



**FACILITY  
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# Master Plan Update Improvements to the Hawaiian Islands Humpback Whale National Marine Sanctuary

Kihei, Maui

July 20, 2009, FINAL REPORT



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Needs Assessment  
Space Utilization Analysis

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This Master Plan is for the following site:

NOAA: The National Oceanic and Atmospheric Administration  
Hawaiian Islands Humpback Whale National Marine Sanctuary  
726 S. Kihei Road  
Kihei, Hawaii 96753  
808-879-2818

*The contents of this document are not for regulatory approval, permitting, or construction.  
July 2009*

# Background for this Master Plan Update

## Recent Improvements

In 2008, the Hawaiian Islands Humpback Whale National Marine Sanctuary moved into a newly constructed Sanctuary Learning Center, which will greatly enhance the capabilities of the Sanctuary. In addition to the new building, the parking lot has been reconfigured and enlarged.



## Purpose for this Update

Obviously the opening of the new Sanctuary Learning Center greatly affects both the operations of the Sanctuary and the site. For these reasons, the Sanctuary believes it is a good time to update the previous master plan to reflect these changes.

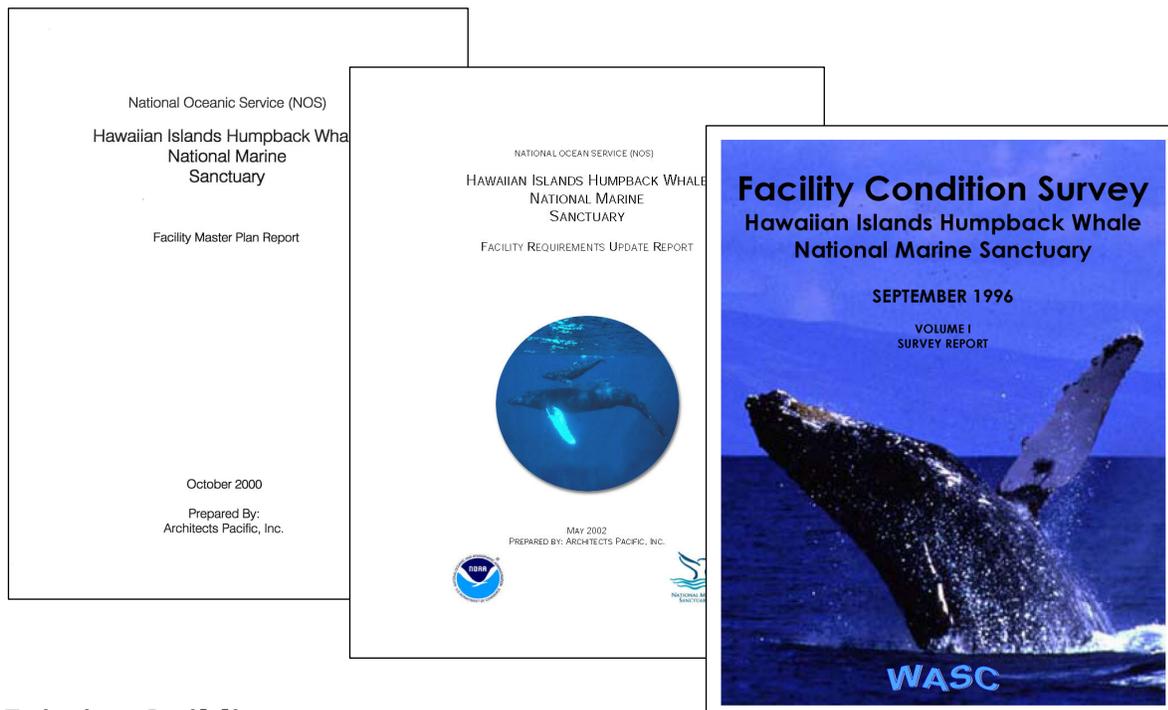
There are also two other existing buildings on the site in need of improvements. In order to obtain funding for these improvements, the Sanctuary needs a fresh strategy and cost estimate of what projects to undertake, and in which order.

Lastly, the Sanctuary would like to use this update to create more of a pedestrian-campus feel on the site.

## Related Documents

There are several previous studies that have informed this master plan update. The information contained in these previous studies provides important background data for the proposed improvements recommended in this update. Instead of re-writing the text of those previous studies, the data has been incorporated by reference, and it is assumed that the reader of this update has also read the previous studies below:

- *Facility Master Plan Report*, Architects Pacific, Inc., October 2000
- *Facility Requirements Update Report*, Architects Pacific, Inc., May 2002
- *Facility Condition Survey*, WASC Facility Condition Survey Team, September 1996



## Existing Buildings

As mentioned above, there are three existing buildings on the site:

- The new Sanctuary Learning Center, completed in 2008
- The iconic Main Building is used for administrative offices
- The Masonry Building which serves as the education and visitor center

# Functional Relationships

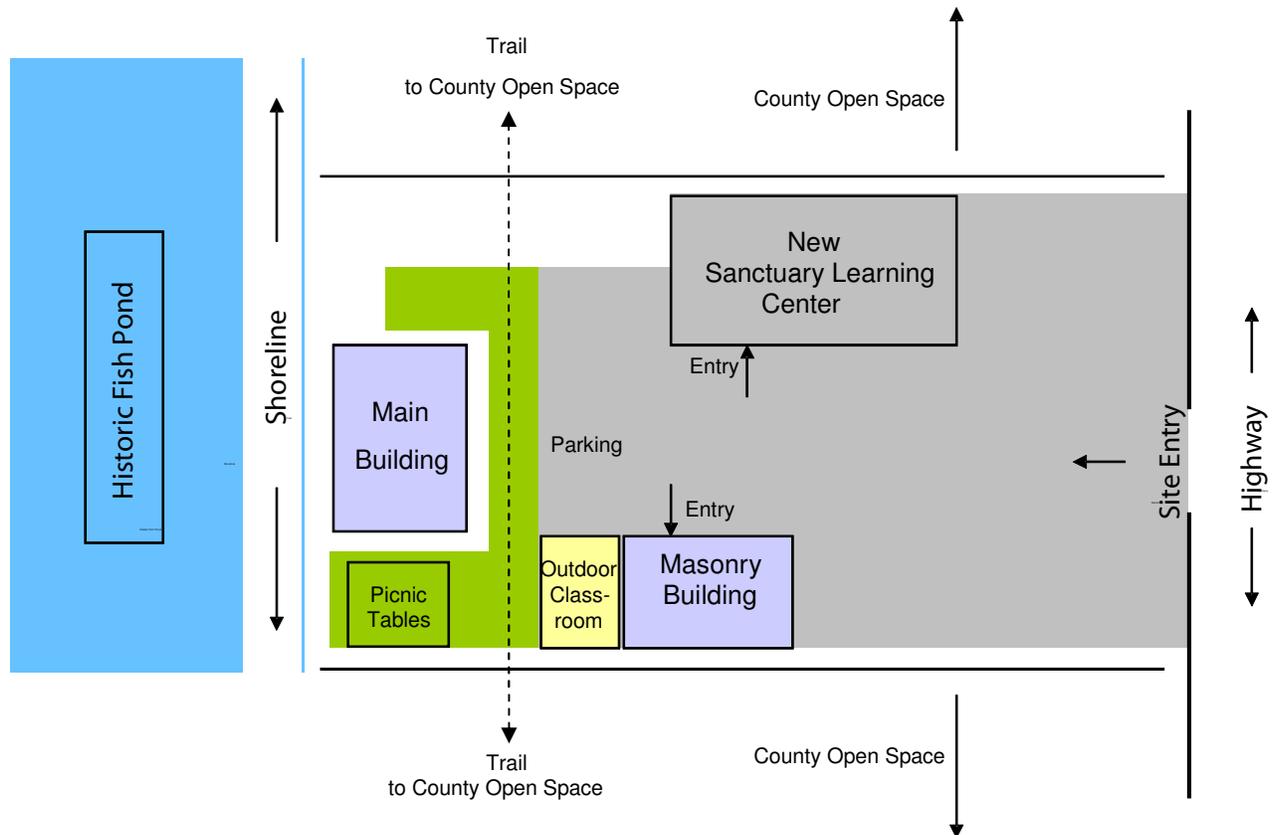
## Three Interrelated Activities

The Sanctuary performs many activities at this site that can be summarized into three major categories. Each activity tends to overlap with the other, and, as is typical in small organizations, many of the staff are cross-trained and backup each other. The three categories are:

- Education and Outreach
- Research and Resource Protection
- Administration

With the addition of the new Sanctuary Learning Center, there are opportunities to re-think how the buildings are used to house the various activities.

## Existing Functional Relationships

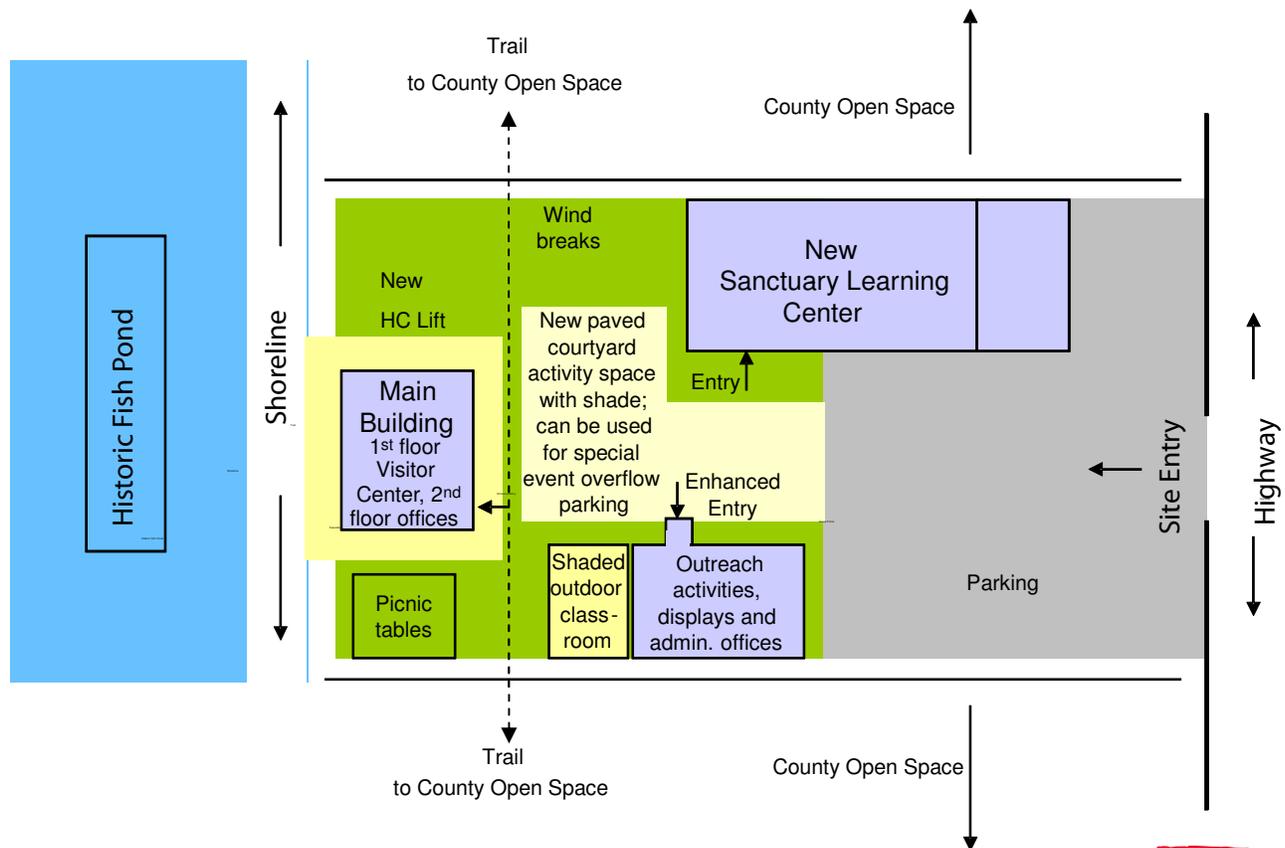


Currently, the Main Building is used for administration with the Masonry Building serving as a combination education and visitor center. The New Sanctuary Learning Center will accommodate educational and large group activities, freeing up space in the Masonry Building.

### Recommended Functional Relationships

The overarching concept is to make improvements to the two older buildings, and then visually link all three building with a central plaza that converts the site into a pedestrian friendly campus. This plaza needs to be designed so that it can also be used for overflow parking during special events. (It is highly recommended that the new plaza remain a pedestrian environment at all other times, and not become a “close-in parking lot for staff.”)

The new “campus” should also be carefully landscaped to provide outdoor gathering spaces that are shaded and wind protected. The design elements used should reflect the Hawaiian spirit which is echoed through the historic aspect of the space.



## Recommendations on Use

Because of its iconic architecture, the Main Building is a natural location for a new Visitor Center. The building's position on the waterfront along the pedestrian trail system attracts potential visitors. Expanding the lanai around the first floor of the Main Building would further invite visitors.

The second floor of the Main Building, however, should be kept as administrative office space. The small loft above the second floor is available to be converted into additional office space.

The Masonry Building should be updated to house additional administrative offices, as well as any activities that are not accommodated in either the New Sanctuary Learning Center or the new Visitor Center in the Main Building.

## Existing Conditions

### Site

The site is a small rectangle of land that measures approximately 1.13 acres on the western shore of Maui, to the south and east of Maalaea Bay. It is bounded on the east by S. Kihei Road, to the north and south by county-owned open space, and to the west by the Pacific Ocean.



The three buildings on the site are:

1. The Main Building is an historic, two-story wooden building built in the 1940's. It is currently painted a distinctive blue. This building is currently used for administrative office space and is the headquarters for the Sanctuary.
2. The new Sanctuary Learning Center (which has also been painted blue) is a large, modern building that contains educational classrooms, meeting space and storage. This building was completed in 2008.
3. The Masonry Building, which was built by the Navy in World War II, is a utilitarian structure that houses the Visitor Center and some educational programs.



The Sanctuary has a vibrant program of meetings, educational programs and outreach events which draws many visitors. However the site is very small, and during these events parking is extremely limited. The Sanctuary has tried to provide as much on-site parking as possible, but in doing so, has created a “sea of asphalt” on an otherwise picturesque site.



The site lacks any sense of arrival for visitors. After leaving their cars, visitors wander across the asphalt between the New Sanctuary Learning Center and the Masonry Building, often dodging other vehicles.



There is a noticeable lack of directional signage or other aids to orient visitors. The entry to the new building is elevated, and the Masonry Building lacks any discernable front door. Ironically, the Main Building intuitively draws visitors like a magnet, yet it contains no visitor activities. The wooden ramp leads visitors to an administration building instead of a visitor center.

The site lies within the 100 year flood plain and periodically storm water sheets across the property. Both the Main Building and the New Sanctuary Learning Center are elevated structures, but the Masonry Building was constructed with a slab on grade. When the site floods, the Masonry Building also floods. Sanctuary staff keep sandbags near the entry to the Masonry Building.



The site lies along the shoreline between open spaces managed by the county. A pedestrian trail crosses the site.

This public location can be viewed as a positive feature of the campus, because it provides more exposure for the Sanctuary. However, this openness also brings security issues. There is a vehicle gate across the entry drive, but the site lacks any perimeter security fencing, making it easily accessible to overnight “visitors”.

Even with its faults, this site could not be replicated. The proximity to the shoreline, the historic fishpond immediately offshore, and the eye-catching architectural style of the Main Building are three examples of the many assets this site holds.



## Building Condition

The three other documents referenced earlier contain considerable information related to the physical condition of the two older buildings. (The Sanctuary Learning Center is new.) This master plan update presents a summary of the condition data and sets the stage for the recommendations that follow.

### The Main Building

The Main Building is a 60+ year old wooden building that was built during wartime for classified military purposes. It has sat on a promontory, buffeted by weathering effects of the coastal winds and the sea. It is like a classic old house that requires significant, continual, and expensive maintenance.



The Sanctuary is faced with a costly enigma. While it would be cheaper in the long run to tear down the Main Building and rebuild it with a different type of structure, the building lies within the coastal setback, so it cannot be re-built without moving it closer to the interior of the site, taking up valuable campus real

estate. Plus this building has historical interest as an example of coastal architecture (and may be considered historically significant). Yet to keep the building implies that the Sanctuary will pay to maintain it.

Some of the significant issues associated with this building include:

- Parts of the structure are in need of shoring and/or repair.
- The plumbing should be replaced.
- The electrical system has been recently upgraded, but it appears more will be required.
- The fire sprinkler system apparently does not operate.
- There is some evidence of mold, although this may be localized.
- The interior layout lacks the functionality of modern administrative space and making needed improvements will trigger other code related upgrades.
- The exterior siding needs repair, caulking, and painting.
- An assessment should be made of the shoreline erosion, storm surges, and sea level rise because of the Main Building's proximity to the shoreline.

The building has two lanais, one on each floor, that partially surround the building.



## The Masonry Building

The Masonry Building was built by the Navy as an industrial building. It has exposed concrete block walls, exposed wooden roof trusses and a concrete floor.

The biggest drawback facing this building is that the elevation of the floor slab is within the 100 year flood plain, and the building periodically floods—a problem that needs to be addressed.



## Space Utilization

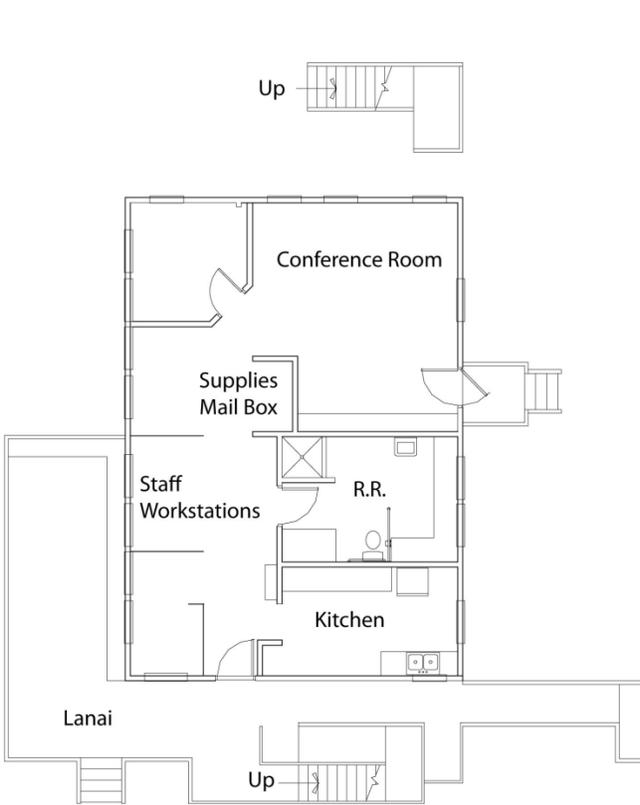
### The Main Building

The interior layout of the building is disjointed and inefficient. The first floor has an oversized, single rest room and a large kitchen. Together these rooms occupy approximately 30% of the available floor space.

The staff workstations, while adequate, do not measure up to modern standards for functional, ergonomic work environments.

There is a small stair leading up to a loft above the second floor. This loft is currently used only for storage.

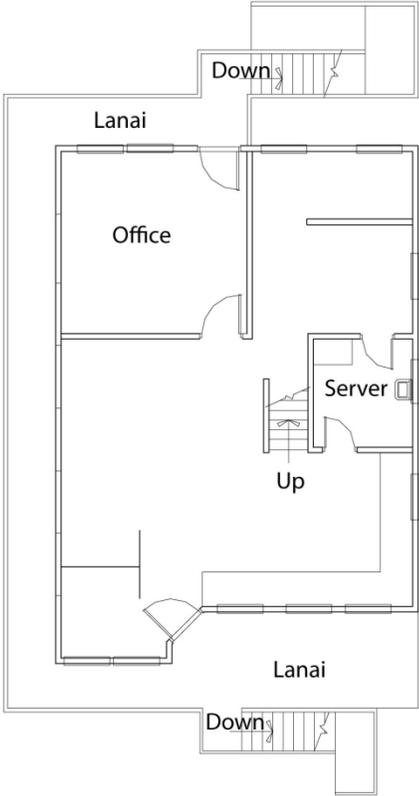




Existing

Main Building  
First Floor Plan

1,666 Sq. Ft. Interior  
674 Sq. Ft. Lanai



Existing

Main Building  
First Floor Plan

1,551 Sq. Ft. Interior  
613 Sq. Ft. Lanai



## The Masonry Building

Until the new Sanctuary Learning Center was constructed, the Masonry Building was the education center, housing classroom activities and educational programs. It consists of two major spaces, one side is a large, open floor plan and the other side has been partially subdivided.



Masonry Building  
Existing Floor Plan

924 Sq. Ft. Interior



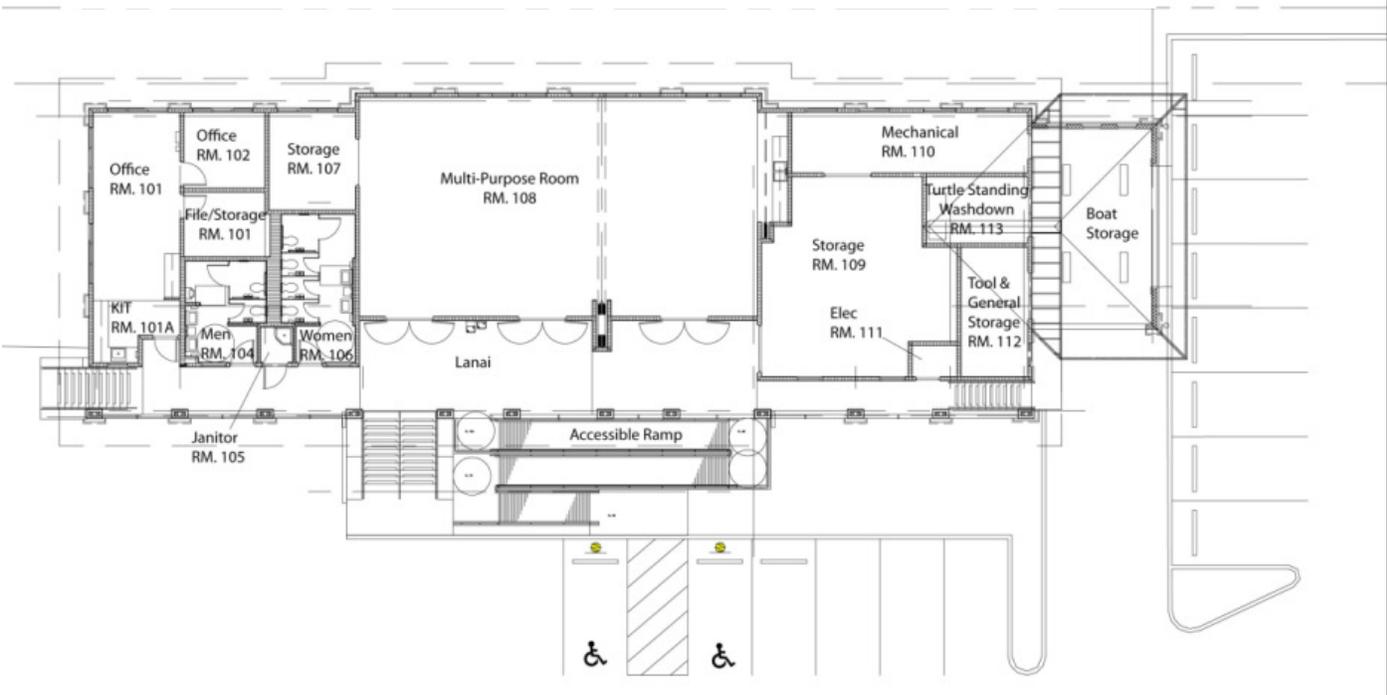
It should be noted that with such limited space, adequate storage is always an issue.

### The New Sanctuary Learning Center

This building was recently completed and is an attractive, functional facility.

### New Sanctuary Learning Center

Existing Property Line



## Recommendations

The following pages contain recommendations for the campus and for each building. A preliminary cost estimate of each recommended project has been provided. Specific architectural and engineering solutions for each recommendation will be developed once this master plan update has been accepted. The cost estimates should be viewed as preliminary, because they have been prepared before particular design solutions have been developed.

### Complete any Planned Improvements to the New Sanctuary Learning Center Building

Several enhancements to the new building were recently completed. These facilities were formally opened in a Grand Opening Program on April 13, 2009.



### New Sanctuary Learning Center

## Create a Campus-like Feeling on the Site

The following improvements are recommended:

- Incorporate consistent Hawaiian design elements to unify the buildings, and create a sense of local significance.

- Create a hardscaped plaza between the buildings (that can also be used for overflow parking during special events).

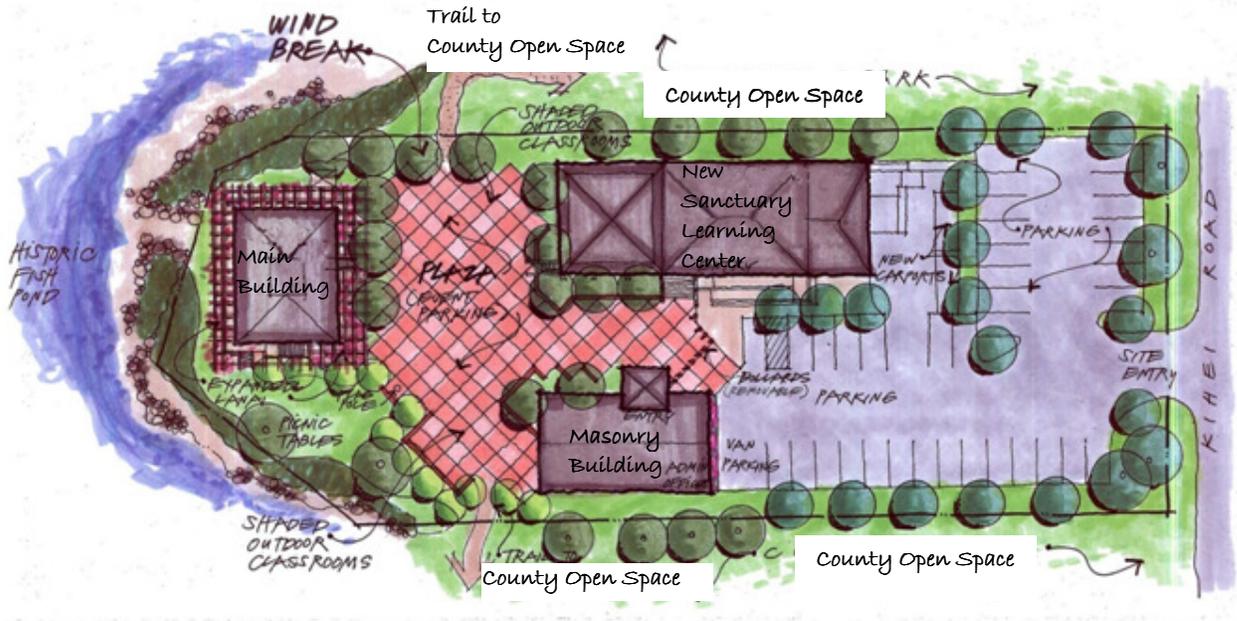
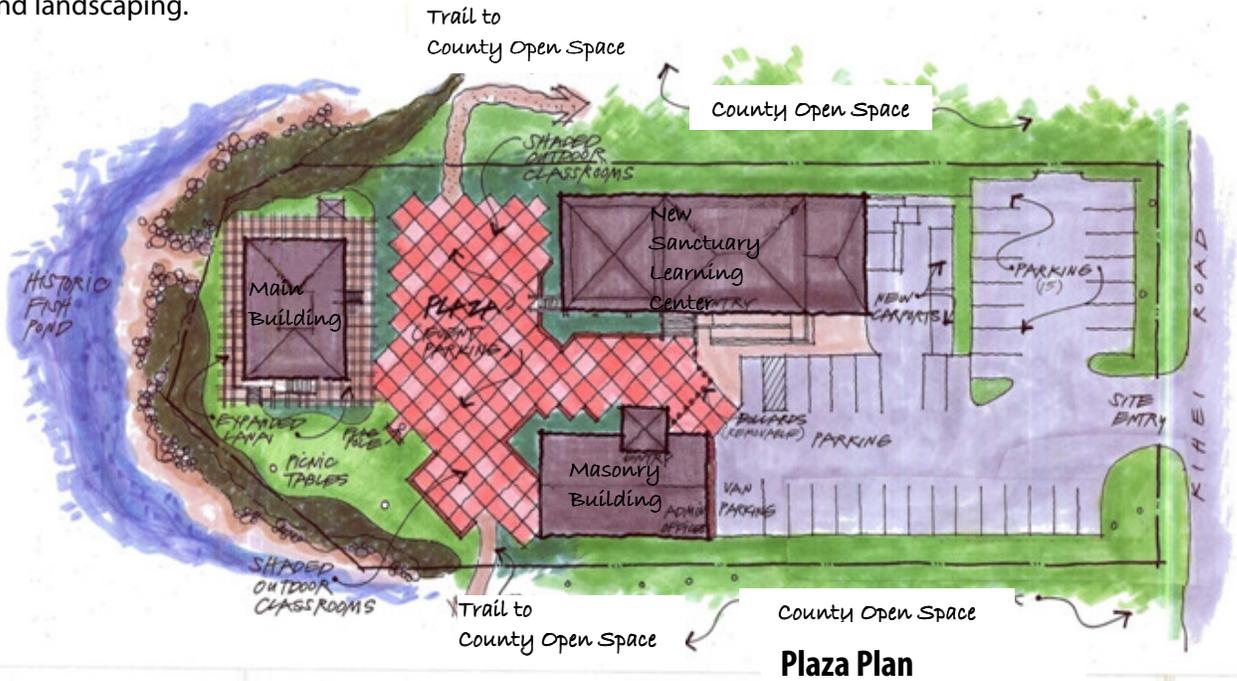
Removing the existing asphalt between the Masonry Building and the New Sanctuary Learning Center is the project that will have the largest overall impact in improving the campus. It will be a place that links the three buildings, provides a sense of orientation for visitors, explains the history and cultural significance of the site, accommodates various types of outdoor events, and it is just a pleasant place to be in.

Although this plaza was first envisioned as a natural landscaped area, the real need for additional parking has caused the original concept to change. It has now turned into a multi-use plaza that is pedestrian most of the time, but is designed with removable bollards to allow overflow parking during high demand events. The design should include appropriate, native trees and planting for shade, and to block the wind.

- Re-grade the site around the Masonry Building.  
As part of the project to help the Masonry Building withstand flooding, the ground area around the Masonry Building should be raised slightly so that water drains away from the building. This will require treating the bottom 12" to 18" of the building wall as a waterproof barrier, so no moisture can permeate inside.
- Expand the lawn area next to the Main Building.  
There is a grassy area with picnic tables to the south of the Main Building. This area should be expanded toward the new plaza, with additional shade trees and wind breaks.
- Install signage and kiosks to present the cultural resources and history of the site.  
As mentioned above, the new plaza and surrounding lawn are an opportunity to explain the significance of this site, and tell the story of the peoples who came before.

- Re-build the outdoor classroom adjacent to the Masonry Building

The outdoor classroom at the western end of the Masonry Building is in need of repair. It should be re-built as a part of the other campus improvements which include site re-grading and landscaping.



## Update the Main Building

The following improvements are recommended:

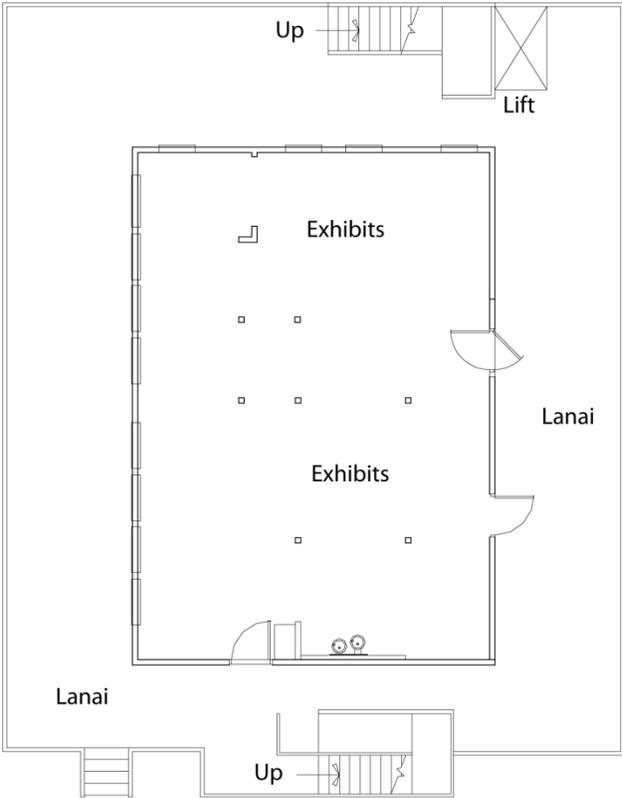
- Make needed repairs to stabilize the building.  
These can best be described as deferred maintenance. They involve making the building weathertight and structurally sound. The exterior should be repaired, caulked and painted. The mold should be abated and the cause of the mold should be eliminated. Any critical structural repairs should be made. Any areas where the roof is leaking should be fixed.
- Convert the first floor into a new visitor center and construct an expanded lanai.  
This building SHOULD be the Visitor Center. This is the opportunity to make it so. Relocate the administrative staff off of the first floor into the Masonry Building and “open up” the first floor into a Visitor Center with appropriate exhibits. Some walls (or columns) can remain to provide structural support and serve as a backdrop for exhibits.  
Rebuilding and expanding the existing lanai so that it completely surrounds the building will further enhance the Visitor Center. A landscaped trellis will also surround the refurbished and expanded lanai. The handicap ramp will be redesigned or replaced with a handicap lift.
- Remodel the second floor into efficient office space for staff.  
Two enclosed offices should be maintained. Demolish the other existing walls (when structurally possible) and create a functional, open plan office environment with modular workstations. (Workstation panel heights should be kept low to maintain views to the bay)  
Construct two new bathrooms and convert the loft into an office by replacing the existing stair with one that is code compliant.
- The major remodeling to the Main Building described above (not including the stabilization repairs) should be done at the same time, giving the contractor a vacant building to work with. This renovation will include the update, repair, and/or replacement of the plumbing, electrical, heating/air conditioning, fire protection, and data/communication systems. Major structural repairs and needed reinforcing will also be done, and a new roof will be installed.

### ■ Assumptions:

Because of the historic nature of this building, reasonable accommodations can be made that would not be acceptable in a new building. These include the following assumptions:

- An elevator is not required because there is comparable, accessible office space in other buildings on campus. The public who come to meet with staff housed in this building would be accommodated in accessible meeting rooms.
- The existing wooden ramp will be redesigned or replaced with a handicap lift to provide access to the Visitor Center.
- Rest rooms are not required in the new Visitor Center because accessible public rest rooms are nearby in the new Sanctuary Learning Center.
- The loft can be used because of its limited size and occupancy.
- Certain improvements such as a new roof and air conditioning have been included because it may be many years before funds are available, and by that time these systems may have reached their useful lives
- Unless the color is determined to be an historic issue, the blue color can be changed.





Recommended

Main Building  
First Floor Plan

1,666 Sq. Ft. Interior  
2,462 Sq. Ft. Lanai



Recommended

Main Building  
Second Floor Plan

1,551 Sq. Ft. Interior  
613 Sq. Ft. Lanai

## Renovate the Masonry Building

The following improvements are recommended:

- Construct a 12" to 18" tall waterproof barrier around the base of the building.

The most effective way to prevent water from entering the building is to construct a watertight base without any penetrations. While still within the 100 year flood plain, Sanctuary staff members report that water has never been higher than 12 inches.

- Construct a new entry canopy and "stoop."

This new stoop will provide an enhanced entry into the building and will provide a way to rise above the new barrier described above. (A separate accessible entry can be incorporated into the re-grading, plaza, and outdoor classroom projects described earlier.)

This work should also include exterior improvements including siding and roof to match the new Sanctuary Learning Center, enlarged windows and new doors.

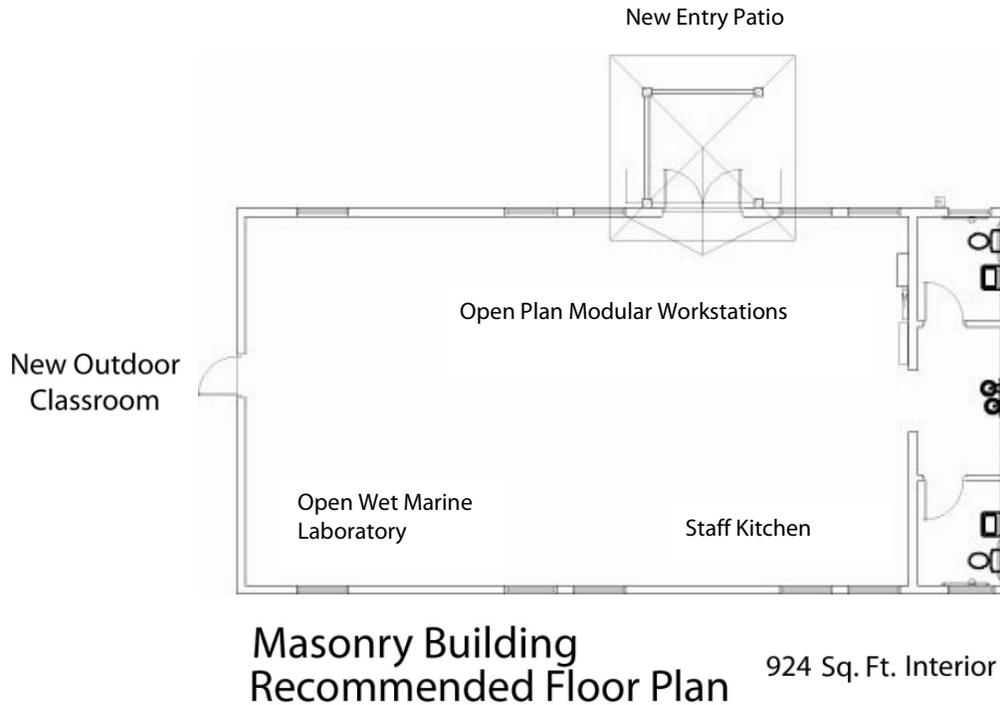
- Install a raised access floor inside the building.

This is the easiest way to elevate the finished floor of the building equal to the height of the exterior barrier. Because the floor panels are removable, if the flood waters ever enter the building, panels can be removed to ventilate and dry out the sub-floor plenum. (As an alternate, instead of using access flooring, the entire floor level could be filled and raised to the new level, but this would be a more complicated solution.)

- Make interior improvements, and convert the building to administrative use, and install modular workstations.

The interior of the building should be updated with new electrical service, a new data and communication network, and new air conditioning. In addition to office space, this building should include a marine laboratory, and a small kitchen, relocated from its existing location in the Main Building. The marine lab would be located in the west end of the masonry building adjacent to the outdoor classroom. These improvements could be phased as funds come available.

- The Sanctuary may wish to consider planning for the ultimate replacement of the Masonry Building, but these improvements will make the building efficient and functional for many years.
- It is unknown if the Masonry Building is considered to be historically significant.



## Sustainable Design

All improvements should incorporate LEED principles and, whenever possible, qualify the buildings for a rating of Silver or higher.

## Improvements Shared with Partners

Certain improvements extend beyond the limits of the site and involve the direct participation of partners. For example, the site, along with the entire area, is subject to flooding during heavy rain. The Sanctuary could work with the County of Maui to discuss possible storm sewer improvements along the west side of S. Kihei Road, including improvements to the road shoulder. An assessment of on-site parking lot drainage could be done at the same time. Similarly, it would be beneficial if the electric pole at the south side of the entry driveway could be relocated.

## Summary of Recommended Projects

### New Sanctuary Learning Center

- Complete any planned improvements to the new Sanctuary Learning Center

### Site Improvements

- Create a hardscaped plaza between the buildings that can also be used for overflow parking during special events
- Re-grade the site around the Masonry Building
- Expand the lawn area next to the Main Building
- Install signage and kiosks to present the cultural resources and history of the site
- Re-build the outdoor classroom adjacent to the Masonry Building

### Main Building

- Make needed repairs to stabilize the building
- Convert the first floor into a new visitors center and construct an expanded lanai with landscaped trellis
- Remodel the second floor into efficient office space for staff

### Masonry Building

- Construct a 12" to 18" tall waterproof barrier around the base of the building
- Construct a new entry canopy and "stoop"
- Install raised access floor inside the building
- Make interior improvements, convert the building to administrative use and install modular workstations

## Sequencing of Projects

The most urgent project should be to make needed repairs to stabilize the Main Building. The Sanctuary should evaluate the remaining projects and sequence them based upon how each would enhance the mission and capability of the Sanctuary and, of course, the availability of funding.

## Summary of the Preliminary Cost Estimate

This Preliminary Cost Estimate was originally prepared early in 2008. It used the historical average construction escalation figures at that point in time.

The following annual constructions escalation cost increases were assumed:

- 10% for 2008-2010
- 8% for 2011-2014
- 7% for 2015

### Summary of Recommended Projects

This spreadsheet assumes that the remaining improvements to the new Sanctuary Learning Center have already been funded.

	2010	2011	2012	2013	2014	2015
<b>Site Improvements</b>						
▪ Construct a new stone wall and entry sign	\$149,230	\$161,169	\$174,062	\$187,987	\$203,026	\$217,238
▪ Create a hardscaped plaza between the buildings that can also be used for overflow parking during special events	\$494,492	\$534,052	\$576,776	\$622,918	\$672,751	\$719,844
▪ Re-grade the site around the Masonry Building	\$64,434	\$69,589	\$75,156	\$81,168	\$87,662	\$93,798
▪ Expand the lawn area next to the Blue Building (Main Building)	\$49,383	\$53,333	\$57,600	\$62,208	\$67,185	\$71,887
▪ Install signage and kiosks to present the cultural resources and history of the site	\$58,140	\$62,792	\$67,815	\$73,240	\$79,099	\$84,636
▪ Re-build the outdoor classroom adjacent to the Masonry Building	\$126,111	\$136,199	\$147,095	\$158,863	\$171,572	\$183,582
<b>Total</b>	\$941,790	\$1,017,133	\$1,098,504	\$1,186,384	\$1,281,295	\$1,370,985
<b>Main Building</b>						
▪ Make needed repairs to stabilize the building	\$357,733	\$386,352	\$417,260	\$450,641	\$486,692	\$520,761
▪ Convert the first floor into a new visitors center (including displays) and construct an expanded lanai	\$3,339,289	\$3,606,432	\$3,894,947	\$4,206,543	\$4,543,066	\$4,861,081
▪ Remodel the second floor into efficient office space for staff	\$716,074	\$773,360	\$835,229	\$902,048	\$974,211	\$1,042,406
<b>Total</b>	\$4,413,097	\$4,766,145	\$5,147,436	\$5,559,231	\$6,003,970	\$6,424,248
<b>Masonry Building</b>						
▪ Construct a 12" to 18" tall waterproof barrier around the base of the building	\$93,254	\$100,715	\$108,772	\$117,474	\$126,871	\$135,752
▪ Construct a new entry canopy and "stoop"	\$155,001	\$167,401	\$180,793	\$195,256	\$210,877	\$225,638
▪ Install raised access floor inside the building	\$41,537	\$44,860	\$48,449	\$52,325	\$56,511	\$60,467
▪ Make interior improvements, and convert the building to administrative use, and install modular workstations	\$534,993	\$577,792	\$624,016	\$673,937	\$727,852	\$778,801
<b>Total</b>	\$824,785	\$890,768	\$962,030	\$1,038,992	\$1,122,111	\$1,200,659
<b>Grand Totals</b>	\$6,179,672	\$6,674,046	\$7,207,970	\$7,784,607	\$8,407,376	\$8,995,892

All figures in this summary are "Total Project Cost" which includes construction costs and allowances for soft costs.

## Appendix

- Grand Opening of the Sanctuary Learning Center
- Methodology Used in this Master Plan Update
- PowerPoint Presentation of Initial Findings
- Structural Engineer's Observations of the Main Building
- Cost Estimate Detail (Preliminary)
- Government Review Comments Worksheet

## Grand Opening of the Sanctuary Learning Center

The grand opening of the Sanctuary Learning Center at the Hawaiian Islands Humpback Whale National Marine Sanctuary facility in Kihei, Maui was celebrated on April 9, 2009.

### **Grand Opening Program**

Opening Pule (Hawaiian prayer) – Joylyn Olivera

Performance by Keiki Hula group

Naomi McIntosh,

*Sanctuary Superintendent, Hawaiian Islands, Humpback Whale National Marine Sanctuary*

Kuheha Paracuelles,

*Representing Mayor Charmaine Tavares, county of Maui*

Laura Thielen,

*Chairperson, State of Hawaii Department of Land & Natural Resources*

Allen Tom,

*Pacific Islands Regional Director, NOAA's Office of National Marine Sanctuaries*

Dr. Jane Lubchenco,

*Under Secretary of Commerce for Oceans and Atmosphere, NOAA Administrator*

Kimokeo Kapahulehua,

*Hawaiian Cultural Advisor*

Honorable Neil Abercrombie,

*Congressman, U.S. House of Representatives*

Honorable Mazie Hirono,

*Congresswoman, U.S. House of Representatives*

Honorable Daniel K. Akaka,

*Senator, U.S. Senate*

Honorable Daniel K. Inouye,

*Senator, U.S. Senate*

Performance by Keiki Hula group

Lei Cutting and Blessing of Sanctuary Learning Center by Kahu Alika

The Program was followed by an Open House Reception in the new Sanctuary Learning Center and Exhibits in the Visitor Center.

## Master Plan Update

The new Sanctuary Learning Center provides new offices, storage and a large multipurpose room for lectures, meetings, and workshops, that can also be divided into two classrooms.



Honored guests and speakers Senator Inouye, Dr. Jane Lubchenko, Senator Inouye, and Kimokeo Kapahulehua participate in a traditional blessing of the new Sanctuary Learning Center.



Dr. Jane Lubchenko and Senator Inouye ceremonially open the maile lei to the Sanctuary Learning Center.



Senator Akaka, Dr. Jane Lubchenko, and Senator Inouye tour exhibits on the Hawaiian Islands Humpback Whale National Marine Sanctuary in the new Sanctuary Learning Center.



# Methodology Used in this Master Plan Update

Preparing this master plan update included the following steps:

- Reviewed the previous studies that were prepared for this site
- Conduced a conference call with key stakeholders to understand the objectives and project requirements
- Conducted a two-day fact-finding workshop at Kihei
- Interviewed the following Sanctuary and NOAA stakeholders (*see following agenda*)
  - Ted Lillestolen
  - Allen Tom
  - Naomi McIntosh
  - Paul Wong
  - Patty Miller
  - Nancy Daschbach
  - David Mattila
  - Ed Lyman
  - Emily Carlson
  - Alastair Hebard
  - Jerry Stowell
  - Ed Boland
  - Tracy Burke
  - Dano Phippen
  - Tino Escalona
- Summarized the requirements and opportunities at Kihei
- Conducted a second workshop at Kihei to review initial findings, develop alternatives, and collect additional data (*see following PowerPoint presentation*)
- Issued an illustrated draft report that focused on big-picture opportunities and recommendations, incorporating the three previous master plan studies by reference
- Received comments from various stakeholders and included their edits
- Issued a revised draft
- Issued the final Master Plan Update

**Kihei Facilities Planning Meeting  
April 2-3, 2008**

**Agenda**

Attendees: Doug Lowe, Ted Lillistolen, Allen Tom, Naomi McIntosh, Paul Wong, Patty Miller, Nancy Daschbach, David Mattila, Ed Lyman, Emily Carlson, Alastair Hebard, Jerry Stowell, Ed Boland, Tracy Burke, Dano Phippen

**April 2**

- 8:00 Doug, Ted, Allen and Naomi, Paul
- 9:00 Doug and Ted walk around (Nancy, Paul, Naomi)
- 9:30 Kick-off meeting: General meeting to present current stage of planning for Kihei campus, and to gather general comments from staff  
Doug, Ted, Allen, HIHWNMS staff
- 10:30 Outline planned objectives and outcomes of scheduled individual staff meetings.  
Site senior staff: Doug meets with Patty, Nancy, David, Naomi, Paul
- 11:15 Research and Rescue: Doug meets with David, Ed Lyman, Paul, Naomi, Nancy
- 12:00 Lunch
- 1:30 Support staff: Doug meets with Ed Boland, Tracy, Patty, David, Paul and Nancy
- 2:30 Education, Outreach and Volunteer staff: Doug meets with Patty, Jerry, Alastair, Emily, Paul, Naomi, Nancy
- 3:30 Maintenance: Doug meets with Dano, Paul, Naomi, and Nancy
- 4:30 Pau

## **Agenda** *(continued)*

### **April 3**

- 9:00 Doug meets with Ted, Allen, Naomi, Paul, Patty, David and Nancy to discuss yesterday's outcomes
- 11:00 Wrap-up meeting with staff
- 12:00 Lunch
- 1:30 Doug to airport

#### STAFF

David Mattila, Research Coordinator  
Ed Lyman, Rescue Coordinator  
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Jerry Stowell, Education Center Manager  
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Ed Boland, IT specialist  
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Dano Phippen, Facilities Maintenance

# PowerPoint Presentation of Initial Findings

Please Note: This presentation was presented in May 2008.  
Some of the information in these PowerPoint slides has been superseded.



# Improvements to the Hawaiian Islands Humpback Whale National Marine Sanctuary *Kihei, Maui*

May 1, 2008  
*Preliminary*



## Discussion

- Opportunities
- Needs
- Limitations
- Functional Relationships
- Recommended Improvements
- Sequence of Improvements
- Next Steps



## Opportunities

- Location, location, location
- Iconic, easily recognizable main building
- Recent major investment
- Close to harbor facilities
- Many visitors



## Needs

- Make existing office space more functional
- Carport & secure parking for government vehicles
- Deferred maintenance on blue building
- Unify the site into a campus
- Address flooding problem
- Additional office space
- Mini laboratory
- More parking
- Dormitory





## Limitations

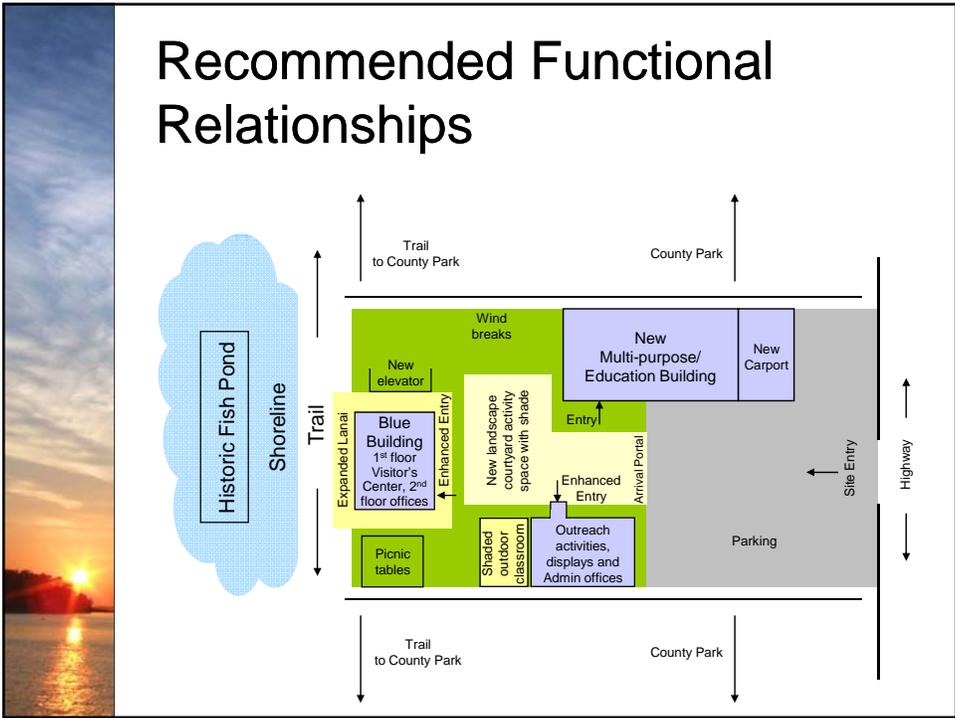
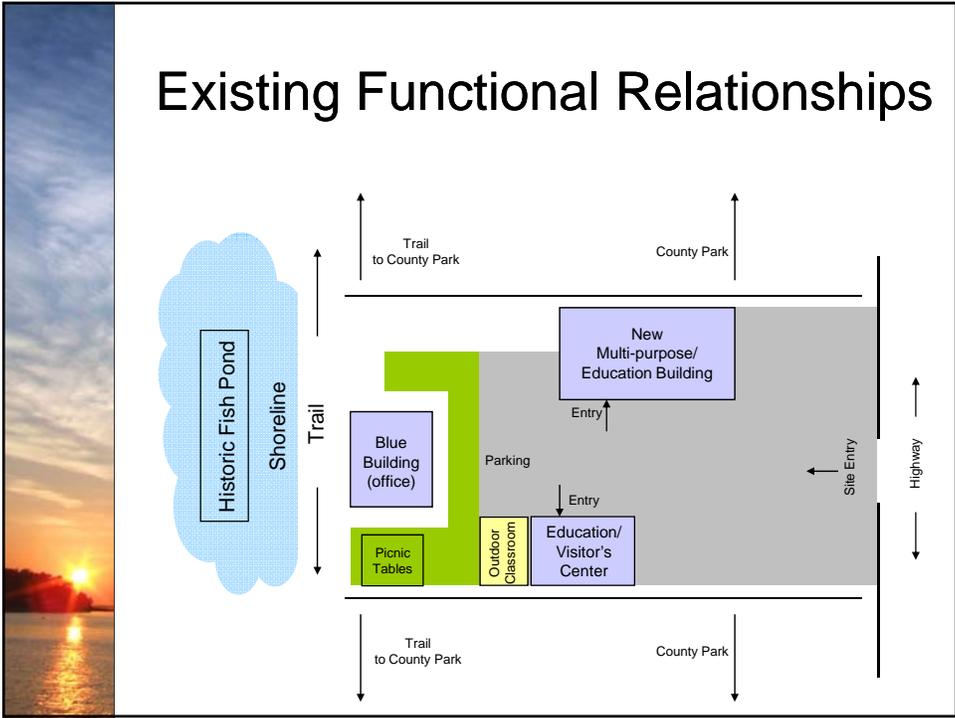
- Not enough land for all parking needs
- Small, landlocked campus
- Blue building will require significant investment
- Site is not inviting
- Site is in the flood plain
- Two of your three buildings are within the coastal setback and cannot be re-built in place



## Existing Functional Relationships

1. Existing site lacks a sense of arrival
2. The 3 buildings seem unrelated
3. Historic blue building attracts visitors, but only contains offices
4. The cultural and historic nature of the site is not well presented
5. Parking between the buildings makes the site less usable and less inviting







## Recommended Improvements

- Campus
  1. Turn the existing site into a pedestrian friendly campus
  2. Remove the parking from between the buildings  
*(parking is extremely limited, but this is key)*



## Recommended Improvements

- Campus (continued)
  3. Relocate electrical vault
  4. Develop a large central courtyard/outdoor activity space





## Recommended Improvements

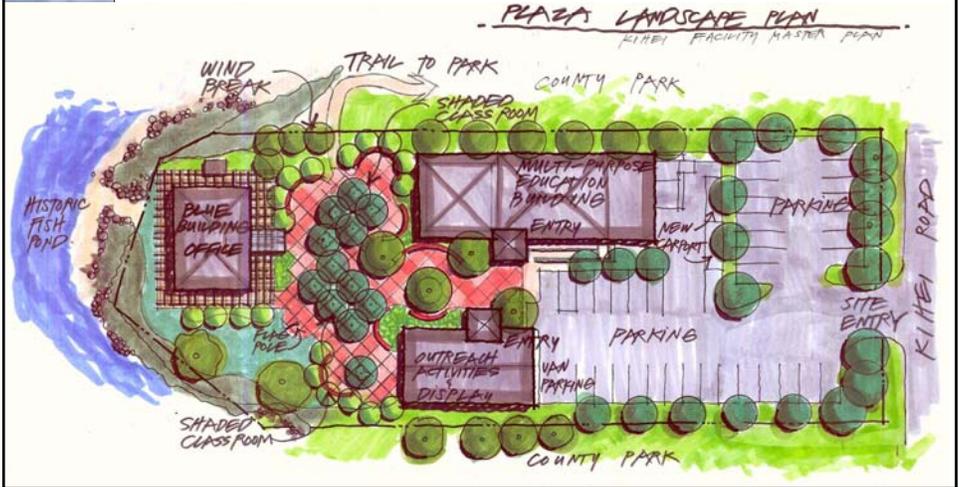
- Campus (continued)

- 5. Attributes of the new courtyard include:

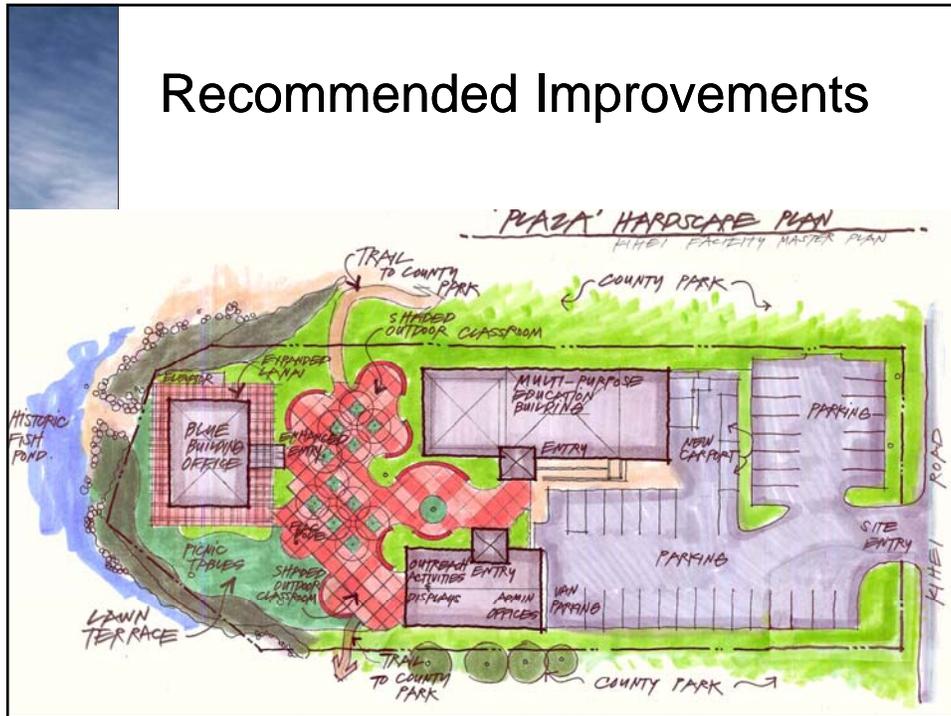
- Trees and man-made shade pergolas and wind breaks
    - Defined entry "portals" from the parking lot and from the trail system ("you are here")
    - A combination of grass and paved areas
    - Displays and signage to present the cultural and historic nature of the site
    - Visually connect all three buildings with each other and with the shoreline
    - Places for small and large groups to gather and sit comfortably (consider an amphitheater against the dune)



## Recommended Improvements



## Recommended Improvements



## Recommended Improvements

- Blue Building
  - Completely renovate and update the blue building
  - Convert the 1st floor of the blue building into a visitor's center





## Recommended Improvements

- **Blue Building (continued)**

7. Expand the lanai completely around the blue building and add a shade pergola
8. Renovate the 2<sup>nd</sup> floor of the blue building into functional office space with rest rooms
9. Remove the wooden ramp leading to the blue building and install a new freestanding elevator



## Recommended Improvements

- **Masonry Building (*Interim Solution*)**

- Convert the existing visitor's center (masonry building) into a combination of office space and outreach activities and displays. Attributes of the renovated masonry building include:
  - Inexpensive--this is an interim solution only
  - Add watertight doors to protect the building when the site floods
  - Install new larger windows
  - Construct a new canopy over the entry door
  - Include a new staff break room and kitchen





## Recommended Improvements

- **Masonry Building (*Long Term Solution*)**
  - Long term--replace the masonry building with a new building that is above the 100 yr. flood plain



## Recommended Improvements

- **New Multi-purpose/Education Building**
  10. Complete improvements that were deleted from the original construction package
  11. Convert the small storage room adjacent to the classroom into a mini-lab for education & resource protection
  12. Ventilate the crawl space and construct a platform for storage
  13. Construct a carport at the east end of the building
  14. Construct attic storage above the work room and the new carport
  15. Enclose two parking spaces for government vehicles





## Sequence of Improvements

1. Complete the improvements to the new Multi-purpose/Education building
2. Make any emergency repairs needed to stabilize the blue building
3. Place modular offices into the courtyard and vacate the blue building
4. Completely renovate the blue building
5. Make interim improvements to the masonry building
6. Develop the landscaped courtyard



## Next Steps

- Engineering assessment of the blue building
- Prepare cost estimates
- Develop block layout diagrams for office areas
- Expand these preliminary recommendations into a detailed program of requirements

# Cost Estimate Detail (Preliminary)

**Hawaiian Islands Humpback Whale  
National Marine Sanctuary Kihei, Maui**  
Concept Estimate  
July 1, 2008

Description	Quantity	Unit	Extension	Total	\$SF
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**SITE IMPROVEMENTS**

**1 CONSTRUCT NEW STONE WALL AND ENTRY SIGN**

**Site Demolition**

Site Demo/Prep for Stone Wall	140	lf	\$ 4.00	\$ 560	
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**Earthwork**

Excavate for Low Wall Footing	83	cy	\$ 15.00	\$ 1,244	
Final Grade at Stone Wall	140	lf	\$ 2.50	\$ 350	

**Environmental**

Storm Water Pollution Prevention Plan - Bldg	1	ls	\$ 500	\$ 500	
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**Landscape/Hardscape**

Landscape at Stone Wall - Assume Low Shrub	840	sf	\$ 3.00	\$ 2,520	
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**Utilities**

Power/Lighting					
Entry Sign Lighting	1	ls	\$ 5,000	\$ 5,000	
Power Branch Conduit for Entry Sign	200	lf	\$ 16.00	\$ 3,200	

**Concrete**

Concrete Footing for Entry Sign	140	lf	\$ 34.00	\$ 4,760	
Patch/Repair Paving at Entry - Allow	1	allow	\$ 4,000.00	\$ 4,000	

**Stone Wall**

Stone Wall - 4' Wall	560	sf	\$ 36.00	\$ 20,160	
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**Signage**

Signage Allowance	1	ls	\$ 7,500.00	\$ 7,500	
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**Subtotal Sitework** \$ 49,794

**Subtotal Construction** \$ 49,794

General Conditions 18.0% \$ 8,963  
**Subtotal** \$ 58,757

General Contractor Fee/Bond 8.0% \$ 4,701  
**Subtotal** \$ 63,458

Contingency 15.0% \$ 9,519  
**Subtotal** \$ 72,977

Maui, Hawaii Factor 30% \$ 21,893  
**Total** \$ 94,870

**Hawaiian Islands Humpback Whale  
National Marine Sanctuary Kihei, Maui**  
Concept Estimate  
July 1, 2008

Description	Quantity	Unit	Extension	Total	\$SF
Soft Cost (Design, permitting, PM oversight etc)			30%	\$	28,461
<b>Total</b>				\$	<b>123,331</b>
<b>2 CREATE A HARDSCAPE PLAZA BETWEEN BUILDINGS</b>	4,000	sf	assume		
<b>Site Demolition</b>					
Demo Paving Between Masonry & New MP Bldg	4,000	sf	\$ 1.50	\$	6,000
Demo Miscellaneous Site Items	1	allow	\$ 3,500	\$	3,500
<b>Earthwork</b>					
Backfill and Grading at New Plaza Area	4,000	sf	\$ 2.00	\$	8,000
<b>Paving</b>					
Base for Plaza	4,000	sf	\$ 2.50	\$	10,000
Vehicular Rated Paver over Concrete	4,000	sf	\$ 14.00	\$	56,000
Removable Bollards	10	ea	\$ 750.00	\$	7,500
<b>Utilities</b>					
Site Lighting at Plaza - w/Conduit/Wire	4,000	sf	\$ 7.00	\$	28,000
<b>Landscape</b>					
Trees	12	ea	\$ 1,000	\$	12,000
Irrigation	4,000	sf	\$ 2.50	\$	10,000
Miscellaneous Site Furnishings - Benches/Etc	4,000	sf	\$ 6.00	\$	24,000
<b>Subtotal Sitework</b>				\$	<b>165,000</b>
<b>Subtotal Construction</b>				\$	<b>165,000</b>
General Conditions				18.0%	\$ 29,700
<b>Subtotal</b>					<b>\$ 194,700</b>
General Contractor Fee/Bond				8.0%	\$ 15,576
<b>Subtotal</b>					<b>\$ 210,276</b>
Contingency				15.0%	\$ 31,541
<b>Subtotal</b>					<b>\$ 241,817</b>
Maui, Hawaii Factor				30%	\$ 72,545
<b>Total</b>					<b>\$ 314,363</b>
Soft Cost (Design, permitting, PM oversight etc)			30%	\$	94,309
<b>Total</b>				\$	<b>408,671</b>
<b>3 REGRADE SITE AROUND MASONRY BUILDING</b>	3,000	sf	assume		

**Hawaiian Islands Humpback Whale  
National Marine Sanctuary Kihei, Maui**

Concept Estimate  
July 1, 2008

Description	Quantity	Unit	Extension	Total	\$SF
<b>Site Demolition</b>					
Demo/Clear Site Around Masonry Building	3,000	sf	\$ 0.50	\$ 1,500	
<b>Earthwork</b>					
Grading and Backfill for Water Shed	3,000	sf	\$ 4.00	\$ 12,000	
<b>Paving</b>					
Realign Partial Paving for Water Shed	400	sf	\$ 5.00	\$ 2,000	
<b>Landscape</b>					
Replace Displaced Vegetation at Masonry	3,000	sf	\$ 2.00	\$ 6,000	
<b>Subtotal Sitework</b>				\$	<b>21,500</b>
<b>Subtotal Construction</b>				\$	<b>21,500</b>
General Conditions				18.0%	\$ 3,870
<b>Subtotal</b>					<b>\$ 25,370</b>
General Contractor Fee/Bond				8.0%	\$ 2,030
<b>Subtotal</b>					<b>\$ 27,400</b>

**Hawaiian Islands Humpback Whale  
National Marine Sanctuary Kihei, Maui**  
Concept Estimate  
July 1, 2008

Description	Quantity	Unit	Extension	Total	\$SF
			Contingency	15.0%	\$ 4,110
			<b>Subtotal</b>		<b>\$ 31,510</b>
			Maui, Hawaii Factor	30%	\$ 9,453
			<b>Total</b>		<b>\$ 40,962</b>
			Soft Cost (Design, permitting, PM oversight etc)	30%	\$ 12,289
			<b>Total</b>		<b>\$ 53,251</b>
<b>4 EXPAND LAWN AREA NEXT TO BLUE BLDG (Main Bldg)</b>	1,500	sf	assume		
<b>Site Demolition</b>					
Minor Demo/Prep for Lawn Expansion	1,500	sf	\$ 0.20	\$	300
<b>Earthwork</b>					
Site Fill at Lawn Area	111	cy	\$ 16.00	\$	1,778
<b>Landscape</b>					
Sod	1,500	sf	\$ 1.10	\$	1,650
Irrigation	1,500	sf	\$ 2.50	\$	3,750
Miscellaneous Site Furnishings - Benches/Etc	1,500	sf	\$ 6.00	\$	9,000
			<b>Subtotal Sitework</b>		<b>\$ 16,478</b>
			<b>Subtotal Construction</b>		<b>\$ 16,478</b>
			General Conditions	18.0%	\$ 2,966
			<b>Subtotal</b>		<b>\$ 19,444</b>
			General Contractor Fee/Bond	8.0%	\$ 1,556
			<b>Subtotal</b>		<b>\$ 20,999</b>
			Contingency	15.0%	\$ 3,150
			<b>Subtotal</b>		<b>\$ 24,149</b>
			Maui, Hawaii Factor	30%	\$ 7,245
			<b>Total</b>		<b>\$ 31,394</b>
			Soft Cost (Design, permitting, PM oversight etc)	30%	\$ 9,418
			<b>Total</b>		<b>\$ 40,812</b>

**5 INSTALL SIGNAGE AND KIOSKS**

**Site Signage**

Wayfinding / Building Locations	8	allow	\$ 850.00	\$	6,800
Kiosks	2	allow	\$ 4,500.00	\$	9,000

**Hawaiian Islands Humpback Whale  
National Marine Sanctuary Kihei, Maui**  
Concept Estimate  
July 1, 2008

Description	Quantity	Unit	Extension	Total	\$SF
Electrical - Conduit/Wire/Trenching	200	lf	\$ 18.00	\$ 3,600	
<b>Subtotal Sitework</b>				<b>\$ 19,400</b>	
<b>Subtotal Construction</b>				<b>\$ 19,400</b>	
General Conditions			18.0%	\$ 3,492	
<b>Subtotal</b>				<b>\$ 22,892</b>	
General Contractor Fee/Bond			8.0%	\$ 1,831	
<b>Subtotal</b>				<b>\$ 24,723</b>	
Contingency			15.0%	\$ 3,709	
<b>Subtotal</b>				<b>\$ 28,432</b>	
Maui, Hawaii Factor			30%	\$ 8,530	
<b>Total</b>				<b>\$ 36,961</b>	
Soft Cost (Design, permitting, PM oversight etc)			30%	\$ 11,088	
<b>Total</b>				<b>\$ 48,050</b>	
<b>6 REBUILD OUTDOOR CLASSROOM AT MASONRY BLDG</b>	500	sf	assume		
<b>Site Demolition</b>					
Demo/Prep area for Outdoor Classroom	500	sf	\$ 1.50	\$ 750	
<b>Earthwork</b>					
Backfill and Grading	500	sf	\$ 2.00	\$ 1,000	
<b>Paving</b>					
Base for Outdoor Classroom	500	sf	\$ 2.00	\$ 1,000	
Hardscape Surface - Concrete	500	sf	\$ 5.00	\$ 2,500	
<b>Utilities</b>					
Site Power at Outdoor Classroom - WP Receptacles	1	allow	\$ 3,600	\$ 3,600	
Site Lighting - Bollards	12	ea	\$ 550	\$ 6,600	
Site Lighting - Pole Type w/Base	6	ea	\$ 1,450	\$ 8,700	
Conduit/Wire/Trenching	360	lf	\$ 18	\$ 6,480	
Lighting Control	1	ls	\$ 700	\$ 700	
<b>Landscape</b>					
Replace Displaced Landscape	500	sf	\$ 5.00	\$ 2,500	
Irrigation - Rework	500	sf	\$ 2.50	\$ 1,250	
Site Specialties - Benches/Furniture	500	sf	\$ 14.00	\$ 7,000	
<b>Subtotal Sitework</b>				<b>\$ 42,080</b>	
<b>Subtotal Construction</b>				<b>\$ 42,080</b>	

**Hawaiian Islands Humpback Whale  
National Marine Sanctuary Kihei, Maui**  
Concept Estimate  
July 1, 2008

Description	Quantity	Unit	Extension	Total	\$SF
General Conditions			18.0%	\$ 7,574	
<b>Subtotal</b>				<b>\$ 49,654</b>	
General Contractor Fee/Bond			8.0%	\$ 3,972	
<b>Subtotal</b>				<b>\$ 53,627</b>	
Contingency			15.0%	\$ 8,044	
<b>Subtotal</b>				<b>\$ 61,671</b>	
Maui, Hawaii Factor			30%	\$ 18,501	
<b>Total</b>				<b>\$ 80,172</b>	
Soft Cost (Design, permitting, PM oversite etc)			30%	\$ 24,052	
<b>Total</b>				<b>\$ 104,224</b>	

**BLUE BUILDING (Main Bldg)**

**1 MAKE NEEDED REPAIRS TO STABILIZE BLUE BLDG  
(Main Bldg)**

**Exterior Wall Repairs**

Clean/Abate Mold Area / Repair	1	allow	\$ 2,500.00	\$	2,500
Recaulk/Reseal at Existing Windows	42	ea	\$ 130.00	\$	5,460
Add Weather Strip/Trim Doors	4	ea	\$ 170.00	\$	680

**Structural Repairs**

**Foundation**

Replace Foundation Pedestals	3	allow	\$ 1,600.00	\$	4,800
Replace Crushed Floor Beams	1	allow	\$ 4,500.00	\$	4,500

**Flooring**

Replace Floor Structure at 3rd Floor - Allow 500sf	500	sf	\$ 6.00	\$	3,000
Replace Floor Structure at 2nd Floor - Allow 500sf	500	sf	\$ 6.00	\$	3,000
Investigate/Repair Floor Joist and Decking 1st Floor	1,666	sf	\$ 3.00	\$	4,998

**Lanai**

Investigate/Repair 2nd Floor Lanai Soft Spots	1,551	sf	\$ 3.00	\$	4,653
Investigate/Repair 1st Floor Lanai Soft Spots	1,551	sf	\$ 3.00	\$	4,653
Replace Trim - Allowance at Lanai	3,075	sf	\$ 3.00	\$	9,225

**Roof**

Replace Flashing	1	allow	\$ 350.00	\$	350
Clean/Repair Attic Venting - Screens/Vents	1	allow	\$ 1,500.00	\$	1,500
New Gutter and Downspouts	300	lf	\$ 13.00	\$	3,900

**Hawaiian Islands Humpback Whale  
National Marine Sanctuary Kihei, Maui**

Concept Estimate  
July 1, 2008

Description	Quantity	Unit	Extension	Total	\$SF
<b>Accessibility</b>					
ADA Lift not required					
<b>Deficiency Items - Non Structural Issues</b>					
<b>Crawl Space</b>					
Repair Existing Interior Spalled Pedestals - Allow	6	ea	\$ 1,200	\$ 7,200	
Jackup/Replace 1st Fl Support Beam SE Corner	1	ls	\$ 5,000	\$ 5,000	
Extend Exist. Drain Line from Under Crawlspace	1	allow	\$ 150	\$ 150	
Replace Rusted Conduit in Crawl Space Area	1	allow	\$ 4,000	\$ 4,000	
Remove Abandoned Utilities under Crawl Area	1	allow	\$ 300	\$ 300	
<b>Attic</b>					
Install Insulation at Attic	1,551	sf	\$ 2.00	\$ 3,102	
Repair Leak at A/C Condensate Line	1	ea	\$ 125.00	\$ 125	
<b>Interior</b>					
Repair Exterior Stairs	2	allow	\$ 1,500.00	\$ 3,000	
Patch/Repair Gyp Ceiling at Interiors	3,217	sf	\$ 2.00	\$ 6,434	
<b>Exterior</b>					
Clean/Prep/Paint Exterior	3,217	sf	\$ 5.00	\$ 16,085	
Replace Trim - Allowance Building	3,217	sf	\$ 1.50	\$ 4,826	
Remove/Reframe Door in South Wall at 2nd Floor	1	ea	\$ 400	\$ 400	
Remove/Reframe Door in North End at 2nd Floor	1	ea	\$ 400	\$ 400	
<b>Interior</b>					
Replace Cracking Vinyl Tile	2,252	sf	\$ 2.00	\$ 4,504	
Install New Floor Substrait	2,252	sf	\$ 4.00	\$ 9,008	
<b>1st Floor</b>					
Repair Water Damage at S Wall of Kitchen	1	allow	\$ 500.00	\$ 500	
Repair Water Damage at S Wall of Main Entry	1	allow	\$ 500.00	\$ 500	
<b>2nd Floor</b>					
Repair Water Damage at Office 2nd Floor	1	allow	\$ 500.00	\$ 500	
Replace Missing Grille at Computer Room	1	ea	\$ 115.00	\$ 115	
<b>Subtotal</b>				<b>\$</b>	<b>119,367</b>
<b>Subtotal Construction</b>				<b>\$</b>	<b>119,367</b>
General Conditions				18.0%	\$ 21,486
<b>Subtotal</b>				<b>\$</b>	<b>140,853</b>
General Contractor Fee/Bond				8.0%	\$ 11,268
<b>Subtotal</b>				<b>\$</b>	<b>152,121</b>
Contingency				15.0%	\$ 22,818

**Hawaiian Islands Humpback Whale  
National Marine Sanctuary Kihei, Maui**  
Concept Estimate  
July 1, 2008

Description	Quantity	Unit	Extension	Total	\$SF
			<b>Subtotal</b>	<b>\$</b>	<b>174,939</b>
			Maui, Hawaii Factor	30%	\$ 52,482
			<b>Total</b>	<b>\$</b>	<b>227,421</b>
			Soft Cost (Design, permitting, PM oversight etc)	30%	\$ 68,226
			<b>Total</b>	<b>\$</b>	<b>295,648</b>
<b>2 CONVERT 1ST FLOOR TO VISITOR CENTER (including displays)</b>					
<b>CONSTRUCT EXPANDED LANAI</b>					
<b>Blue Building (Main Bldg)</b>					
<b>Demolition</b>					
Demo First Floor Interiors	1,666	sf	\$ 1.50	\$	2,499
Demo Ramp	1	allow	\$ 900	\$	900
<b>Structural</b>					
Structural Modifications to Support Renovations	1,666	sf	\$ 12.00	\$	19,992
New ADA Lift - Enclosed	1	ls	\$ 40,000	\$	40,000
<b>Interior Construction</b>					
Add New Entry Doors	1	ls	\$ 4,500	\$	4,500
Renovate Area Into New Visitors Center	1,666	sf	\$ 55.00	\$	91,630
Expand/Improve Existing Lanai with Cover	2,462	sf	\$ 24.00	\$	59,088
<b>Special Construction</b>					
Allowance for Display	1	allow	\$ 800,000	\$	800,000
<b>Mechanical/Electrical/Plumbing</b>					
Replace HVAC System	1,666	sf	\$ 18.00	\$	29,988
Replace Electrical Lighting /Devices	1,666	sf	\$ 16.00	\$	26,656
Replace Electrical Power/Data/Telecom	1,666	sf	\$ 8.00	\$	13,328
New Lighting at Lanai	1,000	sf	\$ 4.00	\$	4,000
Install Security - Cameras/Contacts	1,666	sf	\$ 5.00	\$	8,330
Replace Associated Plumbing	1,666	sf	\$ 6.00	\$	9,996
Rework Existing Fire Protection	1,666	sf	\$ 2.00	\$	3,332
			<b>Subtotal</b>	<b>\$</b>	<b>1,114,239</b>
			<b>Subtotal Construction</b>	<b>\$</b>	<b>1,114,239</b>
			General Conditions	18.0%	\$ 200,563
			<b>Subtotal</b>	<b>\$</b>	<b>1,314,802</b>
			General Contractor Fee/Bond	8.0%	\$ 105,184
			<b>Subtotal</b>	<b>\$</b>	<b>1,419,986</b>
			Contingency	15.0%	\$ 212,998

**Hawaiian Islands Humpback Whale  
National Marine Sanctuary Kihei, Maui**  
Concept Estimate  
July 1, 2008

Description	Quantity	Unit	Extension	Total	\$SF
			<b>Subtotal</b>	<b>\$ 1,632,984</b>	
			Maui, Hawaii Factor	30%	\$ 489,895
			<b>Total</b>	<b>\$ 2,122,879</b>	
			Soft Cost (Design, permitting, PM oversight etc)	30%	\$ 636,864
			<b>Total</b>	<b>\$ 2,759,743</b>	
<b>3 REMODEL 2ND FLOOR INTO EFFICIENT OFFICE SPACE (interior improvements only)</b>					
<b>Blue Building (Main Bldg)</b>					
<b>Demolition</b>					
Demo Second Floor Interiors	1,551	sf	\$ 1.50	\$	2,327
<b>Interior Construction</b>					
Renovate Area Into New Office Space	1,551	sf	\$ 55.00	\$	85,305
Construct New Toilet Rooms	2	ea	\$ 8,000.00	\$	16,000
New Modular Work Stations	10	ea	\$ 4,500.00	\$	45,000
Rework Attic Stair - (widow walk stair )	1	allow	\$ 5,000.00	\$	5,000
<b>Mechanical/Electrical/Plumbing</b>					
Replace HVAC System	1,551	sf	\$ 18.00	\$	27,918
Replace Electrical Lighting /Devices	1,551	sf	\$ 16.00	\$	24,816
Replace Electrical Power/Data/Telecom	1,551	sf	\$ 8.00	\$	12,408
Install Security - Cameras/Contacts	1,551	sf	\$ 5.00	\$	7,755
Replace Associated Plumbing	1,551	sf	\$ 6.00	\$	9,306
Rework Existing Fire Protection	1,551	sf	\$ 2.00	\$	3,102
			<b>Subtotal</b>	<b>\$</b>	<b>238,937</b>
			<b>Subtotal Construction</b>	<b>\$</b>	<b>238,937</b>
			General Conditions	18.0%	\$ 43,009
			<b>Subtotal</b>	<b>\$</b>	<b>281,945</b>
			General Contractor Fee/Bond	8.0%	\$ 22,556
			<b>Subtotal</b>	<b>\$</b>	<b>304,501</b>
			Contingency	15.0%	\$ 45,675
			<b>Subtotal</b>	<b>\$</b>	<b>350,176</b>
			Maui, Hawaii Factor	30%	\$ 105,053
			<b>Total</b>	<b>\$</b>	<b>455,229</b>
			Soft Cost (Design, permitting, PM oversight etc)	30%	\$ 136,569
			<b>Total</b>	<b>\$</b>	<b>591,797</b>

**MASONRY BUILDING**

**Hawaiian Islands Humpback Whale  
National Marine Sanctuary Kihei, Maui**  
Concept Estimate  
July 1, 2008

Description	Quantity	Unit	Extension	Total	\$SF
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**1 CONSTRUCT 12" to 18" TALL WATERPROOF BARRIER AROUND BUILDING**

**Site Demolition**

Site Demo/Prep	130	lf	\$ 4.00	\$ 520	
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**Earthwork**

Excavate for Barrier Wall Footing	58	cy	\$ 15.00	\$ 867	
Final Grade at Barrier Wall	130	lf	\$ 2.00	\$ 260	

**Environmental**

Storm Water Pollution Prevention Plan - Bldg	1	ls	\$ 500	\$ 500	
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**Landscape/Hardscape**

Replace Displaced Landscape	1,040	sf	\$ 1.00	\$ 1,040	
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**Concrete - Dike Wall w/Footing**

Concrete & Labor	16	cy	\$ 120.00	\$ 1,920	
Reinforcing @ 125 lb per cy	1.00	ton	\$ 1,700.00	\$ 1,700	
Forming	1,040	sf	\$ 5.00	\$ 5,200	
Concrete Accessories	130	lf	\$ 3.00	\$ 390	
Waterproofing at Wall	1,040	sf	\$ 2.00	\$ 2,080	
Wall Veneer (allow assume masonry)	1,040	sf	\$ 16.00	\$ 16,640	

**Subtotal Sitework** \$ 31,117

**Subtotal Construction** \$ 31,117

General Conditions 18.0% \$ 5,601

**Subtotal** \$ 36,718

General Contractor Fee/Bond 8.0% \$ 2,937

**Subtotal** \$ 39,655

Contingency 15.0% \$ 5,948

**Subtotal** \$ 45,603

Maui, Hawaii Factor 30% \$ 13,681

**Total** \$ 59,284

Soft Cost (Design, permitting, PM oversight etc) 30% \$ 17,785

**Total** \$ 77,070

**2 CONSTRUCT NEW ENTRY CANOPY AND STOOP**

**Site Demolition**

Site Demo/Prep	300	sf	\$ 0.50	\$ 150	
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**Hawaiian Islands Humpback Whale  
National Marine Sanctuary Kihei, Maui**

Concept Estimate  
July 1, 2008

Description	Quantity	Unit	Extension	Total	\$SF
<b>Earthwork</b>					
Final Grade at Stoop	100	sf	\$ 2.00	\$ 200	
<b>Concrete - Stoop Assume 80sf</b>					
Concrete & Labor	2	cy	\$ 120.00	\$ 240	
Reinforcing @ 125 lb per cy	0.05	ton	\$ 1,700.00	\$ 85	
Forming	35	sf	\$ 5.00	\$ 175	
Concrete Accessories	2	cy	\$ 65.00	\$ 130	
<b>Entry Canopy</b>					
Entry Canopy	100	sf	\$ 40.00	\$ 4,000	
<b>Exterior</b>					
Install Exterior Siding to Match Educ Bldg	1,260	sf	\$ 14.00	\$ 17,640	
Enlarge Existing Windows	7	ea	\$ 1,500.00	\$ 10,500	
Install New Doors	3	ea	\$ 1,800.00	\$ 5,400	
<b>Roofing</b>					
Install New Roofing to Match Educ Bldg	1,100	sf	\$ 12.00	\$ 13,200	
<b>Subtotal</b>				<b>\$</b>	<b>51,720</b>
<b>Subtotal Construction</b>				<b>\$</b>	<b>51,720</b>
General Conditions				18.0%	\$ 9,310
<b>Subtotal</b>					<b>\$ 61,030</b>
General Contractor Fee/Bond				8.0%	\$ 4,882
<b>Subtotal</b>					<b>\$ 65,912</b>
Contingency				15.0%	\$ 9,887
<b>Subtotal</b>					<b>\$ 75,799</b>
Maui, Hawaii Factor				30%	\$ 22,740
<b>Total</b>					<b>\$ 98,538</b>
Soft Cost (Design, permitting, PM oversight etc)				30%	\$ 29,562
<b>Total</b>					<b>\$ 128,100</b>

**3 INSTALL RAISED ACCESS FLOORING INSIDE MASONRY BLDG**

**Interior**

Install Access Flooring w/ Carpet Tile 924 sf \$ 15.00 \$ 13,860

**Subtotal \$ 13,860**

**Subtotal Construction \$ 13,860**

**Hawaiian Islands Humpback Whale  
National Marine Sanctuary Kihei, Maui**  
Concept Estimate  
July 1, 2008

Description	Quantity	Unit	Extension	Total	\$SF
General Conditions			18.0%	\$ 2,495	
<b>Subtotal</b>				<b>\$ 16,355</b>	
General Contractor Fee/Bond			8.0%	\$ 1,308	
<b>Subtotal</b>				<b>\$ 17,663</b>	
Contingency			15.0%	\$ 2,649	
<b>Subtotal</b>				<b>\$ 20,313</b>	
Maui, Hawaii Factor			30%	\$ 6,094	
<b>Total</b>				<b>\$ 26,406</b>	
Soft Cost (Design, permitting, PM oversite etc)			30%	\$ 7,922	
<b>Total</b>				<b>\$ 34,328</b>	

**4 INTERIOR IMPROVEMENTS AT MASONRY BUILDING**

**Demolition**

Demo Interiors	924	sf	\$ 1.50	\$ 1,386
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**Interior Construction**

Renovate Area Into New Administrative Space	924	sf	\$ 40.00	\$ 36,960
Construct New Small Kitchen	1	allow	\$ 7,500	\$ 7,500
Construct New Small Learning Lab	1	allow	\$ 15,000	\$ 15,000
New Modular Work Stations	10	ea	\$ 4,500	\$ 45,000
Allowance for Miscellaneous Furniture	1	allow	\$ 20,000	\$ 20,000

**Mechanical/Electrical/Plumbing**

Replace HVAC System	924	sf	\$ 18.00	\$ 16,632
Replace Electrical Lighting /Devices	924	sf	\$ 16.00	\$ 14,784
Replace Electrical Power/Data/Telecom	924	sf	\$ 8.00	\$ 7,392
Install Security - Cameras/Contacts	924	sf	\$ 5.00	\$ 4,620
Replace Associated Plumbing	924	sf	\$ 8.00	\$ 7,392
Rework Existing Fire Protection	924	sf	\$ 2.00	\$ 1,848

**Subtotal** \$ 178,514

**Subtotal Construction** \$ 178,514

General Conditions 18.0% \$ 32,133  
**Subtotal** \$ 210,647

General Contractor Fee/Bond 8.0% \$ 16,852  
**Subtotal** \$ 227,498

Contingency 15.0% \$ 34,125  
**Subtotal** \$ 261,623

Maui, Hawaii Factor 30% \$ 78,487

**Hawaiian Islands Humpback Whale  
National Marine Sanctuary Kihei, Maui**  
Concept Estimate  
July 1, 2008

Description	Quantity	Unit	Extension	Total	(\$SF)
			<b>Total</b>	<b>\$ 340,110</b>	
			Soft Cost (Design, permitting, PM oversight etc)	30% \$ 102,033	
			<b>Total</b>	<b>\$ 442,143</b>	

# Structural Engineer's Observations of the Main Building

Kihei Blue Building Facility Survey

Ken Bircher

Inspection: 5/1/08

Weather during inspection: Sunny with morning low about 65 degrees Fahrenheit and afternoon high about 84 degrees Fahrenheit.

### EXECUTIVE SUMMARY

The primary purpose of this document is to report on the structural condition of the building and assess the structural capability of the building for anticipated future use. The anticipated future use is public outreach on the first floor, staff offices on the second floor, and storage on the third floor. The report also includes a listing of existing conditions.

The survey was a non-destructive investigation of the building. This means that only visual inspection was employed. There are a number of conditions for which further investigation is recommended. In general, this will typically require destructive testing in which at least the finish surface is damaged. Further investigation may require access holes in structural elements to fully determine existing conditions. There may be sophisticated testing equipment that could be used for some of the further investigation rather than destructive testing, but such equipment was not available for this preliminary survey.

The existing structure appears to be in fairly good condition, but there are specific areas of concern, which include lack of repair to an area previously damaged by insect infestation, attic venting, "soft" spots in the second floor lanai, repetitive cracking in the first floor vinyl tile finish, and apparent failure of several foundation pedestals and a couple first floor framing beams. These will be discussed in more detail later.

There is some concern about remodeling the building for future use. Depending on the anticipated occupancy of the public areas on the first floor, there is serious concern that the structure may not be adequate for "public assembly". Also, there is some apparent reoccurrence of partial failure of the first floor structure that must be addressed. Most of the existing interior wall surfaces are relatively thin pressboard. While this is lighter weight than a more typical GWB (gypsum wall board or "sheet rock") surface, it is less soundproof and much more flammable and there is a concern that the existing structure will not support replacement of the existing pressboard with the heavier GWB. These will be discussed in more detail later.

### EXISTING STRUCTURAL CONDITION

There was evidence of past insect infestation on the third floor in the southeast corner, but this the infestation was evidently eradicated several years ago. However, the floor structure appears to have been damaged to the point that the floor will not support any loading and it has not been repaired.

The attic has some venting on the exterior walls, but it appears the vents have generally been blocked on the inside with straw that was placed there by birds. Even if the vents are cleared and insect screening installed, the venting appears to be inadequate and should be increased to adequately vent the attic areas.

It was reported that some of the second floor lanai "felt soft" when walked upon. These areas were not found. The soft areas may be due to de-lamination of the surfacing material from the underlying decking or there may be some areas where the decking has been compromised by weathering or insect

infestation. The soft areas should be investigated further, which may require removal of the surfacing material. It should be noted that placement of a surfacing material on exterior decking tends to promote degradation of the decking because moisture can easily be trapped between the surfacing material and the decking.

The cracking in the vinyl tile on the first floor may be an indication of excessive, repetitive deflection of the first floor structure. It was anticipated that the cracking, which runs primarily east-west, would reflect the support beams, but the support beams run north-south so the cracks appear to reflect the joists, which run east-west. This would indicate that the floor decking is deflecting too much for the tile. This may be a service problem, which would indicate that a more flexible finish surface should be used, but it may be a strength problem and should be further investigated.

The foundation walls appear to be in good condition, but several foundation pedestals and a couple first floor framing beams are apparently failing. The first floor framing includes decking running diagonally across the joists, which run east-west, the joists supported by beams which run north-south, and the beams supported by perimeter foundation walls (with "thickened" walls at the beams) and interior foundation pedestals. From photos from the last Facility Condition Survey (FCS) in 1996, the exterior concrete spalled off most of the pedestals. This involves about 3" of concrete cover over the vertical reinforcing resulting in about half the diameter of the vertical rebar exposed to the elements, causing the rebar to rust. It was apparent that the concrete was replaced. However, several of the pedestals have substantial cracking in the concrete surfaces and exhibit a hollow sound, which indicates that the concrete is again spalling off. This may indicate that the rebar was not adequately cleaned or the interface between the existing concrete surface and the new concrete not properly prepared or the new concrete was allowed to shrink too much as it dried. The pedestals need to be properly repaired. Two of the first floor wood beams are crushing on the bottom side at the foundation walls. It is apparent from the previous FCS photos that the crushing was in evidence at that time. It is not known whether the crushing has increased in the last 10 years, but the wood above the crushed area seems to be less dense than non-crushed lengths of the beams (a screwdriver penetrates relatively easily into the surface of the beam above the crushed area, but doesn't penetrate into the surface a couple feet away from the wall) so the failure may be continuing. These beam ends should be replaced before the failure affects the remaining structure, e.g. the southeast corner of the building settles noticeably.

#### STRUCTURAL CAPABILITY FOR FUTURE USE.

The cracks in the floor tile on the first floor seem to indicate excessive floor deflections with the current office loading, which is relatively low because there are few interior walls and relatively light furniture loading. This may be just a "service" problem in that the structure is strong enough to support the loading, but the spans allow excessive deflections and the deflection could be circumvented or "solved" with a more flexible floor finish or one more tolerant to repeated bending, such a carpet. However, if it is also a strength problem, then an increase in the floor load would be unacceptable. If the maximum allowable floor loading capacity as required by the future occupancy is higher, there is, therefore, serious concern that the existing first floor structure will be inadequate.

Without structural drawings or an unfinished first floor ceiling, the second floor structure could not be determined. The cantilevered joists for the second floor lanai would indicate some type of central core area with the floor joists than running radially out from the core, at least on the south, west, and north sides to cantilever for the lanai. Therefore, it can't be determined from the visual only inspection if any of the interior first floor walls are not load bearing, which could be removed to facilitate and open public area.

It is unknown why most of the interior surfaces are relatively thin (1/4") pressboard rather than the heavier, more typical GWB. It is also unknown whether the sprinkler system was installed rather than replace the flammable pressboard with much less flammable GWB because of cost, occupancy requirements, or weight. If either of these were because of weight, remodeling of the space would preclude the use of the more typical GWB because of the added weight, which may create less desirable, noisier spaces.

A non-structural concern is the mold in the northwest corner of the conference room. While the visible amount was quite small, it could be the "tip of the iceberg" of mold behind the finish surfaces. As noted above, then intent of this inspection was non-destructive so the extent of the underlying mold was not investigated. While the mold does not appear to be extensive, it has apparently been persistent, which could indicate a substantial growth behind the finish surfaces. If unchecked, this will eventually become a structural concern as well as an aesthetic and/or health concern.

Another non-structural concern is inaccessibility of the second floor. The only access currently is via stairs at the north and south ends. While the intended use does not include public access to the second floor, ADA or UFAS access should be provided for NOAA employees. Installation of a lift would include appropriate and applicable structural concerns.

#### LISTING OF ALL ISSUES

The following listing includes structural and non-structural issues. Most of them are deficiencies, although the last few are informational, such as an indication of the existing structure. They are listed in descending priority with the most serious, as judged by this inspector, listed first. Many of the issues, particularly the structural issues, are reflected in the above discussions.

Crawl area. There are a number of interior foundation pedestals in which the concrete is showing substantial cracking. From photos from several years ago, it appears many of the pedestals experienced the concrete covering over the vertical reinforcing ("exterior concrete") spalling off and the concrete was subsequently replaced. The "new" cracking" may be evidence that the rebar was not adequately cleaned prior to the application of the new concrete so it can be anticipated that the exterior concrete will again all spall off. Repair may require sandblasting the rebar to remove all rust prior to re-application of new concrete.

Crawl area. The perimeter 1st floor support beam at the SE corner and the next beam to the west are both crushing on the bottom against the foundation. From photos from several years ago, it does not appear that the crushing has accelerated, but the wood is in poor condition above the crush area and it should be replaced.

Crawl area. The first floor structure in the crawl area under the restroom appears to include built-up joists that are only about 3" deep. This may be a contributing factor to the apparent excessive deflection of the first floor.

Attic. There is some water staining on several of the roof lath boards in the attic, although the wood still appears to be sound. This appears to be evidence of past leaks, but it could also be due to the lack of adequate attic venting. The only attic venting in evidence is a small vent in the exterior wall above the windows at every third rafter and these appear to be blocked by straw on the inside. It is presumed the

stray was placed by birds. It is recommended that adequate venting be installed, including removal of the straw and insect screening installed on the wall vents.

3rd floor. The floor of the roof access "chase" in the SE corner of the 3rd floor has severe insect (probably termite) damage. This evidently happened some time ago as the occupants are aware of the damage and indicated that the insects were eradicated. However, the floor is structurally unsound and should be replaced. Access to the roof hatch includes "bridging" over the failed floor area which is a safety hazard.

Interior. Most interior wall finishes are painted 1/4" thick pressboard. Most of them are in good condition, but they aren't very soundproof or fire retardant and there are a number of penetrations that are not sealed.

Exterior. The exterior paint is in poor condition and the building should be repainted, after proper and adequate preparation.

Exterior. The siding is warping at the exterior corners in several areas, although the wood still appears to be sound. The warping is probably due to the exposed end grain condition, which is difficult to fully protect with paint. It is suggested that preformed corners be installed prior to the next painting.

Roof. Roof flashing is in generally good condition except for the east end of the south face of the third floor projection, which is in poor condition.

3rd floor. At least one of the fixtures in the 3rd floor storage area did not have a bulb installed. It is not known if that fixture is still part of the circuit. If it is, then the empty fixture is an electrocution hazard.

Crawl area. There is a pipe on the east side of the northwest pedestal there is a small diameter (1"?) that extends down from the first floor area and it is draining into the crawl area. It is not known if the liquid is water or another liquid. The pipe should be re-routed to eliminate drainage into the crawl area.

Crawl area. Near the middle of the north wall of the crawl area, there is a pipe, about 3" diameter, that extends from outside the building into the crawl area at the level of the top of the foundation wall and it is draining into the crawl area. It is not known if the liquid is water or another liquid. The pipe should be re-routed to eliminate drainage into the crawl area.

Crawl area. The crawl area is adequately vented, although there is no insect screening on the vent areas.

Interior. Interior floor finishes include vinyl tile in the corridors, kitchen, and restrooms, and carpet in the office areas. The carpet is generally in good condition. The vinyl tile on the first floor has numerous cracks that run North-South across the length of each tile. It is believed the cracks are due to excessive deflection of the floor structure. In addition, several floor tiles were loose in the kitchen area. Also, many of the tiles in the south end of the office in the SW corner of the room "feel" slightly curled up at the east and west edges. This may be more evidence that the floor is deflecting excessively, which is causing the adhesive to fail and allowing dirt and debris under the tile, causing the curled feel.

Crawl area. Some of the crawl area under the north end of the building has a planking floor. This may be some floor from above that was removed and replaced with the old floor put in the crawl area rather

than removed from the site. Typically, the entire crawl area should be covered with a vapor barrier to prevent moisture coming from the ground getting into the structure. However, the crawl area may flood regularly so a vapor barrier may add more moisture to the structure by preventing the flood water from "escaping" by seeping into the ground than by preventing ground moisture from seeping into the structure.

Exterior. The frame for the exterior door in the south wall of the second floor is in very poor condition. It appears the threshold is some type of fill material rather than a metal threshold.

3rd floor. The lighting in the 3rd floor storage area is made up of fixtures that provide a single incandescent bulb mounted downward and exposed. The ceiling is quite low and the vertically mounted bulb is a hazard.

Interior. Pipe penetrations in interior walls are typically not sealed. This includes the piping for the sprinkler heads.

2nd floor lanai. It was indicated that there were several "soft" spots in the 2nd floor lanai. These were not noticed by this inspector. They may be areas of rotting wood, but they may be areas where the covering has separated from the wood, leaving a gap that feels like a soft spot. Further/closer investigation should be performed.

Exterior. The exterior door at the north end of the second floor is in poor condition. The door bottom is very weathered, the bottom weather stripping allows light to pass, and the door appears to be warped to the point that it is extremely difficult to open. The frame is also in poor condition.

Crawl area. The crawl area includes wiring enclosed in plastic pipe and exposed, sheathed wires. The sheathing is modern plastic sheathing.

Attic. The attic is not insulated, although the ductwork running in the attic is insulated.

1st floor. There is evidence of water damage on the south wall of the kitchen, which may be due to roof or wall leaks, but may also be due to the severely inadequate venting in the room.

1st floor. There was some mold in evidence in the NW corner of the conference room on the first floor. It wasn't a very large patch, but apparently it has been persistent.

Crawl area. There is quite a bit of conduit in the crawl area that is showing substantial amounts of rust. This conduit should be replaced.

1st floor. The main entry door, on the south side of the first floor, has numerous gaps in the weatherstripping.

1st floor. There is evidence of water damage on the south wall above the main entry (first floor).

Attic. Even though the condensate drain line for the AC unit in the north attic extends to an outside wall, it is apparent from the drip pan below the line that it leaks. The leak should be fixed.

Exterior. The existing windows appear to be upgraded dual pane, vinyl frame that are generally in good condition except for the exterior caulking.

Interior. The stairs from the second floor to the third floor are unequal in height.

2nd floor. The south of the two offices in the NE corner of the 2nd floor has evidence of water damage at the ceiling. It is not very extensive and it isn't know if this if from the previous roof surface, e.g. if the leak occurred since the roof was last replaced.

2nd floor. The middle room on the east side of the 2nd floor, which appears to be a computer room, has an opening, which is assumed to be chilled air, is missing a grill or register.

Interior. Most interior ceiling finishes are painted 1/2" GWB. They are generally in good condition, but there are several areas of failing joints and missing fixtures, e.g. cooling duct grill/register.

Crawl area. There is quite a bit of apparently abandoned pipe and wiring in the crawl area that should be removed.

Crawl area. The crawl area is excavated approximately 18" below the surrounding grade and it appears the top of the perimeter wall footing is just below the level of the crawl area. This may be adequate for the current loading, but the perimeter foundation should be further investigated if the load is to be increased.

Exterior. It appears some of the vent panels below the exterior windows have been covered with interior wall finish. The exterior closures are in poor condition and do not have secure closures.

Interior. Wiring seems to typically be surface mounted raceway.

Exterior. The framing for the roof overhang over the second floor lanai appears to be in good condition, but it is quite dirty.

Crawl area. The first floor framing in the crawl area generally appears to be original. The structure includes diagonal planking, which may be tongue and groove, on 2x6 joints at 16" c/c, which span over 4x8 beams along the perimeter walls and at the one-quarter points of the E-W width, which are supported by concrete foundation walls along the perimeter and pier pedestals at the one-quarter points of the N-S span. Most of the pedestals appear to have been repaired. There are numerous areas of water staining, although the wood generally appears to be sound except as specifically noted elsewhere.

3rd floor. There was a wasp in the third floor area, but it appeared to be one that found its way in rather than evidence of an infestation.

Exterior. The handrail for the second floor lanai appears to be in good condition, but there are so many layers of paint that the actual condition of the underlying wood is unknown.

Roof. The roof, which appeared to be composed of cementitious ("Hardi-Plank") shingles, was generally in good condition. There was some discoloration, but it wasn't determined if it was fading or a drainage pattern.

Interior. The interior walls do not appear to be bearing walls, although the walls surrounding the restroom area of the first floor may be bearing walls as they appear to be continuous through the second floor to support the stairwell and roof access "chases". The second floor joists may radiate outward from this central "core".

2nd floor. The north side of the separation wall between the two offices in the NE corner of the 2nd floor is GWB.

Attic. The attic area structure is 1x3 lath at 6"c/c on 2x6 (full size) at 24"c/c with 2x8 (full size) at hips.

Interior. The building is fully sprinklered, including the attic and crawl areas.

Interior. The interior wall finish for the partial height walls around the NW office on the first floor is painted GWB.

# Government Review Comments Worksheet

REVIEW COMMENTS					Project: Master Plan Update, HIHWNMS Kihei	
NOAA FACILITIES					Location: Kihei, Maui, Hawaii	
Line	Reviewer, Organization	Comment			Phase: Planning	Response and By A=Accepted W=Withdrawn I=Incorporate R=Incorporate w/Revisions AD=Additional Info Required NA=No Action Required by Consultant
		#	Date	Page		
1	Tino Escalona	1	6/26/08	Title Page	Title should mention that the document is an Update to the Master Plan	Done
2	Chris Ostrom	1	6/24/08	pg. 1	Pg 1, 7th line from bottom, add "plan" following previous master.....	Done
3	Dan Strandy	1	7/1/07	pg. 1	2nd paragraph, 2nd sentence: Insert "plan" between "master" and to" .	Done
4	Paul Wong	2	6/11/08	pg. 3	Page 3 - Three Interrelated Activities - change to:Education and Outreach Research and Resource Protection Administration	Done
5	Tino Escalona	2	6/26/08	pg. 3	Masonry Building is mentioned for the first time, but the map shows "Education/Visitor's Center". Map or narrative needs to indicate that the Masonry Building is the Education/Visitor's Center.	Done
6	Paul Wong	3	6/11/08	pg. 4	Page 4 - Change Visitor's Center to Visitor Center	Done
7	Chris Ostrom	2	6/24/08	pg. 4	Pg 4, 11th line down needs an "are" inserted after "that".	Done
8	Dan Strandy	2	7/1/07	pg. 4	1st para., 1st sentence: Change "building" to "buildings".	Done
9	Dan Strandy	3	7/1/07	pg. 4	2nd para.: Insert "are" between "that" and "shaded"	Done
10	Tino Escalona	4	6/26/08	pg. 5	The area designated as the "New Carport" on the map will instead be designated as a Garage, Trash Enclosure, and Vehicle Storage. See attached "Page 4" which has a diagram of this area.	Deleted carport text
11	Tino Escalona	5	6/26/08	pg. 5	The "New Elevator" should be changed to "Handicap Lift" and located to match the location shown on page 22.	Done
12	Tino Escalona	6	6/26/08	pg. 6	Para. 2: Should also mention that New building provides storage space.	Done

REVIEW COMMENTS					Project: Master Plan Update, HIHWNMS Kihei	
NOAA FACILITIES					Location: Kihei, Maui, Hawaii	
Line	Reviewer, Organization	Comment			Phase: Planning	Response and By A=Accepted W=Withdrawn I=Incorporate R=Incorporate w/Revisions AD=Additional Info Required NA=No Action Required by Consultant
		#	Date	Page		
13	Chris Ostrom	3	6/24/08	pg. 7	Pg 7, 3rd line down: add comma after small, and delete comma after events.	Done
14	Chris Ostrom	4	6/24/08	pg. 7	Photo with yellow rectangle should be placed where the narrative states (narrative says "above", but photo is below).	Done
15	Chris Ostrom	5	6/24/08	pg. 8	Pg 8, 4th line from top needs a word such as "yet" after magnet.	Done
16	Chris Ostrom	6	6/24/08	pg. 8	12th line down from top, eliminate the "s" in the word "keeps".	Done
17	Paul Wong	4	6/11/08	pg. 9	Page 9 - Change sentence to: The site lies along the shoreline between a county park and an open space managed by the county with a ...	Done
18	Chris Ostrom	7	6/24/08	pg. 10	Pg 10, 4th line from tops, eliminate "s" from "sets", or else say "summarizes the condition that sets the"....	Done
19	Dan Strandy	4	5/1/07	pg. 10	1st para., 2nd sentence: Change "to" to "and".	Done
20	Paul Wong	5	6/11/08	pg. 11	Page 11 - Possibly add: An assessment should be made of shoreline erosion, storm surges, and sea-level rise because of the Blue Building's immediate proximity to the shoreline.	Done
21	Paul Wong	6	6/11/08	pg. 15	Page 15 - Masonry Building. The drawing shows a door and small room on the NE corner of the building, this is not there in the current building. This drawing and the one on page 24 are in different scales.	Done
22	Tino Escalona	8	6/26/08	Page 15	The floor plan shows "New Outdoor Classroom" but the map on Page 3 indicates only "Outdoor Classroom".	Done

REVIEW COMMENTS					Project: Master Plan Update, HIHWNMS Kihei	
NOAA FACILITIES					Location: Kihei, Maui, Hawaii	
Line	Reviewer, Organization	Comment			Phase: Planning	Response and By A=Accepted W=Withdrawn I=Incorporate R=Incorporate w/Revisions AD=Additional Info Required NA=No Action Required by Consultant
		#	Date	Page		
23	Chris Ostrom	8	6/24/08	pg. 18	Pg 18, 12th line down, after "project" use "that" and not "the".	Done
24	Chris Ostrom	9	6/24/08	pg. 18	7th line up from bottom, change "are" to "area".	Done
25	Paul Wong	8	6/11/08	pg. 18	Create a Campus...: The three building should have similar elements in their designs that help tie them visually together. This could include color schemes or design elements such as the rock veneer facing or trellis features that are part of the New Multipurpose building. Another element to consider throughout the site is to include features that create a sense of Hawaiian design. This could include architectural and or landscape features.	Text updated--specific selections
26	Paul Wong	10	6/11/08	pg. 18	Page 18 - Clarify what re-grading around the masonry building means.	Done
27	Tino Escalona	9	6/26/08	pg. 19	Can the plaza shown on page 19 be redesigned somewhat to be more reflective of a plaza that can be used for overflow parking with removable bollards, as stated on page 18?	Done
28	Tino Escalona	10	6/26/08	pg. 19	Can the waterproof dike be shown, to approximate scale on the recommended floor plan shown on page 24?	Dike is actually a barrier that is flush against the building
29	Chris Ostrom	10	6/24/08	pg. 20	Pg 20, 18th line down, "is" should be "it".	Done
30	Chris Ostrom	11	6/24/08	pg. 20	9th line up from bottom, need an "and" after update.	Done

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31	Paul Wong	11	6/11/08	pg. 20	Page 20 - Possible change: Remove or redesign the wooden ramp that serves as the entrance and handicap ramp. If removed completely a handicap lift should be installed.	Recommended that ramp be removed and handicapped lift installed
32	Paul Wong	12	6/11/08	pg. 23	Page 23 - Is it better to build a dike than to fill or elevate the whole floor?	New text added to discuss this point -- elevating floor is more \$
33	Tino Escalona	11	6/26/08	pg. 23	"Staff kitchen" is shown on page 24, but is not previously mentioned except on the existing floor plan of the Blue Building. Need to mention that the kitchen is being relocated to this area, or perhaps, remove "staff kitchen" from page 24.	Done
34	Tino Escalona	12	6/26/08	pg. 27	The timeline can actually start at 2009 (completing new education and multipurpose building, relocate underground electrical vault, make needed repairs to stabilize the blue building).	Projects at the Multi-purpose building have been excluded -- see next comment
35	Paul Wong	13	6/11/08	pg. 27 & 28	Remove the following since they are already scheduled to be done: Construct a new stone wall and entry sign. Relocate the underground electrical vault	Done--entry sign remains in cost estimate for reference
36	Tino Escalona	13	6/26/08	pg. 28	Completing planned improvements to the Multipurpose Building will be done in 2009.	See above
37	Paul Wong	1	6/11/08	General	ALL - change the name of the New Education and Multipurpose Building to just New Multipurpose Building. This will make it easier to read.	Done

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38	Paul Wong	7	6/11/08	pg.15	We had discussed the possibility of the west end of the Masonry Building being a wet marine laboratory. Is it not show here because there is not enough office space? Also a few enclosed office spaces might be nice, if its currently envisioned as an open office space with modular furniture.	Lab included--private offices not included
39	Paul Wong	9	6/11/08	General	Another important point to raise is that the Blue House does not have to remain blue.	Done
40	Paul Wong	15	6/11/08	General	Evaluate the parking lot drainage and tying this in with future County of Maui storm sewer improvements on the west side of South Look to eliminate the electrical pole on South Kihei Road on the south side of the drivewayKihei Road. Including any road shoulder improvements.	Done
41	Paul Wong	14	6/11/08	General	Maybe add the following if you feel they belong though we didn't necessarily discuss: Evaluate the parking lot drainage and tying this in with future County of Maui storm sewer improvements on the west side of South.	inserted different text
42	Paul Wong	16	6/11/08	General	Look to eliminate the electrical pole on South Kihei Road on the south side of the driveway.	Done
43	Nancy Daschbach	1	7/2/08	General	Was it determined that we need a new roof on the Admin. Building? We recently had a repairs completed on on it although it hasn't been "tested" by a heavy rainfall yet.	Included because it may be many years before this bldg is updated

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44	Nancy Daschbach	2	7/2/08	General	Does the regrading around the Ed Center (now the "masonry building) eliminate the deck? And the expansion of the lawn-where will that be	A new deck is included--new lawn refers to more development of space occupied by ramp
45	Nancy Daschbach	3	7/2/08	General	I really can't visualize the dike---will this be like a "collar" around the base of the masonry building? How far out (or in) would it extend?	Dike is actually a barrier flush against the side of the building
46	Tino Escalona	3	6/26/08	General	Review document for various typos, etc.	Done
47	Tino Escalona	7	6/26/08	General	Although "Blue Building" can be clearly identified in the context of this document, the new Multipurpose Building is being painted blue at this time which would make all buildings on campus blue. As this document will be the primary reference document during solicitation (this year), recommend substituting "Blue Building" with "Main Building".	Clarifying text has been inserted-this convention is now used : Blue Building (Main Building)
48	Tino Escalona	14	6/26/08	General	Need a section on methodology that was used for updating the master plan.	Done
49	Tino Escalona	15	6/26/08	General	Need to include results of interviews and meetings as they relate to updates of the master plan. This can be included in the appendix.	Interview notes were not prepared--substituted PowerPoint from 2nd Workshop

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50	Tino Escalona	16	5/18/09		Need name and location of facility on document: NOAA Hawaiian Islands Humpback Whale National Marine Sanctuary 726 S. Kihei Road Kihei, Hawaii 96753 808-879-2818	Address added to front inside page
51	Tino Escalona	17	5/18/09	3	Map shows property to north as county park, should be county open space	All references to county park have been changed to county open space.
52	Tino Escalona	18	5/18/09	3	Map shows "trail" on shore, but the "route" should be crossing the green area	Both diagrams changed to reflect trail crossing through green space.
53	Tino Escalona	19	5/18/09	5	The blue house is no longer a delineating feature. The blue house should be referred to as the main building	All references to the "Blue House" have been changed. It is now referred to in all instances as the Main Building. All instances to the Multi-Purpose Building were changed to its new name: the Sanctuary Learning Center

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54	Tino Escalona	20	5/18/09	7	Leave out second paragraph (in parenthesis) about the electrical vault as this has been removed. Crop photo to remove.	Done
55	Tino Escalona	21	5/18/09	15, 24	This is a repeat comment. The little room in the NE corner of the masonry building does not exist.	Floor plan changed to reflect this.
56	Tino Escalona	22	5/18/09	15	Photo is outdated. See attached photos	Photo changed.
57	Tino Escalona	23	5/18/09	18	Stone wall was already conceptualized and is being constructed already. Remove from document.	Done
58	Tino Escalona	24	5/18/09	18	Replace indigenous with native	Done
59	Tino Escalona	25	5/18/09	20, 21	New text: Redesign the handicap ramp or replace with a handicap lift. (The lift could be problematic with exposure to the salt air and sand.)	Done
60	Tino Escalona	26	5/18/09	20	Second floor: Maintain at least 2 enclosed offices.	Floor plan changed to reflect this.
61	Tino Escalona	27	5/18/09	21	Photo: Is there a trellis around the main building? This is not described anywhere and should be.	Done
62	Tino Escalona	28	5/18/09	23	4th Bullet : The small learning lab is actually a marine lab and should be more adequately described. This would be in the west end of the masonry building adjacent to the outdoor classroom.	Done

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63	Tino Escalona	29	5/18/09	26	There is a discrepancy with the numbers on this page and the Cost Estimate Details as they don't match as you would think for 2010	Cost escalation described to explain this.
64	Tino Escalona	30	5/18/09	26	What is the formula for increases from one year to the next? This should be shown so we can extroplate beyond 2015.	Cost escalation described.
65	Tino Escalona	31	5/18/09	8	Cost Estimate Details Section page 8 should include exhibits for 1st floor visitor center ~ \$400,000. This would include signage for lanai and displays/exhibits inside.	This was left as is as per Tino Escalona 7/18/09



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