

House District 29

Senate District 13

THE TWENTY-SIXTH LEGISLATURE  
HAWAII STATE LEGISLATURE  
APPLICATION FOR GRANTS & SUBSIDIES  
CHAPTER 42F, HAWAII REVISED STATUTES

Log No: **4-C**

For Legislature's Use Only

REC'D JAN 28 2011

Type of Grant or Subsidy Request:

GRANT REQUEST - OPERATING

GRANT REQUEST - CAPITAL

SUBSIDY REQUEST

"Grant" means an award of state funds by the legislature, by an appropriation to a specified recipient, to support the activities of the recipient and permit the community to benefit from those activities.

"Subsidy" means an award of state funds by the legislature, by an appropriation to a recipient specified in the appropriation, to reduce the costs incurred by the organization or individual in providing a service available to some or all members of the public.

"Recipient" means any organization or person receiving a grant or subsidy.

STATE DEPARTMENT OR AGENCY RELATED TO THIS REQUEST (LEAVE BLANK IF UNKNOWN):

STATE PROGRAM I.D. NO. (LEAVE BLANK IF UNKNOWN):

1. APPLICANT INFORMATION:

Legal Name of Requesting Organization or Individual:  
Bishop Museum

Dbas:  
Same

Street Address:  
1525 Bernice Street  
Honolulu HI 96817

Mailing Address:  
Same

2. CONTACT PERSON FOR MATTERS INVOLVING THIS APPLICATION:

Name MIKE SHANAHAN

Title Director of Education, Exhibits and Planetarium

Phone # 847-8235

Fax # 847-8250

e-mail mikes@bishopmuseum.org

3. TYPE OF BUSINESS ENTITY:

- NON PROFIT CORPORATION
- FOR PROFIT CORPORATION
- LIMITED LIABILITY COMPANY
- SOLE PROPRIETORSHIP/INDIVIDUAL

6. DESCRIPTIVE TITLE OF APPLICANT'S REQUEST:

RENOVATIONS AND IMPROVEMENTS TO BISHOP MUSEUM'S PLANETARIUM

4. FEDERAL TAX ID

5. STATE TAX ID #:

7. AMOUNT OF STATE FUNDS REQUESTED:

FY 2011-2012: \$ 1,500,000

8. STATUS OF SERVICE DESCRIBED IN THIS REQUEST:

- NEW SERVICE (PRESENTLY DOES NOT EXIST)
- EXISTING SERVICE (PRESENTLY IN OPERATION)

SPECIFY THE AMOUNT BY SOURCES OF FUNDS AVAILABLE AT THE TIME OF THIS REQUEST:

STATE \$ 0  
 FEDERAL \$ 0  
 COUNTY \$ 0  
 PRIVATE/OTHER \$ 0

TYPE NAME & TITLE OF AUTHORIZED REPRESENTATIVE:

Timothy Johns, President & CEO  
NAME & TITLE

1/27/11  
DATE SIGNED

## Application for Grants and Subsidies

*If any item is not applicable to the request, the applicant should enter "not applicable".*

### I. Background and Summary

*This section shall clearly and concisely summarize and highlight the contents of the request in such a way as to provide the State Legislature with a broad understanding of the request. Include the following:*

#### **1. A brief description of the applicant's background.**

Bishop Museum was founded in 1889 by Charles Reed Bishop to honor the memory of his late wife, Princess Bernice Pauahi Bishop, the great granddaughter of Kamehameha the Great. The Museum's founding collections contain the personal legacies and bequests of the royal Kamehameha and Kalākaua families, including those of Princess Pauahi, Princess Ruth Ke'elikōlani, Queen Emma, and Queen Lili'uokalani. For over 100 years, the Museum has served as the keeper of these Native Hawaiian cultural treasures. Today, its collections encompass more than 25 million objects and specimens, placing Bishop Museum among the top five natural history museums in the United States and the top ten in the world. Bishop Museum's collections include over 1.2 million cultural artifacts, representing Native Hawaiian, Pacific Island, and Hawai'i immigrant life; more than 125,000 historical publications, including many in the Hawaiian language; one million historical photographs, films, works of art, and publications; and over 22.7 million plant and animal specimens. The Bishop Museum Press, Hawai'i's oldest book publisher and one of the first scholarly presses in the Western Hemisphere, is the largest publisher of Hawaiian cultural materials, Hawaiian language publications, and translations of Hawaiian language texts in the world. The Museum's mission, approved by its Board in 2007, is to study, preserve and tell the stories of the cultures and natural history of Hawai'i and the Pacific.

In 1988, Bishop Museum was designated the Hawai'i State Museum of Natural and Cultural History. It is a place where families can learn about their island heritage and discover the wonders of science through fun, hands on exhibits and programs. Traveling exhibits address many educational topics for the residents of Hawai'i that are not otherwise available to them locally. In addition, the Museum's educational outreach efforts bring engaging, interactive programs on topics ranging from science to Hawaiian culture and history into classrooms across the State. Last year, Bishop Museum served over 417,000 children and family members through innovative exhibits and educational programming. The Museum website is [www.bishopmuseum.org](http://www.bishopmuseum.org).

The Jhamandas Watumull Planetarium (formerly the Kilolani Planetarium) opened 50 years ago and was the first planetarium in the Pacific. Roughly three million people, including 600,000 school children, have passed through the star theater since its doors

opened on December 11, 1961. The planetarium provides live, interactive programming that engages school and public audiences in exploring the night sky. Most programs have a strong Hawaiian focus, including the current daily offerings *Sky Tonight*, *Explorers of Polynesia* and *Tropical Skies*.

The planetarium has had a significant impact on the astronomical aspects of life in Hawai'i. The planetarium and Bishop Museum became a center for educating the public about the rare spectacle of a total solar eclipse over the Island of Hawai'i on July 11, 1991. During the months leading up to that 1991 eclipse, 57,000 people attended eclipse related programming in the planetarium (nearly a year's worth of regular attendance in four months). Three thousand people turned out for *Mars Madness*, a special event focused on viewing Mars when it was at one of its closest points to Earth, on a single evening in August 2003. More recently, 2,000 people confirmed their attendance at the planetarium's total lunar eclipse night of December 20, 2010. Even though that evening's heavy rains cancelled the lawn telescope event, 300 people still came to see a planetarium program about the eclipse (it never rains in the planetarium), and to catch glimpses of the eclipsed moon through the clouds.

Three instances stand out as examples of the planetarium's impact on Hawai'i:

- (1) Astronaut Ellison S. Onizuka, from the Kona area of Hawai'i Island, first became interested in astronomy and space sciences when he visited the Bishop Museum's planetarium as a boy.
- (2) Since the 1980s Bishop Museum's planetarium has been a conduit to the public for the cutting edge astronomical research done on Mauna Kea and elsewhere in Hawai'i. Planetarium programs like *Eyes of Hawai'i* and the NASA funded *Explorers of Mauna Kea* take astronomers' research from University of Hawai'i's Institute for Astronomy and elsewhere and interpret that research in ways that school children and the public can readily grasp.
- (3) In the 1970s the planetarium played an important role in the revival of Polynesian navigation. Nainoa Thompson and other members of the Polynesian Voyaging Society (PVS) developed their celestial navigation skills beneath the planetarium's dome, under the guidance of masters such as Micronesian navigator Mau Piailug and planetarium lecturer Will Kyselka. Since those early days, PVS has returned to the Watumull Planetarium on a regular basis. In fall 2010 PVS held an eight week series of classes on celestial navigation in the planetarium for those who were interested in joining the crews of Hōkūle'a as PVS makes plans for a worldwide sail.

From celestial navigation to the telescopes of Mauna Kea, astronomy is a very important part of Hawai'i's story. The three million people who have come to Bishop Museum's planetarium over the last 50 years are testimony to the appeal that the stars have to our residents and visitors alike. The planetarium renovation project will "take it to the next level" in terms of telling these astronomy stories in vivid and compelling new ways.

**2. The goals and objectives related to the request.**

The educational technology now available for planetariums include all dome video, in which vivid moving images cover the entire dome. With all dome video, audiences feel like they are flying through the rings of Saturn or into the heart of a galaxy. This technology evolved about a decade ago and represents a significant leap forward from “old style” planetariums, such as Bishop Museum’s, which still use slide projectors to show images.

While all dome video has sparked an educational revolution in the planetarium field since the year 2000, the traditional star projector still has a vital role in modern planetariums. These optical mechanical star projectors provide the most vivid, realistic recreation of the night sky. Indeed, star projectors have improved; new generation star machines show the stars as crisp, sharp pinpoints of light. In addition, these new generation star projectors are designed to synchronize with the all dome video technology of hybrid systems. For example, a star projector shows the night sky in sharp detail. Then, the all dome video system provides the outlines of Greek and Hawaiian constellations, overlaid on those stars. As the stars projected by the star machine move, the outlines from the all dome video system stay right with them.

Currently the Watumull Planetarium uses its 25 year old fleet of slide projectors to show images and tell its stories. These projectors are outdated and are no longer manufactured. Repairs and maintenance are becoming increasingly difficult and the Planetarium is slowly losing capacity to present programming. New programs are not being made for the old style systems such as Bishop Museum’s, which further limits the Museum’s programming capacity. Most new programs are only available in the new all dome or hybrid formats. The aging facility’s dome has noticeable seams that are not conducive to all dome video and the roof above the dome suffers from serious leakages.

The Planetarium renovation project celebrates the Watumull Planetarium’s 50 years of educating Hawai’i’s communities, including the role the planetarium played in the revival of Polynesian navigation. Even more importantly, the renovation project will give Bishop Museum the tools to educate a new generation of school children, general public, navigators and others in astronomy, space sciences, and the celestial aspects of Hawaiian culture.

While the primary target audience for the Bishop Museum planetarium renovation project is the local population, a significant secondary target is the tourist market. A dynamic new planetarium, offering engrossing programming on Polynesian Navigation, the Hawaiian night sky, Mauna Kea and other topics, will certainly assist the Hawai’i Tourist Authority in its efforts to diversify and stabilize the tourism industry in Hawai’i, and would certainly be a good ‘fit’ with HTA’s strategic plan. All dome video technology provides an added benefit in terms of appeal to eastbound visitors; any all dome program

can be easily subtitled in any language. This would be a draw not only for our long term Japanese market but also the growing Chinese and Korean markets.

Bishop Museum is requesting \$1.5 million for the renovation and improvement of its Jhamandas Watumull Planetarium. The project costs include the following:

- “Hybrid” system that includes both a state of the art star projector and a synchronized Fulldome Video System that “talk” to each other;
- Synchronized control system necessary for providing seamless presentation of hybrid programs, and especially for presenting live programs with that system;
- Upgrade lighting and speaker systems;
- Auxiliary video projector system for even higher resolution images for lectures and other presentations;
- A new interior dome;
- Leak repairs and maintenance on planetarium roof;
- Removal and replacement of chairs and carpet;
- HVAC upgrades.

With Bishop Museum’s unique approach to live, interactive programming coupled with improved equipment and facilities, visitors will immerse themselves, and explore and learn about astronomical topics such as the Hawaiian skies, Polynesian Voyaging and the astronomy of Mauna Kea. Linking Hawaiian culture and traditions with astronomy provides a unique educational experience for our students and the live interaction keeps them engaged in learning.

### **3. State the public purpose and need to be served.**

Bishop Museum is committed to enhancing Hawai‘i’s formal education programs with informal educational experiences, developing learning skills through an appreciation of Hawai‘i’s natural and cultural resources. Through partnerships with public and private schools, other nonprofit organizations, private corporations, community groups, and universities, the Museum creates positive learning experiences. All school programs, including the planetarium presentations, are aligned to the Hawai‘i Content and Performance Standards (HCPS) III.

Bishop Museum’s Jhamandas Watumull Planetarium is uniquely placed to provide an educational experience combining astronomical science with the Hawaiian and Polynesian cultures. Our programs intertwine celestial events and the Hawaiian skies with stories and traditions of the Hawaiian people. In addition, while many planetariums show only recorded programs (much as a movie theater would), Bishop Museum maintains a strong commitment to a live, interactive approach in its planetarium. This live approach will continue in the new era of all dome video. In the renovated planetarium a Bishop Museum presenter will still, for example, have the audience measure the height of the north star above the horizon as they try to get back to the correct latitude for Hawai‘i. In the renovated theater, this hands on sky experience will be followed by all dome images that put the audience right on the rocking deck of the voyaging canoe Hōkūle‘a, the vessel’s masts soaring over the heads of the audience.

Bishop Museum “brings Hawai‘i to the world” and also “brings the world to Hawai‘i.” While maintaining a focus on Hawaiian astronomy, the planetarium also addresses astronomical topics of global interest. In 2009 the Watumull Planetarium developed the program *The Astronomy of Galileo* as Bishop Museum’s contribution to the International Year of Astronomy. The proposed renovations will allow Bishop Museum to offer more programming on such topics of universal interest, such as the following example. On June 5, 2012 the planet Venus will transit across the face of the sun. Venus transits come in pairs, separated by a century. Hawai‘i did not see the 2004 transit, but is in a prime location to view the 2012 transit. This event has particular resonance here. A transit of Venus drew Captain Cook to Tahiti in the 18<sup>th</sup> century. This 2012 event will be visible from Hawai‘i and the Museum will build a major event around this rare event. The renovation timeline calls for the new planetarium to open in May 2012 a month before this transit occurs.

Completing this renovation and equipment upgrade will strengthen and improve Bishop Museum’s ability to meet its mission to “study, preserve and tell the stories of the natural and cultural history of Hawai‘i and the Pacific.” The new hybrid system will allow Bishop Museum to purchase, rent or create new programming to supplement its regular offerings of eight programs to students. The planetarium was the most popular school group program choice in 2009-2010.

Total attendance in the Planetarium during the fiscal year that ended June 30, 2010 was **68,878**, of which **15,882** were school children. This represents 69 percent of the 23,046 students who came to the Bishop Museum on field trips in 2009-2010. Of the school children who attended the planetarium in the year ending June 30, 2010, **7,608** (63 percent) were from public schools, including **4,397** from Title I public schools. Title I students thus represent 19 percent of total student attendance at the planetarium, and 58 percent of all public school attendees at the planetarium.

#### **4. Describe the target population to be served.**

Bishop Museum identifies the target population to be served as residents of the State of Hawai‘i. The State is a dynamic community with a resident population of 1,295,178 people (July 2009 U.S. Census). A comparison of the multicultural composition of the Museum’s members and the State reveals that Bishop Museum effectively serves the diversity of Hawai‘i residents, which includes 239,655 Native Hawaiians and 72,000 Pacific Islanders. The target population also includes 250,000 school children of all ages from both public and private elementary and secondary educational systems, and students and researchers from the University of Hawai‘i and other colleges and universities.

As noted above, visitors to the islands are a key secondary audience for the renovated planetarium. The interest is there. For example Bishop Museum ran a planetarium program for Jalpak customers nightly from 2001 to 2008 (except Christmas night) and brought in 90,000 visitors during the run. A top notch planetarium at Bishop Museum would provide another “jewel in the crown” in terms of the various authentic experiences

available to tourists, both eastbound and westbound. The project will also strengthen Bishop Museum's world class reputation, enhance Hawai'i's overall reputation, and enhance the Islands' competitive position in the tourism industry.

### **5. Describe the geographic coverage.**

Bishop Museum has a local, national and international range of educational and research program coverage. Approximately 400,000 Hawai'i residents and visitors from the mainland and around the world come to Bishop Museum annually. For example, during the July 2009 to June 2010, there were 399,209 resident and nonresident visitors to the main Museum in Kalihi, in addition to 18,284 served by the Museum's outreach programs. About 86 percent of the visitors to the main Museum were residents and 14 percent were non residents. The resident Museum attendees, which include military personnel, are primarily comprised of Caucasians (28 percent), Hawaiians (19 percent), and Japanese (14 percent). Resident museum goers are mostly from the island of O'ahu. About 40 per cent of the resident visitors bring their children, and about 41 percent of nonresident visitors bring children. Regular special events with greatly discounted or free entry make it possible for low income resident families who are not members to visit.

School children who visit the Museum primarily come from schools on the island of O'ahu. About 50 per cent are from public schools and 35 per cent from private schools, which include preschools and 15 percent are from other programs (home school, summer day programs, etc.). About 25 percent are Native Hawaiian children, most of whom attend public schools, including Native Hawaiian Charter Schools. Last year, Bishop Museum served 23,046 school children through its on site educational programs.

## **II. Service Summary and Outcomes.**

*The Service Summary shall include a detailed discussion of the applicant's approach to the request. The applicant shall clearly and concisely specify the results, outcomes, and measures of effectiveness from this request.*

### **1. Describe the scope of work, tasks and responsibilities.**

Bishop Museum will seek proposals for the planetarium equipment from the major suppliers in the field. These companies will include Spitz, Inc. (Chadds Ford, PA), Sky Skan (Nashua, NH), and Zeiss Planetarium Division (Jena, Germany). The successful company will handle the installation of the star projector, the all dome video equipment, new interior dome, sound system and lighting.

Key project activities include:

- Installation of star machine and all dome video hybrid equipment;
- Repair leaks and other maintenance work on the planetarium roof;
- Remove old interior dome and install new, seamless interior dome;
- Renovate sound system;
- Install new lighting system;
- Remove and replace carpet in the planetarium; and

- Remove and replace chairs in the theater.

The planetarium equipment contractor's activities include the following:

- Development of an overall project execution plan, strategies for construction, phasing requirements based on the results of the investigation of existing conditions, and budget and schedule analyses;
- Work with Bishop Museum staff in planning the shipment of all equipment;
- Install interior dome, star machine, all dome video system, lights and sound system;
- Conduct project update meetings;
- Interim and final reviews of project construction and installation documents.

**2. The applicant shall provide a projected annual timeline for accomplishing the results or outcomes of the service**

Bishop Museum has investigated various hybrid systems and has received preliminary quotations from Spitz, Inc. and Sky Skan. Based on this input, the following is a realistic timeline:

Spring 2011: finalize price quotes from three planetarium equipment vendors;

July 2011: Make decision on which hybrid system to select for the planetarium;

Place order for star projector

December 2011: Celebrate 50<sup>th</sup> anniversary of planetarium with final programs in old dome;

January 3, 2012: Close planetarium for installation;

January–February 2012:

Remove existing planetarium equipment for safekeeping and salvage;

Remove old interior dome of planetarium;

Remove all seats and carpeting;

Repairs to exterior roof of planetarium;

Repair HVAC system in dome;

Install new audio system including speakers;

Install new lighting trough and lighting system.

February 2012: Install new interior dome;

March 2012:

Install new star projector;

Install video projectors and control system and synch system with star projector;

Acceptance testing of all equipment;

Bishop Museum staff trained on new equipment.

April 2012:

Install signature show for new dome;

Staff training continues;

Preview performances.

May 2012: Official opening of new planetarium



3. **The applicant shall describe its quality assurance and evaluation plans for the request. Specify how the applicant plans to monitor, evaluate, and improve their results**

The project manager will work with the successful contractor to provide a detailed work plan which is monitored for progress on a weekly basis. Problems will be identified, budgets will be carefully reviewed, and corrective actions will be identified and implemented on a regular basis.

4. **The applicant shall list the measure(s) of effectiveness that will be reported to the State agency through which grant funds are appropriated (the expending agency). The measure(s) will provide a standard and objective way for the State to assess the program's achievement or accomplishment. Please note that if the level of appropriation differs from the amount included in this application that the measure(s) of effectiveness will need to be updated and transmitted to the expending agency.**

- Quarterly progress reports to the State agency on the planetarium renovation project;
- Final report at end of project.

### III. Financial

#### Budget

1. **The applicant shall submit a budget utilizing the enclosed budget forms as applicable, to detail the cost of the request.**

Attached.

2. **The applicant shall provide its anticipated quarterly funding requests for the fiscal year 2011-2012.**

Quarter 1	Quarter 2	Quarter 3	Quarter 4	Total Grant
300,000	300,000	600,000	300,000	1,500,000

Note: significant expenses at start of FY 2011-2012 due to down payments on equipment. Equipment is manufactured offsite and then shipped to be installed in Hawai'i.

3. **The applicant shall provide a listing of all other sources of funding that they are trying to obtain for fiscal year 2011-2012.**

We do not have other funding at this time for the renovation project.

#### IV. Experience and Capability

##### A. Necessary Skills and Experience

**The applicant shall demonstrate that it has the necessary skills, abilities, knowledge of, and experience relating to the request. State your experience and appropriateness for providing the service proposed in this application. The applicant shall also provide a listing of verifiable experience of related projects or contracts for the most recent three years that are pertinent to the request.**

Bishop Museum, founded in 1889, is a 501(c)(3) non-profit organization with a staff of about 200 and an annual operating budget of \$12 million. Bishop Museum has been serving Hawai'i's people for more than a century and has had a relationship with the State Department of Education and the public schools for more than 45 years. Between 1990 and June 2010, the Museum has served over 8.3 million people, including over 1.3 million school children.

Bishop Museum's Jhamandas Watumull Planetarium opened its doors in December 1961. The Planetarium has served approximately three million visitors since 1961, including 600,000 school children.

In 2009-2010 the Watumull Planetarium served 68,878 visitors, including 15,882 school children.

The planetarium offers eight programs for school children. All programs are aligned with Hawai'i Content and Performance Standards.

\* (Stories Under the Stars (Pre-K–Grade 3)

- *Up in the Sky* (Pre-K to Grade 3)
- *Moon Witch* (Pre-K to Grade 4)
- *Explorers of Polynesia* (Grades 4-12)
- *Explorers of Mauna Kea* (Grades 4-12)
- *Journey to the Planets* (Grades 4-12)
- *Sky Tonight/Space Update* (Grades 4-12)
- *Cool Moon* (Grades 3-12)
- *Astronomy of Galileo* (Grades 3-12)

The planetarium presents at least three daily programs for the public. The schedule is as follows:

- *The Sky Tonight*
- *Explorers of Polynesia*
- *Tropical Skies* (replaced *Astronomy of Galileo* on 1/5/2011).

Planetarium staff add extra programs on busy days; e.g., when visitors are turned away from a regularly scheduled show because that show has filled up.

The planetarium also presents an evening version of *The Sky Tonight* on the first and third Fridays of the month. This in depth tour of the current night sky also allows the attendees to look through the telescope in the Museum's observatory.

The last significant renovation of the planetarium's audio visual equipment was in 1987. The planetarium's physical plant was renovated in June 2003, when all chairs and carpet were replaced. In addition, a new lighting system was installed, the interior was repainted, and the control board was upgraded. This renovation was completed in just eight days.

The planetarium is capable of managing major projects. In addition to serving as "information central" for the 1991 solar eclipse and other large public astronomy events, planetarium staff managed the NASA funded Explorers Project. This involved creating, testing, refining and distributing three planetarium programs to 250 planetariums across the U.S. The three programs developed in the *Explorers* series (on Polynesian navigation, Mauna Kea and the International Space Station) have been seen by more than two million people.

In October 2010, elements of a temporary hybrid system using an all dome video system from Evans and Sutherland (Salt Lake City, UT) was installed in the Watumull Planetarium. The installation was done in preparation for Bishop Museum's hosting of the 2010 conference of the Association of Science and Technology Centers (ASTC). Key Museum staff were able to preview the advantages of an all dome system at that time. In the middle of intensive conference planning, it still proved feasible to install an all dome video system and run eight shows for conference attendees and museum staff.

## **B. Facilities**

**The applicant shall provide a description of its facilities and demonstrate its adequacy in relation to the request. If facilities are not presently available, describe plans to secure facilities. Also describe how the facilities meet ADA requirements, as applicable.**

Bishop Museum is located on 16.5 acres of land in lower Kalihi Valley. Its campus of 17 buildings combines original 19<sup>th</sup> century stone buildings, modern research facilities, a planetarium, an interactive science center with tropical gardens, an interpreted science garden, and the activity filled Great Lawn. The Museum has a total of 79,000 square feet of exhibit space and of that area, approximately 64,000 square feet are dedicated to long term exhibits and 15,000 square feet to temporary exhibits. The Hawaiian Hall Complex, closed in the summer of 2006 to begin restoration and improvements, funded in part by the State of Hawai'i and reopened in August 2009.

The 70 seat Watumull Planetarium (ADA accessible) is supplemented by the NOAA funded *Science on a Sphere* (SOS) in the planetarium lobby. SOS is a six foot globe that is externally lit by four video projectors that are synchronized to cover the sphere in seamless global images. Bishop Museum was one of the first four sites in the nation to be

awarded an SOS. The sphere can display still images of the earth, planets, and moons of the solar system, as well as animations of such striking global phenomena as the 2006 hurricane season or the consequences to Hawai‘i of a global rise in sea level. Bishop Museum education staff have recently started exploring ways in which SOS and the planetarium can supplement each other educationally. For example the newest Watumull Planetarium show, *Tropical Skies*, starts at SOS. Using SOS for the sun, and an earth globe for our planet, the presenter models “the reasons for the seasons” in three dimensions. Then, the audience enters the planetarium to see how those seasonal changes appear in the Hawaiian sky.

The focus of another dynamic exhibit program is the Castle Memorial Building. The Museum presents traveling exhibits that bring the world to Hawai‘i. The planned exhibit for fall 2011, *Facing Mars*, looks at both the red planet and the challenges of a human mission to Mars.

The Castle Memorial Building, the Planetarium and Lobby, and the Mamiya Science Adventure Center are compliant with the Americans with Disabilities Act (ADA). Hawaiian Hall was recently renovated and is substantially in compliance with ADA since it reopened in August 2009. As part of the renovation, all major Hawaiian Hall complex exhibits areas are now accessible to visitors with impaired mobility.

The Richard T. Mamiya Science Adventure Center, which opened in November 2005, contains 16,000 square feet of exhibit space on three levels. The Center showcases immersive, interactive exhibits on the geology, biology, and oceanography of the Hawaiian Islands. Its centerpiece, an active volcano, is modeled after Pu‘u ‘Ō‘ō.

## V. Personnel: Project Organization and Staffing

### A. Proposed Staffing, Staff Qualifications, Supervision and Training

**The applicant shall describe the proposed staffing pattern and proposed service capacity appropriate for the viability of the request. The applicant shall provide the qualifications and experience of personnel for the request and shall describe its ability to supervise, train and provide administrative direction relative to the request.**

Bishop Museum is proud of its professional staff that is composed of accomplished individuals who represent Hawaii’s rich multicultural heritage. The professional staff of executives, administrators, managers, educators, scientists, cultural experts, technical and craft specialists are responsible for planning, development, and execution of goals and objectives that support the Museum’s strategic plan.

The project team consists of consultants and Museum staff. A formal bid process will be followed to procure the consultant(s). The Museum staff includes the following:

Blair Collis, Senior Vice President & COO  
Michael Shanahan, Director of Exhibits, Education and Planetarium

**Blair Collis** is Chief Operating Officer. He will be the project director if this proposal is funded. Mr. Collis received his Bachelors degree in International Business on scholarship from the University of Hawai'i at Mānoa. He is responsible for the programmatic and operational oversight of the Education and Exhibits Departments, Public Relations and Marketing, Retail operations, Visitor Services, the Bishop Museum Press, Outside Sales, and Amy B.H. Greenwell Ethnobotanical Garden. Mr. Collis has managed the details of the 2009-10 CIP project for renovating much of Bishop Museum's physical plan.

**Mike Shanahan**, Director of Education, Exhibits and Planetarium, will be the project manager if this requested is funded. Mr. Shanahan has been with Bishop Museum for 11 years. Before coming to Honolulu, Shanahan spent 20 years developing and presenting live, interactive planetarium programs at Seattle's Pacific Science Center (PSC), where he also managed the 1991 renovation of PSC's planetarium.

Mr. Shanahan came to Bishop Museum as planetarium director in 1999. He managed the final years of the NASA funded Explorers Project, created new programs for the Watumull Planetarium on topics ranging from Mauna Kea to Galileo, and managed such major public astronomy events as the 2003 *Mars Madness*. He managed the last renovation of the Watumull Planetarium (June 2003). While Mike Shanahan is now the Director of Education, Exhibits and Planetarium, he remains committed to astronomy education in Hawai'i. He writes the monthly sky article for the *Honolulu Star Advertiser*, produces one new planetarium program a year for the Watumull Planetarium, and supervises a planetarium staff that creates monthly Hawai'i sky maps and other astronomy information on the Watumull Planetarium website, <http://www.bishopmuseum.org/planetarium/planetarium.html>.

## **B. Organization Chart**

*The applicant shall illustrate the position of each staff and line of responsibility/supervision. If the request is part of a large, multi-purpose organization, include an organizational chart that illustrates the placement of this request.*

Attached.

## **VI. Other**

### **A. Litigation**

*The applicant shall disclose any pending litigation to which they are a party, including the disclosure of any outstanding judgement. If applicable, please explain.*

Not applicable.

**B. Licensure or Accreditation**

*Specify any special qualifications, including but not limited to licensure or accreditation that applicant possesses relevant to this request.*

Bishop Museum is accredited by the Association of American Museums.

**BUDGET REQUEST BY SOURCE OF FUNDS**  
(Period: July 1, 2011 to June 30, 2012)

Applicant: BISHOP MUSEUM

<b>BUDGET CATEGORIES</b>	<b>Total State Funds Requested (a)</b>	<b>(b)</b>	<b>(c)</b>	<b>(d)</b>
<b>A. PERSONNEL COST</b>				
1. Salaries				
2. Payroll Taxes & Assessments				
3. Fringe Benefits				
<b>TOTAL PERSONNEL COST</b>				
<b>B. OTHER CURRENT EXPENSES</b>				
1. Airfare, Inter-Island				
2. Insurance				
3. Lease/Rental of Equipment				
4. Lease/Rental of Space				
5. Staff Training				
6. Supplies	45,000			
7. Telecommunication				
8. Utilities				
9. Exterior dome repair	165,000			
10 HVAC upgrades	7,000			
11 Signage	5,455			
12 Painting	6,300			
13				
14				
15				
16				
17				
18				
19				
20				
<b>TOTAL OTHER CURRENT EXPENSES</b>	<b>228,755</b>			
<b>C. EQUIPMENT PURCHASES</b>	<b>1,271,245</b>			
<b>D. MOTOR VEHICLE PURCHASES</b>				
<b>E. CAPITAL</b>				
<b>TOTAL (A+B+C+D+E)</b>	<b>1,500,000</b>			
<b>SOURCES OF FUNDING</b>		Budget Prepared By:		
(a) Total State Funds Requested	1,500,000	Name (Please type or print) _____ Phone _____		
(b) Bishop Museum general account		Signature of Authorized Official _____ Date _____		
(c)				
(d)				
<b>TOTAL BUDGET</b>	<b>1,500,000</b>	Name and Title (Please type or print) _____		





# BUDGET JUSTIFICATION - EQUIPMENT AND MOTOR VEHICLES

Applicant: Bishop Museum

Period: July 1, 2011 to June 30, 2012

DESCRIPTION EQUIPMENT	NO. OF ITEMS	COST PER ITEM	TOTAL COST	TOTAL BUDGETED
Hybrid Planetarium System	1.00	\$1,213,145.00	\$ 1,213,145.00	
Elevator	1	\$35,000.00	\$ 35,000.00	
New chairs for theater	70	\$330.00	\$ 23,100.00	
			\$ -	
			\$ -	
<b>TOTAL:</b>	<b>72</b>		<b>\$ 1,271,245.00</b>	

**JUSTIFICATION/COMMENTS:**

#7: This is for a system that includes a star projector, an all-dome video system that is synchronized to the star projector, a new interior dome to project the video and stars onto, lighting and sound systems and controls.

#8: Elevator to raise and lower the star machine

#9: 70 new chairs at \$330 each

DESCRIPTION OF MOTOR VEHICLE	NO. OF VEHICLES	COST PER VEHICLE	TOTAL COST	TOTAL BUDGETED
			\$ -	
			\$ -	
			\$ -	
			\$ -	
			\$ -	
<b>TOTAL:</b>			<b>\$ -</b>	

**JUSTIFICATION/COMMENTS:**

**BUDGET JUSTIFICATION  
CAPITAL PROJECT DETAILS**

Applicant: BISHOP MUSEUM

Period: July 1, 2011 to June 30, 2012

FUNDING AMOUNT REQUESTED						
TOTAL PROJECT COST	ALL SOURCES OF FUNDS RECEIVED IN PRIOR YEARS		STATE FUNDS REQUESTED FY:2011-2012	OF FUNDS REQUESTED FY:2011-2012	FUNDING REQUIRED IN SUCCEEDING YEARS	
	FY: 2009-2010	FY: 2010-2011			FY:2012-2013	FY:2013-2014
PLANS						
LAND ACQUISITION						
DESIGN						
CONSTRUCTION						
EQUIPMENT			1500000			
<b>TOTAL:</b>			<b>1,500,000</b>			
<b>JUSTIFICATION/COMMENTS:</b>						
This is a one-time request for funds to completely restore the Bishop Museum planetarium in FY 2011-12.						

**DECLARATION STATEMENT  
APPLICANTS FOR GRANTS AND SUBSIDIES  
CHAPTER 42F, HAWAII REVISED STATUTES**

The undersigned authorized representative of the applicant acknowledges that said applicant meets and will comply with all of the following standards for the award of grants and subsidies pursuant to section 42F-103, Hawaii Revised Statutes:

- (1) Is licensed or accredited, in accordance with federal, state, or county statutes, rules, or ordinances, to conduct the activities or provide the services for which a grant or subsidy is awarded;
- (2) Comply with all applicable federal and state laws prohibiting discrimination against any person on the basis of race, color, national origin, religion, creed, sex, age, sexual orientation, or disability;
- (3) Agree not to use state funds for entertainment or lobbying activities; and
- (4) Allow the state agency to which funds for the grant or subsidy were appropriated for expenditure, legislative committees and their staff, and the auditor full access to their records, reports, files, and other related documents and information for purposes of monitoring, measuring the effectiveness, and ensuring the proper expenditure of the grant or subsidy.

In addition, a grant or subsidy may be made to an organization only if the organization:

- (1) Is incorporated under the laws of the State; and
- (2) Has bylaws or policies that describe the manner in which the activities or services for which a grant or subsidy is awarded shall be conducted or provided.

Further, a grant or subsidy may be awarded to a non-profit organization only if the organization:

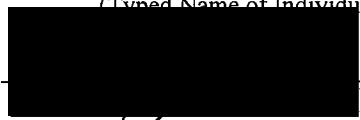
- (1) Has been determined and designated to be a non-profit organization by the Internal Revenue Service; and
- (2) Has a governing board whose members have no material conflict of interest and serve without compensation.

For a grant or subsidy used for the acquisition of land, when the organization discontinues the activities or services on the land acquired for which the grant or subsidy was awarded and disposes of the land in fee simple or by lease, the organization shall negotiate with the expending agency for a lump sum or installment repayment to the State of the amount of the grant or subsidy used for the acquisition of the land.

Further, the undersigned authorized representative certifies that this statement is true and correct to the best of the applicant's knowledge.

Bishop Museum

(Typed Name of Individual or Organization)



1/27/11  
(Date)

Timothy E. Johns

(Typed Name)

President and CEO

(Title)

# Bernice Pauahi Bishop Museum Organizational Chart 2010

