAL ENVIRONMENT...

Outdoor Areas

A "Piko" which is the heart of the school. This area has the capacity for the entire student body and is a social and gathering area. It is also used as an outdoor performance and learning area.

BUILDING SPACE ELEMENTS

- Administration Suite is located at Ka'oleioku Building and near the front entry of the school.
- Students enter the school and are directed to a large mall like atmosphere.
- The Neighborhood Classrooms are housed at Keli'imaika'i Building on the second and third floors.
- Art, vocational technology, home economics, various resource classrooms and the library and media center are housed on the ground floor of Keli'imaika'i Building.
- Kalama Dining Hall in the Ka'oleioku Building is multi-use and can be a performance area.
- The "Piko" is the center and heart of the school and is used as an outdoor performance area and social and gathering area.
- Student services and a health center are located in Ka'oleioku Building.
- Cool and soothing exterior materials add a feeling of comfort for staff and students, • The interior color palette provides a vibrant atmosphere for staff and students.
- Daylighting and sun screening designed into the spaces allowing an enhanced learning environment.
- Simple roof frames, deep overhangs, articulated windows reminiscent of the other historic Kamehameha building styles have been incorporated into the building.
- Inclusion of a comprehensive student support area, counseling center and student activity center.
- An electives wing to house hula and chant, band, choral and music.

MECHANICAL & ELECTRICAL ELEMENTS

- A highly efficient and sustainable air conditioning system is utilized.
- Energy efficient luminaries used for sustainability.
- State of the art technology utilized including multi-media connections and smart board technology.

LANDSCAPE ELEMENTS

- A dramatic landscape plaza provided at the entry is used as a welcoming area along with opportunity for performances for Students.
- Medium to large canopy trees for shade and reduced heat island effect. This also enhances student social gathering areas.
- A landscaped "Piko" is also featured.
- Outdoor fitness area for Physical Education activities.



RESULTS OF THE PROCESS & PROJECT

A recent visit to the Kamehameha Middle School by John Chubb, current President of NAIS (National Association of Independent Schools) wrote a stunning article on the project's outcome. He exclaimed:

"On a recent visit to the Kamehameha School's Kapalama Campus, on a mountainside high above the city of Honolulu, I was greeted in the outside courtyard by a class of middle school girls who danced and sang-beautifully- a traditional hula. The Kamehameha Schools were established in the late 19th century by the last princess of Hawaii and dedicated to the education of native Hawaiian children. The institution aims at once to preserve the Hawaiian culture while preparing students for the modern world. It has long been endowed, through the princess's trust with the resources to enable most indigenous students to attend Kamehameha at little or no cost to families. As I enjoyed my traditional hula greeting, I thought what a remarkable opportunity these girls were enjoying.

Little did I know what that opportunity now entails. We left the courtyard and headed to the brand new middle school next door. Several stories tall, a simple rectangle, gleaming in the Hawaiian sun, the new building is a handsome addition to the traditional campus, which is stacked up and down the mountain, with ample fields and facilities for the 3,200 K-12 students on this campus (Kamehameha Schools has 31 preschool sites statewide and K-12 campuses on Oahu, Maui and the Big Island). The new middle school on the Kapalama Campus is anything but traditional. We entered at the far end of the rectangle, into what normally be a corridor lined with classrooms facing front and rear. No corridor. No classrooms. Just wide open spaces.

RESULTS OF THE PROCESS & PROJECT...

We walked the length of the floor – the equivalent of five or six classrooms long. On either side of what might have been the corridor, students –well over a hundred—worked in small groups, larger groups, occasionally individually, often on digital devices but also in discussion or with other instructional media. Teachers were sometimes engaged in direct instruction. More often, they were facilitating as students took the lead in their learning. At the end of the corridor, we headed up to the next floor. Same set-up. And the next floor as well. I asked the school director about the rather radical openness of the school’s floor plan. She said simply that as the school plans for the future, it did not want its instructional program to be limited by the facility.

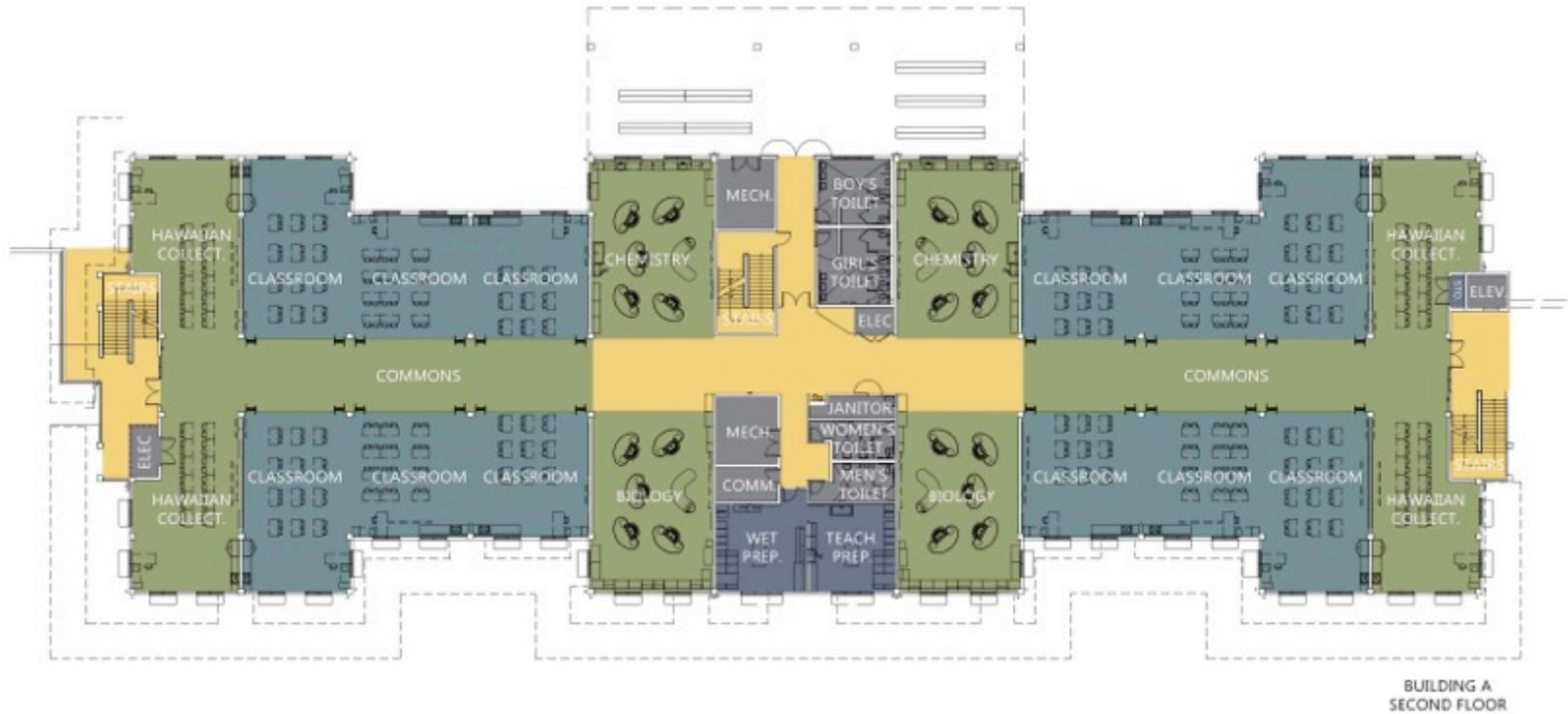
No one knows what high quality teaching and learning will look like in schools of the future. We know that students and teachers –like everyone else in this world—have many more ways to access knowledge, to acquire skills, to conduct research, to collaborate, and to communicate than ever before, a product of the internet and technological innovation. We know that our young people need to leave school with competence in all of these areas, and more design, engineering, entrepreneurship. If we are honest with ourselves, we know as educators that school will be different. Traditions, relationships, values –strengths of independent schools. And on full display as I visited Kamehameha – will remain vital. But the learning inevitably change, in wide ranging ways”

Building A Floor Plans



First Floor

Building A Floor Plans



Second Floor

Building A Floor Plans



Third Floor

Building B Floor Plans



First Floor

Building B Floor Plans



Second Floor

Exhibition of School Planning and Architecture : Project Data

Submitting Firm :	
Project Role	Project Architect
Project Contact	Steve Wong
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Joint Partner Firm:	
Project Role	Educational Facilitator
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Other Firm:	
Project Role	
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Construction Firm:	
Project Role	Nordic PCL
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Project Name	Kamehameha Middle School Redevelopment
City	Honolulu
State	Hawaii
District Name	n/a
Supt/President	Earl T. Kim
Occupancy Date	August 2012
Grades Housed	7-8
Capacity(Students)	680 Students
Site Size (acres)	15 acres
Gross Area (sq. ft.)	112,000 sf
Per Occupant(pupil)	
gross/net please indicate	
Design and Build?	Yes
If yes, Total Cost:	\$38M (not to be published)
Includes:	
If no,	
Site Development:	
Building Construction:	
Fixed Equipment:	
Other:	
Total:	