

Construction Management

New Program Proposal

2011



UNIVERSITY of HAWAII®
HONOLULU
COMMUNITY COLLEGE

NEW PROGRAM PROPOSAL

ASSOCIATE OF SCIENCE IN CONSTRUCTION MANAGEMENT HONOLULU COMMUNITY COLLEGE

1. Objectives of the Program:

Honolulu Community College proposes to develop an Associate of Science degree in Construction Management. The College currently offers a number of degrees focused on the construction industry. Some of these include the Associate of Science degrees and/or Certificates of Achievement in Carpentry Technology, Sheet Metal and Plastics Technology, Refrigeration and Air Conditioning Technology, Electrical Installation and Maintenance Technology, Welding Technology, among others. Honolulu Community College is also mandated to provide the state's apprenticeship training in these areas in conjunction with the appropriate trade unions and industry organizations. Additionally, the College was key in forming the state-wide Construction Academy program, which was the first of its kind in embedding community college faculty into the high school classroom environment, focused on teaching contextualized learning, while exposing students to career and technical educational programs.

The number of programs housed at Honolulu Community College makes it strategically key in the development and implementation of this program. The already developed pathways that engage high school students will serve as one of the many recruitment streams of enrolling students into the program. Other individuals targeted for this degree path will be those already in the construction industry workforce looking to retool their education and skills to then enter higher level positions. This may also include individuals injured on the job in trades related occupations. The College has already experience existing employees within the construction industry who have expressed interest in an associate degree in order to qualify for promotions within their current line of work.

The proposed program is designed for students who are planning to enter the construction management related occupations that require an associate degree. The Associate of Science in Construction Management will provide the students with:

1. A comprehensive academic background based on construction management principles and concepts that incorporates both sustainable and traditional construction methods.
2. Hands on experience in the inquiry approach to problem-solving, problem-based learning, and place-based learning.
3. Exposure to technologies and skills required in construction management.
4. Information about careers in a variety of construction related areas.
5. Knowledge and skills that address sustainability in construction and green building management.

Program Mission: The Construction Management program's mission is to provide training for students who are interested in developing entry level skills or in-service professional development required for employment in the construction industry.

Program Description: The Construction Management program is designed to prepare students for immediate employment as quantity surveyors, estimators, coordinators, project engineers, and supervisors. The program intends to provide well rounded individuals with skills in AutoCAD, Building Information Modeling software, Primavera, and other industry standard software.

Program Student Learning Outcomes (SLO):

Upon the successful completion of the Construction Management program, students will be able to:

- Demonstrate key skills necessary for effective management, planning, scheduling, and control of the overall construction project with attention to related sustainable considerations.
- Explain the materials and methods used in the construction of commercial and residential construction projects, covering procedures, equipment, sustainability, and techniques.
- Demonstrate proficiency in the interpretation of construction drawings and specifications, construction safety principles and practices, LEED essential elements, and related federal, state, and county codes.

2. Relationship of Objectives to Appropriate Functions of the College and University:

Honolulu Community College's mission statement supports the College's role in delivering the Construction Management program. The College mission states:

Serve the community as an affordable, flexible, learning-centered, open-door, comprehensive community college that meets the post-secondary educational needs of individuals, businesses, and the community. Serve the Pacific Rim as the primary

technical training center in areas such as transportation, information technology, education, communications, construction and public and personal services.

The College recently revisited and revised its strategic plan to align properly with the Community Colleges and University of Hawaii Strategic Plans. The proposed degree directly supports the College's strategic goals listed below:

GOAL A: Promote Learning & Teaching for Student Success

The Community Colleges will focus on student success by being learning colleges, providing access to quality programs which are affordable, adaptable, flexible, and responsive to the changing needs of students and their communities.

GOAL B: Functions as a Seamless State System

The UH System will function seamlessly when student learning becomes the core of the mission, and when students who demonstrate adequate preparation, regardless of their education level or where they are currently enrolled, are able to take courses from any program or campus that meets their educational interests. As a seamless system, we will function collaboratively, foster collegiality, and respect the diversity of each campus.

GOAL C: Promote Workforce and Economic Development

To promote workforce and economic development by responding quickly with education and training programs to meet changing workforce requirements, by developing strategic partnerships with selected businesses and training providers, and by offering degrees in response to demonstrated market demands.

GOAL D: Develop our Human Resources: Recruitment/ Retention/Renewal

To sustain and enhance a skilled, knowledgeable and productive workforce, committed to the delivery of high quality education and service.

GOAL E: Develop Sustainable Infrastructure for Student Learning

Promote effective learning through a continuing commitment to the maintenance and improvement of the campus physical environment and through the application of new technologies to better serve traditional and nontraditional students.

More information on the relation to the Honolulu Community College strategic plan and the Hawaii System strategic plan is available in Appendix A and B for this document.

Relation to Hawai'i State Department of Education (DOE) Career Pathways:

This degree directly supports Department of Education career pathways developed to guide career exploration and planning activities, to focus teaching and learning, and to link education with relevant real-world experimental activities. The career pathway supported by this degree is Industrial and Engineering Technology.

As previously mentioned, the Construction Academy is also a major initiative spearheaded by Honolulu Community College. That program allows for students to become engaged and experience the number of trade programs available for career choices and appropriate degree pathways. This proposed associate degree will serve as a possible next step for high school students seeking a career in construction.

3. Needs Assessment

Presently, there are no specific degree or certificate programs available at the undergraduate level with the UH system. The University of Hawaii at Manoa, College of Engineering offers a Master of Science in Construction Management. Honolulu Community College faculty and administration have begun discussions with the UHM College of Engineering faculty to work on alignment of the Construction Management degree with the undergraduate Engineering programs, with the hopes to develop other pathways for students matriculating through the University of Hawaii colleges.

Stimulus funding, rail, current interest rates are pointing to a favorable construction climate. As the construction industry regains its momentum, HCC will be prepared to supply not only construction tradespersons but well-educated construction leaders with experience to meet the new challenges of Sustainable Construction.

Currently, there are approximately 9 accredited community colleges that offer a similar program, with 8 more that are in the process of developing Construction Management programs, according to the American Council on Construction Education.

Occupations that will require an Associate's degree as a minimum qualification include project coordinators, junior estimators, quantity surveyors, surveyors, project engineers, quality control officers, safety officers, and supervisors.

SOC data estimates that through 2017, Oahu will have approximately 40 openings per year both new jobs and through separation. Nationally, the Department of Labor BLS data projects through 2018 projects employment in the field will grow by 17%. In Hawai'i, O*net data projects a 14% increase in the number of jobs and approximately 40 jobs available per year. Hirenet and O*net both rate Construction Management as "better than Average" for its projected growth rate.

Appendix C includes a listing of current job openings for graduates with an associate degree from companies in Hawaii and in the Pacific basin. These jobs were placed in mid-September from both government agencies and private companies.

The faculty planners and administration have already established an advisory board and have begun regularly scheduled meetings. The members of the advisory board have expressed the need for the program. In addition, several students have already been referred to the program by parents who own construction companies, in hopes that the program (so far only via experimental basis) will prepare them to eventually acquire their family business. Other students have been referred to the program by their employers.

Advisory Board Members:

Dee Oswald, Project Executive, Kiewit Building Group

Wayne Kawano, President, CCPI

Herbert Chock, President, Herbert Chock & Associates, Inc.

Bert Ogasawara, General Superintendent, Pankow Special Projects

Owen Miyamoto, Retired Head of Airports, State of Hawaii

Eric Hashizume, Vice President Building Division, Hawaiian Dredging & Construction

Glenn Ushio, Vice President, TOMCO, Inc.

Miles Yamasaki, RME, JENCO, Inc.

Chris T. Takashige, PE, Area Engineer U.S. Army Corps of Engineers

Alan Shintani, President, Alan Shintani General Contractor, Inc.

Gregg T. Kodama, Vice President, Brett Hill Management Group, LLC.

Several letters of support are available in Appendix D of this document.

4. Curriculum

The proposed program is designed for students who are planning to enter the construction management related occupations that require an associate degree. The proposed curriculum will require a minimum of 67 Credits of 100 level courses and a cumulative 2.5 grade point average for all courses required for the degree. These include:

- 49 credits of required Architectural & Engineering CAD Technology and Construction Management courses.
- 18 credits of General Education requirements.

Program prerequisites include:

- AEC 80 or AEC 81 or instructor approval based on high school drafting or other prior training/experience.
- ENG 22 / ENG 60 or ESL 23 or Placement in ENG 100.
- Placement in Math 103 or higher

The proposed program requirements and sequence include:

				Associate of Science Degree Credits
Suggested First Semester				
GER1a	ENG 100	Composition		3
	CM 100	Intro to Construction Management		3
	AEC 110	Intro to AutoCAD		4
	AEC 118	Construction Materials		3
GER2c	100 Level	General Education Requirement		3
				16
Suggested Second Semester				
	AEC 120	Intro to Construction Drawings		3
	AEC 124	Building Information Modeling Software		3
	AEC 131	Building Codes		2
	SP 251	Principles of Effective Speaking		3
GER1b	MATH 103	College Algebra		3
	OESM 145	Occ. Safety & Health in Const		3
				17
Suggested Third Semester				
	CE 211	Surveying		3
	CM 146	Applied Mechanics		3
	AEC 130	Residential Working Drawings		3
	CM 136	Construction Ethics and Law		3
	AEC 141	Building Systems		3
	ACC 201	Elementary Accounting		3
				18
Suggested Fourth Semester				
	IS 106	Sustainable Construction Practices		1
	ENG 209	Business & Mgmt Writing		3
	CM 145	BIM and Construction Management		3
	CM 142	Construction Documents		3
	AEC 138	Construction Estimating		3
	CM 148	Const Planning & Scheduling		3
				16
		Minimum Credits Required		67

Appendix E and F provide examples of the graduation check sheet to be used by students as well as a complete description of course offerings.

5. Enrollment Projections

In the fall 2010 semester, HCC ran an experimental course, AEC 197 Introduction to Construction Management. Current students in other majors have expressed interested in the program as well. As the college continues to develop and run courses on an experimental basis, a base of approximately 20 students have already surfaced interested in attaining the degree. Given the letters of support and daily inquiries regarding the program, it is expected to have a base of 40 students entering per year, totaling enrollment over the next three years at 80 majors.

6. Resources Required for Program Implementation

Faculty - The College has reallocated two existing FTE faculty qualified to teach the Construction Management courses. They will continue to be assigned to the Construction Management program.

Library Resources: The program faculty have met with the librarian staff and have concluded that the College already has adequate library resources to support the proposed program.

Physical Resources – The faculty currently teaching the experimental Construction Management courses are housed in office space close to the AEC program. This allows for close collaboration between the faculty within the two disciplines. In addition, the Construction Academy will utilize previously existing student laboratory space in the AEC and Apprenticeship programs. Additional supplies, computer hardware and software, and surveying equipment will need to be purchased to insure that the program has the adequate equipment and the most up-to-date technologies available.

Cost-Revenue Template

- a. **Annual costs to implement the program:** Refer to the cost template
- b. **Projected enrollment and estimated tuition revenue:** Refer to the cost template

7. Measures of Program Efficiency

Program efficiency will be measured by the community college's program health indicators, including; (a) number of majors; (b) course fill rate (how many student registered in courses compared to number of seats available); (c) the number of courses taught per year; (d) the number of graduates.

8. Measures of Program Effectiveness

Program effectiveness will be measured by: (a) placement of graduate into related industry positions; (b) success rate of transfer students; (c) performance of graduates in related industry positions. Program outcomes will be measured by; (a) student evaluations; (b) course completion rates.

A variety of student assessments will be used. All students in the program will be required to maintain portfolios of their course work including project and internship reports, field notes, papers, presentations, and other instructors' and supervisors' evaluations. The AS-CM faculty will develop rubrics for assessing student progress as shown in the portfolio.

APPENDIX “A”

Goals, objectives, and action strategies of the University of Hawaii’s Honolulu Community College Strategic Plan 2003 – 2010

The following goals, objectives, and action strategies of the College’s 2003-2010 strategic plan that are directly supported by the proposed Associates of Science in Construction Management.

GOAL A: Promote Learning & Teaching for Student Success

The Community Colleges will focus on student success by being learning colleges, providing access to quality programs which are affordable, adaptable, flexible, and responsive to the changing needs of students and their communities.

Hawaii’s Educational Capital

Increase the educational capital of the state by increasing the participation and completion of students, particularly low-income students and those from underserved regions

Performance Measures

- a) Increase credit enrollment by 1% per year to 4,500 students by 2015.
- b) Promote low-income student success and graduation by increasing the Pell Grant participation by 14% per year to 1,455 students (39% of those eligible to participate), and the total annual amount of Pell Grant aid disbursed to \$2,851,130 by 2015.
- f) Increase the number of students who successfully progress and graduate, or transfer to baccalaureate institutions by 3-6% per year to 1,025 by 2015, while maintaining the percentage of transfers who achieve a first year GPA of 2.0 or higher at the transfer institution.

GOAL B: Functions as a Seamless State System

The UH System will function seamlessly when student learning becomes the core of the mission, and when students who demonstrate adequate preparation, regardless of their education level or where they are currently enrolled, are able to take courses from any program or campus that meets their educational interests. As a seamless system, we will function collaboratively, foster collegiality, and respect the diversity of each campus.

STRATEGIC OUTCOMES:

A Globally Competitive Workforce

Address critical workforce shortages and prepare students for effective engagement and leadership in a global environment.

Performance Measures

- a) Increase the number of degrees awarded, and/or transfers to UH baccalaureate programs that lead to occupations where there is a demonstrated state of Hawai'i shortage of qualified workers, or where the average annual wage is at or above the U.S. average (2006=\$38,651) by 3% per year to 665 by 2015.
- b) Work closely with employers to create a better understanding of their requirements for a qualified workforce as well as develop increased opportunities for internships and eventual employment by our program graduates.
- c) Contribute to meeting the State's incumbent worker education goal by increasing enrollment of 25-49 years old in credit programs by 2% per year to 1,670 by 2015.
- d) Increase the annual degrees/certificates awarded in Science Technology, Engineering, and Math (STEM) fields by 6% per year to 135 by 2015.

A Seamless System

Contribute to the continued development of a seamless education system that meets the state's evolving demand for a qualified workforce by actively working with high schools and colleges to increase the number of students who successfully move from high school to college and into high skilled, high wage jobs within the state.

Performance Measures

- a. Create specific articulated pathways between selected high schools and the College designed to smooth the transition between the two institutions as well as improve the educational preparation of recent high school graduates who enroll in the college.
- b. Create specific articulated pathways between the college and baccalaureate granting institutions by increasing the number of specific program-to-program articulation agreements.
- c. Work closely with employers to create a better understanding of their requirements for a qualified workforce as well as develop increased opportunities for internships and eventual employment by our program graduates.

GOAL C: Promote Workforce and Economic Development

To promote workforce and economic development by responding quickly with education and training programs to meet changing workforce requirements, by developing strategic partnerships with selected businesses and training providers, and by offering degrees in response to demonstrated market demands.

STRATEGIC OUTCOMES:**Economic Contribution to the State**

Contribute to the state's economy and provide a solid return on its investment in higher education through research and training.

Promote Workforce Development

Respond to the evolving workforce needs of the various communities served by Honolulu Community College.

Performance Measures

- a) Refining and improving the alignment between our program offerings, curricula, and enrollment, and the external demand.
- b) Increase the number and diversity of programs offered to or in underserved regions by increasing the number and types of programs that can be completed through distance learning technologies.

GOAL E: Develop Sustainable Infrastructure for Student Learning

Promote effective learning through a continuing commitment to the maintenance and improvement of the campus physical environment and through the application of new technologies to better serve traditional and nontraditional students.

STRATEGIC OUTCOME:**Resources and Stewardship**

Acquire, allocate, and manage public and private revenue streams and exercise exemplary stewardship over all of the College's resources, for a sustainable future.

Performance Measures

- a) Build and/or acquire appropriate facilities to deliver educational programs and services, and identify repairs and maintenance requirements to properly maintain existing facilities.
- b) Increase operational efficiency by: increasing the average class size to the average of the UHCC system (CTE = 18; GPP = 23) by 2015, and reducing redundant infrastructure and services.
- f) Develop and sustain an institutional environment that promotes transparency, and a culture of evidence that links institutional assessment, planning, resource acquisition, and resource allocation as measured by faculty and staff responses on the Community College Inventory.

APPENDIX “B”

The Construction Management program directly supports the mission of the University of Hawai'i system as:

The common purpose of the University of Hawai'i system of institutions is to serve the public by creating, preserving, and transmitting knowledge in a multi-cultural environment. The University is positioned to take advantage of Hawai'i's unique location, physical and biological environment, and rich cultural setting. At all levels in the academy, students and teachers engage in the mastery and discovery of knowledge to advance the values and goals of a democratic society and ensure the survival of present and future generations with improvement in the quality of life.

The Construction Management program supports the following University of Hawai'i Community College Strategic Outcomes and Performance Measures 2008-2015:

2.4 Increase by 5% per year the number of students who successfully progress and graduate, or transfer to baccalaureate institutions, while maintaining the percent of transfers who achieve a first year GPA of 2.0 or higher at the transfer institution.

3.1 Increase by 3% per year the number of graduates in programs, or students who transfer to baccalaureate programs, that lead to occupations where the average wage is at or above the U.S. average (\$38,651).

3.2 Contribute to the development of a highly skilled, high wage workforce through the establishment of new education and training programs that lead to employment in emerging fields identified as innovative and knowledge-intensive opportunities.

The Construction Management program also clearly supports and enhances the fulfillment of Honolulu Community College's mission. The college mission states, Honolulu Community College is committed to:

Serve the community as an affordable, flexible, learning-centered, open door, comprehensive community college that meets the post-secondary educational needs of individuals, businesses, and the community.

Serve the Pacific Rim as the primary technical training center in areas such as transportation, information technology, education, communications, construction and public and personal services.

The mission statement also includes a series of specific goals to enable the College to fulfill this mission. Adding the Construction Management program will manifestly, support the following Honolulu Community College goals:

Provide two-year transfer educational programs that offer students the general educational component of the Baccalaureate Degree.

Insure general education competency in communications, problem-solving, ethical deliberation, cultural diversity, and global awareness.

To provide co-curricular programs and activities to promote student learning and development and to prepare students for leadership roles and responsibilities in a global community.

Contribute to the support of the community's economic and social growth.

The Construction Management program will establish itself as a premier training center for construction management in Hawai'i. The program will support the economic recovery and development in the state of Hawai'i and its construction industry. The establishment of this program will develop a high skilled, high-wage workforce in the construction industry. In addition, the curriculum focus will contribute to the development and training of mid-management positions within an industry that ethnic and gender diversity is appreciated, respected, and promoted. Enrollment projections anticipate a beginning enrollment of 20 students, with an increase to 40 students by Fall 2012.

APPENDIX "C"

- **Construction Project Manager / Estimator**

Local Construction company seeking to hire a full time project manager/estimator. Construction knowledge critical for residential and light commercial. Sub-Contractor and vendor knowledge good to have.

Must be able to read Blueprints and do accurate quantity takeoffs, Architectural background preferred.

Supervise workers and set job schedule.

CAD, Computer, and good communication skills required.

Send Resume' with salary requirements and references

- **Project Engineer**

Immediate opening for Inter Project Engineer. Recent college graduate perfect position to gain work experience.

We are seeking individuals who are team players and are eager to develop new skills and abilities. The duties will include field support for superintendents and administrative documentation.

Candidates should have, as a minimum:

- * Engineering degree (desired but not required)

- * Computer skills (Excel, Word, and Adobe Acrobat)

- * Driver's License (clean record)

Fax your resume to 682-9280 or Email to apbhr@apbconstructiongroup.com

- **Full-Time, Project Engineer/Project Manager**

Who will be responsible for all phases of Electrical project management.

Responsibility includes but not limited to project organization, project documentation, progress measurement for payment, change orders, etc.

Must have scheduling experience, Federal or State job project experience preferred.

Must be able to multi-task and have excellent computer skills.

Full-Time, Project Engineer Assistant, Assist Sr. Project Engineer w/ various tasks, including but not limited to assist development of bid packages, manage CPM schedules, review submittals, process subcontractor billings. and other tasks as needed.

Excellent computer, communication, administration skills & multi-tasking essential.

Please e-mail your resume.

- **Project Engineer**

Key Responsibilities:

Tasks include performing, scheduling and witnessing inspections, testing, monitoring construction activities and documenting results.

Issue reports for subcontractors regarding quality deficiencies and remediation requirements.

Ensure adequate corrective measures are implemented in cases of noncompliance.

Review for compliance with requirements and maintain contract documents, drawings, specifications, as-builts, RFIs and submittals.

Inspect materials, equipment and workmanship.

Develop punchlist and final inspection and acceptance.

Qualifications Required:

2 or 4 year degree in building science, construction management or engineering.

5 years field experience on Government projects desirable but not required.

Computer knowledge and skills.

Good written and verbal communication skills.

Additional Information:

Travel between the Hawaiian Islands depending on job location.

Send resume to olivia@primatechconstruction.com

- **HECO Planner / Scheduler**

Management services company in Honolulu currently has two (2) Planner / Scheduler positions available. These individuals will be working on a project with Hawaiian Electric Company (HECO). This is a very exciting opportunity, that could eventually lead to full-time employment with HECO.

The Planner / Scheduler will primarily be responsible for facilitating the planning process of overhead pole installation and replacement. Will be working with and writing work packages to have overhead poles replaced and sending HECO contractors out to job sites. Will also be conducting research, using project planning documents, and obtaining input from team members, suppliers, and subcontractors in order to support the development of project schedules.

These openings are entry- to mid-level positions. Previous engineering technician and/or construction scheduling experience would be helpful.

The company utilizes proprietary software. On-the-job training will be provided.

Location:

Ward

Oahu: Various

Salary:

\$20.00 to \$25.00 Hourly

Required Education and Qualifications:

- Scheduling and planning experience with Primavera or project experience would be helpful
- Must be computer literate and proficient
- Good communication skills and the ability to work well with others

- **Cost Estimating, Engineer**

Economy Plumbing & Sheetmetal is a well established local Mechanical Construction Firm completing air conditioning and plumbing projects in Hawaii since 1958.

We are seeking a motivated Engineer for a cost estimating position. We are looking for a candidate with some construction experience (no more than 5 years experience). Individuals should be career minded, goal oriented, and ready to grow and develop with an established firm.

Job Responsibilities

- 1) Ability to read blueprints and develop accurate material take offs
- 2) Review contract drawings and specifications
- 3) Ability to write RFI clarifications
- 4) Communication with other contractors and material suppliers

Minimum education and experience

- 1) Previous Experience utilizing Mechanical Estimating Software Programs
- 2) Engineering or Drafting college courses. Mechanical Engineering Degree from an accredited school will be given preference.
- 3) Minimum of two (2) years working experience in Construction Field
- 4) Computer skills -- Microsoft Office (Word, Excel), Windows, Adobe
- 5) Excellent interpersonal and communication skills

Preferred Qualifications:

- 1) Mechanical design experience
- 2) Basic drafting skills
- 3) Computer estimating experience

Competitive salary and benefit package. Salary and benefits are based on experience. If interested, email cover letter and resume with detailed project history and references to eps-hr@hawaii.rr.com. Questions related to these positions can be addressed to this email as well.

In state candidates preferred. No relocation assistance is available for these positions.

APPENDIX “D”

Letters of Support:

Owen Miyamoto, PE
3209 Paty Drive
Honolulu, HI 96822-1439

August 26, 2011

Mike Rota, Chancellor
Honolulu Community College
874 Dillingham Boulevard
Honolulu, HI 96817-4598

Dear Mike,

I am writing in support for the establishment of a 2-year Associates Degree in Construction Management at Honolulu Community College. In the future, I urge your consideration for the expansion of the program to offer a full 4-year Bachelors Degree.

From my experience with the Hawaii Department of Transportation, there is an unmet demand for qualified professionals in construction management for both the government and private sector. There is a clear future for employment to meet the unmet infrastructure needs of our state that will require skilled personnel, which can receive their training at HCC through a new construction management program. Construction has become increasingly complex and competitive and will require a thorough knowledge on how best to take advantage of the latest technology in specialized equipment, materials and their application.

Over the years I have been able to observe the programs and instruction for which HCC is especially noted. The focus on apprenticeship training in practical skills with immediate application to construction distinguishes it from other academic institutions. HCC can effectively fill the gap between blue-collar workers and managers with the proposed Construction Management Program. The Engineering Department at UH-Manoa has been unable to provide an ongoing program in construction management and several years ago dropped courses in surveying, which remains an unmet need of the industry.

Thank you for your consideration of my proposal. Please do not hesitate to contact me for further information or if there is any way I can help to establish a Construction Management Program at HCC.

Sincerely yours,



Owen Miyamoto



HERBERT CHOCK & ASSOCIATES, INC.

Fort Street Tower, Ste. 708 - 745 Fort St. - Honolulu, Hawaii 96813 - (808)526-9399 - Fax (808)533-0771

August 25, 2011

Mike Rota, Chancellor
Honolulu Community College
874 Dillingham Blvd.
Honolulu, HI 96817

Re: Proposed Associates of Science in Construction Management Program at HCC

Dear Mr. Rota,

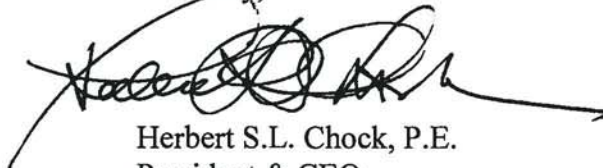
I am writing this letter in support of the proposed Construction Management Program for Honolulu Community College. As an active member of the Construction Industry in Hawaii (Construction & Engineering Consulting), my firm is constantly exposed to deficits in the area of construction and construction management. One of the reasons for this is lack of proper and continuous education and experience.

The resource of properly skilled personnel is not being filled because there are not enough opportunities for promising and potential student and/or journeymen to be educated in a formal environment. I believe that this is the "gap" that this proposed program will attempt to fill. That the opportunities such as this do not exist on a regular and economically reasonable basis emphasizes the need for this program.

It is encouraging to know that there is a future vision of the program evolving into a certified four year Construction Management Bachelor of Science degree is a possibility pending the success of the 2 year Associates degree. With the prospects of the construction industry in Hawaii continuing (long term) and with the emphasis on costs, time and technology becoming more critical, the need for this kind of preparation is absolutely essential.

Please feel free to call me if you have any questions regarding my comments on your program at (808)469-4671 or email: herb@hcahawaii.com.

Sincerely,



Herbert S.L. Chock, P.E.
President & CEO

HSLC/ez

Cc: Norman Takeya

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 **TOMCO CORP.**
General Contractors

500 Alakawa Street, Suite 100A Honolulu, Hawaii 96817
Ph (808) 845-0755 Fax (808) 845-1021

August 26, 2011

Mike Rota, Chancellor
Honolulu Community College
874 Dillingham Blvd.
Honolulu, Hawaii 96817

Dear Mike,

As a member of our local construction industry, please accept this letter of support for the proposed Associates of Science in Construction Management Program to be offered at Honolulu Community College.

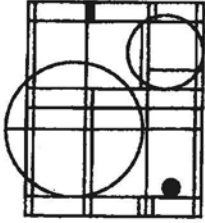
Honolulu Community College has played a vital role in the training and development of our construction trade workers, and this proposed Construction Management program is long overdue and will assist and advance the industry as a whole.

Presently this position requires a minimum of five to ten years of on the job training and experience, not to mention the cost expended. I highly encourage and support the development of a Construction Management program as a four-year bachelor's degree.

Thank you for your time and consideration.

Aloha,


Glenn Ushio,
President



Brett Hill Management Group LLC
Hawaiki Tower
88 Piikoi Street Suite 303
Honolulu, Hawaii 96814
Telephone: (808) 593-1500
Facsimile: (808) 593-1501

September 6, 2011

Mike Rota, Chancellor
Honolulu Community College
874 Dillingham Blvd.
Honolulu, HI 96817

Dear Mr Rota,

As an active member of our local construction industry, please accept this as letter of support for the proposed Associates of Science in Construction Management Program to be offered at Honolulu Community College. The proposed Construction Management program fills a need in the industry for training of workers not interested to be a tradesman but wanting to stay in the construction industry.

Having a focused training program will allow local construction companies to send employees through a series of classes to improve and sharpen their skill set that will elevate the knowledge base of the industry as a whole.

It is with full endorsement that I further encourage the development of the program into a four-year bachelor's degree. Hawaii is one of few states with no existing four-year degree program in Construction Management. With more construction projects requiring the services of Construction Managers it would be advantageous to have a locally trained workforce that will enable us to compete for these projects thus positively impacting our local economy.

Thank you for your kind consideration of this request. Please do not hesitate to contact me with any questions at (808) 306-6136 or email at gkodama@bretthillcompanies.com.

Aloha,

Gregg Kodama
Vice President



DEPARTMENT OF THE ARMY
U.S. ARMY CORPS OF ENGINEERS, HONOLULU DISTRICT
FORT SHAFTER, HAWAII 96858-5440

REPLY TO
ATTENTION OF:

August 26, 2011

Schofield Barracks Area Office
Construction Branch
Engineering & Construction Division

Board of Regents' Office
University of Hawaii
2500 Campus Road
Honolulu, HI 96822

Dear Sirs:

I am writing in support of the proposed Construction Management degree program at Honolulu Community College (HCC). As a US Army Corps of Engineers professional involved with construction management for the past 30+ years, the proposed degree program would greatly benefit the communities and the US military in Hawaii, by improving and enhancing all personnel involved in construction management activities.

Under the current construction hierarchy, construction project engineers utilize construction inspectors to accomplish a myriad of duties required to build private, commercial and government infrastructures and facilities. The work to fulfill these duties include quality control and assurance, safety, environmental, scheduling and contract administration, just to name a few, require knowledge and skills that can no longer be learned on the job and instead must be gained through formal classroom instruction. While the project engineer at a construction site uses their skills to resolve complex problems and provide organizational expertise, it is the non-engineer that takes up the duty mentioned previously, on a day to day basis. Historically these employees were construction specialty persons who have worked in either trade specific jobs or been trained in a particular occupation such as construction safety. Today, as construction projects have become diverse and complex, requiring so many skills, having a formal educational basis to draw upon would greatly benefit and enhance the construction industry.

The Department of Army, led by the US Army Corps of Engineers, is currently reviewing a proposal to establish a professional graded work series for 4-year Construction Management graduates, equivalent to engineers graduating with an accredited BS degree. This is being done to support mainland colleges awarding Engineering Tech and Construction Management degrees, but also because there is a recognized shortage of professional, non-engineer personnel available for construction management. It is expected that the proposal will be approved shortly; thereby allowing these graduates equal opportunity to compete for jobs with engineers. By allowing HCC to establish a 2-year program, and hopefully expanding to a 4-year degree, you will provide a great opportunity for local Hawaii graduates to compete for these jobs.

I urge you to fully support this initiative for the above reasons and to support the professional growth and development of the people of the State of Hawaii.

The views presented in this letter are those of the author and do not necessarily represent the views of DoD, the US Army, or the US Army Corps of Engineers.

Respectfully,

A handwritten signature in blue ink that reads "Chris T. Takashige". The signature is written in a cursive style with a large, stylized "C" and "T".

Chris T. Takashige, PE, CCM
Area Engineer, Schofield Barracks Area Office



August 31, 2011

Mr. Mike Rota, Chancellor
Honolulu Community College
874 Dillingham Blvd.
Honolulu, HI 96817

Subject: Construction Management Program at HCC

Dear Mr. Rota,

On behalf of the Cement and Concrete Products Industry of Hawaii (CCPI), please accept this letter of support for the proposed Associates of Science in Construction Management program at the Honolulu Community College.

As a member of the Industry Advisory Council at the University of Hawaii – College of Civil and Environmental Engineering, we have seen an attenuation of courses related to construction engineering and management program at the Manoa campus. This has created a critical gap in the training and educational development of Hawaii's future construction workforce; i.e. trade workers, inspectors, project engineers, and construction managers.

Furthermore, we fully endorse the development of this program into a four-year bachelor's degree program in Construction Management. Our local construction companies and engineering firms need the services of locally, well-trained and educated in construction management, in lieu of hiring from out of state.

We appreciate your attention on this matter. Please feel free to contact me at 848-7100 or email at wkawano@ccpihawaii.org if you have any questions. Mahalo!

Sincerely,

A handwritten signature in blue ink that reads 'Wayne Kawano'.

Wayne Kawano
President, CCPI

CCPI is a non-profit trade organization, representing over 30 companies statewide. For over 47 years, CCPI has represented the local suppliers of cement, concrete, and masonry products. Our purpose is not only to promote but to also protect and advance the welfare and interests of the concrete products industry as may be deemed more satisfactorily performed by group action rather than individual action.

APPENDIX “E”

Construction Management (CM) AY 20XX Graduation Checklist for Honolulu Community College (HCC)

Associate in Science (AS) Degree 67 credits

This is not an official document. Use it to keep track of your academic progress. You are responsible for meeting your program and graduation requirements. Check catalog for course descriptions and course prerequisites. See your academic counselor if you need help.

MAJOR PREREQUISITES FOR CM COURSES	AS	COURSE	CREDIT	GRADE	SEMESTER YEAR
<ul style="list-style-type: none"> • AEC 80 or 81 or Instructor Approval • ENG 22/ENG 60 or ESL 23, or Placement in ENG 100 • Placement in MATH 103 or higher 					
Required Courses for Major. Must be taken in order.					
First Semester: Fall Only. All Courses Required					
AEC 197 Introduction to Construction Management			3		
AEC 110 Introduction to AutoCAD			4		
AEC 118 Construction Materials			3		
ENG 100 Composition			3		
100 Level General Education Requirement (2C)			3		
			16		
Second Semester: Spring Only. All Courses Required					
AEC 120 Intro to Construction Drawings			3		
AEC 124 Building Information Modeling			3		
AEC 131 Building Codes			2		
OESM 145 Occ. Safety & Health in Construction			3		
SP 251 Principles of Effective Speaking			3		
MATH 103 College Algebra			3		
			17		
Third Semester: Fall Only. All Courses Required					
CE 211 Surveying			3		
CM 146 Applied Mechanics			3		
AEC 130 Residential Working Drawings			3		
AEC 141 Building Systems			3		
CM 136 Construction Ethics and Law			3		
ACC 201 Elementary Accounting			3		
			18		
Fourth Semester: Spring Only. All Courses Required					
IS 106 Sustainable Construction Practices			1		
ENG 209 Business & Mgmt Writing			3		
CM 145 BIM and Construction Management			3		
CM 142 Construction Documents			3		
AEC 138 Construction Estimating			3		
CM148 Construction Planning & Scheduling			3		
Total			16		
Program Total Credits			67		

Graduation Requirements:

- 64 credits for Associate of Applied Science (AAS)
- 2.0 cumulative grade point average
- **CA Proficiency Requirement:** Completion of ENG 20BCDE or place higher than ENG 20BCDE on the placement test and completion of MATH 20BCD or place higher than MATH 20BCD on the placement test. MATH 21 does not meet this requirement.
- **Residency Requirement:** The final twelve (12) credits in the major must be earned from HCC. This requirement may be waived. See an academic counselor for more information.
- Submit graduation application by March 15 for Spring semester and October 15 for Fall semester. There is no graduation in the summer.
- When there is a break in enrollment for more than one year, must use the graduation requirements in effect at the time of applying for graduation.

APPENDIX “F”

Course Descriptions

AEC 80, Basic Manual Drafting (2)

A first course in technical drawing designed primarily for students planning to enroll in regular-program Architectural, Engineering and CAD Technologies courses upon completion of this course, but open to others as well. Topics to include use of manual drafting tools, drawing to scale, orthographic projection, sections, dimensions, pattern drawing, and pictorial drawing. Similar to AEC 81, but manual drafting tools are used, and the course is an internet course.

1 Hour Lecture, 3 Hours Lab / Week

AEC 81, Basic CAD Drafting (2)

Pre-program course required for all CM students who have not had high school or similar drafting training. Exploratory mechanical drawing using AutoCAD®. Emphasis on orthographic projection, dimensioning, sections, etc. rather than on the software.

1 Hour Lecture, 2 Hours Lab / week

CM 100, Intro to Constr. Management (3)

(Prerequisite: AEC 81 or Instructor Approval)

Introduction to the construction process, including a general overview of organization, relationships, practices, terminology, project types, procurement methods, industry standards, contract documents, and career opportunities.

3 Hours Lecture / Week

AEC 110, Basic AutoCAD® (4)

(Prerequisite: AEC 80 or AEC 81, or instructor Approval, Placement in ENG 100, Placement in MATH 24/50/53)

Foundation AutoCAD® course. Basic drawing and editing commands, text, dimensions, blocks, tables, external references, layouts, intro to AutoCAD® 3D, and more. A 4-credit course.

2 Hours Lecture, 6 Hours Lab / week

AEC 118, Construction Materials (3)

(Prerequisite: Placement in ENG 100 & MATH 24/50/53)

Survey of building materials, products, and systems. Concrete, masonry, wood, metals, conveying systems, plumbing systems, etc. Topics based on the CSI (Construction Specification Institute) format. A rigorous internet course.

AEC 120, Intro to Construction Drawings (3)

(Prerequisite: AEC 110, Recommended AEC 118,)

A core course in basic building construction and drawing. Foundations, sills, floor plans, framing, doors and windows, cornices, roofs, elevations, etc. All drawing in AutoCAD®

2 Hours Lecture, 3 Hours Lab / Week

AEC 124, Building Information Modeling

(Prerequisite CM 100, placement in ENG 100)

This course provides students with the opportunity to work on a medium-size modeling/drafting project using the latest architectural software. Emphasis is on the three-dimensional drawing tools of the Revit software. Architectural models, rendering, and animation are important elements of the course. Students create photo realistic computer images of buildings, components, and the project site.

2 hrs. Lecture; 3 hrs. lab. per week

AEC 130, Residential Working Drawings (3)

(Prerequisite: AEC 118)

Advanced study and application of materials and methods of construction specifically related to multi story dwellings. Development of details and a complete set of working drawings.

3 Hours Lecture / Week

AEC 131, Construction Codes (2)

(Prerequisite: AEC120 and ENG 100)

This course explores the ramifications of codes on building projects. Students apply the material of the course relating to zoning, building, and accessibility requirements to drawing projects in the corequisite course, AEC 130. This is a lecture discussion-exercise course

2 Hours Lecture / Week

CE 211, Surveying (3)

(Instructor Approval)

Introduction to basic surveying operations and computations. Development of the surveying skills necessary to measure distances, angles, and elevations to required accuracies. Calculation of tape corrections, bearing, coordinates, traverses, and areas. Emphasis is placed on instrument use and note-keeping techniques.

2 Hours Lecture, 4 Hours Lab / Week

CM 136, Construction Law & Contracts (3)

(Prerequisite: CM 100)

The study of contracts and law, documents, and administrative functions common in the construction industry. Documentation from startup to closeout will be covered as well as ethics and professionalism, and written and oral communications in construction.

3 Hours Lecture / Week

AEC 138, Construction Estimating & Bidding (3)

(Prerequisite: AEC 118, AEC 120, ENG 100)

Introduction to construction contracts, types of estimates, construction costs, cost accounting, print reading, the bidding process, etc. A computer spreadsheet course.

2 Hours Lecture, 3 Hours Lab / Week

AEC 141, Building Systems (3)

(Prerequisite: AEC 118, AEC 130 Corequisites: AEC 140 or Instructor Approval)

Principles of code, design, methods, and materials are applied to plumbing, heating, ventilation, air conditioning, and electrical systems.

2 Hours Lecture, 4 Hours Lab / Week

CM 145, BIM and Construction Management (3)

(Prerequisite AEC 130)

Through the use of Building Information Modeling this course explores the use of this powerful software and its use in construction management.

2 Hours Lecture, 5 Hours Lab / Week

CM 146, Applied Mechanics (3)

(Prerequisite: Math 53 or MATH 103, AEC 118)

Principles of statics and strength of materials including properties of materials, forces, equilibrium, stresses and strains are studied. Emphasis is placed on understanding the behavior of structural components associated with the construction process

3 Hours Lecture / Week

CM 148, Planning & Scheduling (3)

(Prerequisite: AEC 130, AEC 138)

The theory and the practice of planning, scheduling, and reporting of a construction project through the use of bar chart and CPM.

4 Hours Lecture / Week

OESM 145, Occupational Safety & Health in Construction (3)

(Recommended prep OESM 101)

Comprehensive overview of techniques and procedures to insure effective control of hazards and accidents in construction and allied industries; emphasis on applicable OSHA and HIOSHA standards and related codes.

IS 106, Sustainable Construction Practices (1)

An overview of sustainability and how it relates to the construction industry.

2 Hour Lecture / Week

ACC 201, Elementary Accounting (3)

This course introduces the student to accounting theory and the methods used to record and report financial information. It analyzes methods for valuing the assets, liabilities and ownership of an organization.