



**BOW ENGINEERING
& DEVELOPMENT, INC.**



STATEMENT OF QUALIFICATIONS

**To Provide Professional Environmental Engineering Services for:
Fiscal Year 2023 - 2024**



**Department of Environmental Management
County of Hawai‘i**

June 30, 2023

Submitted By:

Bow Engineering & Development, Inc.

1953 South Beretania St. PH-A
Honolulu, HI 96826-1342
www.bowengineering.com

Contact Person:

William F. Bow
Phone: (808) 369-8217
Fax: (808) 945-9299
Email: wbow@bowengineering.com

Bow Engineering & Development, Inc.

1953 S. Beretania Street, PH-A
Honolulu, Hawai'i 96826-1342

Telephone: (808) 941-8853

Fax: (808) 945-9299

www.bowengineering.com



June 30, 2023

Via email: ohcd@hawaiicounty.gov

Ms. Susan Kunz, Administrator
Housing and Community Development, County of Hawai'i
1990 Kino'ole Street, Suite 102
Hilo, Hawai'i 96720-4224

**SUBJECT: Response to Notice to Providers of Professional Services
Fiscal Year 2023-2024**

Dear Ms. Susan Kunz,

In response to the County's Notice to Providers of Professional Services, Bow Engineering & Development, Inc. is pleased to submit this letter of interest and the accompanied statement of qualifications for consideration to provide **Civil Engineering (Solid Waste, Wastewater), Environmental Engineering (Sanitary Engineering), Environmental Engineering (Wastewater), Environmental Engineering (Environmental Compliance), and Community Planning (Environmental Assessment)** services to the County of Hawai'i's Department of Environmental Management.

Bow Engineering & Development, Inc. is a woman-owned and operated small business. We have been in business for over 26 years, offering a wide range of civil and environmental engineering services to public and private sector clients throughout the state of Hawai'i.

We take great pride in providing quality professional services in a responsive and timely manner. We have a solid track record in completing projects within budget and on schedule, fulfilling the requirements and specifications of our scope of work, and meeting or exceeding our clients' expectations. Our current work load is moderate such that we are able to start working on the County of Hawai'i's projects right away.

If you have any questions or comments, please contact William Bow at wbow@bowengineering.com or 808-369-8217. We look forward to hearing from you and welcome the opportunity to be of service to the County of Hawai'i.

Sincerely,

BOW ENGINEERING & DEVELOPMENT, INC.

A handwritten signature in blue ink that reads "William F. Bow".

William F. Bow, M.S.
Partner & Environmental Director

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I DPW FORM 120

STATE OF HAWAI'I
COUNTY OF HAWAI'I - DEPARTMENT OF PUBLIC WORKS

QUESTIONNAIRE FOR ARCHITECTS, ENGINEERS AND OTHER PROFESSIONAL SERVICES

QUESTIONNAIRE FOR: (LIST DISCIPLINE) Community Planning (Environmental Assessment)	OTHER QUESTIONNAIRES SUBMITTED: (LIST DISCIPLINES) (Empty)	DATE 06/30/2023
FIRM NAME Bow Engineering & Development, Inc.	ESTABLISHED YEAR STATE 1997 HI	TYPE OF ORGANIZATION (Underline) INDIVIDUAL PARTNERSHIP <u>CORPORATION</u> JOINT VENTURE OTHER
BUSINESS ADDRESS, TELEPHONE & FAX NO. OF HAWAI'I OFFICE 1953 South Beretania Street, PH-A, Honolulu, HI 96826-1342 Phone 808-941-8853 Fax 808-945-9299	AGE OF FIRM 26 years	FEDERAL ID NO. 94-3271983
PRINCIPALS OF FIRM: (NAMES) William F. Bow, Sarah K. Bow	ASSOCIATE MEMBERS OF FIRM: (NAMES) William H.Q. Bow	
PRESENT BRANCH OFFICE(s): (ADDRESS, TELEPHONE & FAX NO.) (Empty)	PERSON IN CHARGE: (NAMES) William F. Bow	

NUMBER OF PERSONNEL IN YOUR PRESENT ORGANIZATION

LOCATED AT	PRINCIPALS & KEY PERSONNEL			OTHER PERSONNEL											TOTAL
	Architect	Engineer	Others	Architect	Engineers				Draftsmen	Spec. Writer	Estimator	Inspector	Surveyor	Balance	
					Mech.	Electri	Civil	Others							
		1	2				4		1			2		1	11
TECHNICAL PERSONNEL:				NUMBER OF PERSONNEL WITH HAWAI'I LICENSES						NUMBER OF PERSONNEL WITHOUT HAWAI'I LICENSES					
5				4						4					

PERSONAL HISTORY STATEMENT OF PRINCIPALS AND ASSOCIATES WITHIN YOUR FIRM							
NAME William F. Bow			RESIDENT OF Hawai'i		NAME Sarah K. Bow		RESIDENT Hawai'i
TITLE Partner & Environmental Director				TITLE Partner & Director of Finance			
YEARS OF EXPERIENCE 12	AS PRINCIPAL IN THIS FIRM 4	AS PRINCIPAL IN OTHER FIRMS 0	OTHER THAN PRINCIPAL 8	YEARS OF EXPERIENCE 15	AS PRINCIPAL IN THIS FIRM 4	AS PRINCIPAL IN OTHER FIRMS 0	OTHER THAN PRINCIPAL 11
EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION) University of Hawai'i at Manoa, M.S., 2010, Organic Chemistry Chaminade University, B.S., 2006, Forensic Science				EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION) Seattle Pacific University, B.A. in Biology, 2004 Seattle Pacific University, Certification in Elementary Education, 2005			
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS National Assoc. of Environmental Professionals, Hawaii Ass. of Environmental Professionals, Academy of Board Certified Environmental Professionals; American Chemical Society - Hawaii				MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS NAIOP, Family Business Center of Hawaii			
REGISTRATION (TYPE, YEAR, STATE) N/A				REGISTRATION (TYPE, YEAR, STATE) N/A			
NAME William ("Bill") H.Q. Bow			RESIDENT OF Hawai'i		NAME		RESIDENT OF
TITLE Principal Engineer				TITLE			
YEARS OF EXPERIENCE 47	AS PRINCIPAL IN THIS FIRM 26	AS PRINCIPAL IN OTHER FIRMS	OTHER THAN PRINCIPAL 21				
EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION) University of Hawai'i at Manoa, B.S., 1976, Civil Engineering							
MEMBERSHIP IN PROFESSIONAL ORGANIZATIONS American Society of Civil Engineers, Disability Communications Access Board, American Council of Engineering Companies of Hawaii							
REGISTRATION (TYPE, YEAR, STATE) Professional Civil Engineer, 1980, Hawaii Realtor Associate, 1994, Hawaii							

PERSONAL HISTORY STATEMENT OF TECHNICAL PERSONNEL WITHIN YOUR FIRM

NAME Emi L. Tanitomi		STATUS (Underline) <u>FULL-TIME</u> Part-Time	NAME Jesse J.C. Elliott		STATUS (Underline) <u>FULL-TIME</u> Part-Time
TITLE OR POSITION Project Manager		YEARS OF EXPERIENCE 17 years	TITLE OR POSITION Project Manager		YEARS OF EXPERIENCE 18 years
WITH THIS FIRM 7 years	WITH LAST FIRM (NAME & NO. OF YEARS) HDR, 5	WITH OTHER FIRMS 3.5 years	WITH THIS FIRM 6 years	WITH LAST FIRM (NAME & NO. OF YEARS) Wilson Okamoto, 12	WITH OTHER FIRMS
EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION) San Diego State University, M.S., 2007, Civil Engineering University of Hawai'i at Manoa, B.S., 2005, Civil Engineering			EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION) University of Hawai'i at Manoa, B.S., 2005, Civil Engineering		
REGISTRATION (TYPE, YEAR, STATE) Professional Civil Engineer, 2011, Hawai'i Professional Civil Engineer, 2009, California			REGISTRATION (TYPE, YEAR, STATE) Professional Civil Engineer, 2011, Hawai'i		
NAME Mandi R.K. Moriwaki		STATUS (Underline) <u>FULL-TIME</u> Part-Time	NAME Don Yanos		STATUS (Underline) <u>FULL-TIME</u> Part-Time
TITLE OR POSITION Project Manager		YEARS OF EXPERIENCE 12 years	TITLE OR POSITION Senior Designer/AutoCAD Drafter		YEARS OF EXPERIENCE 28 years
WITH THIS FIRM 12 years	WITH LAST FIRM (NAME & NO. OF YEARS)	WITH OTHER FIRMS	WITH THIS FIRM 20 years	WITH LAST FIRM (NAME & NO. OF YEARS) SSFM International, 6	WITH OTHER FIRMS 2 years
EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION) University of Southern California, B.S., 2011, Civil Engineering			EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION) Kapiolani Community College, A.S., 1995, Architectural Drafting		
REGISTRATION (TYPE, YEAR, STATE) Professional Civil Engineer, 2015, Hawai'i			REGISTRATION (TYPE, YEAR, STATE) N/A		
NAME Korey L. Johnson		STATUS (Underline) <u>FULL-TIME</u> part-time	NAME		STATUS (Underline) Full-time <u>Part-Time</u>
TITLE OR POSITION Environmental Project Manager		YEARS OF EXPERIENCE 8 years	TITLE OR POSITION		YEARS OF EXPERIENCE
WITH THIS FIRM 4 years	WITH LAST FIRM (NAME & NO. OF YEARS) XRF Research, Inc., 4	WITH OTHER FIRMS	WITH THIS FIRM	WITH LAST FIRM (NAME & NO. OF YEARS)	WITH OTHER FIRMS
EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION) University of Hawai'i at Manoa, M.S., 2015, Natural Resource and Environmental Management University of Hawai'i at Manoa, B.S., 2011, Environmental Studies			EDUCATION (COLLEGE, DEGREE, YEAR, SPECIALIZATION)		
REGISTRATION (TYPE, YEAR, STATE) N/A			REGISTRATION (TYPE, YEAR, STATE)		

OUTSIDE ASSOCIATES AND CONSULTANTS USUALLY EMPLOYED

DISCIPLINE	NAME OF FIRM OR INDIVIDUAL	DISCIPLINE	NAME OF FIRM OR INDIVIDUAL
Land Surveying and Mapping	Austin, Tsutsumi & Associates, Inc.	Landscape Architecture and Irrigation	PBR Hawaii & Associates, Inc.
Traffic Consulting	Austin, Tsutsumi & Associates, Inc.	Geotechnical Engineering	Kokua Geotech LLC
Electrical Engineering	Ronald N.S. Ho & Associates, Inc.		
Structural Engineering	KSF, Inc.		

ERRORS AND OMISSIONS INSURANCE

DOES YOUR FIRM HAVE ERRORS & OMISSION (E&O) INSURANCE? (Underline)			AMOUNT OF COVERAGE PER CLAIM	AMOUNT OF DEDUCTIBLE
<u>YES</u>	NO	PROJECT INSURANCE	\$1,000,000	\$50,000

Submit proof of insurance or insurability from your insurance carrier with this form.

SUMMARY OF YOUR FIRM'S COMPLETED AND PRESENT PROJECTS DURING THE LAST TEN YEARS

AS A PRIME A/E CONSULTANT

TOTAL NUMBER OF COMPLETED PROJECTS	120 +-
TOTAL ESTIMATED CONSTRUCTION COST OF COMPLETED PROJECTS	\$300 mil +-
TOTAL NUMBER OF PRESENT PROJECTS	30 +-
TOTAL ESTIMATED CONSTRUCTION COST OF PRESENT PROJECTS	\$50 mil +-

AS AN ASSOCIATE WITH OTHER A/E CONSULTANTS

TOTAL NUMBER OF COMPLETED PROJECTS	200 +-
TOTAL ESTIMATED CONSTRUCTION COST OF COMPLETED PROJECTS (ONLY THE PORTION OF WORK FOR WHICH YOUR FIRM WAS RESPONSIBLE)	\$100 mil +-
TOTAL NUMBER OF PRESENT PROJECTS	15 +-
TOTAL ESTIMATED CONSTRUCTION COST OF PRESENT PROJECTS (ONLY THE PORTION OF WORK FOR WHICH YOUR FIRM IS RESPONSIBLE)	\$20 mil +-

CLASS OF WORK AND PROJECT TYPE SPECIALIZATION

TYPE OF PROJECT	TOTAL NO. OF COMPLETED PROJECTS	TOTAL ESTIMATED CONSTRUCTION COST	TOTAL ESTIMATED PROJECT SIZE (G.S.F.)
Planning	15 +-	\$50 mil +-	Not known
Sitework	985 +-	\$350 mil +-	Not known

Categorize your firm's class for work during the last ten years by project type. Examples of project types include Educational, Commercial, Industrial, Residential, Health Care, Correctional and Judicial Facilities. Work may also be categorized as planning, civil sitework, renovation/alteration, architectural barrier removal, fire alarm system, etc.

PRESENT/COMPLETED PROJECTS IN WHICH YOUR FIRM IS/WAS DESIGNATED THE PRIME CONSULTANT (BY TYPE)

(LIST A MAXIMUM OF 10 PROJECTS FOR EACH DISCIPLINE/TYPE OF WORK BEING APPLIED FOR. LIST PROJECTS THAT REFLECT YOUR ABILITY TO PROVIDE QUALITY WORK FOR YOUR REQUESTED PROJECTS.)

TYPE: Environmental & Civil Engineering							
YEAR	NAME AND LOCATION OF THE PROJECT	NAME OF LEAD DESIGNER	NAME, ADDRESS, PHONE & FAX NO. OF THE OWNER	ESTIMATED CONST. COST (\$)	DURATION FOR DESIGN (MONTHS)	% COMPLETED	
						DESIGN	CONST
Ongoing	Waikaea Boat Ramp Dredging and Site Improvements	Emi Tanitomi	State of Hawaii Dept of Land and Natural Resources. PO Box 373, Honolulu, HI 96809 Ph 808-587-0122 (Eric Yuasa)	\$5 mil	20	100	Ongoing
Ongoing	Honu'Apo Estuary Wetland Restoration, Phase I, Big Island	Emi Tanitomi	Department of Land and Natural Resources - Div. of Forestry & Wildlife, Kalanimoku Bldg, 1151 Punchbowl St #325, Honolulu, HI Ph 808-587-0233	\$500,000	18	35	0
2022	Dept of Education Underground Injection Control Monitoring and Reporting, Statewide	Will Bow	State of Hawaii Dept of Education, PO Box 2360, Honolulu, HI 96804, Ph 808-590-6502, fax 808-81-6750	N/A	N/A	N/A	N/A
2021	Pouhala Marsh - Phase I Environmental Site Assessment	Will Bow	State of Hawaii Dept of Land & Natural Resources [Same as above] Ph 808-587-0258	N/A	12	100	N/A
2019	Lyon Arboretum Various Health & Safety Improvements, Honolulu, Oahu	Mandi Chang	University of Hawaii at Manoa, 2002 East West Rd. Rm# A5, Honolulu, HI 96822, Ph 808-956-3676 (Carol Ogata)	\$1.6 mil	60	100	100
2015	Kahana Valley State Park Sewer Improvements & Well Repair, Oahu	Will Bow	State of Hawaii Dept of Land & Natural Resources [Same as above]	\$80,000	12	100	N/A
2015	Port Allen Small Boat Harbor Water Quality Monitoring & Reporting, 'Ele'ele, Kaua'i	Will Bow	State of Hawaii Dept of Land & Natural Resources 4 Sand Island Access Road Honolulu, HI 96819, Ph 808-587-3250 (Finn McCall)	\$1 mil	12	100	100

PRESENT/COMPLETED PROJECTS THAT YOUR FIRM IS/WAS ASSOCIATED WITH OTHERS (BY TYPE)

(LIST A MAXIMUM OF 10 PROJECTS FOR EACH DISCIPLINE/TYPE OF WORK BEING APPLIED FOR. LIST PROJECTS THAT REFLECT YOUR ABILITY TO PROVIDE QUALITY WORK FOR YOUR REQUESTED PROJECTS.)

TYPE: Environmental Engineering								
YEAR	NAME AND LOCATION OF THE PROJECT	NAME, ADDRESS, PHONE & FAX NO. OF THE OWNER	ESTIMATED CONSTRUCTION COST		DURATION FOR DESIGN (MONTHS)	PRIME FIRM ASSOCIATED WITH	% COMPLETED	
			ENTIRE PROJECT	YOUR FIRM'S WORK			DESIGN	CONST.
On-going	Kapalama Terminal Wharf Dredging, Phase II, Honolulu, Oahu	State of Hawaii Dept of Transportation - Harbors, Hale Awa Ku Moku Building, 79 S. Nimitz Hwy, Honolulu, HI 96813, Ph 808-587-1860	\$450 mil	\$809,000	N/A	Kiewit West Infrastructure, Co.	N/A	50
On-going	Waimea River Ford Crossing, Kauai	County of Kauai - Dept of Public Works, 4444 Rice St. Ste. 275, Lihue, HI 96766	\$1.8 mil	\$250,000	18	KAI Hawaii	90	0
2021	Kahauiki Stream Maintenance Dredging, Ohau	Us Army Corps of Engineers, Bldg. 230, Room 302, Fort Shafter, HI 96858, Ph 808-346-9083	\$5.9 mil	\$97,000	N/A	Elite Pacific Construction	N/A	100
2021	Waikiki Beach Maintenance - WQM, Oahu	State of Hawaii Dept of Land and Natural Resources, Office of Conservation Coastal Lands, 1151 Punchbowl St. #131, Honolulu, HI 96813	\$3.98 mil	\$44,000	N/A	Kiewit Infrastructure West Co.	N/A	100
2017	Hawaii Belt Road Umauma Stream Bridge Rehabilitation, Hilo, Hawaii Island	State of Hawaii Dept of Transportation, 610 Kamokila Blvd, Rm 688, Kapolei, HI 96707, ph 808-692-7547	\$38 mil	\$1 mil	24	Nagamine Okawa Engineers Inc.	100	80
2017	Nawiliwili Road Improvements, Lihue, Kauai	State of Hawaii, Dept of Transportation, 610 Kamokila Blvd, Kapolei, HI 96707, Ph 808-692-7547	\$10 mil	\$400,000	24	Goodfellow Bros. Inc.	100	100

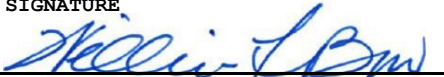
Explain firm's individual project assignment, project management structure, project execution (work flow and responsibilities) and quality control process. In the event the spaces provided on this form are not sufficient for entries, or if you wish to furnish additional information, it may be inserted here or on separate sheets, with appropriate references.

BOW ENGINEERING & DEVELOPMENT, INC. is a team of dedicated professionals with practical experience in civil engineering, specializing in infrastructure improvements and site development. We are committed to making sure that every project is in compliance with applicable requirements, standards and schedules. We take a pro-active approach to all our projects. To ensure the optimal level of quality in our work products, we implement the following procedures:

At start-up, the principal engineer, in consultation with the core project team, prepares a comprehensive work plan with target and anticipated dates to monitor tasks, submittals, reviews, deliverables and other milestone events. This work plan also provides clients and the team with timely, accurate and useful information that enables them to be informed and pro-active. The principal engineer assigns the project to a project manager, who is responsible for coordination and quality control (QC) reviews. He closely monitors the efforts of the project, ensuring quality, completeness and conformity of the work produced by the project staff. The principal engineer is the point of contact for the contract and provides team leadership and overall QC oversight. He performs independent QC reviews to provide an objective, near "third-party" review as a nonparticipating member of the project team. This process helps to minimize the chances of errors and provides an early opportunity to rectify them so that the process passes the QC test. As a result of our diligence and QC efforts, we very seldom encounter major problems.

By utilizing innovative technology, exercising good engineering practice, conforming to applicable criteria and standards, and thoroughly understanding the scope of services and time and budget constraints, we minimize many potential problems. We use software applications such as Microsoft Project, AutoCAD Civil 3D, and HydroCAD as planning, monitoring, drafting and analytical tools. It not only helps us fast-track the designs, it dramatically reduces the occurrence of oversight. In turn, it often translates to substantial savings in time and costs for the clients.

As of this date June 30, 2023, the foregoing is a true statement of facts.

NAME OF FIRM OR INDIVIDUAL SUBMITTING QUESTIONNAIRE	TYPE NAME AND TITLE OF PERSON SIGNING	SIGNATURE
Bow Engineering & Development, Inc.	William F. Bow, Partner	

NOTE: It is to a firm's advantage to maintain its experience record on a current basis. This may be accomplished by periodically forwarding current data to DAGS.

NAME William F. Bow	TITLE AND POSITION Partner & Environmental Director	YEARS WITH FIRM 12 years
MAJOR RESPONSIBILITIES WITH THIS FIRM Coordination with clients, agencies, and sub-contractors during proposals and contracting; Management of environmental projects including permitting, consultations, and compliance from planning phases through construction and executive level project management.		

PRIOR EMPLOYMENT

(START WITH LATEST EMPLOYMENT PRIOR TO JOINING THIS FIRM AND PROVIDE SIMILAR INFORMATION FOR EACH SEPARATE EMPLOYMENT OR MAJOR CHANGES IN DUTIES WITH THE SAME EMPLOYER.)

FIRM: Bow Engineering & Development, Inc.	DATE FROM: 2017 TO: 2018	FIRM: Bow Engineering & Development, Inc.	DATE FROM: 2012 TO: 2016
ADDRESS: 1953 S. Beretania St. PH-A, Honolulu, HI 96826		ADDRESS: 1953 S. Beretania St. PH-A, Honolulu, HI 96826	
JOB TITLE: Executive Project Manager		JOB TITLE: Chemist	
SUPERVISOR'S NAME AND TITLE: William H.Q. Bow, President		SUPERVISOR'S NAME AND TITLE: William H.Q. Bow, President	
MAJOR DUTIES: Managing projects which require extensive environmental permitting, coordination with clients & govt. agencies		MAJOR DUTIES: Worked as a chemist performing water quality monitoring and reporting for projects which impact State waters.	

FIRM: Maryknoll School	DATE FROM: 2010 TO: 2012	FIRM:	DATE FROM: TO:
ADDRESS: 1526 Alexander St., Honolulu, HI 96822		ADDRESS:	
JOB TITLE: High School Science Teacher		JOB TITLE:	
SUPERVISOR'S NAME AND TITLE:		SUPERVISOR'S NAME AND TITLE:	
MAJOR DUTIES: Taught high school chemistry and forensic sciences as a full-time faculty member.		MAJOR DUTIES:	

NAME Sarah K. Bow	TITLE AND POSITION Partner & Director of Finance	YEARS WITH FIRM 15 years
MAJOR RESPONSIBILITIES WITH THIS FIRM Maintains taxes, payroll, HR, and insurance; responsible for all contracting documents and financial oversight within the company; has active role in team leadership, business development, and financial analysis.		

PRIOR EMPLOYMENT

(START WITH LATEST EMPLOYMENT PRIOR TO JOINING THIS FIRM AND PROVIDE SIMILAR INFORMATION FOR EACH SEPARATE EMPLOYMENT OR MAJOR CHANGES IN DUTIES WITH THE SAME EMPLOYER.)

FIRM: Bow Engineering & Development, Inc.	DATE FROM: 2015 TO: 2018	FIRM: Bow Engineering & Development, Inc.	DATE FROM: 2008 TO: 2014
ADDRESS: 1953 S. Beretania St. PH-A, Honolulu, HI 96826		ADDRESS: 1953 S. Beretania St. PH-A, Honolulu, HI 96826	
JOB TITLE: Executive Vice President		JOB TITLE: Office Manager	
SUPERVISOR'S NAME AND TITLE: William H.Q. Bow, President		SUPERVISOR'S NAME AND TITLE: William H.Q. Bow, President	
MAJOR DUTIES: All of the office manager responsibilities plus part of the leadership team and active in business development		MAJOR DUTIES: Process payroll, pay all federal and state taxes, make travel arrangements for engineers, proofread proposals, obtain office supplies, pay vendors, submit E&O insurance application	

FIRM: Damien Memorial School	DATE FROM: 08/07 TO: 07/08	FIRM:	DATE FROM: TO:
ADDRESS: 1401 Houghtailing St., Honolulu, HI 96817		ADDRESS:	
JOB TITLE: Physical Science Teacher		JOB TITLE:	
SUPERVISOR'S NAME AND TITLE:		SUPERVISOR'S NAME AND TITLE:	
MAJOR DUTIES:		MAJOR DUTIES:	

II STATEMENT OF QUALIFICATIONS

A

Experience and Professional Qualifications:

Bow Engineering Experience

Bow Engineering & Development, Inc. is a woman-owned and operated corporation that provides an array of civil and environmental engineering services throughout all the major islands in the state of Hawai'i. We have been in business since 1997, completing projects in all phases of site development, permitting, and construction, we specialize in the following work:

Environmental Design and Permitting

- Environmental compliance type projects
- National Pollutant Discharge Elimination System (NPDES) permits
- Storm Water Pollution Prevention Plans
- Clean Water Act Section 401 and 404 permits
- Water, soil, sediment testing, monitoring, and reporting
- Environmental Assessments and Phase 1 Environmental Site Assessments

Utility Design and Analysis

- Water system analysis and design (potable/non-potable, water meters, fire protection)
- Sewer system analysis and design (sewer connections, pump systems, IWS systems)
- Drainage system analysis and design (pipe network analysis, detention/retention basins, HEC-RAS, culvert/inlet analysis)

Commercial and Industrial Type Projects

- Government and educational facilities
- Shopping centers and office buildings
- Hotel and resort developments
- Recreational hiking trails, comfort stations

Awards/Recognition:

- ★ 2020 Building Industry Design & Construction Award Winner – *Koa'e Workforce Housing*
- ★ 2015 Kukulu Hale NAIOP Award Winner – *Kolo Place Apartment Residences & Right-of-way*
- ★ 2015 American Council of Engineering Companies of Hawai'i (ACECH) Engineering Excellence Award
Manele Small Boat Harbor Tsunami Damage Response
- ★ 2015 American Society of Civil Engineers Engineering Excellence Award for Small Projects
Manele Small Boat Harbor Tsunami Damage Response



Site Development and Planning

- Roadway and utility design
- Intersection and parking lot design
- Traffic control plans
- Residential & agricultural subdivisions
- Master planned communities
- Engineering plans & construction docs

Project Management and Construction Administration Services

- Onsite project inspections and construction management
- Responses to RFI's and submittals
- Erosion and Sediment Control Plan (ESCP) Preparation and Coordination

B**EDUCATION, TRAINING, & QUALIFICATIONS OF KEY INDIVIDUALS:****Staff Composition**

We currently have a staff of 11 individuals, including five civil engineers, four of whom are licensed Professional Civil Engineers (P.E.) in the state of Hawai‘i. Over the past five years, we have had an average staff of 14.

KEY INDIVIDUALS:

	<u>Title</u>	<u>Years of Experience</u>
William H.Q. Bow, P.E.	Principal Engineer	47
Emi L. Tanitomi, P.E., M.S.	Project Manager	17
Jesse J.C. Elliott, P.E.	Project Manager	18
Mandi R.K. Chang, P.E.	Project Manager	12
William F. Bow	Partner & Environmental Director	11



William H.Q. “Bill” Bow, Principal Engineer of **Bow Engineering & Development Inc.**, is a licensed Professional Civil Engineer in Hawai‘i (PE 4904) since 1980 and a graduate of the University of Hawai‘i at Mānoa. He has 47 years of civil engineering experience with a planning, design, and construction administration background. Bill has extensive knowledge in hydraulic design, hydrologic analysis, utility system design, subdivision site development, trenchless construction techniques, airfield design, housing feasibility studies, highway and roadway planning, and drainage/sewer/water master planning and system design. He provides project leadership and quality assurance oversight.

Emi L. Tanitomi, Project Manager, has 17 years of civil engineering experience. She is a licensed Professional Civil Engineer in Hawai‘i (PE 14383) and in California (C 75248). She is a graduate of the University of Hawai‘i at Mānoa and a post-graduate of the San Diego State University, specializing in water resources. Emi has provided engineering services in the planning and design of water resources and potable water and wastewater infrastructure projects. Emi has comprehensive knowledge of hydraulic design, hydrologic analysis and utility system planning and design. She is proficient in reservoir assessment design, coastal structure assessment, watershed management and flood control facility design. She is also proficient in AutoCAD, ArcGIS and HEC-RAS. Emi is responsible for planning, reporting and coordination of design plans, construction drawings, specification and cost estimates.



Jesse J.C. Elliott, Project Manager, has 18 years of civil engineering experience. He is a licensed Professional Civil Engineer in Hawai‘i (PE 14516), a graduate of the University of Hawai‘i at Mānoa, and an Autodesk Civil 3D Certified Professional. Jesse’s AutoCAD background provides a strong foundation to the team as he provides CADD management and standardization. Having worked on numerous projects statewide for both the public and private sectors, Jesse has comprehensive knowledge of hydraulic design, hydrologic analysis, drainage/sewer/water master planning and system design, site grading, ADA design and subdivision site development.



B**EDUCATION, TRAINING, & QUALIFICATIONS OF KEY INDIVIDUALS:****Staff Composition**

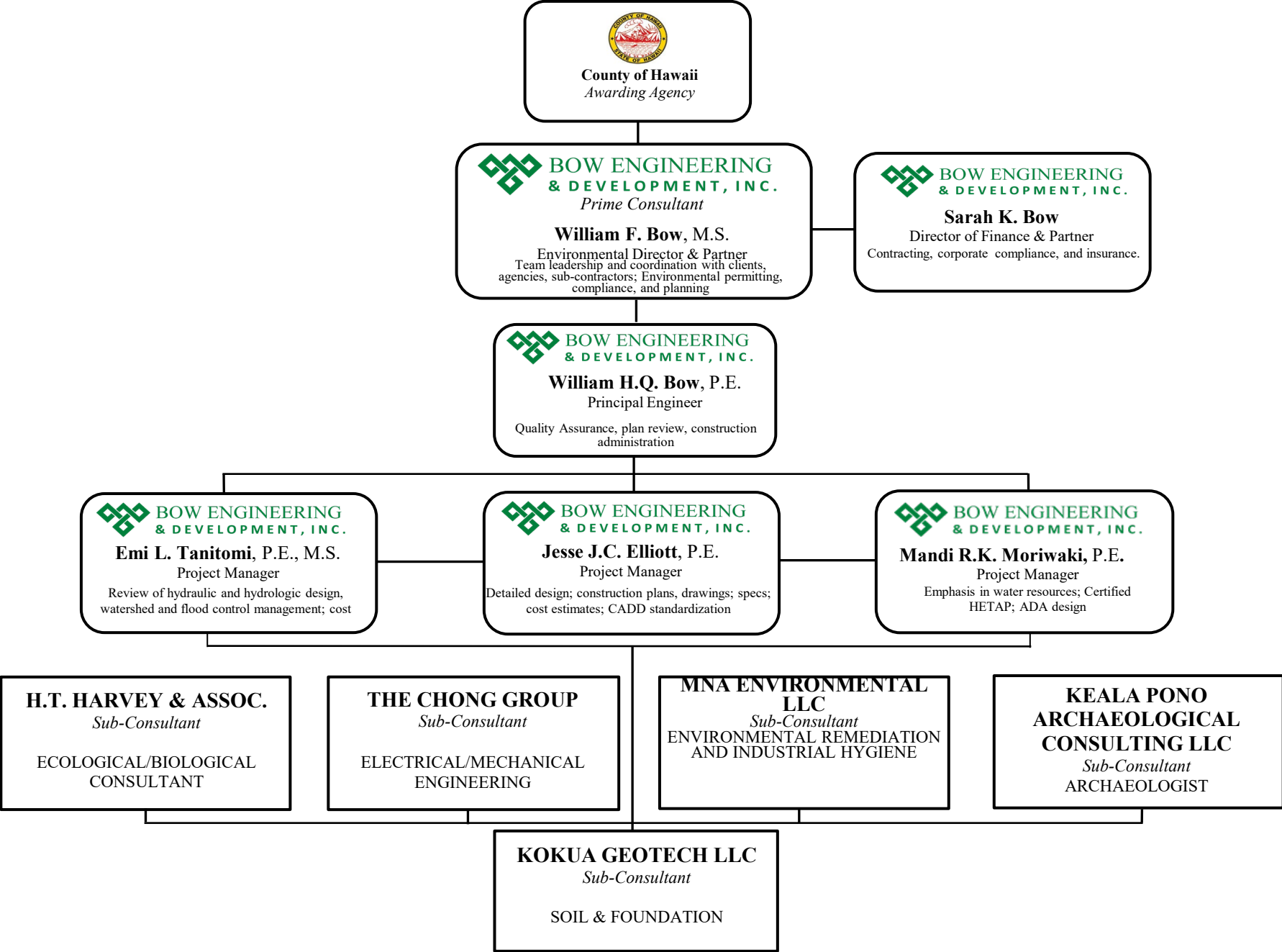
Mandi R.K. Chang, Project Manager, is a licensed professional civil engineer in Hawai‘i (PE 16814). She received a bachelor’s degree in civil engineering from the University of Southern California with an emphasis in water resources. Mandi has 12 years of civil engineering experience with design and analysis of drainage, water and sewer systems, CAD drafting, and permitting. Mandi is trained and certified in the High Efficiency Trail Assessment Process (HETAP) by American Trails and has surveyed several miles of trails using the HETAP surveying equipment. She also specializes in ADA design and has developed the UH Mānoa Campus Walkway Master Plan.

William F. Bow, Environmental Director, has 11 years of experience providing and coordinating environmental services which include the monitoring, sampling and analyses of water, soil and air to comply with construction requirements. He received a bachelor’s degree in Forensic Science from Chaminade University in 2006 and a master’s degree in Organic Chemistry from the University of Hawai‘i at Mānoa in 2010. He is certified in the Environmental Protection Agency’s Techniques of Sampling and Field Analysis of Storm and Wastewater Effluent. William has experience performing on-going state-wide inspections, monitoring, and reporting for various Federal, State, and County projects that require permitting and compliance.


**ADDITIONAL (OUTSIDE) TEAM MEMBERS:**

On larger, more specialized projects, there is typically a need to collaborate with additional team members in order to perform the required work. When the need arises, we typically work with the sub-consultants as shown on the following Organizational Chart. We have collaborated successfully on a number of projects and will engage their services to ensure our team has the ability, skills and experience to properly perform our tasks in an efficient manner. We are also open to hiring additional staff and enlisting other specialists.


Organizational Chart of Proposed Team




County of Hawaii
 Awarding Agency

 **BOW ENGINEERING & DEVELOPMENT, INC.**
 Prime Consultant
William F. Bow, M.S.
 Environmental Director & Partner
 Team leadership and coordination with clients, agencies, sub-contractors; Environmental permitting, compliance, and planning

 **BOW ENGINEERING & DEVELOPMENT, INC.**
Sarah K. Bow
 Director of Finance & Partner
 Contracting, corporate compliance, and insurance.

 **BOW ENGINEERING & DEVELOPMENT, INC.**
William H.Q. Bow, P.E.
 Principal Engineer
 Quality Assurance, plan review, construction administration

 **BOW ENGINEERING & DEVELOPMENT, INC.**
Emi L. Tanitomi, P.E., M.S.
 Project Manager
 Review of hydraulic and hydrologic design, watershed and flood control management; cost

 **BOW ENGINEERING & DEVELOPMENT, INC.**
Jesse J.C. Elliott, P.E.
 Project Manager
 Detailed design; construction plans, drawings; specs; cost estimates; CADD standardization

 **BOW ENGINEERING & DEVELOPMENT, INC.**
Mandi R.K. Moriwaki, P.E.
 Project Manager
 Emphasis in water resources; Certified HETAP; ADA design

H.T. HARVEY & ASSOC.
 Sub-Consultant
 ECOLOGICAL/BIOLOGICAL CONSULTANT

THE CHONG GROUP
 Sub-Consultant
 ELECTRICAL/MECHANICAL ENGINEERING

MNA ENVIRONMENTAL LLC
 Sub-Consultant
 ENVIRONMENTAL REMEDIATION AND INDUSTRIAL HYGIENE

KEALA PONO ARCHAEOLOGICAL CONSULTING LLC
 Sub-Consultant
 ARCHAEOLOGIST

KOKUA GEOTECH LLC
 Sub-Consultant
 SOIL & FOUNDATION

C**CAPACITY TO ACCOMPLISH THE WORK IN THE REQUIRED TIME:****Project Experience and Current Workload**

The Bow Engineering team has the experience and capability of providing Civil & Environmental design services for various County of Hawaii type-projects as demonstrated in some of our previous work. Over the years, we have designed a number of housing, roadway, utility, and County improvement-type projects across the state.

The Bow Engineering team has the capacity to accomplish the work in the required time. Our team of professionals is experienced in working on County-type projects and understands the standards and regulations set forth by City and State reviewing agencies. Our current workload is moderate and we are able to take on additional work.

Allocating Manpower, Adjusting to Project Changes

During a project, there is always a possibility for a scope change or unforeseen roadblock that could delay the project schedule. When this happens, it is our priority to shift manpower and allocate additional support to ensure we are doing everything we can to maintain the schedule or minimize the delay. In order to ensure project continuity, we conduct weekly staff meetings to inform team members of project deadlines and shift manpower accordingly.

Communicating with the Project Team

We are always working to build positive relationships with our clients by providing detailed and accurate plans and by communicating efficiently with the project team. In order to provide the best service, we emphasize responsiveness and handling issues in a timely manner. Problems can be minimized by dealing with issues at an early stage and by being transparent within our team. We work to foster an environment of teamwork, encouraging our sub-consultants and Contractor to work together to find an amicable solution during conflicts. We believe that a positive environment will help keep the project running smoothly and yield the best results.

We pride ourselves on our “Commitment to Excellence” and our “Responsiveness” in communicating with the project team. By being responsive, we can minimize communication issues and help the team be more efficient and on task.

D

INNOVATIVE AND ALTERNATIVE METHODS:

Cutting Edge Technology

It is a priority on all Bow Engineering projects to minimize the impact and surprise factor projects will have on the public and private stakeholders. It is our goal to always be on the front line to address project problems and concerns to alleviate the burden on our clients. In order to accomplish this we utilize the following strategies: >>

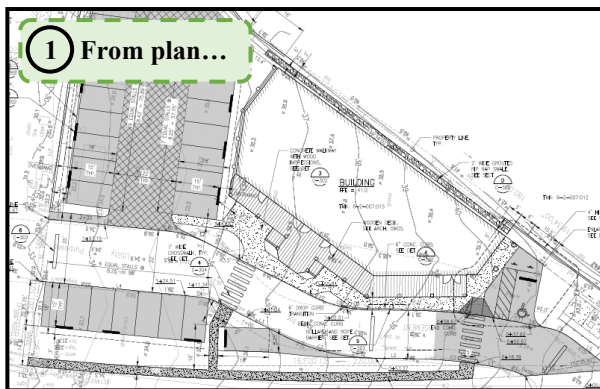
Coordination Strategies:

- Public Relations Sub-Consultants
- Public Informational Meetings
- Stakeholder Focus Groups
- Design Charrettes
- Regularly-scheduled coordination meetings

Infracore Software

When appropriate, we utilize the Infracore Software, to generate 3D models for our clients. The software is capable of importing lines, objects, and surfaces from AutoCAD and converting them into a 3D rendering. The software has built in graphical features, but additional objects and textures can be downloaded, including Revit files for extra detail.

The three-phase diagram shown below represents the different phases for the North Shore Gateway Starbucks building: plan, rendering, and finished construction:



Infracore Attributes:

- Converts CAD Drawings into 3D renderings
- Unlimited array of viewpoints
- Interactive 360 degree walkthrough
- Models for clients, community meetings

E

CLIENT REFERENCES:

Contact and Projects

We have worked with each of the following clients on similar projects relating to the type of work conducted at the County of Hawai'i. Clients that we are currently working with on active projects are noted by the asterisk sign (*).

*Mr. James Komata
Park Planner
Department of Parks and Recreation
County of Hawai'i
808-961-8311

Hawaii County Accessibility
Improvements Project - Miloli'i Beach
Park & Kahuku Park

① Alii Kai Subdivision Neighborhood
Park

*Mr. Carty Chang
Chief Engineer
Engineering Division
Department of Land & Natural Resources
808-587-0248

Kahana Valley State Park Sewer
Improvements and Well Repair

Waikaea Boat Ramp
Pouhala Marsh Restoration

*Mr. Adam Roversi
County Housing Director
County of Kaua'i
808-241-4440

② Waimea Affordable
Habitat for Humanity Affordable
Pua Loke Affordable

*Emmett Kenney
Vice President
Healy Tibbitts Builders, Inc.
808-487-3664

Manele Small Boat Harbor Ferry
Improvements

FY17 Pearl Harbor Maintenance
Dredging
Honolulu Harbor Maintenance
Dredging

Mr. Kyle Nakamura
Project Manager
Kiewit Infrastructure West Co.
360-448-9916

③ Waikiki Beach Maintenance, Phase II
Kapalama Container Terminal Wharf &
Dredging



PROJECTS OF SIMILAR SCOPE

1

HILO SKATE PARK

Hilo, Hawai'i

Owner/Client: County of Hawaii –
Department of Parks & Recreation

Completion Date: Ongoing

Contact: James Komata

Construction Cost: \$2 million

Phone: 808.961.8411

Project Description

- Bow Engineering & Development, Inc. was contracted by the County of Hawaii - Department of Parks and Recreation to design a new skate park for skaters of varying levels of skill.
- Design includes children's playground, comfort station, accessible routes, parking area, pedestrian and bike paths, fencing, and coordinated utilities.



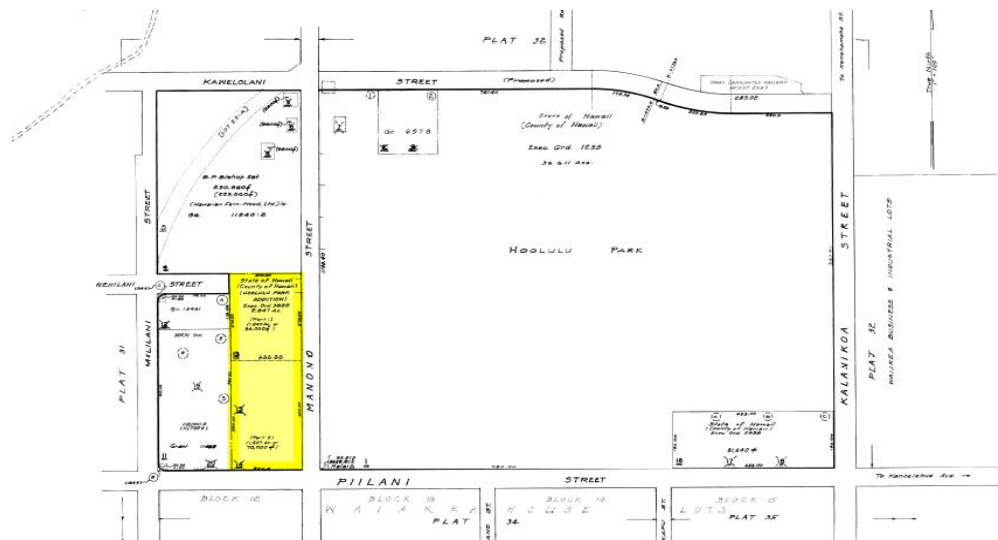
Project site of the proposed Hilo Skate Park

Project Scope

- Environmental Assessment conducted by Bow Engineering as prime
- Plan and profile of utility improvements including water, sewer, and drainage
- Design of new parking lot layout and ADA routes
- Preparation of various permits: Building, Electrical, Plumbing, DCAB & SHPD
- Coordinated public informational meetings, and utility agreements

Relevancy to County of Hawai'i:

- Site, utilities, and grading
- Various permit submittals
- Skate park design and coordination
- Environmental Assessment



ACCESSIBILITY IMPROVEMENTS PROJECT – MILOLI‘I BEACH PARK & KAHUKU PARK

South Kona and Ka‘u, Hawai‘i

Owner/Client: County of Hawai‘i - DPR

Contact: James Komata

Phone: 808.961.8531

Completion Date: Ongoing

Construction Cost: \$1.7 Mil

Project Description

- County of Hawai‘i, Department of Parks and Recreation issued a request for ADA improvements to two County of Hawai‘i parks: Miloli‘i Beach Park & Kahuku Park
- Bow Engineering contracted to provide assessment of existing infrastructure
- Assessment included ADA suggested improvements to the properties to ensure equal access for all patrons and users of the parks

Project Scope for Kahuku Park

- Civil design work for the parking lot, playground, onsite water system, ADA accessible walkways and bleachers, and modifications to the scorer’s booth

Relevancy to County of Hawai‘i

- Past County of Hawai‘i project
- IWS Design
- ADA Compliance for design
- Environmental Assessment



Kahuku Park – Existing Conditions from Lower Level

Project Scope for Miloli‘i Beach Park

- Site and utility layout, ADA improvements to walkways and park amenities, Water tank and potable water improvements, and drainage analysis
- Conducted EA as prime consultant

Design Challenges for Miloli‘i Beach Park

- Sewer treatment methods were limited due to site’s location near the ocean
- Coordination with the community occupying the area



Miloli‘i Beach Park – Existing Conditions of Parking Lot and Pavilion

HONU'APO ESTUARY WETLAND RESTORATION, PHASE I

Big Island, Hawaii

Owner/Client: Department of Land and Natural Resources

Contact: Melissa Agbayani

Phone: 808.587.0233

Completion Date: On-going

Construction Cost: \$500,000

Project Description

- To provide professional services for the Honu'Apo Estuary Wetland Restoration project, Phase I



Relevancy to County of Hawai'i

- Environmental assessment
- Concept design and grading
- Revegetation plan
- Permitting compliance

Project Scope

- Provided preliminary engineering report
- Site investigation and research
- Concept design
- Cultural resources consultation for the State Historic Preservation District Permit
- Environmental assessment for the rehabilitation of Hou'Apo Estuary
- Next phase of the project will include the final design and permitting for the rehabilitation

Owner/Client: Hawaii DOT - Harbors
Contact: David Collentine –
 Kiewit West Infrastructure, Co.
Phone: 360.901.2216

Completion Date: Ongoing
Construction Cost: \$450 million

Job ID: N/A

Project Description

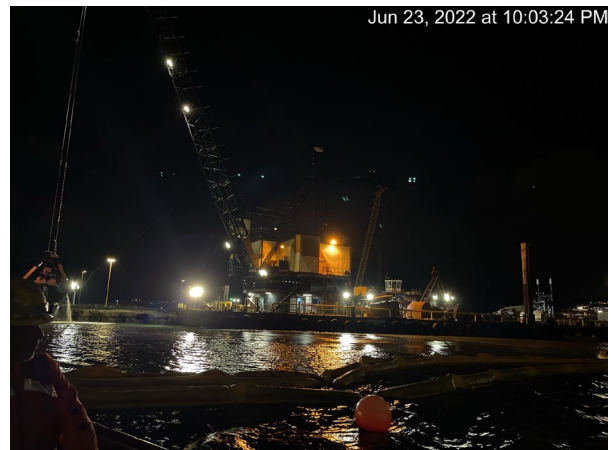
Kiewit Infrastructure West, Co. contracted Bow Engineering to provide water quality monitoring and reporting services for the Kapalama Wharf project. The scope of our work was limited to preconstruction, during construction, and post-construction monitoring and reporting. Section 401 water quality certification compliance, including consultations and meetings with Hawaii DOH – Clean Water Branch and NPDES Form F (Hydrotesting) compliance are also included in our scope. Coral mitigation around the project site was also performed as a requirement of the Department of Army Permit; corals were surveyed, harvested, and transplanted as a part of this effort



Demolition work within Snug Harbor

Relevancy to County of Hawai'i

- Section 401 Water Quality Certification consultation
- Coral mitigation through survey and transplant activities
- Water quality monitoring and reporting
- NPDES Form F compliance
- NPDES Form G application, permit, and compliance



Work along pier 42

UNDERGROUND INJECTION CONTROL (UIC) MONITORING

Statewide

Owner/Client: State of Hawai'i
Department of Education (DOE)

Completion Date: Ongoing

Contact: Robert Bondoc

Construction Cost: N/A

Phone: 808.286.0459

Project Description

- 1999 US EPA mandate requires public-use Large Capacity Cesspools (LCC) be closed and/or converted to Individual Wastewater Systems (IWS)
- Between 1999 and 2006, DOE worked to convert public school LCC's to IWS's
- All public schools operating under an Underground Injection Control permit must be monitored, tested, and reported on a regular basis



Visual inspections of well and casing are conducted monthly to check for any or other potential problems

Project Scope

- Visual inspections of water quality, water level, casing condition, and any odors present, performed monthly
- Flow vs. head testing to determine percolation rate and efficiency of well, performed annually
- Detailed annual status reports and permit renewals to the Department of Health (DOH)
- Management, inventory, documentation for each school



The overall well depth and water levels are



Relevancy to County of Hawai'i

- Individual Wastewater Systems (IWS)
- IWS monitoring

WAIMEA RIVER FORD CROSSING

Waimea, Kauai, HI

Owner/Client: KAI Hawaii

Contact: Mr. Michael Hunneman, P.E.

Phone: 808.791.3980

Completion Date: N/A

Construction Cost: \$1.8 million

Project Description

- There is an existing “dirt” crossing used by farmers and residents to access farmlands located across the Waimea River, just northeast of Waimea town
- Large storm events cause water levels to fluctuate and change the terrain and making for unpredictable and dangerous crossing conditions
- Project will construct a permanent crossing surface and provide paved approaches on both sides of the river



Existing ford crossing location: Water levels typically between 1 to 2 feet and surface consists of loose soil/mud

Project Scope

- Civil design for permanent ford crossing (stabilized gabions and rip rap) and paved concrete approaches
- Site investigation, research, biological, and archaeological coordination
- Stream analysis and no-rise analysis
- Environmental Assessment (EA) consultation, research, and preparation of EA for public review (OEQC publication)
- Conducted public hearing meetings to inform residents and receive public input
- Various permitting (US Army Corps Nationwide Permit, NPDES Permit, Grading and Building Permits)
- Coordination between client, KAI Hawaii, and owner, County of Kauai



When water levels are too high, residents park along Menehune Road and cross using a pedestrian bridge

Relevancy to County of Hawai‘i

- Environmental Permitting
- Preparation of an Environmental Assessment
- Coordination with Army Corps of Engineers

POUHALA MARSH RESTORATION – CONCEPT DESIGN, HRS 343 ENVIRONMENTAL ASSESSMENT, PHASE I ENVIRONMENTAL SITE ASSESSMENT Waipahu, Oahu

Owner/Client: DLNR – Engineering Division

Contact: Dani Yoo

Phone: 808.587.0258

Completion Date: January 2021

Construction Cost: N/A

Project Description

- The goal of the Pouhala Marsh State Wildlife Sanctuary Restoration was to rehabilitate a 10 acre are to create a pond for increased native bird habitat
- Bow Engineering worked with DOFAW to create a concept design and Final EA (HRS 343) to be used for future design and construction.
- Ownership of other portions of land within the marsh was to be transferred from City and County of Honolulu to DLNR. A Phase I Environmental Site Assessment (ESA) was completed.



Project Scope

- Civil concept design for the restoration of a portion of the marsh and Environmental Assessment – FONSI according to HRS 343 to be used for future design and construction.
- Phase 1 ESA on land being acquired by DLNR-DOFAW from the City & County of Honolulu
- Included visual observations of the land and surrounding areas, and research of all historic environmental impacts to the site. All information was compiled into an ESA report following the ASTM Standard E 1527-13
- Coordination with the client, city agencies, and property record sources allowed for a more thorough analysis of the property
- Occupant interviews to obtain more information regarding the known environmental conditions were performed



Owner/Client: Kiewit Infrastructure West Co.

Contact: Jared Tavares

Phone: 808-753-6069

Completion Date: 2021

Construction Cost: \$3.98M

Honolulu, Oahu

Project Description

- Due to sand erosion along Waikiki Beach, sand replenishment was necessary to restore the beach to its approximate 1985 shoreline.
- Sand for replenishment was pumped from sand deposits about 450 – 500 meters offshore, dewatered on the beach to dry, then transported along the shore in the project area to achieve the designed beach profile.
- Bow Engineering was contracted by Kiewit Infrastructure West Co. (prime contractor) to perform water quality monitoring and reporting throughout the duration of the project.

Project Scope

- Conduct pre-construction, during-construction, and post-construction monitoring at all three work sites: recovery, dewatering, and placement sites.
- Water sampling and photo documentation were performed daily for pre-construction, three times per week during-construction, and three times for post-construction.
- Reports of data and observations were submitted to the contractor for review and submittal to the owner.



Placement site in Waikiki (Pre-construction)



Recovery site approximately 100 yards off shore



Dewatering site



Placement site in Waikiki (Post-construction)

WAIKAEA BOAT RAMP DREDGING AND SITE IMPROVEMENTS

'Ele'ele, Kaua'i

Owner/Client: State of Hawai'i DLNR

Contact: Finn McCall

Phone: 808.587.0122

Completion Date: Ongoing

Construction Cost: \$5 mil

Project Description

- Two-phase project requiring design coordination to tie each phase together in regards to drainage grading
- Phase 1: Harbor maintenance dredging to remove sand buildup near the boat launching ramp and upstream portions of the canal
- Phase 2: Site improvements including a new asphalt concrete parking lot, a comfort station, updated utilities, and boat wash down areas



Shallow conditions make boat launching difficult

Relevancy to County of Hawai'i

- Various Permitting
- Utility Design
- Conducted informational meetings for boaters to discuss project scope, get input

New asphalt parking lot will be constructed for boat parking and vehicle wash down



Sand accumulation visible near the boat launching area

Project Scope

Civil design, permitting, water quality monitoring, and construction administration for the dredging work

Department of Health Section 401 Water Quality Permit

Department of the Army Nationwide Permit

Kauai DPW stockpiling permit

Site layout and grading for the parking lot, comfort station, and ADA walkways

Design for new water and sewer lines and drainage analysis



PORT ALLEN SMALL BOAT HARBOR WATER QUALITY MONITORING AND REPORTING

'Ele'ele, Kaua'i

Owner/Client: State of Hawai'i DLNR

Completion Date: 2015

Contact: Finn McCall

Construction Cost: \$1 mil

Phone: 808.587.3250

Project Description

- In-water repair work conducted at the Port Allen Small Boat Harbor
- Bow Engineering hired to conduct water quality testing, monitoring, and reporting

Project Scope

- Designed water protection measures (turbidity curtains, etc.) for the in-water work
- Created working and cleanup procedures for work in and around the water
- Conducted weekly water quality testing to ensure construction activities did not adversely affect surrounding waters

Design Challenges

- Special work restrictions: weather conditions, tidal changes, marine life present

Relevancy to County of Hawai'i

- Environmental compliance project
- Water quality testing, sampling, monitoring

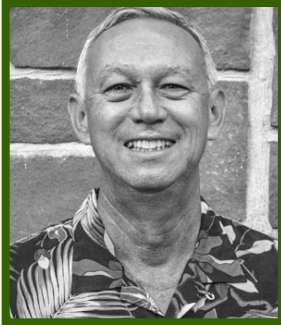


Turbidity curtains installed around the harbor



Turbidity curtains are shown around the in-water work area

IV CURRICULA VITAE OF KEY PERSONNEL



Years of Experience:

*Combined: 47 Years
With this firm: 26 Years*

Education:

*B.S. Civil Engineering
University of Hawaii*

Registration:

*Civil Engineer, Hawaii
License #4909 (1980)*

Professional Affiliation:

*American Society of Civil
Engineers (ASCE)*

*Disability Communications
Access Board (DCAB) Chairman*

*American Council of
Engineering Companies of Hawaii*

*International Erosion
Control Association*

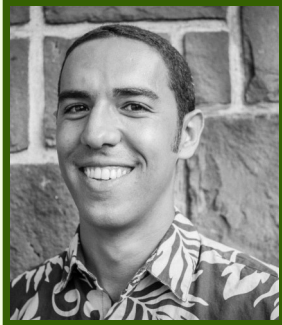
**William H.Q. Bow, P.E.
Principal Engineer**

Bill started Bow Engineering back in 1997. He has over 47 years of civil engineering experience with planning, design, and construction administration. As the Principal Engineer, Bill provides project quality assurance to ensure that projects can be designed and built on schedule and under budget.

Guided by his core principals of client-service, innovation, and commitment to excellence, Bill has produced many successful projects across the state, including several projects which were recognized as being outstanding by the American Society of Civil Engineers (ASCE) and the American Council of Engineering Companies of Hawaii (ACECH). He has extensive knowledge in hydraulic design, hydrologic analysis, utility system design, subdivision site development, trenchless construction techniques, highway and roadway planning, master planning, and drainage/water/sewer system design.

Project Experience:

- Nohili Road Repaving at Pacific Missile Range Facility, Barking Sands, Kauai
- Kauai Lagoons Water System Master Plan, Kauai
- Kauai Lagoons Sewer Master Plan, Kauai
- Hokuala Resort Master Planning, Kaua'i
- Diamond Head State Monument Sewer Lift Station Replacement, Oahu
- Kekaha Landfill Fire Hydrant Improvements, Hawaii
- Manele Small Boat Harbor Ferry and ADA Improvements, Lanai
- Hawaii State Department of Education Schools Underground Injection Control Monitoring and Reporting, Statewide
- Lihue Water System 8-Inch Main Replacement, Kauai
- Mapunapuna Water System Improvements, Oahu
- Ward Avenue 12 & 8-Inch Water Mains and Traffic Control, Honolulu, Oahu
- Poamoho Camp Water System and Roadway Improvements, Wahiawa, Oahu
- University of Hawaii Manoa Campus Walkways Restoration and Improvement Master Plan, Honolulu, Oahu
- Hawaii Belt Road Rehabilitation of Umauma Stream Bridge, Hilo, Hawaii
- Kulana 140-Lot Agricultural Subdivision, Kapaa, Kauai



Years of Experience:

*Combined: 16 Years
With this firm: 11 Years*

Education:

*B.S. Forensic Science
Chaminade University
of Honolulu*

*M.S. Organic Chemistry
University of Hawaii, Manoa*

Professional Affiliation:

*American Chemical Society,
Hawaii Section (past-Treasurer,
past-Chair)*

*Hawaii Association of
Environmental Professionals
(Board Member, President)*

*National Association of
Environmental Professionals
(Board Chapter Representative)*

*Academy of Board Certified
Environmental Professionals*

Specialization:

*Water, soil, and sediment
Monitoring*

Permit Management

Permit Compliance

**William F. Bow, M.S. Organic Chemistry
Environmental Director & Partner**

William Bow started working with Bow Engineering in June 2012. He has over 16 years of combined experience working as a Chemist in the laboratory and in the field at Bow Engineering. His representative projects include permitting, water quality monitoring, and permit management for projects which fall under the jurisdiction of various agencies including the U.S. Army Corps of Engineers, Department of Health, Department of Land and Natural Resources, and County Offices. He is certified by the Environmental Protection Agency (EPA) in the *Techniques of Sampling and Field Analysis of Storm and Wastewater Effluent*. His technical experience includes the application of standard laboratory techniques and field inspection and monitoring required by permits.

As the Environmental Director, William Bow is responsible for overseeing all field managers and inspectors and works closely with engineers to make technical recommendations based on field observations and analytical data.

Current Projects (Expected Completion):

- Kapalama Container Terminal Wharf & Dredging, Honolulu, Oahu (2024)
- Honu’Apo Estuary Wetland Restoration , Phase 1, Ka’u , Big Island (2023)
- Honolulu Harbor Maintenance Dredging, Honolulu, Oahu (2022)
- Waiakea Boat Ramp Dredging and Site Improvements, Kapa’a, Kaua’i (2022)

Project Experience:

- Pearl Harbor Maintenance Dredging (FY17), Honolulu, Oahu
- Manele Small Boat Harbor Ferry Dock Water Quality Sampling, Manele, Lāna’i
- Waikiki Beach Maintenance, Phase II, Honolulu, Oahu
- Sand Island WWTP Revetment Improvements, Honolulu, Oahu
- DoE Underground Injection Control (UIC) Monitoring, Statewide
- Kelewina Street Culvert Maintenance, Kailua, Oahu
- Kahauiki Stream Maintenance Dredging, Honolulu , Oahu
- Sewer Improvement Phase 1 & 2 and Well Repair Improvements Ahupaa o Kahana State Park, Ka’a’awa, Oahu
- Port Allen Harbor Water Quality Monitoring, Ele’ele, Kaua’i
- Pouhala Marsh Restoration, Honolulu, Oahu



Emi L. Tanitomi, P.E., M.S. **Project Manager**

Emi has 17 years of experience working on a variety of civil engineering projects in California, Hawaii, and Japan. She specializes in water resources and has comprehensive knowledge of hydraulic design, hydrologic analysis, and utility system planning. Her representative projects include reservoir assessment design, coastal structure assessment, design, potable water and wastewater infrastructure design, hydrologic and hydraulic studies, floodplain studies, and detention basin design. Her technical experience includes various software programs such as HEC-1, HEC-2, HEC-RAS, AES, WSPG, and ArcGIS.

As Project Manager, Emi is responsible for reviewing hydraulic and hydrologic design, construction drawings, coastal and floodplain assessments, and mentoring the Engineers in Training.

Years of Experience:

*Combined: 17 Years
With this firm: 7 Years*

Education:

*B.S. Civil Engineering
University of Hawaii*

*M.S. Water Resources
San Diego State University*

Registration:

*Civil Engineer, Hawaii
License #14383 (2010)*

*Civil Engineer, California
License #75248 (2010)*

Professional Affiliation:

*American Society of Civil
Engineers (ASCE)*

Specialization:

Water Resources

*Hydraulic Design and
Hydrologic Analysis*

*Watershed Management
Flood Control*

Current Projects (Expected Completion):

- Hilo Skate Park, Big Island (2024)
- Accessibility Improvements – Miloli‘i Beach Park and Kahuku Park, Big Island (2024)

Project Experience:

- Koa‘e Workforce Housing Development, Kaua‘i
- Kekaha Landfill Fire Hydrant Improvements, Kaua‘i
- Kahana Valley State Park Notice of Violation Sewer Improvements & Well Repair, Oahu
- State of Hawaii DLNR Diamond Head Sewer Lift Station Replacement, Oahu
- State of Hawaii DLNR Assessment of Unregulated Dams/Reservoirs, Crater Reservoir, Maui
- Pacific Aquascapes New Office & Warehouse, Oahu
- Kawainui Marsh Levee Flood Hazard Environmental Abatement, Oahu
- Honu‘apo Wetlands Rehabilitation, Oahu
- Honolulu Board of Water Supply Kailua Fire Hydrants, Oahu



Years of Experience:

*Combined: 18 Years
With this firm: 6 Years*

Education:

*B.S. Civil Engineering
University of Hawaii*

Registration:

*Civil Engineer, Hawaii
License #14383-C (2011)*

*AutoCAD Certified
Professional (2014)*

Specialization:

*Utility Systems and
Infrastructure Design*

*Site Development / Earthwork
Design*

**Jesse J. Elliott, P.E.
Project Manager**

Jesse has over 18 years of civil engineering experience in utility system and infrastructure design with planning, design, and construction administration. He is an AutoCAD Certified Professional and provides a solid foundation to the team by providing CADD Management and standardization. Jesse's responsibilities include coordination and review of construction drawings and standardization of the company drafting standards.

Prior to his time at Bow Engineering, Jesse served as an Associate Project Manager for the third design-build segment of the Honolulu Rail Transit Project and Kona Judiciary Complex.

Current Projects (Expected Completion):

- Waimea ES Parking Lot & ADA Improvements, Kauai (2023)
- Maunawili Elementary School Parking Lot Improvements, Oahu (2023)
- Kauai Multi-Use Path Repair, Kauai (2023/2024)
- Lihue Bus Maintenance Facility, Kauai (2024)
- Kauai Fire Department Training Facility, Kauai (2024)
- North Shore Preserve, Kauai (2024)
- Russian Fort Elizabeth State Historical Park, Kauai (2025)

Project Experience:

- Haena Beach Park Shuttle Stop, Kauai
- Kealahou at Pua Loke Transitional Housing, Kaua'i
- Pua Loke Affordable Housing, Kaua'i
- Habitat for Humanity Affordable Housing, Kaua'i
- Waimea Affordable Housing, Kaua'i
- Waimea Canyon Park ADA Improvements, Kaua'i
- Kekaha Faye Park ADA Improvements, Kaua'i
- Improvements at the School for the Deaf and Blind, Oahu
- Honolulu Rail Transit Project Airport Segment (Third Segment), Oahu
- Kona Judiciary Complex, Hawaii
- American Cancer Society Hope Lodge, Oahu



Mandi R. K. Moriwaki, P.E. Project Manager

Mandi has 12 years of experience working on a variety of civil engineering projects. She specializes in water resources, hydraulic design, hydrologic analysis, drainage and utility systems, and overall project planning. She is experienced in planning for large-scale developments, construction phasing, and planning .

As Project Manager, Mandi is responsible for overseeing projects from start to finish including initial research, design and analysis, and construction administration. She also helps to mentor the younger engineers and interns.

Years of Experience:

*Combined: 12 Years
With this firm: 12 Years*

Education:

*B.S. Civil Engineering
University of Southern California*

Registration:

*Civil Engineer, Hawaii
License #16814 (2015)*

Professional Affiliation:

*American Society of Civil
Engineers (ASCE)*

Specialization:

Water Resources

*Hydraulic Design and
Hydrologic Analysis*

*Drainage Analysis and
Water Quality*

ADA Accessibility

*Project Planning and
Due Diligence Studies*

Current Projects (Expected Completion):

- Silverwest Hotels – Hokualea Lot 8, Kaua’i (2024)
- Hokualea – Water Master Plan Update, Kaua’i (2022)
- Hokualea Lot 9C/D Condominiums, Kaua’i (2022)

Project Experience:

- Hokualea Commercial Complex, Lihue, Kaua’i
- Hokualea Golf Clubhouse, Lihue, Kaua’i
- Princeville Center Commercial Expansion, Princeville, Kaua’i
- Koa’e Workforce Housing, Koloa, Kaua’i
- Manoa Campus Walkways Restoration and Improvement Master Plan, Oahu
- Mānoa Campus Wide Upgrade Walkways – Law Courtyard, Oahu
- Lyon Arboretum Various Health and Safety Improvements, Honolulu, Oahu
- University of Hawaii at Manoa Law Courtyard, Honolulu, Oahu
- KS Akahi and Pauahi Intersection Repaving, Honolulu, Oahu
- KS Building 21 Foundation Repairs, Honolulu, Oahu
- KS Maluna Fields Slope Stabilization Repair, Honolulu, Oahu
- Manoa Campus Walkways Restoration and Improvement Master Plan, Oahu
- Starbucks at Waipi’o Shopping Center, Waipahu Oahu
- Starbucks at Kahala Mall, Honolulu, Oahu

IV STATE OF HAWAII

PROFESSIONAL LICENSES

Licenses and Accreditations

Professional Civil Engineering Licenses

