

COUNTY OF HAWAII

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DEPARTMENT OF WATER SUPPLY • COUNTY OF HAWAI'I

345 KEKŪANAŌ'A STREET, SUITE 20 • HILO, HAWAI'I 96720
TELEPHONE (808) 961-8050 • FAX (808) 961-8657

February 9, 2007

Oceanit
ATTENTION: MR. DAYAN VITHANAGE
Oceanic Center
828 Fort Street Mall, 6th Floor
Honolulu, HI 96813

**DRAFT ENVIRONMENTAL IMPACT STATEMENT
KONA KAI OLA
TAX MAP KEY 7-4-008:003 (PORTION), 071, 072, AND 7-4-008:099**

Thank you for allowing us the opportunity to comment on the subject Draft Environmental Impact Statement. We have the following comments and conditions.

There is an existing 16-inch waterline within Queen Kaahumanu Highway and an existing 8-inch waterline within Kalakh Parkway on the *makai* side of Queen Kaahumanu Highway.

Currently, the Department cannot support the estimated 2,648,625 gallons per day, maximum day demand for the proposed project. The developer will be required to construct additional source, storage, transmission, and distribution facilities in accordance with the Department's Water System Standards and Rules and Regulations. Pursuant to Rule 5 of the Department's Rules and Regulations, the developer may be required to enter into a Water Agreement with the Water Board of the Department of Water Supply to ensure that the necessary water system improvements are made to support the proposed development.

In addition, should the developer utilize recycled or gray water systems for irrigation or other use, such systems shall be designed to avoid any cross-connection or backflow into the Department's potable water system.

If you have any questions, please contact Mr. Finn McCail of our Water Resources and Planning Branch at (808) 961-8070, extension 255.

Sincerely yours,

Milton D. Pavao, P.E.
Manager

FM:sco

copy - State of Hawai'i, Office of Environmental Quality Control
State of Hawai'i, Department of Hawaiian Homelands
Jacoby Development, Inc.

... *Water brings progress...*



DEPARTMENT OF WATER SUPPLY
COUNTY OF HAWAII

345 KEKĪANAŌ'A STREET, SUITE 20 • HILO, HAWAII 96720



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OCEANIT
ATTENTION MR DAYAN VITHANAGE
OCEANIC CENTER
828 FORT STREET MALL 6TH FLOOR
HONOLULU HI 96813



96813+4321-99 C025





July 23, 2007

Milton D. Pavao, P.E., Manager
Department of Water Supply
County of Hawai'i
345 Kekūanāo'a St., Suite 20
Hilo, Hawai'i 96720

Dear Mr. Pavao:

Subject: Kona Kai Ola Draft Environmental Impact Statement
Response to Your Comments Dated February 9, 2007

Thank you for your comments on the Kona Kai Ola Draft Environmental Impact Statement.

As discussed in EIS Section 4.10.8, Potable Water Facilities, current DWS sources are not adequate to support the full demand generated by Kona Kai Ola. Initial coordination with DLNR has identified two possible sources that may be used for the project and these include Keōpū Well #2 (State Well No. 3957-02) and Keōpū Well #4 (State Well No. 3857-02). DLNR anticipates a sustainable yield of each well to be approximately 1.5 million gallons per day.

The proposed water system will also include transmission and storage facilities. Proposed water system improvements and operating criteria are based on Chapter 5 of Hawai'i County Department of Water Supply Potable Water System Design Standards. Developed wells, storage tanks, transmission and distribution mains will be dedicated to the DWS. Further, we understand that the developer may be required to enter into a Water Agreement with the Water Board of the DWS to ensure that the necessary water system improvements to support Kona Kai Ola will be developed.

We note that the project will make every effort to reduce the use of potable water for non-potable purposes. Kona Kai Ola will aggressively reduce the use of potable water used in fixtures and appliances by 70 percent relative to a basecase building. The development will cut water use through the application of innovative water recycling techniques, the incorporation of water efficient fixtures and appliances, and the recycling of greywater for toilet flushing. The initial modeling of a timeshare unit demonstrated that the use of water efficient fixtures and appliances and the recycling of greywater for toilet flushing already contribute to a 50 percent reduction in potable water demands.

Further, the project will reduce or eliminate the need for potable irrigation. The reduction or elimination of potable irrigation will be accomplished using a multi-prong strategy. First, the project will focus on incorporating native Hawaiian plants, including native dryland species, in its landscaping plan. The project will retain a significant amount of the black lava features that make the Kona Kai Ola site so distinctive. Employing native vegetation and maintaining lava features will reduce water demand. To fulfill the remaining water requirements, the development may use brackish water to irrigate vegetation that is not affected by salt levels. Furthermore, the use of rainwater cisterns to collect rainwater and distribute it, while also recycling greywater from showers, laundry, dishwashers, and hand sinks can lead to further reductions in water needed for irrigation. Irrigation water may also be provided by condensation on cold water pipes buried at the root zone of landscape plants, as has been shown to be successful at the Natural Energy Laboratory of Hawaii.

Your comment letter and this response are included in the Final Environmental Impact Statement. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like to receive a printed or electronic copy of the Final Environmental Impact Statement, or portions thereof.

Sincerely,



Dayan Vithanage, P.E., PhD.
Director of Engineering

cc: Office of Environmental Quality Control
State Department of Hawaiian Home Lands
Jacoby Development, Inc.

Harry Kim
Mayor



Darryl J. Oliveira
Fire Chief

Glen P. I. Honda
Deputy Fire Chief

County of Hawai'i

FIRE DEPARTMENT

25 Aupuni Street • Suite 103 • Hilo, Hawai'i 96720

(808) 961-8297 • Fax (808) 961-8296

December 28, 2006

Attention: Dayan Vithanage
Oceanit Center
828 Fort Street Mall, 6th Floor
Honolulu, Hawaii 96813

TITLE OF PROJECT: KONA KAI OLA
LOCATION/JUDICIAL DISTRICT: HAWAII ISLAND, NORTH KONA
TMKs: 7-4-008:0701-072, 7-4-008:003 (portion), 7-4-008:099 (proposed parkway through project site)
AGENCY ACTION: Accepting Authority – Department of Hawaiian Home Lands

In regards to the above-mentioned Change of Zone application, the following shall be in accordance:

Fire apparatus access roads shall be in accordance with UFC Section 10.207:

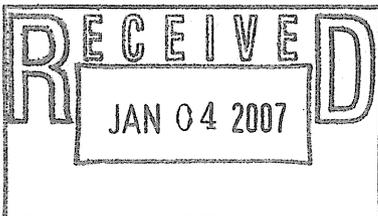
"Fire Apparatus Access Roads

"Sec. 10.207. (a) **General.** Fire apparatus access roads shall be provided and maintained in accordance with the provisions of this section.

"(b) **Where Required.** Fire apparatus access roads shall be required for every building hereafter constructed when any portion of an exterior wall of the first story is located more than 150 feet from fire department vehicle access as measured by an unobstructed route around the exterior of the building.

"**EXCEPTIONS:** 1. When buildings are completely protected with an approved automatic fire sprinkler system, the provisions of this section may be modified.

"2. When access roadways cannot be installed due to topography, waterways, nonnegotiable grades or other similar conditions, the chief may require additional fire protection as specified in Section 10.301 (b).



"3. When there are not more than two Group R, Division 3 or Group M Occupancies, the requirements of this section may be modified, provided, in the opinion of the chief, fire-fighting or rescue operations would not be impaired.

"More than one fire apparatus road may be required when it is determined by the chief that access by a single road may be impaired by vehicle congestion, condition of terrain, climatic conditions or other factors that could limit access.

"For high-piled combustible storage, see Section 81.109.

"(c) **Width.** The unobstructed width of a fire apparatus access road shall meet the requirements of the appropriate county jurisdiction.

"(d) **Vertical Clearance.** Fire apparatus access roads shall have an unobstructed vertical clearance of not less than 13 feet 6 inches.

"**EXCEPTION:** Upon approval vertical clearance may be reduced, provided such reduction does not impair access by fire apparatus and approved signs are installed and maintained indicating the established vertical clearance.

"(e) **Permissible Modifications.** Vertical clearances or widths required by this section may be increased when, in the opinion of the chief, vertical clearances or widths are not adequate to provide fire apparatus access.

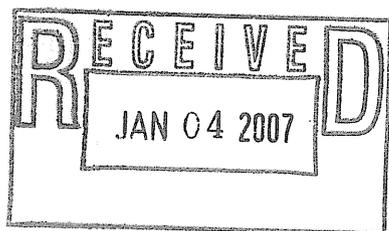
"(f) **Surface.** Fire apparatus access roads shall be designed and maintained to support the imposed loads of fire apparatus and shall be provided with a surface so as to provide all-weather driving capabilities." (20 tons)

"(g) **Turning Radius.** The turning radius of a fire apparatus access road shall be as approved by the chief." (45 feet)

"(h) **Turnarounds.** All dead-end fire apparatus access roads in excess of 150 feet in length shall be provided with approved provisions for the turning around of fire apparatus.

"(i) **Bridges.** When a bridge is required to be used as access under this section, it shall be constructed and maintained in accordance with the applicable sections of the Building Code and using designed live loading sufficient to carry the imposed loads of fire apparatus.

"(j) **Grade.** The gradient for a fire apparatus access road shall not exceed the maximum approved by the chief." (15%)



"(k) **Obstruction.** The required width of any fire apparatus access road shall not be obstructed in any manner, including parking of vehicles. Minimum required widths and clearances established under this section shall be maintained at all times.

"(l) **Signs.** When required by the fire chief, approved signs or other approved notices shall be provided and maintained for fire apparatus access roads to identify such roads and prohibit the obstruction thereof or both."

Water supply shall be in accordance with UFC Section 10.301(c):

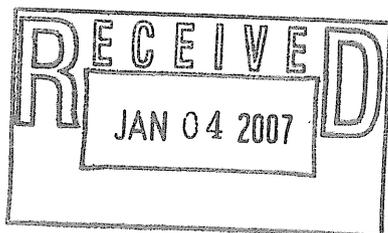
"(c) **Water Supply.** An approved water supply capable of supplying required fire flow for fire protection shall be provided to all premises upon which buildings or portions of buildings are hereafter constructed, in accordance with the respective county water requirements. There shall be provided, when required by the chief, on-site fire hydrants and mains capable of supplying the required fire flow.

"Water supply may consist of reservoirs, pressure tanks, elevated tanks, water mains or other fixed systems capable of providing the required fire flow.

"The location, number and type of fire hydrants connected to a water supply capable of delivering the required fire flow shall be protected as set forth by the respective county water requirements. All hydrants shall be accessible to the fire department apparatus by roadways meeting the requirements of Section 10.207.


DARRYL OLIVEIRA
Fire Chief

PBW:lpc



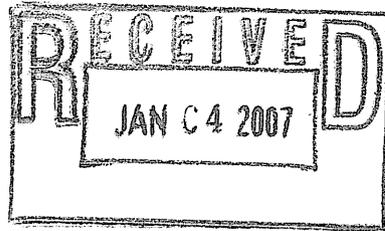
HAWAII COUNTY FIRE DEPARTMENT

25 Aupuni Street
Hilo, Hawaii 96720



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Attention: Dayan Vithanage
Oceanit Center
828 Fort Street Mall, 6th Floor
Honolulu, HI 96813



96813+4321-33 0023



January 23, 2007

Chief Darryl Oliveira
County of Hawaii Fire Department
25 Aupuni Street, Suite 103
Hilo, Hawaii 96720

Dear Chief Oliveira:

Subject: **Kona Kai Ola Draft Environmental Impact Statement
Response to Your Comments Dated December 28, 2006**

Thank you for your comments on the Kona Kai Ola Draft Environmental Impact Statement. We appreciate your comments and references to pertinent Hawaii County standards.

The Kona Kai Ola project is being designed to comply with all Hawaii County standards, including those related to fire apparatus access roads and water supply, which you note in your comment letter. The Final Environmental Impact Statement will include references to compliance with these requirements in the discussion of Fire Protection Services in Section 4.

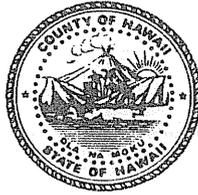
Your comment letter and this response are included in the Final Environmental Impact Statement. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like to receive a printed or electronic copy of the Final Environmental Impact Statement, or portions thereof.

Sincerely,

Dayan Vithanage, P.E., PhD.
Director of Engineering

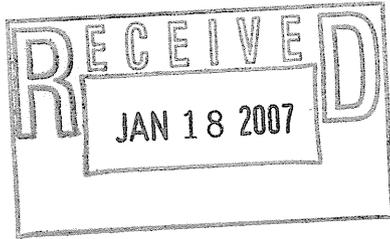
cc: Office of Environmental Quality Control
State Department of Hawaiian Homelands
Jacoby Development, Inc,

Harry Kim
Mayor



Christopher J. Yuen
Director

Brad Kurokawa, ASLA
LEED® AP
Deputy Director



County of Hawaii
PLANNING DEPARTMENT

101 Pauahi Street, Suite 3 • Hilo, Hawaii 96720-3043
(808) 961-8288 • FAX (808) 961-8742

January 16, 2007

Mr. Dayan Vithanage
OCEANIT
Oceanit Center
828 Fort Street Mall, 6th Floor
Honolulu, HI 96813

Dear Mr. Vithanage:

SUBJECT: KONA KAI OLA – HAWAII ISLAND – NORTH KONA
TMK: 7-4-008:071-072
7-4-008:003 (portion)
7-4-008:099 (proposed parkway through project site)

This letter provides the comments of the County of Hawai'i Planning Department on the Draft Environmental Impact Statement prepared by Oceanit for "Kona Kai Ola", T.M.K. Nos. 7-4-008:071-72, portion of 7-4-008:003, and 7-4-008:099.

The DEIS has three major defects: (1) it contains no consideration of alternatives, (2) it contains no consideration of secondary effects, and (3) it fails to disclose and discuss the inconsistency of the project with the Hawaii County General Plan.

1. No consideration of alternatives.

The DEIS describes a project consisting of 1803 timeshare units, 700 hotel units, a large commercial area, an expanded marina consisting of 800 new boat slips with a minimum basin size of 45 acres, and some recreational, open space and support uses, on a total of 530 acres.

The DEIS candidly states, at p. 19, that no alternatives were considered to this specific project, other than the alternative of taking no action at all. The developer, Jacoby Development International ("JDI") attempts to justify the failure to consider alternatives by explaining that their agreements with the State require them to develop an 800 slip

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marina and various other infrastructure improvements at their own expense, and that therefore “the income generating features of the development must be sufficient to provide an acceptable level of economic return for JDI.” (DEIS at 19). In other words, because there was a prior decision to create an 800 slip marina, to support this requires a private project of the scale proposed by JDI. The DEIS also does not analyze other alternatives, such as a wider harbor entrance, or residential use of the property, and justifies this lack of analysis by saying that the State has made prior decisions that eliminated these options.

An EIS is inadequate if it tries to limit the scope of alternatives by claiming that earlier decisions have foreclosed those options, unless those earlier decisions themselves were made after an adequate EIS. Ilio‘ulaokalani Coalition v. Rumsfeld, 464 F.3d 1083 (9th Cir. 2006).

If it is true that the State has already made a final decision to have an expanded marina with a minimum of 800 new slips, that decision itself should have been made after an EIS that reviewed and considered other alternatives. When an agency proposes an action that will have a significant environmental effect—as would the construction of an 800 slip marina expansion at Honokohau—it must prepare an EIS “at the earliest possible time.” Sierra Club v. Office of Planning, 109 Haw. 411, 126 P.3d 1098 (2006).

The EIS is supposed to give information to the decisionmaker to evaluate whether to go ahead with the project. It is not supposed to merely ratify or justify decisions already made.

As the court said in Ilio‘ulaokalani Coalition v. Rumsfeld, “an EIS must describe and analyze alternatives to the proposed action. Indeed, the alternatives analysis section is the heart of the environmental impact statement. The agency must look at every reasonable alternative within the range dictated by the nature and scope of the proposal. The existence of reasonable but unexamined alternatives renders an EIS inadequate.”

This EIS does not give the decisionmakers who need to make further decisions on this project, or the general public, a fair understanding of the merits of this project as compared to other alternatives. There are rational alternatives to the proposed project. A smaller marina is obviously an alternative that might not need such a large income-generating component, even if privately funded. Another alternative is a marina partially funded by a state subsidy through an appropriation, rather than by the subsidy of state

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land for a developer. There may be problems with these alternatives, but the EIS laws require that they be considered and discussed.

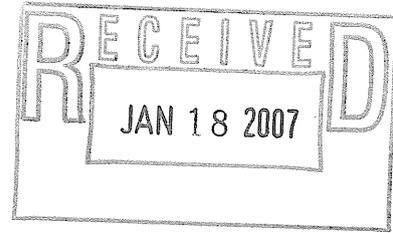
JDI's basic economic claim is that a large income-generating resort component is financially necessary to induce a private investor to build a marina. This means that they anticipate that the boat owners who will use the marina will not pay enough to cover the costs of constructing and maintaining their boat slips. There is nothing in the DEIS that demonstrates that this is true. The DEIS does not contain any analysis which justifies that a 2500 unit hotel and timeshare project as proposed by JDI is necessary to cover the anticipated shortfall in revenues from marina fees. It is not clear from the DEIS whether the DLNR will obtain any net revenue from the JDI project, or whether the commitment of more than 150 acres of potentially revenue-producing state lands is purely to subsidize the creation of the marina.

The DEIS's failure to consider alternatives violates H.A.R. sec. 11-200-17(F), which requires that:

The draft EIS shall describe in a separate and distinct section alternatives which could attain the objectives of the action, regardless of cost, in sufficient detail to explain why they were rejected. The section shall include a rigorous exploration and objective evaluation of the environmental impacts of all such alternative actions. Particular attention shall be given to alternatives that might enhance environmental quality or avoid, reduce, or minimize some or all of the adverse environmental effects, costs, and risks. Examples of alternatives include:

1. The alternative of no action;
2. Alternatives requiring actions of a significantly different nature which would provide similar benefits with different environmental impacts;
3. Alternatives related to different designs or details of the proposed actions which would present different environmental impacts;
4. The alternative of postponing action pending further study; and,
5. Alternative locations for the proposed project.

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This is not a technical issue. It goes to the very heart of this project and the process by which the decisions have been made with respect to marina development at Honokohau Harbor. One cannot evaluate the impacts of a project, and whether adverse impacts can be mitigated, without considering the full range of alternatives. The DLNR and DHHL must make a final decision about the scale and type of development to occur around the harbor after considering all the impacts and alternatives in an EIS, not before the EIS is done.

2. No consideration of secondary impacts.

The DEIS has almost no consideration of “secondary impacts”, such as the impact of the workforce that will be necessary for the project. According to its economic analysis, it will need 3841 on-site workers, and generate 1267 off-site jobs. The region is already short of workers in the visitor industry, and these employees will have to come from somewhere. None of them can live within the project according to its present description. For them to live nearby, there must be major development of housing at prices much less than currently available in Kona. If housing is not developed nearby, transportation of workers to the project will put new strain on traffic. The workers will need schools for their children, parks for their recreation, doctors and hospitals when they are sick.

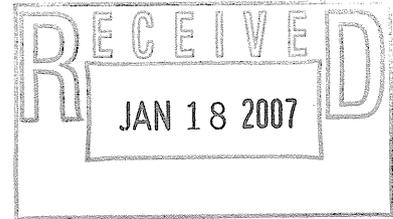
The EIS rules point out that “these secondary effects may be equally important as, or more important than, primary effects, and shall be thoroughly discussed to fully describe the probable impact of the proposed action on the environment. The population and growth impacts of an action shall be estimated if expected to be significant, and an evaluation made of the effects of any possible change in population patterns or growth upon the resource base, including but not limited to land use, water, and public services, of the area in question.” H.A.R. sec. 11-200-17(I).

There is nothing in the DEIS considering or quantifying these secondary effects. In fact, the DEIS claims (in Appendix “B” at p. 18) that “it is difficult to assert that of themselves the subject development and users will create the need for meaningful expansion of existing public services.”

3. Disclosure of land use requirements.

The project does not accurately describe the land use approvals it will need, at least with respect to the DLNR portion. The project, as proposed, cannot validly obtain the County zoning and SMA major permit it will need to proceed. It will need a General

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Plan amendment to designate the property as “Resort” or “Resort Node” on the “Land Use Pattern Allocation Guide” (LUPAG) map, and an amendment to the list of resort areas on Table 14-5 of the General Plan. This is true even after the enactment of an interim General Plan amendment to the area by Bill 309, Draft 4, at the end of 2006. LUPAG map amendment E-4, in Bill 309, expanded the “alternate urban expansion” designation in the area to the DLNR property, but did not authorize a resort.

Resort areas are designated in the LUPAG map specifically as “Resort” or “Resort Node.” The geographical areas where they are allowed are also listed as “resort” in the table of urban centers, resort areas, and industrial areas in the text of the General Plan. This is Table 14-5 in the 2005 General Plan; p. 81 in the 1989 General Plan; and p. 78-79 in the 1971 General Plan.

The General Plan identifies four basic types of resort areas: “major”, “intermediate”, “minor”, and “retreat.” Sec. 14.7.4. A “major” resort has a maximum of 3000 visitor units, an “intermediate” resort has a maximum of 1500 units, a “minor” resort has a maximum of 500 units, and a “retreat” resort has a maximum of 50 units (100 were allowed before the 2005 General Plan.) Because of their relatively small scale, the retreat resorts are the only resorts that are not always specifically mapped in the LUPAG map.

There is no listing of Honokohau or Kealakehe as a resort area of any kind in the 2005 General Plan, and no listing was proposed with Amendment E-4. In the 1989 General Plan, there was an “Intermediate” resort listed at Kealakehe and a “minor” resort listed at Honokohau on p. 81. These listings were removed along with the corresponding LUPAG map resort designations in the 2005 General Plan.

The 2005 General Plan explains the purpose of the various land use designations on the LUPAG map on p. 14-7. “Resort Node” and “resort area” are two described categories where hotels are specifically mentioned as a use, and it is very clear that a major proposal such as the JDI development fits within one of those LUPAG resort categories. The General Plan, by contrast, describes an “Urban expansion area” as allowing “for a mix of high density, medium density, low density, industrial, industrial-commercial and/or open designations in areas where new settlements may be desirable, but where the specific settlement pattern and mix of uses have not been determined.” The description in the 1989 General Plan was similar, but also had this sentence, which has been removed: “Within areas designated for development as resorts, portions of the resort area may be included in the urban expansion area.” The removal of this sentence in the 2005 General Plan makes it clearer that a “resort” and an “urban expansion area” are different, but even

Mr. Dayan Vithanage
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under the 1989 text, the urban expansion area would have to be within an area designated in the text of the General Plan as a resort to allow resort development.

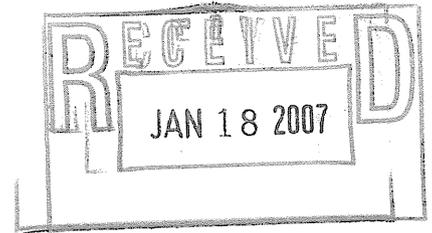
The General Plan describes a “major resort” as containing up to 3000 visitor units. The proposed JDI development, with a total of about 2500 hotel and timeshare units clearly constitutes a “major resort” in the General Plan. If the project were scaled down to a maximum of 1500 visitor units, it would still need a General Plan amendment for an “intermediate resort” designation on Table 14-5, and a “resort area” designation on the LUPAG map.

This is consistent with the actual practices followed in Hawaii County during the 1980’s and 1990’s. When a development came forward seeking a resort where it was not shown on the LUPAG map, it applied for and received a LUPAG map amendment to “resort”, not “urban expansion,” and was put on the list of resort areas as an intermediate or major resort. Some examples are Kuki’o, Kohanaiki, Awake’e, O’oma, and the “Hawaiian Riviera”. On the other hand, the Manini’owali project, which was prohibited from having a hotel by the conditions of a land exchange, applied for and received an “Urban Expansion” designation.

County zoning must be consistent with the General Plan, including the LUPAG map. See General Plan at sec. 14.1.1. Current laws governing commercial leases on state land, such as H.R.S. sec. 171-41(a), sec. 171-42, and sec. 171-60, require that these leases be consistent with county zoning.

Similarly, no SMA permit can validly be approved when it is not consistent with a General Plan map. GATRI v. Blane, 88 Haw. 108, 962 P.2d 367 (1998).

With respect to the DHHL portion of the property, the County is operating under a Memorandum of Agreement with DHHL, made in 2002, that the County believes follows the current law on the County’s land use authority (or lack thereof) on DHHL property. In essence, the MOA permits DHHL to designate the zoning that it wants for a parcel, in accordance with DHHL’s adopted land use plans, so the County does not have zoning authority over DHHL. The MOA does not specifically refer to the SMA law, although the County is aware of a state attorney general opinion that DHHL does not have to obtain SMA permits for the use of DHHL property.



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According to the rules, an EIS must include:

Discussion of how the proposed action may conform or conflict with objectives and specific terms of approved or proposed land use plans, policies, and controls, if any, for the area affected shall be included. Where a conflict or inconsistency exists, the statement shall describe the extent to which the agency or applicant has reconciled its proposed action with the plan, policy, or control, and the reasons why the agency or applicant has decided to proceed, notwithstanding the absence of full reconciliation. H.A.R. sec. 11-200-17(H).

The DEIS must at least refer to and discuss the issues with respect to non-conformance with the County General Plan.

4. Miscellaneous comments.

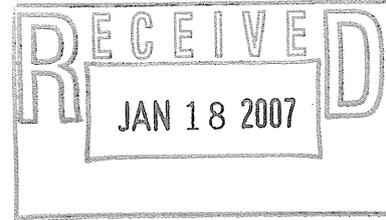
The DEIS has no clear description how the public costs and benefits were calculated. In particular, it is not clear whether the costs include housing, schools, parks, and other services for the induced employment, as mentioned in the comments on secondary impacts. Given the statement quoted above in Appendix "B", it seems likely that these costs were not counted.

Figs. D, E, and F, which are project area maps, contain the statement that these are "not to scale". Given that these are the main maps showing the proposed project master plan, it would be customary to have them to scale.

The list of County permits on p. 148 should include "Plan Approval."

Please have your water quality consultant speak with Dr. Jim Beets at the University of Hawaii-Hilo. He mentioned an area somewhere north of Honokohau Harbor that he believes shows signs of nutrient over-enrichment (oral communication.)

Mr. Dayan Vithanage
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Oceanit Center
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Questions about this letter should be referred to Chris Yuen, Planning Director.

Sincerely,

A handwritten signature in cursive script that reads "Chris Yuen".

CHRISTOPHER J. YUEN
Planning Director

CJY:pak

Wpwin60/Chris2/Oceanit – Honokohau DEIS comments

cc: Mayor Harry Kim
Department of Hawaiian Homelands
Jacoby Development, Inc.
Long Range Division
Planning Division



July 23, 2007

Christopher J. Yuen, Director
County of Hawai'i Planning Department
101 Pauahi St., Ste. 3
Hilo, Hawai'i 96720-3043

Dear Mr. Yuen:

Subject: Kona Kai Ola Draft Environmental Impact Statement
Response to Your Comments Dated January 16, 2007

Thank you for your comments of January 16, 2007 on the Kona Kai Ola Draft Environmental Impact Statement. We address your comments in the order in which they were provided.

1. No consideration of alternatives

As explained in the DEIS, the agreement between JDI and the State of Hawai'i established a required scope and scale of the project for which the impact analysis was provided. Several comments have addressed the fact that alternatives other than the No Project Alternative were not addressed in the DEIS Section 2, Alternatives Analysis.

Kona Kai Ola is of the position that alternative actions other than a No Project alternative are not currently feasible without an amendment to the agreement with the State. Agency and public comments in response to the DEIS, as well as additional information generated as a result of inquiry into issues raised by the comments, have been helpful in identifying alternative actions that will serve the State's goal of providing additional marina slips for the Kona area. These alternative actions also serve to reduce or mitigate anticipated effects of the proposed development.

Thus, agencies such as the Land Division of the Department of Land and Natural Resources, the U.S. Department of the Interior Fish and Wildlife Service, the Planning Department of the County of Hawai'i, and the Office of Environmental Quality Control (OEQC), as well as community organizations have commented that a reduced scale marina and related facilities should be considered. The OEQC has also asked that the alternative of a reduced scale project be evaluated under the assumption that DHHL may determine that a downsized project would be preferred.

In response to these comments on the DEIS and in consideration of measures to mitigate anticipated impacts, the EIS Section 2, Alternatives Analysis, has been revised to describe the following alternatives, which are discussed in more detail in the EIS:

- Alternative 1 is a project involving a 400-slip marina, 400 hotel units, 1,100 time-share units, and commercial and support facilities. This alternative would enhance water quality and avoid the need to widen the existing harbor entrance channel, as well as reduce traffic and socioeconomic impacts.
- Alternative 2 is an alternative that had been previously discussed, but not included in the proposed project that includes an 800-slip harbor and a golf course.
- Alternative 3 is the no-action alternative.

A comparison between impacts related to the proposed project concept and impacts related to Alternative 1 indicates that a reduction in the acreage and number of slips in the marina, as well as the reduction in hotel and time-share units, would generate less environmental, traffic, social and economic impacts. Although positive economic impacts would be reduced, Alternative 1 can be considered as a preferable alternative because of reduced environmental impacts. However, while it can be concluded that the 25-acre marina in Alternative 1 would be the preferred size, the DLNR agreement establishes the size of the marina at 45 acres and 800 slips. An amendment to the DLNR agreement is required in order to allow Alternative 1 to proceed. Hence, selection of Alternative 1 is an unresolved issue at this time. The additional EIS text that includes the added EIS Section 2, Alternative Analysis, is contained in Attachment 1 of this letter.

2. No consideration of secondary impacts

We respectfully disagree that the DEIS and the FEIS did not consider “secondary impacts”. For example, impacts on public services, public facilities, the socio-economic environment, regional traffic, etc. are discussed in detail.

As to your specific comments, a study of workforce housing requirements was prepared to evaluate secondary impacts. Findings are summarized in EIS Section 4.6.5, Workforce Housing Impacts, which is in Attachment 2 of this letter, and Appendix C-1 contains the new study. It is estimated that Kona Kai Ola will generate a workforce housing need of 625 units, based on the ratio set forth in Hawai'i County Ordinance Chapter 11, Section 4, Affordable Housing Requirements. Another method of calculating the need for affordable worker housing units is based on approximately 80 percent of the total in-migrant worker needing housing that meet affordable housing pricing guidelines. This results in a high end range of 859 units.

As agreements between the State and JDI prohibit residential development at Kona Kai Ola, workforce housing would need to be located off-site. The most suitable location for workforce housing units is the Villages at La'i'Opua community, a DHHL project, or within the Hawai'i Housing Finance and Development Corporation affordable housing development planned for Keahuolu. These are two State-owned undertakings directly across the highway in the same or adjacent ahupua'a. Locating workforce affordable housing units in these communities would substantially lessen the traffic impacts associated with a community subject workforce. Alternatively, the State lands adjacent to Waikoloa Village would be appropriate for workforce housing.

JDI will comply with all affordable housing requirements of applicable Hawai'i County ordinances.

3. Disclosure of land use requirements

We acknowledge your comments and respect your perspective as the County of Hawai'i Planning Director. After a thorough consideration of your comments, we find that we disagree with your general conclusion that the DEIS does not accurately describe the land use approvals that will be required for the DLNR portion of the project.

A basic premise in your comments is that the project cannot "validly" obtain County Zoning and a Special Management Area Use permit because the County's General Plan must first be amended to create a resort designation for the project. Your overview of the General Plan provisions on resort designations is informative and appreciated. It is clear that you consider a plan that includes a hotel and time share units to be a "resort" plan, regardless of other project components. We do not share that point of view, based upon our understanding of the functionality of the project components and awareness of applicable law.

Although commonly used interchangeably, "resort" and "hotel" are distinct land use concepts. Transient accommodations, including time share units, are inherent in both terms. However, a resort is a concept in which visitors are attracted to spend most, if not all, of their stay within the resort area through the design of amenities that fulfill the needs of a particular visitor market segment. This self-containment is achieved to varying degrees in resort development, depending on the natural, historic/cultural, and recreational resources within a resort site and the intended scale of the resort. A "resort" is also defined by the Zoning Code to mean "an area with facilities to accommodate the needs and desires primarily of visitors, tourists and transient guests." The hotel and time share units are but one component of the project, which is intended to satisfy the boating, park, recreational, commercial and community needs of the West Hawai'i community.

State and County laws recognize this distinction between a "resort" and a "hotel" or "time-share unit." Section 514E-5, Hawai'i Revised Statutes, authorizes time-share units to be located in a resort area or any other area in which a county may

by ordinance allow a hotel unit. The Hawai'i County Code correspondingly permits hotels and time share units in non-resort zoning districts, including the general commercial district.

As you have pointed out, there is a General Plan designation of "urban expansion area" for a portion of the project area. This designation does not prohibit hotels or time share developments. It was intended to accommodate the State's plans to expand the harbor and have associated commercial and golf course development south and east of the harbor. As indicated, commercial zoning includes hotels and time shares as permitted uses. It appears from the General Plan language relating to an "Urban Expansion Area" designation that a variety of high-density to low-density urban uses are possible within it, as the term appears to connote.

The ultimate determination of whether the Kona Kai Ola project in its current or future form is consistent with the County's General Plan, and that the project area can be rezoned to allow its implementation, are to be made by the County Council pursuant to §46-4, Hawai'i Revised Statutes, and § 3-15, County of Hawai'i Charter. This principle is also supported by an opinion of the County's Office of the Corporation Counsel, dated May 21, 2001, which is contained in Attachment 3.

We see the Kona Kai Ola project concept as a mix and inter-relation of public and private uses that will cover the gamut from industrial, commercial, recreational, visitor, scientific, educational, and cultural facilities. It is not primarily a visitor destination area per-se and will appeal to several markets, while addressing local demands. It involves a long-awaited expansion of the major boat harbor in West Hawai'i. We believe that the sum of these components and their direct and indirect effects characterizes an urban expansion area and that governmental decision-making can be based on that recognition.

After consideration of a full record and the public's input in a zoning or permitting process, the County Council and other agencies can be expected to have more than adequate grounds to conclude that this project is consistent with the General Plan and should be supported.

4. Miscellaneous comments

Regarding public costs and benefits, Appendix B of the DEIS, which is Appendix C-1 in the EIS, contains a discussion of the basis for determining public costs and benefits. As explained in our response to comments regarding secondary impacts, workforce housing requirements have been estimated, and JDI will comply with all affordable housing requirements of applicable Hawai'i County ordinances.

Figures D, E and F have been corrected to show map scale and are included as Attachments 4-1 to 4-3.

EIS Section 5.3 has been revised to include Plan Approval as a Hawai'i County permit, as follows:

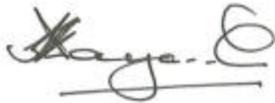
Table 3: Permits Required for the Project

Agency	Permit or Approval	Requirement	Time Frame
U.S. Army Corps of Engineers	Department of the Army (DOA) Individual Permit	<p>Work in navigable waters; placing fill in waters of the U.S., placing navigation aids</p> <p>Will incorporate:</p> <ul style="list-style-type: none"> ▪ Rivers and Harbors Act Section 10 ▪ Clean Water Act Sections 401 and 404 ▪ Coastal Zone Management Act Section 307 ▪ Endangered Species Act Section 7 ▪ National Historic Preservation Act Section 106 	Prior to any in-water work or fill or placement of navigation aids or modification of terrestrial habitat that may impact species listed under Endangered Species Act
U.S. Coast Guard	Private Aids to Navigation approval	For approval for marking aids to navigation	Prior to placement. Note: placement requires DOA Permit.
State Board of Land and Natural Resources	Easement over Submerged Lands / Shared Harbor Channel Entrance	HRS Section 171-53 (6)	Prior to commencement of operations of new marina
State Department of Business, Economic Development & Tourism	Determination of Hotel Development	HRS Section 171-42	Prior to approval of Master Development Plan
State Department of Land and Natural Resources (DLNR) Office of Conservation and Coastal Lands (OCCL)	Conservation District Use Permit (CDUP)	<p>For any work in the conservation district</p> <ul style="list-style-type: none"> ▪ Kuakini Highway extension and SWAC pipe; Shoreline Park ▪ Hawaiian Cultural Park, Ocean Front Trail 	Prior to any work in the conservation district
DLNR Commission on Water Resource Management	Well Construction Permit, Pump Installation Permit	For well construction or ground water source development	Prior to construction or development
State Department of Health (DOH) Clean Water Branch	401 Water Quality Certification	Triggered by DOA permit	Start simultaneously with DOA permit
		NPDES	
	- Individual Permit	Discharge into state waters	Prior to construction
	- NOI Appendix C	Construction activities on one or more acres	Prior to construction

Agency	Permit or Approval	Requirement	Time Frame
	- NOI Appendix G	Construction dewatering	Prior to construction
	- NOI Appendix L	Discharge of circulation water from decorative ponds	Prior to construction
	All NPDES applications	Copy to DLNR/State Historic Preservation Division	Simultaneously with DOH NPDES submittals
	Zone of Mixing	Include with NPDES for discharge into state waters	Concurrent with NPDES application
DOH Safe Drinking Water Branch	Water Source Approval and capacity demonstration	For new drinking water sources	After source is identified
	Operator Certification	For operators of water systems	Before system use
	Construction Plan Review	For water system improvements and connections	Before construction
	Underground Injection Control (UIC) Permit	For injection well operations	Before operations
DOH Clean Air Branch	Dust control management plan	Recommended only, not required	During construction planning
DOH Noise, Radiation, & Indoor Air Quality Branch	No permit	Comply with Administrative Rules Chapter 11-46, Community Noise Control	During construction
County of Hawai'i	Special Management Area (SMA) Major Permit	Work in the SMA	Prior to any construction or other work in the SMA (does not include DHHL land)
	Zoning	Must be consistent with the General Plan	After acceptance of EIS
	Building Permit	To erect a new structure including fences, swimming pools and retaining walls more than 3'-0" in height, and water catchments regardless of depth or capacity	Prior to construction
	Grading, Grubbing, and Stockpiling Permits	For volumes as specified by county	Prior to activity
	Development, subdivision, drainage and flood zone reviews	For development	Prior to construction

Your comment letter and this response are included in the Final Environmental Impact Statement. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like to receive a printed or electronic copy of the Final Environmental Impact Statement, or portions thereof.

Sincerely,



Dayan Vithanage, P.E., PhD.
Director of Engineering

cc: Office of Environmental Quality Control
State Department of Hawaiian Home Lands
Jacoby Development, Inc.

Attachment 1

2 Alternatives Analysis

~~In typical land development projects, the initial planning process includes the exploration of alternatives to development objectives. In the EIS process, these alternatives are presented with a disclosure of reasons for the dismissal of non-preferred alternatives.~~

~~Kona Kai Ola does not follow this same pattern of alternatives evaluation. As discussed in Section 1.4, the proposed Kona Kai Ola project is the result of agreements between JDI and the State DLNR and DHHL. The agreements and leases between the State and JDI stipulate the parameters of development for this site in terms of uses, quantities and size of many features, resulting in a limited range of land uses. Unlike a private property project, JDI is required to meet the criteria outlined in the agreements, thereby affording less flexibility in options and uses. From the developer's perspective, the agreements must also provide sufficient flexibility to allow for a development product that responds to market needs and provides a reasonable rate of return on the private investment.~~

~~The agreements between JDI and DLNR specify that the proposed harbor basin is to be 45 acres and accommodate 800 slips. This development proposal is the subject of this EIS. In response to DEIS comments, additional water quality studies and modeling were conducted. These studies determined that the water circulation in a 45-acre 800-slip marina would be insufficient to maintain the required standard of water quality. The models of water circulation suggest that a new 25-acre harbor basin could successfully maintain required water quality in the new harbor. Comments on the DEIS from DLNR, from other government agencies, the neighbors and the general community also called for the consideration of alternatives in the EIS, including a project with a smaller harbor basin and less density of hotel and time-share units.~~

~~In response to these comments on the DEIS, three alternatives are evaluated in this Final EIS and include Alternative 1, which is a plan with a 25-acre 400-slip harbor basin including a decrease in hotel and time-share units; Alternative 2, which is an alternative that had been previously discussed but not included in the proposed project, that includes an 800-slip harbor and a golf course; and Alternative 3, the no-project alternative. Each alternative is included in the EIS with an evaluation of their potential impacts. These project alternatives are presented to compare the levels of impacts and mitigation measures of the proposed project and alternative development schemes pursuant to requirements set forth in Chapter 343, HRS.~~

~~JDI is required to provide a new marina basin not less than 45 acres and a minimum of 800 new boat slips. Further, the agreements provide the following options for land uses at the project site:~~

- ~~▪Golf Course~~
- ~~▪Retail Commercial Facilities~~
- ~~▪Hotel Development Parcels~~
- ~~▪Marina Development Parcels~~
- ~~▪Community Benefit Development Parcels~~

JDI is not pursuing the golf course option and is proposing instead to create various water features throughout the project site. All other optional uses have been incorporated in Kona Kai Ola.

2.1 Project Alternatives

2.1.1 Alternative 1: 400-Slip Marina

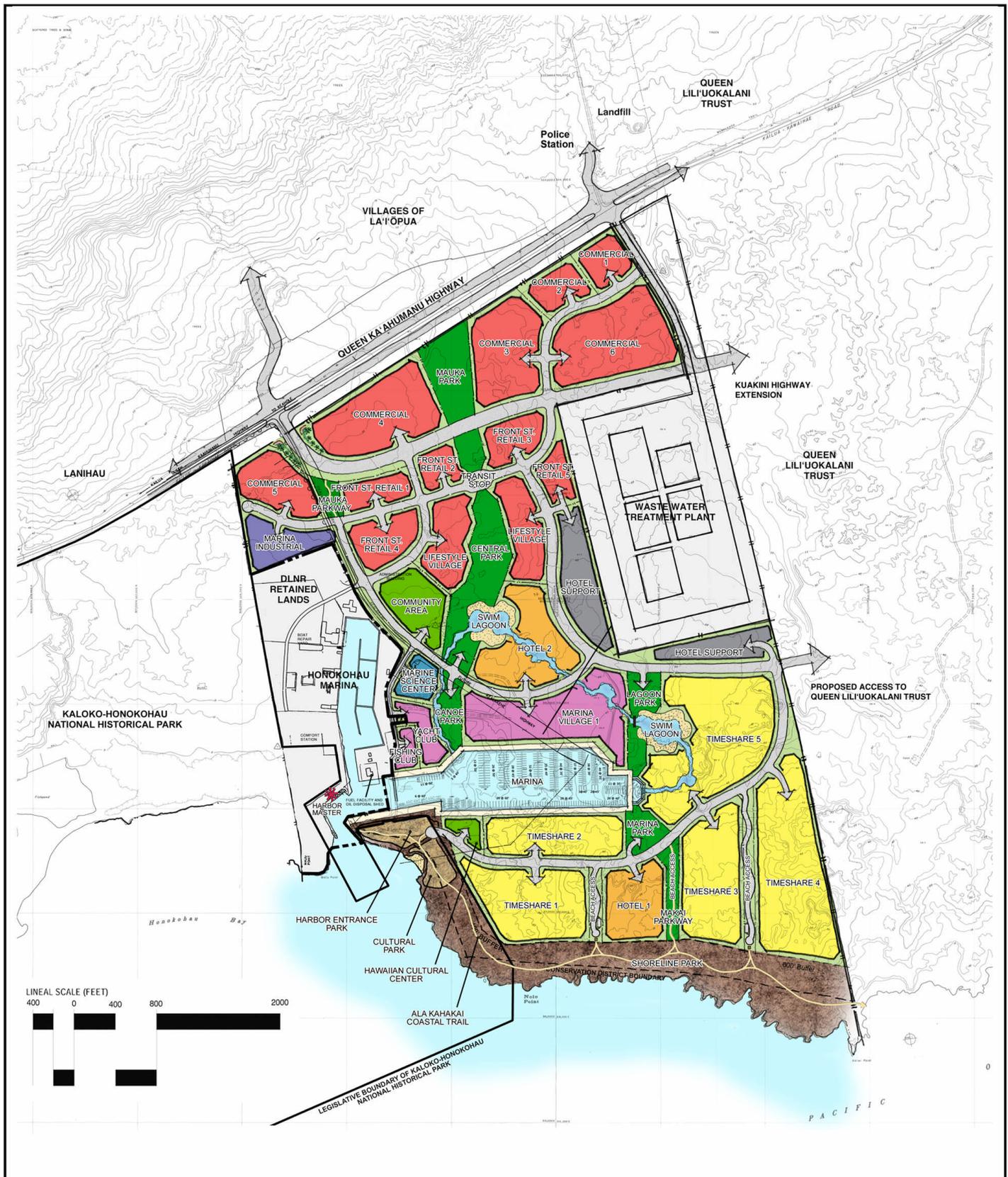
Studies conducted in response to DEIS comments found the construction and operation of an 800-slip marina may significantly impact the water quality within the marina and along the shoreline. Specifically, the Harbor Water Quality Modeling Study, as contained in Appendix U, found that the water circulation in a 45-acre 800-slip harbor was insufficient to maintain an acceptable level of water quality. Further, the existing harbor channel, which would serve both the existing and new harbors, could not adequately serve the increased boat traffic generated by an 800-slip marina during peak traffic. Mitigation measures to accommodate peak boat traffic included the widening of the existing channel, an action that would entail a complex process of Federal and State approvals and encounter significant environmental concern.

Concerns related to the proposed density of hotel and time-share units were also expressed in comments to the DEIS from members of the public, neighbors to the project site, especially the Kaniohale Community Association, and government agencies. Common themes in DEIS comments were related to impacts regarding traffic, project requirements of potable water and infrastructure systems, including sewer, drainage, utility and solid waste systems, and socioeconomic impacts.

In response to the water quality study results, and to the DEIS comments, an alternative plan was developed with a smaller marina with less boat slips, and a related decrease in hotel and time share units. Illustrated in Figure G, Alternative 1 reflects this lesser density project, and features a 400-slip marina encompassing 25 acres. For the purposes of the Alternative 1 analysis, JDI assumed 1,100 time-share units and 400 hotel rooms. Project components include:

- 400 hotel units on 34 acres
- 1,100 time-share units on 106 acres
- 143 acres of commercial uses
- 11 acres of marina support facilities
- 214 acres of parks, roads, open spaces, swim lagoons and community use areas

In addition, Alternative 1 would include the construction of a new intersection of Kealakehe Parkway with Queen Ka'ahumanu Highway, and the extension of Kealakehe Parkway to join Kuakini Highway to cross the lands of Queen Lili'uokalani Trust, and connecting with Kuakini Highway in Kailua-Kona. This is a significant off-site infrastructure improvement and is included in the agreements between the State and JDI.



Source: PBR HAWAII

Plan is conceptual only and subject to change

Figure G: Alternative 1: 400-Slip Marina

LEGEND

 TIME SHARE	 MARINA SUPPORT / COMMERCIAL	 UTILITIES
 HOTEL	 MARINE SCIENCE CENTER	 PARKS & GREEN SPACE
 RETAIL / COMMERCIAL	 COMMUNITY AREA / CULTURAL CENTER	 SHORELINE
 MARINA RETAIL	 SWIM LAGOON	 HARBOR ENTRANCE PARK / CULTURAL PARK
 MARINA		



Like the proposed project, Alternative 1 would have a strong ocean orientation, and project components that support this theme would include various water features including seawater lagoons and a marine science center. The new Alternative 1 harbor would include a yacht club, fishing club, a canoe park, and a cultural park with a focus on Hawaiian maritime cultural heritage of the voyaging canoe. The coastal area would be protected with a shoreline park with trails and public access parking for walking and shoreline fishing, and a cultural park surrounding the heiau, the cultural sites and 'Alula for community use. Additional Alternative 1 community areas would include facilities and space for community use, including programs of the Kona Kai Ola Community Foundation, which supports community programs in health care, culture, education, and employment training for the local community, especially to native Hawaiians. Like the original proposed plan, Alternative 1 includes 40 percent of the land in parks, roads, open spaces, swim lagoons and community use areas.

2.1.2 Alternative 2: Golf Course Feature

Alternative 2 was among the alternatives discussed at a community charrette in September 2003. It includes a golf course, which is a permitted use in the DLNR agreement and DHHL lease. As Figure H illustrates, an 18-hole championship golf course would occupy 222 acres on the southern portion of the project site. As with the proposed project, Alternative 2 includes an 800-slip marina on a minimum of 45 acres.

To support the economic viability of the project, other Alternative 2 uses include:

- Golf course clubhouse on three acres
- 1,570 visitor units on 88 acres fronting the marina
- 118 acres of commercial uses
- 23 acres of community uses

Community uses in Alternative 2 include an amphitheater, a canoe facilities park, a community health center, a Hawaiian cultural center and fishing village, a marine science center and employment training center. The sea water lagoon features contained in the proposed project and Alternative 1 are not included in this alternative.

2.1.3 Alternative 3: No Action

In Alternative 3, the project site would be left vacant, and the proposed marina, hotel and time-share facilities, commercial and marina industrial complexes, and community-oriented uses would not be realized.

The economic viability and sustainability of the project is determined by the density and uses proposed. Because JDI is obligated to develop an 800 slip marina for the State, complete road improvements, and provide various public enhancement features at its own expense, the density proposed for the income generating features of the development must be sufficient to provide an acceptable level of economic return for JDI. The market study, which is discussed in Section 4.6, reviewed various development schemes and determined that the currently proposed density and mix is the optimum to meet the anticipated financing and development cost obligations for the public features associated with the development.

2.2 Alternatives Analysis

As discussed in Section 2.1, the proposed Kona Kai Ola project (also referred to as “proposed project”) is defined by development requirements related for a marina and the related uses that would be needed to generate a reasonable rate of return that covers development costs.

Beginning with Section 2.2.1, the alternative development concepts are comparatively assessed for potential impacts that may reasonably be expected to result from each alternative. Following is an overview of the primary observations of such assessment.

Alternative 1 includes half of the State-required boat slips and 60 percent of the proposed hotel and time-share units and, due to the decreased density, this alternative would generate significantly less environmental and socio-economic impacts. A harbor water quality model found the reduction of the volume of the new marina basin by about half (approximately 25 acres) significantly improved the water circulation and quality. Further, the reduced number of boat slips would generate less boat traffic, thereby reducing congestion and the need to mitigate impacts further by the widening of the existing harbor channel.

A project with fewer hotel and time-share units and increased commercial space with a longer (14 years) absorption period would change the mix of employment offered by the project, and slightly increase the overall employment count. The public costs/benefits associated with Alternative 1 would change, compared to the proposed project, with a general increase in tax collections, and a general decrease in per capita costs. Detailed discussion of Alternative 1 potential economic impacts are provided in Section 4.6.6. Comparisons of levels of impact are presented throughout this FEIS.

While this analysis might indicate that the 25-acre marina in Alternative 1 would be the more prudent choice, the DLNR agreement establishes the minimum size and slip capacity of the marina at 45 acres and 800 slips, respectively. Amendments to the DLNR agreement would be required in order to allow Alternative 1 to proceed as the preferred alternative. Hence, selection of the preferred alternative is an unresolved issue at the writing of this FEIS.

Alternative 2, the golf course alternative, was not previously considered to be the preferred alternative primarily because market conditions at the time of project development might not likely support another golf course. Further, DHHL has a strategy goal to have more revenue-generating activities on the commercial lease lands within the project area. In addition, concerns have been expressed as to environmental impacts of coastal golf courses, including the potential adverse impact on Kona’s water supply if potable water is used for golf course irrigation.

While Alternative 3, the no-project alternative, would not generate adverse impacts related to development of these lands associated with the construction and long-term operations, it would also not allow for an expanded public marina that would meet public need and generate income for the public sector. Further, the no-project alternative would foreclose the opportunity to create a master-planned State-initiated development that would result in increased tax revenue, recreation options and community facilities. Crucial privately-funded improvements, such as the marina, regional roadway and circulation improvements, and improvements to the existing wastewater treatment plant, would not be implemented. Private funds toward the development of community-oriented facilities such as parks, other recreational facilities, and public access would not be contributed.

~~Hence, the only valid alternative to the proposed project is the no-action alternative. In this alternative, the project site would be left vacant, and the proposed marina, hotel and time share facilities, commercial and marina industrial complexes, and community-oriented uses would not be realized.~~

~~The no-project alternative would therefore not generate adverse impacts associated with the construction and long-term operations would not occur.~~

~~Likewise, the creation of a master-planned state-initiated development, resulting in increased employment, tax revenue, recreation options and community facilities, would not be created. Privately funded improvements, such as the marina, regional roadway and circulation improvements, and improvements to the existing wastewater treatment plant, would not be implemented. Private funds toward the development of community-oriented facilities such as parks, other recreational facilities and public access would not be contributed.~~

~~Further, the creation of revenue-producing businesses on the DHHL property to fund homestead programs would not occur, resulting in fewer potential benefits for Hawaiians.~~

~~Hence, the agreements and leases between the State and JDI indicate that the no-action alternative is not in the public interest has been rejected at this time.~~

2.2.1 Impact Comparison

Grading and Excavation

The proposed project requires grading and excavation. Both actions may impact groundwater due to rainfall runoff during construction. Alternative 1 would require a significantly smaller excavation for the marina basin and would therefore carry a lesser risk of potential adverse effects on water quality. Alternative 2 would require the same basin excavation as the proposed project, and would also include extensive grading and filling to build the golf course, the latter of which would generate additional impacts. Alternative 3 would result in no change to the geography, topography and geology.

Further discussion on grading and excavation is contained in Section 3.3.

Natural Drainage

Most precipitation infiltrates into the porous ground at the site, and no significant sheet flow is likely. Alternative 1 would generate similar levels of impacts on natural drainage as those of the proposed project and thus require similar mitigation measures. The golf course in Alternative 2 would not be as porous since the site would be graded, soil would be placed, and grass and other landscaping would be grown. Sheet flow and runoff can occur on a golf course, and drainage patterns might change. Alternative 3 would result in no change to the existing natural drainage pattern. Further discussion on natural drainage is contained in Section 3.4.

Air Quality

Air quality will be affected by construction activities, as well as pollutants from vehicular, industrial, natural, and agricultural sources. Alternative 1 would generate less construction air quality impacts than the proposed project due to the reduced amount of intensive groundwork associated with the smaller marina basin and fewer long-term impacts by reducing traffic 35 and 40 percent during, respectively, AM and PM peak traffic times. Construction of Alternative 2 would result in fugitive dust and exhaust from equipment and is expected to generate the same level of air quality impact as the proposed project. Alternative 3 would result in no change to existing air quality. Further discussion on air quality is contained in Section 3.5.

Terrestrial Environment

To provide additional habitat for shorebirds and some visiting seabirds, the project proposes to construct a brackishwater pond area suitable for avian fauna, including stilts, coots and ducks. While habitat expansion is beneficial, there is also a possibility that these species may be exposed to activity that may harm them. Alternative 1 would not include a brackish water pond, but will include 5 acres of seawater features, which is 74 percent less than the 19 acres of seawater features in the proposed project. While this would reduce beneficial impacts, it would also decrease exposure to potentially harmful activity. Alternative 2 does not include the brackish water pond features, but would include drainage retention basins that would attract avian fauna and expose them to chemicals used to maintain golf course landscaping. While Alternative 3 would result in no increase in potentially harmful activity, it would also not provide additional habitat for avian fauna. Further discussion on the terrestrial environment is contained in Section 3.7.

Groundwater

Groundwater at the project site occurs as a thin basal brackish water lens. It is influenced by tides and varies in flow direction and salt content. The existing Honokōhau Harbor acts as a drainage point for local groundwater. Any impact to groundwater flow from the proposed harbor is likely to be localized. The proposed marina basin will not result in any significant increase in groundwater flow to the coastline, but rather a concentration and redirection of the existing flows to the harbor entrance.

There will be differences in the flow to the marina entrance between the proposed project and Alternative 1. Alternative 1, being smaller in size, will have less impact on groundwater flow than the proposed marina. Alternative 2 will have a similar impact to groundwater quality as the proposed project. Alternative 2 may also impact water quality by contributing nutrients and biocides to the groundwater from the golf course. Alternative 3 would result in no change in existing groundwater conditions. Further discussion on groundwater is contained in Section 3.8.1.

Surface Water

There are no significant natural freshwater streams or ponds at the site, but there are brackish anchialine pools. Surface water at the project site will be influenced by rainfall. Runoff typically percolates rapidly through the permeable ground. The proposed project will include some impermeable surfaces, which together with building roofs, will change runoff and seepage patterns.

Alternative 1 is a lower density project that is expected to have proportionally less impact on surface water and runoff patterns and less potential impact on water quality than the proposed project. Alternative 2 would have more impact on surface water quality than the proposed project due to fertilizers and biocides carried by runoff from the golf course. Alternative 3 would result in no change to surface water conditions. Further discussion on surface water is contained in Section 3.8.2.

Nearshore Environment and Coastal Waters

The potential adverse impacts to the marine environment from the proposed project are due to the construction of an 800-slip marina and the resulting inflow of higher salinity seawater and inadequate water circulation, both of which are anticipated to impair water quality to the extent of falling below applicable standards. One possible mitigation measure is to significantly reduce the size of the marina expansion.

The reduced marina size (from 45 to 25 acres) and reduced lagoon acreage in Alternative 1 are expected to result in a proportionate reduction in seawater discharging into the new harbor and increased water circulation. Alternative 2 includes the same marina basin size and is therefore subject to the same factors that are expected to adversely affect water quality.

In the existing Honokōhau Harbor, water quality issues focus on the potential for pollutants, sediments, mixing and discharge into the nearshore marine waters. Before the harbor was constructed, any pollutants entrained within the groundwater were believed to have been diffused over a broad coastline.

The water quality in the proposed harbor depends on several components. These include salinity, nutrients, and sediments that come from the ocean, rainfall runoff, water features with marine animals, and dust. The smaller project offered as Alternative 1 is expected to produce a reduced amount of pollutants and reduce the risk of adverse impact upon water quality.

It is notable that the 45-acre marina basin planned in the proposed project and Alternative 2 only becomes viable from a water quality impact standpoint if the additional brackish groundwater inflow into the new marina exceeds 60 mgd. The resulting flushing from such inflow would be expected to better maintain water quality. However, it is unclear whether 60 mgd of brackish groundwater would be available. As proposed in Alternative 1, reduction of the volume of the new marina basin by 45 percent will significantly improve the flushing and water quality because the lower volume can be flushed by the available groundwater flow.

In addition, there could be higher rainfall runoff from the Alternative 2 golf course into the harbor, because the grassed golf course will be less porous than the natural surface. The golf course will also require relatively high levels of fertilizer, biocides, and irrigation, all of which could contribute to adverse water quality impacts.

Further discussion on nearshore environment and coastal waters is contained in Section 3.9.1.

Anchialine Pools

Anchialine pools are located north of Honokōhau Harbor, and south of the harbor on the project site. The marine life in these pools is sensitive to groundwater quality, and changes due to construction and operation of the project could degrade the viability of the pool ecosystem. In the southern complex, 3 anchialine pools with a combined surface area of 20m² would be eliminated due to the harbor construction in the proposed project and Alternatives 1 and 2.

Predicting the extent of change in groundwater flow is difficult if not impossible even with numerous boreholes and intense sampling. The actual flow of groundwater towards the sea is minimal today, and tidal measurements show that tide fluctuations represent more than 90 percent in actual harbor tides. The fluctuations occur simultaneous with the ocean/harbor tide, which indicate a vertical and horizontal pressure regime between bore hole 6 and the ocean and harbor. Hence, the tides alone create a mixing system that increases salinity, as the flow approaches the point of discharge which will be either the channel or the shore. Another factor that could influence groundwater quality is the increased local recharge from irrigation between the channel and shore. This will add fresh water to the lens locally but is not quantified at this time.

Quantification of these impacts, including the flow of groundwater through each pond, is therefore extremely difficult. The shallow lavas are of the pahoehoe type and have a relatively high horizontal permeability. In surface depressions or undulations, the pahoehoe lavas have a tendency to lose vertical permeability from sedimentation thus restricting water exchange within the individual pools. This is normally reflected in both the salinity and temperature and this information has been adequately studied in the pools.

Changes in groundwater quality may or may not impact biological communities in the anchialine and estuarine environment. In either case, it is important to understand these relationships to effectively manage the resource. If there is significant deviation from the baseline especially in regard to nutrients, pathogens, and toxins, a mitigation plan to determine the cause and take decisive appropriate action will be implemented.

Due to the uncertainty of changes in groundwater flow and quality due to marina construction, the variability in impacts between the proposed project and Alternatives 1 and 2 is unknown at this time. Alternative 3 would result in no change in groundwater flow. While this would eliminate the potential for adverse impacts, Alternative 3 would also continue the pattern of existing degradation related to human activity and the introduction of alien species. Further discussion on anchialine pools is contained in Section 3.9.2.

Marine Fishing Impacts

The proposed marina will increase the number of boats in the area and it is reasonable to assume that a portion of these new boats will engage in fishing activities. The increase in boats in the area would be primarily related to the marlin and tuna / pelagic fishery, coral reefs due to extractive fisheries, and SCUBA activities. The pressure on fish and invertebrate stocks is expected to increase with or without the marina. Harbor expansion provides the opportunity to address existing conditions to consolidate, focus, and fund management and enforcement activities at one location.

Compared to the proposed project, Alternative 1 would result in a 21 percent decrease in boat traffic, thereby lessening the potential for marine fishing impacts. The level of impacts in Alternative 2 would be similar to that of the proposed project. Alternative 3 would result in no change in existing marine fishing conditions, and no opportunity to address already existing pressure on fish and invertebrate stocks. Further discussion on marine fishing impacts is contained in Section 3.9.3.

Cultural and Archaeological Resources

The proposed project will integrate cultural and archaeological resources in the overall development. Archaeological sites recommended for preservation will be preserved, and cultural practices will be encouraged. Kona Kai Ola includes a canoe park, and a cultural park with a focus on Hawaiian maritime cultural heritage of the voyaging canoe. Proposed is a 400-foot shoreline setback that would serve as a buffer between the ocean and developed areas. This coastal area would be protected with a shoreline park with trails and public access parking for walking and shoreline fishing, and a cultural park surrounding the heiau, the cultural sites and 'Alula for community use.

Alternative 1 would contain all of the cultural archaeological features and the shoreline setback area would be 400 feet in the northern portion of the site and increase to 600 feet in the southern portion. Alternative 2 would preserve cultural and archaeological resources, but does not include a 400-foot shoreline setback. Alternative 3 would result in no change to existing cultural and archaeological resources and no addition of cultural and community facilities and activities. Further discussion on cultural and archaeological resources is contained in, respectively, Sections 4.1 and 4.2.

Noise

Project-generated noise is due to construction equipment and blasting, boats, marina activities, vehicle traffic, and the Kealakehe Wastewater Treatment Plant operations. Alternative 1 would generate less noise impacts due to reduced construction activities, fewer boats, less traffic and less on-site activity. Alternative 2 would also generate less noise due to reduced traffic and less on-site activity, but noise related to the excavation of the marina basin and an increase in the number of boats would be similar to that of the proposed project. Further discussion on noise impacts is presented in Section 4.4.

Socioeconomic Impacts

The proposed project will generate an increase in de facto population of an estimated 5,321 persons due to the increase in hotel and time-share units. The estimated de facto population increase in Alternative 1 is 37 percent less, at 3,363 persons, than the proposed project. The de facto population increase in Alternative 2 is similar to Alternative 1.

Employment in the commercial components will nearly double in Alternative 1, from a stabilized level of 1,429 full-time equivalent (FTE) positions in the proposed project to 2,740 in the Alternative 1.

Under Alternative 1, the total operating economic activity at Kona Kai Ola will increase due to the added commercial space more than off-setting the fewer visitor units, moving upward from \$557.6 million per year to circa \$814.3 million annually. The total base economic impact resulting from development and operation of Alternative 1 will similarly be higher by between 35 and 45 percent than that of the proposed project.

Alternative 1, which has a reduced marina size of 25 acres, and fewer hotel and time-share units, would have a meaningful market standing, create significant economic opportunities, and provide a net benefit to State and County revenues. From a market perspective, a smaller Kona Kai Ola would still be the only mixed use community in the Keahole to Kailua-Kona Corridor offering competitive hotel and time-share product.

The estimated absorption periods for marketable components of Alternative 1 are generally shorter than those for the same components in the proposed project. Marina slips under Alternative 1 are estimated to be absorbed within 2 years after groundbreaking, as compared with 9 years for absorption of slips in the proposed project. Hotel rooms under Alternative 1 are estimated to be absorbed within 4 years after groundbreaking, as compared with 7 years under the proposed project. Time-share units would be absorbed within 10 years under Alternative 1, while 15 years are projected under the proposed project. Due to the planned increase in commercial facilities under Alternative 1, the absorption period of commercial space is estimated at 14 years, as compared with 8 years for absorption of such facilities under the proposed project.

The State and County will still both receive a net benefit (tax receipts relative to public expenditures) annually on a stabilized basis under the Alternative 1. The County net benefits will be some \$12.2 million per year under the Alternative 1 versus \$14.9 million under the proposed project. The State net benefits will increase under the Alternative 1 to about \$37.5 million annually, up substantially from the \$11.4 million in the proposed project.

Due to the lower de facto population at build-out, the effective stabilized public costs for both the State and County will decline meaningfully under the Alternative 1, dropping from \$7.7 million annually for the County and \$36.5 million for the State, to \$4.9 million and \$23 million per year, respectively.

Alternative 3 would result in no increase in de facto population and improvement to economic conditions. Further discussion on social and economic impacts are contained in, respectively, Sections 4.5 and 4.6.

Vehicular Traffic

The proposed project will impact the nearby road network that currently is congested during peak traffic times. The proposed project includes roadway improvements that would reduce the impact and improve roadway conditions for the regional community.

Alternative 1 includes the same roadway system improvements as the proposed project, yet would reduce vehicular traffic by 35 percent when compared to the proposed project. Alternative 2 would have similar traffic conditions and roadway improvements as Alternative 1. Alternative 3 would result in no increase in traffic and no roadway improvements.

Marina Traffic Study

The increase in boat traffic due to the proposed 800-slip marina would cause entrance channel congestion during varying combinations of existing and new marina peak traffic flow. Worst case conditions of active sport fishing weekend and summer holiday recreational traffic result in traffic volumes exceeding capacity over a short afternoon period. Mitigation to address boat traffic in the proposed project include widening the entrance channel, traffic control, implementation of a permanent traffic control tower, or limiting vessel size.

Alternative 1 would result in a 21 percent reduction in boat traffic congestion under average existing conditions and ten percent reduction during peak existing conditions. The reduction to 400 slips also reduces the impacts of congestion at the entrance channel, thereby reducing the need for any modifications to the entrance channel.

Alternative 2 would have the same level of boat traffic as the proposed project. Alternative 3 would not meet the demand for additional boat slips and would not generate additional boat traffic. Further discussion on marina traffic is contained in Section 4.8.

Police, Fire and Medical Services

The proposed project will impact police, fire and medical services due to an increase in de facto population and increased on-site activity. Alternatives 1 and 2 would have similar levels of impact as the proposed project due to increased on-site activity. Further discussion on police, fire and medical services are contained, respectively, in Sections 4.10.1, 4.10.2 and 4.10.3.

Drainage and Storm Water Facilities

The proposed project will increase drainage flows, quantities, velocities, erosion, and sediment runoff.

Alternative 1 involves a reduction of the project density that would reduce storm runoff from the various land uses due to a reduction in impervious surfaces associated with hotel and time-share development and to the creation of more open space. However, roadway areas will increase by about 30 percent in Alternative 1. Storm runoff from proposed streets would therefore increase; thus requiring additional drainage facilities and possibly resulting in no net savings. The golf course in Alternative 2 may also change drainage characteristics from those of the proposed project and may not reduce impacts. Alternative 3 would result in no change in existing conditions and no improvements to drainage infrastructure. Further discussion on drainage and storm water facilities is contained in Section 4.10.5

Wastewater Facilities

The proposed development is located within the service area of the Kealakehe WWTP and a sewer system will be installed that connects to the WWTP. The sewer system will be comprised of a network of gravity sewers, force mains, and pumping stations which collect and convey wastewater to the existing Kealakehe WWTP. Project improvements will incorporate the usage of recycled / R1 water. Improvements implemented by the proposed project will also accommodate the needs of the regional service population.

Alternative 1 would generate approximately 10 percent less wastewater flow than the proposed project. Wastewater flow in Alternative 2 is undetermined. Alternative 3 would result in no additional flow, as well as no improvements that will benefit the regional community. Further discussion on wastewater facilities is contained in Section 4.10.6.

Potable Water Facilities

The proposed project average daily water demand is estimated at 1.76 million gallons per day. Existing County sources are not adequate to meet this demand and source development is required. The developer is working with DLNR and two wells have been identified that will produce a sustainable yield that will serve the project. These wells will also serve water needs beyond the project.

Alternative 1 would result in net decrease of about five percent of potable water demand. Alternative 2 may have a lower water demand than the proposed project as long as potable water is not used for irrigation. Alternative 3 would result in no additional flow, as well as no source development that will benefit the regional community. Further discussion on potable water facilities is contained in Section 4.10.8.

Energy and Communications

Regarding Alternative 1, preliminary estimates for electrical, telecommunications, and cable resulted in a net demand load that remains similar to the proposed project. Further discussion on energy and communications is contained in Section 4.10.9.1.

The proposed project will increase the demand for electrical energy and telecommunications. The demand would be reduced in Alternative 1 because the number of boat slips and units would decrease. Similarly, Alternative 2 would have fewer units than the proposed project and therefore reduce energy demands. Further reduction in energy demand for either alternative could be achieved by using seawater air conditioning (SWAC) and other energy reduction measures, as planned by the developer. Further discussion on energy and telecommunications is contained in Section 4.10.9.2.

Water Features and Lagoons

The proposed project includes a brackishwater pond, lagoons, and marine life exhibits supplied by clean seawater. The water features in Alternative 1 would significantly decrease by 74 percent from 19 acres in the proposed project to five acres in Alternative 1. This decrease in water features would result in a corresponding decrease in water source requirements and seawater discharge. Alternative 2 does not include the seawater features. Alternative 3 would result in no additional demand for water source requirements and seawater discharge.

2.2.2 Conformance with Public Plans and Policies

State of Hawai'i

Chapter 343, Hawai'i Revised Statutes

Compliance with this chapter is effected, as described in Section 5.1.1 in regard to the proposed project and the alternatives discussed.

- State Land Use Law, Chapter 205, Hawai'i Revised Statutes

The discussion in Section 5.1.2 is directly applicable to Alternative 1, the proposed project. Alternative 1 will involve a setback of 400 feet that increases to 600 feet along the southern portion of the project site's shoreline area. Alternative 2 does not provide for such a setback, but may still require approvals from DLNR for cultural, recreational, and community uses and structures within the Conservation district.

- Coastal Zone Management Program, Chapter 205A, Hawai'i Revised Statutes

Recreational Resources:

In addition to the discussion of consistency with the associated objective and policies, as described in Section 5.1.3, the reduction from the proposed project's 800-slip marina to a 400-slip marina under Alternative 1 will still expand the region's boating opportunities and support facilities. The existing harbor entrance will still be utilized under this alternative; however, potential risks relating to boat traffic and congestion in the marina entrance area will be reduced significantly. The 400-600 foot shoreline setback, public parks, trails, cultural areas, community facilities, and marine science center remain important recreational components under Alternative 1.

Alternative 2 includes a golf course component, which would add a more passive recreation to the active and social components, such as boating, fishing, swimming, trails, walkways, parks, marine life, educational and interactive areas that are also part of the project. The golf course would enhance the range of leisure and recreational opportunities offered at Kona Kai Ola.

Alternative 2, like the proposed project, will expand the region's boating opportunities and support facilities through its 800-slip marina. However, the potential adverse impacts of increased boat traffic from the size of the marina are significant enough to offset the benefits of increased boating opportunities.

Coastal Ecosystems:

The discussion in Section 5.1.3 is directly applicable to Alternative 1.

Alternative 1 not only reduces the number of slips proposed by 50 percent, but it also reduces the size of the marina from 45 acres to 25 acres. The 25-acre marina will increase the body of water within the existing harbor, but to a significantly lesser extent than the proposed project's estimated increase, which is also applicable to the 45-acre size that is proposed for the marina under Alternative 2.

The findings of the Harbor Water Quality Modeling Study conclude that a reduction in the size of the harbor expansion is an alternative that will mitigate the risk of significant impacts upon water quality within the marina and existing harbor. Accordingly, the reduction in both the number of slips and the size of the marina basin under Alternative 1, in combination with proper facilities design, public education, and enforcement of harbor rules and regulations, would result in fewer long-term impacts to water quality and coastal ecosystems. Short-term (construction-related) impacts would likely remain the same although the reduction in the total acreage of excavation is expected to result in a shorter duration of such impacts.

In addition to its 800-slip marina and potential adverse impacts upon water quality and the marine environment, Alternative 2 includes a golf course component, which has the potential to impact coastal ecosystems by increasing the nutrient loading in surface runoff and groundwater and also by introducing pesticides, herbicides, and other chemicals common in golf course use and management into the nearshore waters surrounding the project site.

Economic Uses

Although reduced in the number of slips, the smaller marina under Alternative 1 will nevertheless serve public demand for more boating facilities in West Hawai'i and is consistent with the objective and policies and discussion set forth in Section 5.1.3. The economic impacts of Alternative 2, while comparable to those of the proposed project's marina development, are notably marginal as to the golf course component, based on the marketability analysis that indicates a condition of saturation within the region.

Coastal Hazards

The discussion and considerations set forth in Section 5.1.3 are also applicable to Alternatives 1 and 2 and indicate compliance with the objective and policies addressed. Tsunami risks mainly affect the large shoreline setback area that is proposed for the project and Alternative 1. Alternative 2 projects a transient accommodation site that is partially within the tsunami hazard zone and thus carries a higher hazard risk. However, the essential requirement for these alternatives, as well as the proposed project, is a well-prepared and properly implemented evacuation plan.

Beach Protection

Discussion and considerations set forth in Section 5.1.3 are also applicable to Alternatives 1 and 2 and indicate compliance with the objective and policies addressed. Alternative 1 and, to a lesser extent, Alternative 2, will retain the shoreline area in its natural condition.

Similar to the proposed project, Alternative 1 provides for a shoreline setback of considerable width within which no structure, except for possible culturally-related structures, would be allowed. Alternatives 1 and 2 will thus be designed to avoid erosion of structures and minimize interference with natural shoreline processes.

Marine Resources

The discussion in Section 5.1.3 is also applicable to Alternative 1 which is described to be an alternative that is specifically projected to mitigate anticipated adverse impacts on water quality and the marine environment that might otherwise result from the original harbor design and scale, which is also incorporated in Alternative 2. The reduced marina size under Alternative 1 is projected to meet water quality standards and enable greater compliance with the objective and policies addressed in this section.

Alternative 2 includes a golf course component and thus the potential to adversely impact marine resources by increasing the nutrient loading in surface runoff and groundwater and also by introducing pesticides, herbicides, and other chemicals common in golf course use and management into the nearshore waters surrounding the project site.

Hawai'i State Plans, Chapter 226, Hawai'i Revised Statutes

Section 226-4 (State goals), 5 (Objectives and policies for population, and 6 (Objective and policies for economy in general):

The discussion in Section 5.1.4 is applicable to Alternatives 1 and 2, in addition to the proposed project. These development concepts generally conform to the goals, objectives, and policies set forth in these sections because they will provide some degree of economic viability, stability, and sustainability for future generations. Kona Kai Ola will convert essentially vacant land into a mixed-use development with a distinctive marina and boating element, providing a wide range of recreational, business, and employment opportunities to the community.

Section 226-8 Objective and policies for the economy – the visitor industry:

Alternatives 1 and 2 will be consistent with the State's economic objective and policies relating to the tourism industry for the same reasons that are discussed in regard to the proposed project in Section 5.1.4. They will incorporate JDI's commitment to sustainability principles in the planning and design of the development concepts in Alternatives 1 and 2. Although the total hotel and time-share unit count is reduced to approximately 1,500 in Alternatives 1 and 2, the transient accommodations component of these alternatives will still further the State's objective and policies for increased visitor industry employment opportunities and training, foster better visitor understanding of Hawai'i's cultural values, and contribute to the synergism of this mixed-use project concept that addresses the needs of the neighboring community, as well as the visitor industry.

Section 226-11 Objectives and policies for the physical environment: land-based, shoreline and marine resources:

Alternative 1 is expected to involve less potential adverse impacts upon these environmental resources than the proposed project. Likewise, and Alternative 2 would have less adverse impact because of its reduction in the size of the marina and in the total hotel and time-share unit count. Alternative 1 carries less potential risk to water quality and related impacts upon the marine environment and anchialine pool ecosystems. Although approximately three anchialine pools are expected to be destroyed, the great majority of pools will be preserved within and outside of the proposed 400-foot shoreline setback.

The golf course component in Alternative 2 has the potential to impact marine resources by increasing the nutrient loading in surface runoff and groundwater and also by introducing pesticides, herbicides, and other chemicals common in golf course use and management into the marina basin and nearshore waters surrounding the project site. It also has the potential to adversely affect the anchialine pools by introducing the chemicals into the pond systems.

Section 226-12 Objective and policies for the physical environment: scenic, natural beauty, and historic resources:

The discussion in Section 5.1.4 is directly applicable to Alternative 1 and describes the compliance with the objective and policies addressed.

The golf course component of Alternative 2 would create a park-like view that would potentially enhance the beauty of the project site and surrounding areas when considered in combination with the existing rugged natural beauty of the area.

Just as with the proposed project, Alternatives 1 and 2 would also be designed to blend with the natural terrain and to honor and protect the cultural history, resources, and practices of these lands.

Section 226-13 Objectives and policies for the physical environment: land, air and water quality:

As stated above, because of the reduction in both the number of slips and the size of the marina basin, with proper facilities design, public education and enforcement of harbor rules and regulations, Alternative 1 is anticipated to cause fewer long-term impacts to water quality than either the proposed project or Alternative 2. Based on the findings of the Harbor Water Quality Modeling Study, water quality resulting from a reduced marina basin size as proposed under Alternative 1 is expected to be similar to existing conditions.

As previously noted, Alternative 2 has the potential to adversely impact water quality by increasing the nutrient loading in surface runoff and groundwater by introducing pesticides, herbicides and other chemicals common in golf course development and maintenance into the marina basin and nearshore waters surrounding the project site.

Section 226-14 Objectives and policies for facility systems - general:

Alternatives 1 and 2 will conform to the objective and policies of this section on the grounds that are discussed in regard to the proposed project in Section 5.1.4. The master-planning and phasing of the project concepts under these alternatives will be coordinated with associated public and private infrastructural planning and related private and public infrastructural financing. The cost of the marina construction and project-related infrastructure is to be borne by the developer, resulting in considerable savings for the public. In addition, the projected lease revenue from these public lands will provide additional public benefits by establishing a revenue stream for capital improvements and maintenance of a range of State facilities.

Section 226-15 Objectives and policies for facility systems - solid and liquid wastes:

In addition to the developer's commitment to sustainable development design, the project will involve upgrades to the County of Hawai'i's Kealakehe Wastewater Treatment Plant to meet current needs, as well as the project's future needs. This commitment is applicable to Alternatives 1 and 2, as well as the proposed project that is discussed in Section 5.1.4.

Section 226-16 Objectives and policies for facility systems – water:

The discussion of water conservation methods and the need to secure additional potable water sources in Section 5.1.4 is also applicable to Alternative 1 and demonstrates conformity to the objective and policies for water facilities. Alternative 2 involves greater irrigation demands in regard to its golf course component and greater potable water demands for human consumption than those for Alternative 1. Alternative 2 is expected to face more serious challenges in securing adequate and reliable sources of water.

Section 229-17 Objectives and policies for facility systems – transportation:

Alternatives 1 and 2 will conform to this objective and policies because they will present water transportation opportunities, including the possible use of transit water shuttles to Kailua-Kona, as described in regard to the proposed project in Section 5.1.4.

Section 226-18 Objectives and policies for facility systems – energy:

Alternatives 1 and 2 conform to these objective and policies through the use of energy efficient design and technology and commitment to the use and production of renewable energy to serve the project's needs. Solar energy production, solar hot water heating, and the use of deep cold seawater for cooling systems are currently identified as means of saving substantial electrical energy costs for the community and the developer.

Section 226-23 Objectives and policies for socio-cultural advancement – leisure:

Alternative 1 conforms to this objective and related policies for the reasons offered in Section 5.1.4 in regard to the proposed project. Alternative 1 will be of greater conformity with the policy regarding access to significant natural and cultural resources in light of the 400-600 foot shoreline setback that has been designed for this alternative.

Although it does not propose the considerable shoreline setback that is planned for Alternative 1, Alternative 2 is consistent with this objective and related policies in incorporating opportunities for shoreline-oriented activities, such as the walking trails. In addition, the golf course component adds a more passive recreation alternative to the active and social components, such as boating, fishing, swimming, trails, walkways, parks, marine life educational and interactive areas that are also part of the project. The golf course would enhance the range of leisure and recreational opportunities offered at Kona Kai Ola.

Section 226-25 Objectives and policies for socio-cultural advancement-culture:

The discussion in Section 5.1.4 is relevant to Alternatives 1 and 2 and demonstrate their conformity the objective and policies of this section.

Both alternatives involve the preservation and protection of cultural features that have been identified by the Cultural Impact Assessment and archaeological studies for the project area. Both provide for public shoreline access, and both will continue the policy of close consultation with the local Hawaiian community and cultural and lineal descendants in the planning of cultural resource preservation and protection.

Section 226-103 Economic priority guidelines:

Alternatives 1 and 2 conform to these guidelines for the same reasons that are set forth in Section 5.1.4. They involve private investment in a public project that will create economic diversification through a mix of marina, industrial, commercial, visitor, and cultural facilities. This presents a wide range of entrepreneurial opportunities, long-term employment opportunities, and job training opportunities.

Section 226-104 Population growth and land resources priority guidelines:

As described in Section 5.1.4, the policy support for the proposed project also extends to the similar development concepts considered in Alternatives 1 and 2. Those alternatives conform to the guidelines of this section because they involve an urban development under parameters and within geographical bounds that are supported by the County's General Plan, a preliminary form of the Kona Community Development Plan, the County's Keahole to Kailua Regional Development Plan, and the reality of being located along the primary commercial/industrial corridor between Keahole Airport and Kailua-Kona. As with the proposed project, the development concepts of Alternatives 1 and 2 are essentially alternatives for the implementation and "in-filling" of the urban expansion area in North Kona.

DHHL Hawai'i Island Plan

This 2002 plan projects DHHL's Honokōhau makai lands for commercial use. As compared to the proposed project and Alternative 2, Alternative 1 presents an expanded commercial component that provides greater compliance with the plan, while addressing certain beneficiaries' concerns about the scale of the marina originally required in the Project. Alternative 2 also conforms to the recommended commercial uses in the makai lands but to a lesser degree than Alternative 1 because of its more limited commercial component. Like the proposed project, its marina size and number of slips raise environmental issues, as more specifically discussed in Part 3, and community concerns.

County of Hawai'i General Plan

HCGP Section 4 – Environmental Quality Goals, Policies and Courses of Action:

Alternative 1 is consistent with this section. It presents a reduction in both the number of slips and the size of the marina basin that, in combination with proper facilities design, public education and enforcement of harbor rules and regulations, would result in very few long term impacts to water quality. Based on the findings of the Harbor Water Quality Modeling Study, water quality would remain similar to existing conditions.

Alternative 2 is the least consistent with this section. In addition to the potential significant impacts of its 800 slip marina basin, its golf course component has the potential to adversely impact marine resources by increasing the nutrient loading in surface runoff and groundwater and also by introducing pesticides, herbicides and other chemicals common in golf course use and management into the nearshore waters surrounding the project site. It also has the potential to adversely affect the anchialine pools beyond their current conditions by introducing such substances into the pool systems.

HCGP Section 7 – Natural Beauty Goals and Policies:

Alternative 2 conforms to some degree with this section. Its golf course component would create a park-like view that would potentially enhance the beauty of the project site and surrounding areas when considered in combination with the existing rugged natural beauty of the area, as demonstrated in other makai golf courses within the region.

HCGP Section 8 – Natural Resources and Shoreline:

Alternative 1 is most consistent with the goals and policies of this section. It would require considerably less marina excavation than the proposed project and Alternative 2 and would reduce the potential risk of long-term adverse impacts to water quality. Based on the findings of the Harbor Water Quality Modeling Study, water quality would remain similar to existing conditions with the degree of reduction in marina basin size that is proposed under Alternative 1. This reduction is also expected to reduce potential impacts upon anchialine pools and their ecosystems, as well as shoreline and marine resources that are affected by water quality. Alternative 1 also retains the shoreline preservation and protection concepts that are proposed in and described for the Project.

HCGP Section 10 – Public Facilities Goals and Policies:

The discussion in Section 5.2.1. in relation to the proposed project is applicable to Alternatives 1 and 2. Improvements to public facilities are integral to the Kona Kai Ola development. The provision of additional boat slips and numerous road improvements, including a makai extension of Kuakini Highway south to Kailua-Kona are incorporated into plans for the project's development. In light of these elements, Alternatives 1 and 2 are consistent with the goals and policies of this section.

HCGP Section 11 – Public Utility Goals, Policies:

As with the proposed project, Alternatives 1 and 2 are consistent with the goals and policies of this section, based on the relevant grounds set forth in Section 5.2.1. The developer is committed to design, fund, and develop environmentally sensitive and energy efficient utility systems to the extent possible, as described previously in Part 5. Its master planning provides for the coordinated development of such systems with the objective of achieving significant savings for the public. As previously-mentioned example, the project development involves the upgrading of the Kealakehe Wastewater Treatment Plant.

HCGP Section 12 – Recreation:

Alternative 1 is consistent with the goals, policies, and courses of action for North Kona in this section.

Although the number of slips is reduced under Alternative 1, the region's boating opportunities and support facilities will still be expanded. The existing marina entrance would still be utilized under this alternative. However, concerns relating to increased activity leading to increased congestion in the marina entrance area would be mitigated to a certain extent. The 400-600 foot shoreline setback, public parks, trails, cultural areas, community facilities and marine science center remain important components of Alternative 1.

The golf course component of Alternative 2 would add a more passive recreation to the active and social components, such as boating, fishing, swimming, trails, walkways, parks, marine life, educational and interactive areas that are also part of the project. The golf course would enhance the range of leisure and recreational opportunities offered at Kona Kai Ola. Alternative 2 is also considered to be consistent with this section.

HCGP Section 13 and 13.2 – Transportation:

The reduced marina component under Alternative 1 will still provide transportation opportunities and provide for possible use of transit water shuttles to Kailua-Kona, although to a lesser degree than under the proposed project and Alternative 2. However, in each scenario, internal people-movers are planned, and numerous roadway improvements are planned for coordination with public agencies, including but not limited to the construction of the Kuakini Highway extension between Honokōhau and Kailua-Kona. Accordingly, both Alternatives 1 and 2 are consistent with the goals, policies, and courses of action for North Kona under these sections of the General Plan.

HCGP Section 14.3 – Commercial Development:

For the reasons presented in the discussion under Section 226-104 of the State Plan, the planned commercial component under Alternatives 1 and 2 are consistent with this section.

HCGP Section 14.8 – Open Space:

Alternatives 1 and 2 are consistent with the goals and policies of this section. Alternative 1 provides a considerable (400-600 foot) shoreline setback along the entire ocean frontage of the project site as a means of protecting the area's scenic and open space resources, as well as natural and cultural resources. Although it does not incorporate the shoreline setback planned in Alternative 1, Alternative 2 provides a golf course component would contribute to the amount of open space that is currently proposed and allow additional view corridors to be created.

Community Development Plans

Community development plans are being formulated for different regions in the County in order to supplement the County's General Plan. The Kona Kai Ola project is located in the Kona Community Development Plan (CDP) area. Maps associated with the preliminary work phases

of the Kona CDP include the Kona Kai Ola project site within the “Preferred Urban Growth” boundary of the North Kona district. The Kona CDP process is guided by a Steering Committee composed of a broad cross-section of the community. The Steering Committee will eventually complete its work and recommend the CDP’s adoption.

After the DEIS was published, the Kona CDP has progressed to the development of plans for the major urban growth corridor north of Kailua-Kona. The Kona CDP has produced a draft plan showing a transit oriented development that includes a midlevel public transit corridor along the mauka residential elevation, and a makai transit corridor that runs along a proposed new frontage road just makai and parallel to Queen Kaahumanu Highway. The development plan for Alternative 1 includes the Kuakini Highway as part of this proposed frontage road and transit line from Kailua Kona to the Kealakehe area, along with a transit stop at Kona Kai Ola. The Alternative 1 plan also includes a road that could be extended to be part of the proposed frontage road should it be approved and implemented. In addition, the Kona CDP has continued to emphasize the principles of smart growth planning with mixed use urban areas where people can live, work, play and learn in the same region. Kona Kai Ola has been specifically designed to be consistent with this policy in order to provide a stable employment base close to where people live in the mauka residential areas already planned for DHHL and HHFDC lands.

It should be noted that currently and over the years, the 1990 Keāhole to Kailua Development Plan (K-to-K Plan) guides land use actions by the public and private sectors. It is intended to carry out the General Plan goals and policies related to the development of the portion of North Kona area, including the Kona Kai Ola site. The “Preferred Growth Plan” of the Keāhole to Kailua Development Plan identifies the project site as a new regional urban center to include commercial, civic, and financial business related uses, an expanded “Harbor Complex,” a shoreline road, and a shoreline park. The proposed project and the development concepts in Alternatives 1 and 2 are therefore consistent with the recommendations in the Keāhole to Kailua Development Plan.

Hawai'i County Zoning

As shown on Figure AA, the project site is zoned “Open”. Under Section 25-5-160 of the Hawai'i County Code, “The O (Open) district applies to areas that contribute to the general welfare, the full enjoyment, or the economic well-being of open land type use which has been established, or is proposed. The object of this district is to encourage development around it such as a golf course and park, and to protect investments which have been or shall be made in reliance upon the retention of such open type use, to buffer an otherwise incompatible land use or district, to preserve a valuable scenic vista or an area of special historical significance, or to protect and preserve submerged land, fishing ponds, and lakes (natural or artificial tide lands)”.

Some of the proposed uses at Kona Kai Ola are permitted uses in the Open zone such as:

- Heiau, historical areas, structures, and monuments;
- Natural features, phenomena, and vistas as tourist attractions;
- Private recreational uses involving no aboveground structure except dressing rooms and comfort stations;

- Public parks;
- Public uses and structures, as permitted under Section 25-4-11.

In addition to those uses permitted outright, the following uses are permitted after issuance of a use permit:

- Yacht harbors and boating facilities; provided that the use, in its entirety, is compatible with the stated purpose of the O district.
- Uses considered directly accessory to the uses permitted in this section shall also be permitted in the O district.

The proposed time-share and hotel units and commercial uses would not be consistent with the zoning designation of "Open". Project implementation therefore requires rezoning of portions of the project to the appropriate zoning category or use permits for certain uses.

Special Management Area

As shown in Figure AB, the entire project area up to the highway is within the coastal zone management zone known as the Special Management Area ("SMA"). At the County level, implementation of the CZM Program is through the review and administering of the SMA permit regulations. Kona Kai Ola complies with and implements the objectives and policies of the Coastal Zone Management (CZM) Program, and a full discussion is provided in Section 5.1.3. The development concepts in the proposed project and Alternatives 1 and 2 will be subject to applicable SMA rules and regulations.

Attachment 2

4.6.5 Workforce Housing Impacts

In response to DEIS comments, a study of possible workforce requirements and related secondary impacts was conducted by The Hallstrom Group; this study is presented in Appendix C-2. This study was based on a four-step study process that included 1) quantification of population and employment projections, 2) analysis of West Hawai'i employment demand and supply, 3) characterization of the subject workforce, and 4) quantification of subject workforce housing impacts.

The population and job count on the Hawai'i Island are forecast to increase by approximately 70 percent during the 24 year projection period that ends in 2030. On average, at least 60 percent of the population growth will be a result of net in-migration to the County.

Although trends will be slowing relative to recent decades, a significant portion of the population and business expansion will be directed towards West Hawai'i. In the next two decades, the population and job count in West Hawai'i will increase by about 80 percent, reaching 128,200 residents and 87,400 employment positions by 2030. The available approved or entitled, proposed and announced new projects and their associated forecast job creation supply will not be sufficient to meet estimated employment demand over time. Further, with the approaching build-out of the major West Hawai'i resorts and residential-orientation of the newer resort communities, few opportunities will exist for expansion in the historically-vital tourism economic sector.

As discussed in Section 4.6.3.2, implementation of the Kona Kai Ola master plan will create a total of 3,842 on-site full time equivalent employment positions in the operating businesses of the development. The project is estimated to be operational around 2012, following completion of infrastructure and Phase I construction, and will continue until the community reaches build-out and stabilization in 2026.

Approximately 45 percent of the jobs will be entry level positions with an average annual wage of \$20,000 in current dollars. Another 40 percent will be mid-level jobs with average yearly pay of \$32,000, and, 15 percent will be management/high-skill positions with wages averaging \$50,000.

Approximately 2,147 of the jobs in the subject project will be filled by persons who have in-migrated to the Big Island. However, only a nominal portion would be specifically relocated to West Hawai'i as a result of the development.

The total net housing load created by Kona Kai Ola in-migrant workers will be 1,074 units. This in-migration will generate a need for a range of 625 to 859 affordable housing units, as follows:

- As discussed in Section 4.5.2.2, under Hawai'i County Ordinance Chapter 11, Section 4 Affordable Housing Requirements, hotel uses generating more than 100 employees on a full-time equivalent basis must earn one affordable housing credit for every four full-time equivalent jobs created. Application of the "1 to 4" ratio to all of the transient units proposed for Kona Kai Ola (hotel and time-share) results in a workforce housing requirement of 625 units.

- Another method of calculating the need for affordable worker housing units is to estimate that approximately 80 percent of the total in-migrant worker need housing that meet affordable housing pricing guidelines. This results in a high end range of 859 units.

Based on affordable housing pricing guidelines, affordable housing units will have an estimated sales price of \$216,000 to \$292,000.

As agreements between the State and JDI prohibit residential development at Kona Kai Ola, workforce housing would need to be located off-site. Probable and desirable locations for workforce housings were based on availability, efficiencies and surveys conducted of area workers. Possible locations in support of Kona Kai Ola included the mid-elevation lands of the Keahole to Kailua-Kona Corridor, between the Queen Ka'ahumanu fronting commercial/industrial developments and Mamalahoa Highway; and in the Waikoloa Village expansion areas.

The most suitable location for workforce housing units is the Villages at La'i'Ōpua community, a DHHL project, or within the Hawai'i Housing Finance and Development Corporation affordable housing development planned for Keahuolū. These are two State-owned undertakings directly across the highway in the same ahupua'a. Locating workforce affordable housing units in these communities would substantially lessen the traffic impacts associated with a community subject workforce. Alternatively, the State lands adjacent to Waikoloa Village would be appropriate.

JDI will comply with all affordable housing requirements of applicable Hawai'i County ordinances.

4.6.6 Market and Economic Impacts Associated with Alternative 1

Alternative 1, which has a reduced marina size of 25 acres, and fewer hotel and time-share units, would have a meaningful market standing, create significant economic opportunities, and provide a net benefit to State and County coffers. From a market perspective, a smaller Kona Kai Ola would still be the only mixed use community in the Keahole to Kailua-Kona Corridor offering competitive hotel and time-share product.

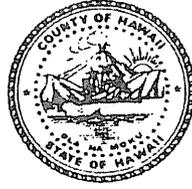
The additional commercial sites in the near-highway lands will also be in demand as the area continues its evolution into the northerly gateway of the Kona urban center. The increased retail acreage will further capitalize on the available frontage-related opportunities by generating greater cumulative attraction for the development and enabling increased product diversity supporting a wider spectrum of businesses.

Absorption of the visitor-oriented inventory would be proportionately shorter with fewer hotel and time-share sites and units to be marketed, and fewer marina slips to be filled. The absorption time-frame for the larger commercial component will be longer, while the amount of marina-support and other leasable acreage is the same as in the proposed project and will require a similar absorption period.

Table 3 compares the primary marketable components of the proposed project and Alternative 1 and their estimated absorptions:

Attachment 3

Harry Kim
Mayor



Lincoln S.T. Ashida
Corporation Counsel

Gerald Takase
Assistant Corporation Counsel

County of Hawaii

OFFICE OF THE CORPORATION COUNSEL

101 Aupuni Street, Suite 325 • Hilo, Hawaii 96720-4262 • (808) 961-8251 • FAX (808) 961-8622

May 21, 2001

FILE COPY	
DIV CHIEF	_____
ACC	_____
CC	_____

MEMORANDUM

TO: CHRISTOPHER J. YUEN
Planning Director

FR: PATRICIA K. O'TOOLE *PKO*
Deputy Corporation Counsel

RE: General Plan Map Interpretation

Attached is a copy of an opinion from our office in response to an inquiry from Bobby Jean Leithead-Todd, Planning Committee Chair, on a pending rezoning request by Matsuno Enterprises, Inc. I gave a copy of your April 27, 2001 letter addressed to Lincoln Ashida to Mr. Torigoe to review before he responded to the request from the council. In summary, the opinion is that the planning director is an appropriate person to advise the council on a rezoning application when there is an underlying question concerning the Land Use Pattern Allocation Guide (LUPAG) map. It seems that if you would like more than advisory power in these situations there would have to be a specific grant of such authority.

Please feel free to contact me or Mr. Torigoe if you have any further questions.

PKO:pc
a:PKO-CCSR01:Gen Plan Map memo to Yuen 5-01
Enclosure

Harry Kim
Mayor



Lincoln S.T. Ashida
Corporation Counsel

Gerald Takase
Assistant Corporation Counsel

County of Hawaii

OFFICE OF THE CORPORATION COUNSEL

101 Aupuni Street, Suite 325 • Hilo, Hawaii 96720-4262 • (808) 961-8251 • FAX (808) 961-8622

May 15, 2001

RECEIVED
Time _____ By _____
Date 7/5/01
County Council JP-PC

Ms. Bobby Jean Leithead-Todd
Planning Committee Chair
Hawai'i County Council
25 Aupuni Street
Hilo, Hawai'i 96720

Dear Ms. Leithead-Todd:

RE: Communication 60/Bill 17
Change of Zone Application, RS-10 to CG-20
TMK: 2-2-40:14 and 69
Matsuno Enterprises, Ltd.
(Our Entry No. 287)

This is in response to your letter dated April 3, 2001, in which you asked for a legal opinion as to what is the General Plan Land Use Pattern Application Guide (LUPAG) Map designation of the subject property. This question arises in context of the owner's application for upzoning, and the Charter Section 3-15 (b) requirement that no zoning ordinance "shall be initiated or adopted unless the same conforms to and implements the general plan."

We have reviewed various historical documents regarding the discussion of whether this property was interpreted as being within the high density area by former Planning Director Albert Lyman. It appears that Mr. Lyman did in 1987 give the Planning Commission his opinion that this property is "already included" or "already reflected" in the high density designation. Hearing Transcript, August 17, 1987, pp. 14-15. By letter of November 4, 1988 the owners nevertheless asked the Council to specifically include the property in the high density area. By letter of January 25, 1989, Takashi Domingo asked the Council to include this request in the LUPAG map changes

Comm. No. 60.6
File No. ZNG/HI
Ref. To: Presented PC
Ref. Date JUL 6 2001

Ms. Bobby Jean Leithead-Todd
May 15, 2001
Page 2

to be recommended to the Commission. On February 15, 1989, the Council appears to have forwarded the request to the new Planning Director, Duane Kanuha. However, the request does not appear to have been included in the final changes to the LUPAG map.

Prior amendments placing the Prince Kuhio Plaza area into high density identified Puainako Street as the boundary. All concerned concede that the LUPAG map was not formally changed to include the subject property in the high density area. You have essentially asked whether Planning Director Lyman's interpretive statements have the legal effect of including the subject property in the high density area, and if so, under what authority.

The short but somewhat superficial answer is "no," Mr. Lyman's interpretation does not change the LUPAG map. The LUPAG map, consistent with general plan history, graphically seems to show Puainako street as the boundary between the Prince Kuhio Plaza high density area and the subject lower density area. If you assume the foregoing, according to the LUPAG map the subject property was and remains on the lower density side of Puainako Street. As Councilman Tyler aptly noted, "you could give this to a grade school person and they could tell you exactly where this property is." April 3, 2001 minutes, pp. 9-10.

However, does this necessarily mean that an upzoning of this property could not "conform to and implement the general plan" as required by Charter Section 3-15(c)? Not necessarily. That is a decision as to which the Planning Director may advise the Council, and which the Council must ultimately make.

This is because the LUPAG map was not meant to describe in fine detail what specific lots were immutably predestined to specific designations. The General Plan p.79, under "Proposed Land Use Pattern" states:

"There are no universal standards for determining the amount of land needed in the future for each land use or activity located within an area. Estimates can be made, however, of the future land use acreage allocation for each use. The land use pattern is a broad, flexible design intended to guide the direction and quality of future developments in a coordinated and rational manner. The General Plan Land Use Pattern Allocation Guide Map indicates the general location of various land uses in relation to each other.

14/045

Land uses are designated *generally* on the map in reference to the following categories: . . ." (Italics added)

The General Plan goes on to list the various Urban and Rural Designations. But by its own terms, the land use pattern and the LUPAG map is intended to show a "broad, flexible design," indicating only the "general location of various land uses in relation to each other." Uses are only designated "generally" on the map by category. The LUPAG map clearly is not intended for use as a parcel-by-parcel delineation of use limitations.

It can be argued that where streets are used as boundaries, this should provide precise use limitations for adjacent properties. However, it is apparent that the map is not scaled to provide that degree of accuracy. Indeed, the streets are not even marked or identified. The current Planning Director, Mr. Christopher J. Yuen, in his April 27, 2001 letter to Corporation Counsel Lincoln Ashida, notes that "there are many instances where zoning has been allowed that is not precisely consistent with the LUPAG, if you try to precisely scale the map." This includes areas such as parts of the Kona Industrial subdivision and the Ritz-Carlton Hotel. If the map is not scaled for this level of accuracy, then even the accuracy of the supposed streets is in question. Even if one wanted to use the map for parcel-by-parcel categorization, it simply is not scaled to do so.

It can be argued that the history of the Plaza specifically identifies Puainako as the boundary between areas. However, if the purpose of the LUPAG map is to show the "general" location of various intended land uses, and not specific parcel status, then it should be used in a general way, especially regarding lots which are on the boundary lines. This parcel is definitely on the boundary line. Puainako Street may tell you where the line is, but the general plan says the line is still general, broad and flexible in its application.

For parcels such as this, it would be convenient but probably a misuse of the LUPAG map to simplistically say, "can't even consider it, would not conform to and implement the general plan." The General Plan and LUPAG map actually show this lot adjacent to the very edge of the generally shown high density area. In such a situation, it falls to the Planning Director to advise the Council on whether upzoning of this particular parcel would conform to the general plan, as expressed by the general outlines of the designated use areas.

Ms. Bobby Jean Leithead-Todd
May 15, 2001
Page 4

Before the 1998 Charter amendments, the Planning Director was, among other things, to:

(a) Serve as the chief planning officer of the county and the technical advisor to the mayor, planning commission, and council on all planning and related matters.

(b) Prepare a general plan and amendments thereto to guide the development of the county district or districts.

(c) Prepare proposed zoning and subdivision ordinances, zoning maps and regulations and any amendments or modifications thereto. . . .

* * *

(g) Receive, process and recommend to the planning commission appropriate action regarding rezoning applications . . .

After the 1998 Charter amendments, the Planning Director is, among other things, to:

(a) Advise the mayor, planning commission, and council on all planning and land use matters.

(b) Prepare a general plan, implementation plans, and any amendments thereto in accordance with Section 3-15.

(c) Prepare proposed zoning and subdivision ordinances, zoning maps and regulations and any amendments thereto. . . .

* * *

(g) Make recommendations on rezoning applications,

Thus, it has been and remains the Planning Director's duty to advise the Commission and the Council on rezoning and planning. Being the drafter of the general

Ms. Bobby Jean Leithead-Todd
May 15, 2001
Page 5

plan and amendments, the Director clearly speaks with some authority regarding the intent and implementation of the General Plan and the LUPAG map. If anyone in the County is authorized to advise the Council regarding whether a proposed rezoning conforms to and implements the general plan, it would be the Planning Director.

Perhaps this is what Mr. Lyman was in substance saying; that this property need not be specifically included by amendment because it is on the edge of the general high density boundary of Puainako street. It would be within the Planning Director's authority to advise the Commission and Council that an upzoning of such borderline property would conform to and implement the general plan, if he reasonably believed thus under all the circumstances.

To summarize, the subject property appears to be just outside of but adjacent to the high density LUPAG map area bounded by Puainako Street. However, because the general plan and LUPAG map are intended to flexibly establish only the general location of different types of uses in relation to each other, the property's LUPAG map location should not automatically foreclose consideration of rezoning. The significance of the LUPAG map location should be considered in light of the advice of the Planning Director and the recommendations of the Planning Commission regarding this rezoning. The Council should consider all applicable general plan policies to determine whether rezoning would conform to and implement the general plan, as well as other usual factors considered in weighing the merits of a rezoning request.

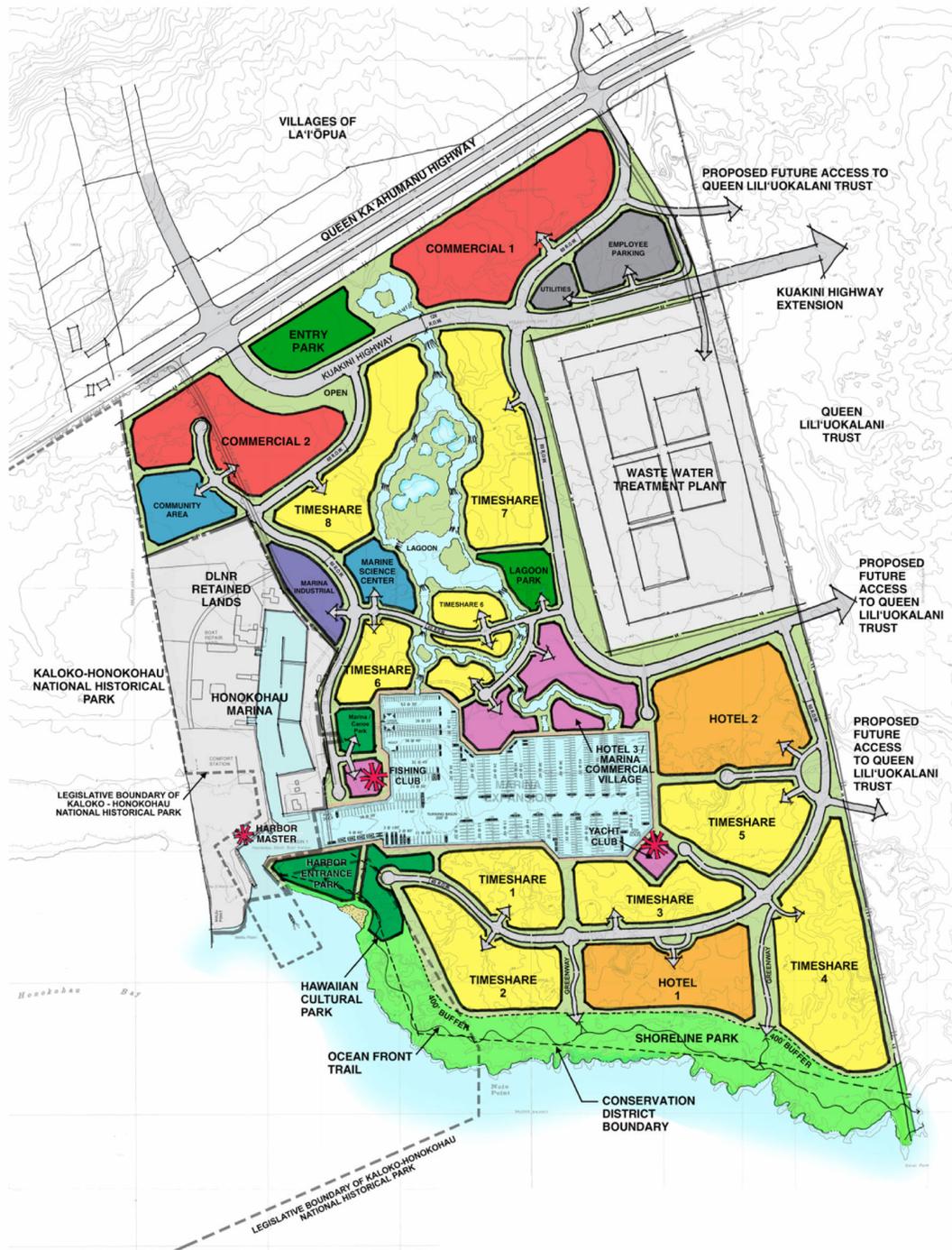
We hope this has been of help. Please contact the undersigned if you require further assistance.

Sincerely,


IVAN M. TORIGOE
Deputy Corporation Counsel

IMT:ch
misc2:a/CouncilChangeZoneMatsunoEnterprise.ltr

Attachment 4-1



Source: PBR HAWAII

Plan is conceptual only and subject to change

Figure D: Preliminary Concept Plan

Legend

 Timeshare	 Marine Science Center / Community Area
 Hotel	 Utilities / Hotel Facilities
 Commercial	 Recreation / Open
 Marina Retail	 Shoreline Park
 Marina Support / Commercial	



Not to Scale



JACOBY DEVELOPMENT, INC.

Attachment 4-2



Source: PBR HAWAII

Plan is conceptual only and subject to change

Figure E: Green / Open Space Plan



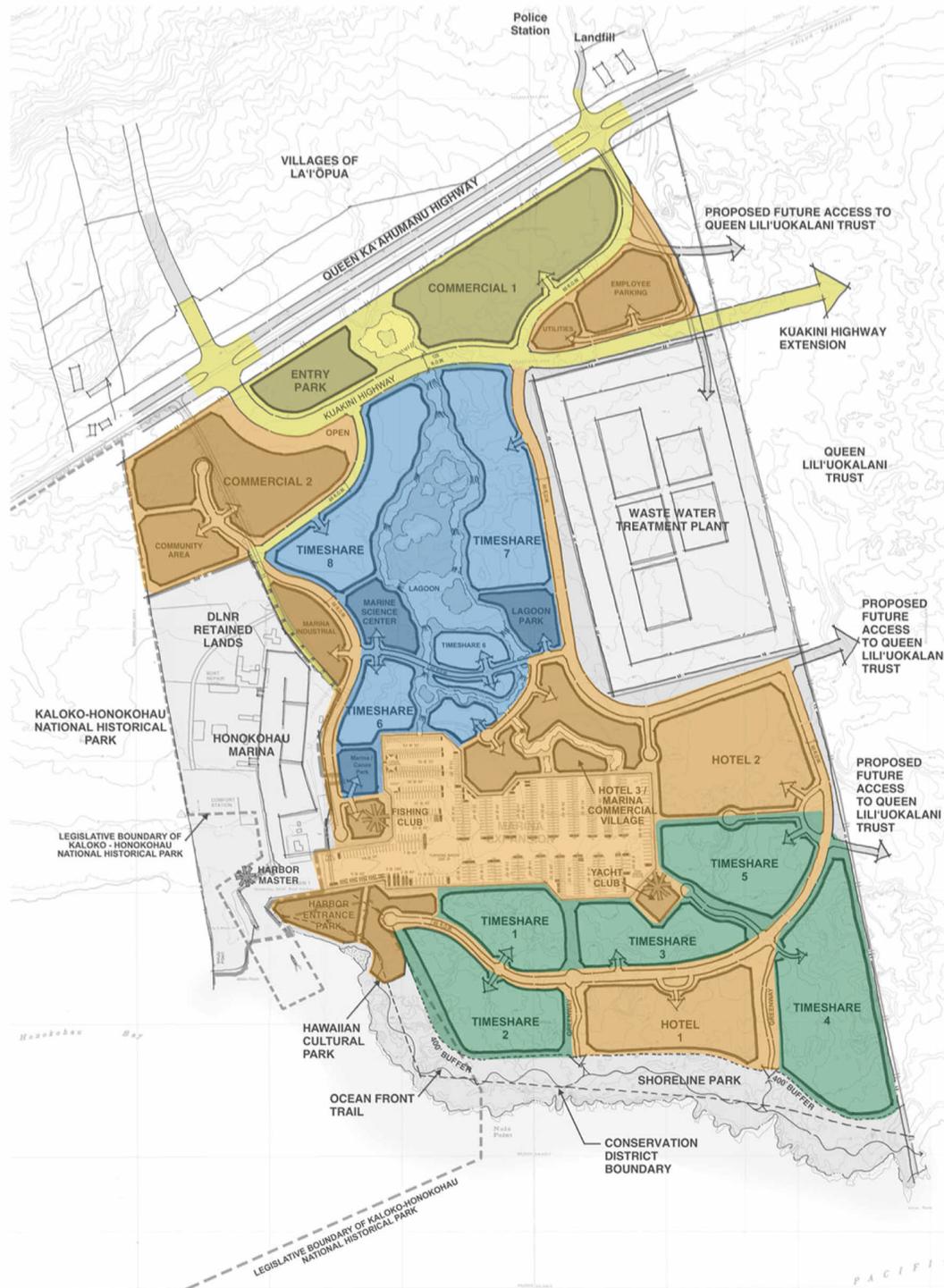
Not to Scale



JDI

JACOBY DEVELOPMENT, INC.

Attachment 4-3



Source: PBR HAWAII

Plan is conceptual only and subject to change

Figure F: Phasing Map

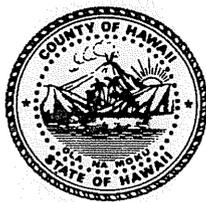
Legend	COLOR	PHASE
		1
		2
		3
		4



Not to Scale



Harry Kim
Mayor



Lawrence K. Mahuna
Police Chief

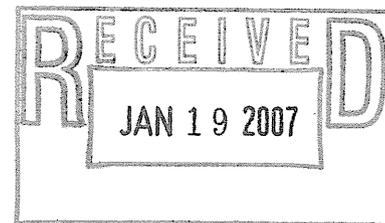
Harry S. Kubojiri
Deputy Police Chief

County of Hawaii

POLICE DEPARTMENT

349 Kapiolani Street • Hilo, Hawaii 96720-3998
(808) 935-3311 • Fax (808) 961-2389

January 16, 2007



Mr. Dayan Vithanage
Oceanit
Oceanit Center
828 Fort Street Mall, 6th Floor
Honolulu, Hawaii 96813

Dear Mr. Vithanage:

This responds to your request for review of the Draft Environmental Impact Statement (DEIS) for the Kona Kai Ola project at Honokohau, North Kona, Hawaii.

Staff has serious concerns with the current proposed roadway alignment. This project proposes that the north end of Kuakini Highway be extended to meet with Kealakehe Parkway. There is no provision to extend this roadway farther north. With exception to Kaloko National Park, all of the properties along the makai side of Queen Kaahumanu Highway between Palani Road and Keahole Airport are slated for some form of higher-density development.

Staff feels that the proposed roadway system, even with the widening of Queen Kaahumanu Highway, will not provide sufficient egress for a tsunami evacuation. Staff proposes that the northern Kuakini Highway extension intersect at Kealakehe Parkway rather than terminate. Staff further recommends that this extension continue north across the Kaloko National Park, the Kohana Iki properties, the O'ama properties, and the NELHA properties to finally intersect with the Keahole Airport entry road. This secondary road will create an alternate evacuation route given any problems along Queen Kaahumanu Highway.

Staff further recommends that all further development along the makai side of Queen Kaahumanu Highway between Palani Road and the Keahole Airport entrance be put on hold until this secondary road is completed.

Staff maintains that until such time as adequate roads are built to support the ever-growing population, construction, and additional vehicles on our roadways, additional

development must adhere to the County's proposed policy on the principle of concurrency.

Should you have any questions, please contact Major John Dawrs at 326-4646, ext. 299, or Captain Paul Kealoha, Commander of the Kona District, at 326-4646, ext. 249.

Sincerely,

LAWRENCE K. MAHUNA
POLICE CHIEF

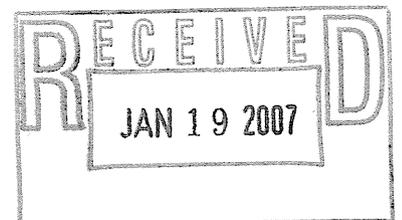


DEREK D. PACHECO
ASSISTANT CHIEF
AREA II OPERATIONS

cc: Mr. Christopher Yuen, Planning Director
Hawaii County Planning Department

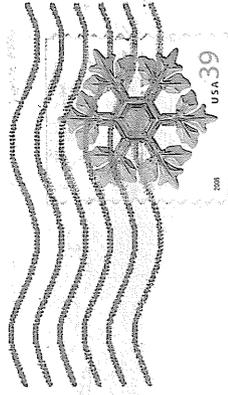
Ms. Linda Chinn
Department of Hawaiian Homelands
1099 Alakea Street, Suite 2000
Honolulu, Hawaii 96813

Mr. Scott Condra, Senior Vice President
Jacoby Development, Inc.
171 17th Street NW, Suite 1550
Atlanta, GA 30363



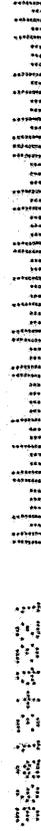


County of Hawaii
POLICE DEPARTMENT
349 Kapiolani Street
Hilo, Hawaii 96720-3998



Mr. Dayan Vithanage
Oceanit
Oceanit Center
828 Fort Street Mall, 6th Floor
Honolulu, Hawaii 96813

RECEIVED
JAN 19 2007





July 23, 2007

Lawrence Mahuna, Police Chief
County of Hawai'i Police Department
349 Kapi'olani St.
Hilo, Hawai'i 96720-3998

Dear Mr. Mahuna:

Subject: Kona Kai Ola Draft Environmental Impact Statement
Response to Your Comments Dated January 16, 2007

Thank you for your comments on the Kona Kai Ola Draft Environmental Impact Statement.

Prior to addressing your specific comments, we note that the EIS includes a discussion of three alternatives, one of which specifically addresses the proposed frontage road concept you identify in your letter that would integrate the proposed Kuakini Highway extension with a roadway that would be parallel to and be makai of Queen Ka'ahumanu Highway. This frontage road is envisioned to extend as far north as the Kona International Airport access road.

As explained in the DEIS, the agreement between JDI and the State of Hawai'i established a required scope and scale of the project for which the impact analysis was provided. Several comments have addressed the fact that alternatives other than the No Project Alternative were not addressed in the DEIS Section 2, Alternatives Analysis.

Kona Kai Ola is of the position that alternative actions other than a No Project alternative are not currently feasible without an amendment to the agreement with the State. Agency and public comments in response to the DEIS, as well as additional information generated as a result of inquiry into issues raised by the comments, have been helpful in identifying alternative actions that will serve the State's goal of providing additional marina slips for the Kona area. These alternative actions also serve to reduce or mitigate anticipated effects of the proposed development.

Thus, agencies such as the Land Division of the Department of Land and Natural Resources, the U.S. Department of the Interior Fish and Wildlife Service, the Planning Department of the County of Hawai'i, and the Office of Environmental Quality Control (OEQC), as well as community organizations have commented

that a reduced scale marina and related facilities should be considered. The OEQC has also asked that the alternative of a reduced scale project be evaluated under the assumption that DHHL may determine that a downsized project would be preferred.

In response to these comments on the DEIS and in consideration of measures to mitigate anticipated impacts, the EIS Section 2, Alternatives Analysis, has been revised to describe the following alternatives, which are discussed in more detail in the EIS:

- Alternative 1 is a project involving a 400-slip marina, 400 hotel units, 1,100 time share units, and commercial and support facilities. This alternative would enhance water quality and avoid the need to widen the existing harbor entrance channel, as well as reduce traffic and socioeconomic impacts.
- Alternative 2 is an alternative that had been previously discussed, but not included in the proposed project that includes an 800-slip harbor and a golf course.
- Alternative 3 is the no-action alternative.

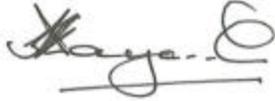
A comparison between impacts related to the proposed project concept and impacts related to Alternative 1 indicates that a reduction in the acreage and number of slips in the marina, as well as the reduction in hotel and time-share units, would generate less environmental, traffic, social and economic impacts. Although positive economic impacts would be reduced, Alternative 1 can be considered as a preferable alternative because of reduced environmental impacts. However, while it can be concluded that the 25-acre marina in Alternative 1 would be the preferred size, the DLNR agreement establishes the size of the marina at 45 acres and 800 slips. An amendment to the DLNR agreement is required in order to allow Alternative 1 to proceed. Hence, selection of Alternative 1 is an unresolved issue at this time. The additional EIS text that includes the added EIS Section 2, Alternative Analysis, is contained in Attachment 1 of this letter.

Alternative 1 would decrease the number of trips generated in the AM peak period 35 percent, from 1,511 trips in the proposed plan to 977 trips, and would decrease the PM peak period by 40 percent, from 3,277 trips in the proposed plan to 1,972 trips.

We reviewed the proposed frontage road concept that would integrate the proposed Kuakini Highway extension with a roadway that would be parallel to and be makai of Queen Ka'ahumanu Highway. This frontage road is envisioned to extend as far north as the Kona International Airport access road. We concur with this concept and have made provisions in Alternative 1 to accommodate the frontage road at the time approvals are obtained from the adjacent properties to the north.

Your comment letter and this response are included in the Final Environmental Impact Statement. We appreciate your participation in the environmental review process. Please submit a request to our office if you would like to receive a printed or electronic copy of the Final Environmental Impact Statement, or portions thereof.

Sincerely,



Dayan Vithanage, P.E., PhD.
Director of Engineering

cc: Office of Environmental Quality Control
State Department of Hawaiian Home Lands
Jacoby Development, Inc.

Attachment 1

2 Alternatives Analysis

~~In typical land development projects, the initial planning process includes the exploration of alternatives to development objectives. In the EIS process, these alternatives are presented with a disclosure of reasons for the dismissal of non-preferred alternatives.~~

~~Kona Kai Ola does not follow this same pattern of alternatives evaluation. As discussed in Section 1.4, the proposed Kona Kai Ola project is the result of agreements between JDI and the State DLNR and DHHL. The agreements and leases between the State and JDI stipulate the parameters of development for this site in terms of uses, quantities and size of many features, resulting in a limited range of land uses. Unlike a private property project, JDI is required to meet the criteria outlined in the agreements, thereby affording less flexibility in options and uses. From the developer's perspective, the agreements must also provide sufficient flexibility to allow for a development product that responds to market needs and provides a reasonable rate of return on the private investment.~~

~~The agreements between JDI and DLNR specify that the proposed harbor basin is to be 45 acres and accommodate 800 slips. This development proposal is the subject of this EIS. In response to DEIS comments, additional water quality studies and modeling were conducted. These studies determined that the water circulation in a 45-acre 800-slip marina would be insufficient to maintain the required standard of water quality. The models of water circulation suggest that a new 25-acre harbor basin could successfully maintain required water quality in the new harbor. Comments on the DEIS from DLNR, from other government agencies, the neighbors and the general community also called for the consideration of alternatives in the EIS, including a project with a smaller harbor basin and less density of hotel and time-share units.~~

~~In response to these comments on the DEIS, three alternatives are evaluated in this Final EIS and include Alternative 1, which is a plan with a 25-acre 400-slip harbor basin including a decrease in hotel and time-share units; Alternative 2, which is an alternative that had been previously discussed but not included in the proposed project, that includes an 800-slip harbor and a golf course; and Alternative 3, the no-project alternative. Each alternative is included in the EIS with an evaluation of their potential impacts. These project alternatives are presented to compare the levels of impacts and mitigation measures of the proposed project and alternative development schemes pursuant to requirements set forth in Chapter 343, HRS.~~

~~JDI is required to provide a new marina basin not less than 45 acres and a minimum of 800 new boat slips. Further, the agreements provide the following options for land uses at the project site:~~

- ~~▪Golf Course~~
- ~~▪Retail Commercial Facilities~~
- ~~▪Hotel Development Parcels~~
- ~~▪Marina Development Parcels~~
- ~~▪Community Benefit Development Parcels~~

JDI is not pursuing the golf course option and is proposing instead to create various water features throughout the project site. All other optional uses have been incorporated in Kona Kai Ola.

2.1 Project Alternatives

2.1.1 Alternative 1: 400-Slip Marina

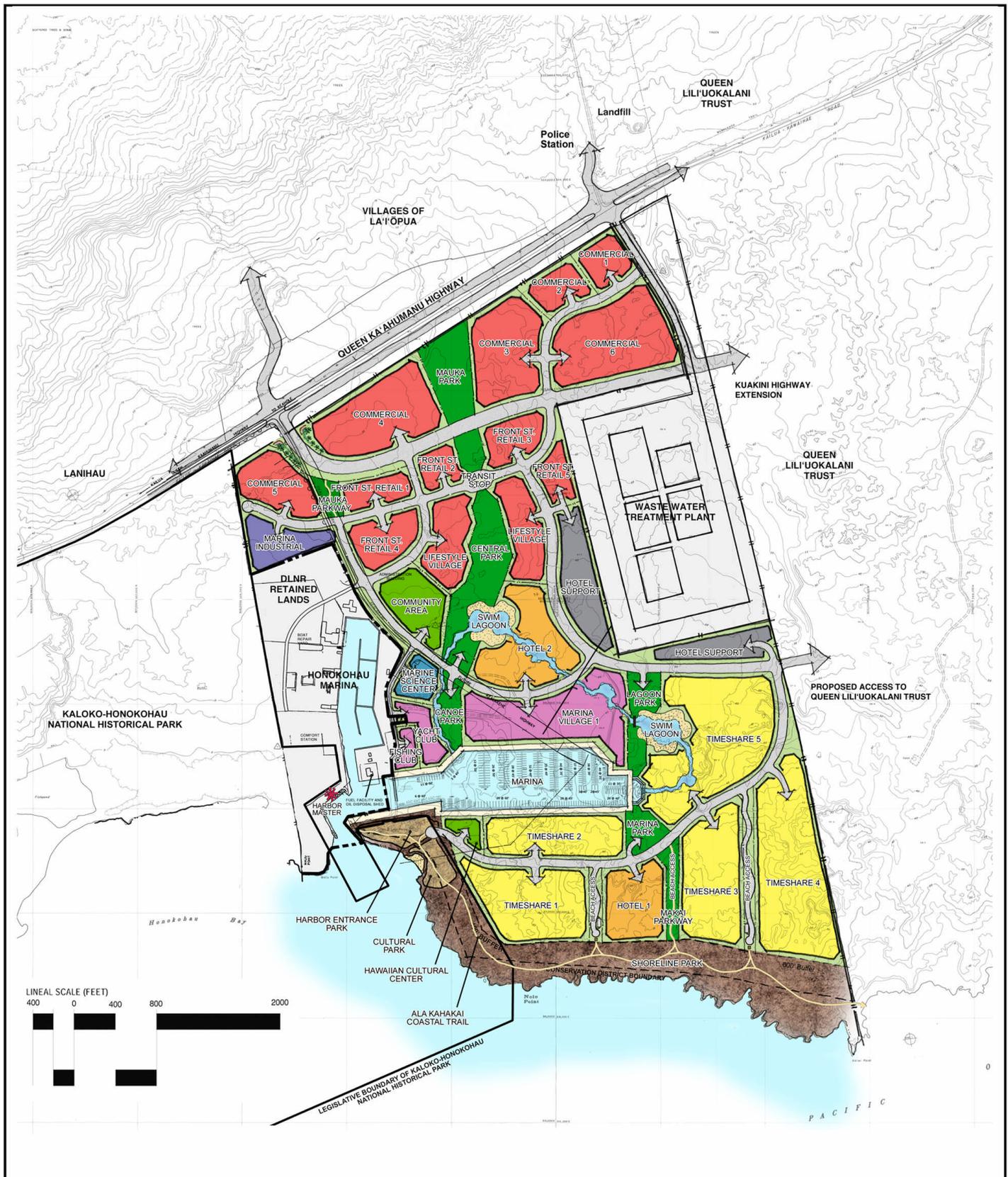
Studies conducted in response to DEIS comments found the construction and operation of an 800-slip marina may significantly impact the water quality within the marina and along the shoreline. Specifically, the Harbor Water Quality Modeling Study, as contained in Appendix U, found that the water circulation in a 45-acre 800-slip harbor was insufficient to maintain an acceptable level of water quality. Further, the existing harbor channel, which would serve both the existing and new harbors, could not adequately serve the increased boat traffic generated by an 800-slip marina during peak traffic. Mitigation measures to accommodate peak boat traffic included the widening of the existing channel, an action that would entail a complex process of Federal and State approvals and encounter significant environmental concern.

Concerns related to the proposed density of hotel and time-share units were also expressed in comments to the DEIS from members of the public, neighbors to the project site, especially the Kaniohale Community Association, and government agencies. Common themes in DEIS comments were related to impacts regarding traffic, project requirements of potable water and infrastructure systems, including sewer, drainage, utility and solid waste systems, and socioeconomic impacts.

In response to the water quality study results, and to the DEIS comments, an alternative plan was developed with a smaller marina with less boat slips, and a related decrease in hotel and time share units. Illustrated in Figure G, Alternative 1 reflects this lesser density project, and features a 400-slip marina encompassing 25 acres. For the purposes of the Alternative 1 analysis, JDI assumed 1,100 time-share units and 400 hotel rooms. Project components include:

- 400 hotel units on 34 acres
- 1,100 time-share units on 106 acres
- 143 acres of commercial uses
- 11 acres of marina support facilities
- 214 acres of parks, roads, open spaces, swim lagoons and community use areas

In addition, Alternative 1 would include the construction of a new intersection of Kealakehe Parkway with Queen Ka'ahumanu Highway, and the extension of Kealakehe Parkway to join Kuakini Highway to cross the lands of Queen Lili'uokalani Trust, and connecting with Kuakini Highway in Kailua-Kona. This is a significant off-site infrastructure improvement and is included in the agreements between the State and JDI.



Source: PBR HAWAII

Plan is conceptual only and subject to change

Figure G: Alternative 1: 400-Slip Marina

LEGEND

 TIME SHARE	 MARINA SUPPORT / COMMERCIAL	 UTILITIES
 HOTEL	 MARINE SCIENCE CENTER	 PARKS & GREEN SPACE
 RETAIL / COMMERCIAL	 COMMUNITY AREA / CULTURAL CENTER	 SHORELINE
 MARINA RETAIL	 SWIM LAGOON	 HARBOR ENTRANCE PARK / CULTURAL PARK
 MARINA		



Like the proposed project, Alternative 1 would have a strong ocean orientation, and project components that support this theme would include various water features including seawater lagoons and a marine science center. The new Alternative 1 harbor would include a yacht club, fishing club, a canoe park, and a cultural park with a focus on Hawaiian maritime cultural heritage of the voyaging canoe. The coastal area would be protected with a shoreline park with trails and public access parking for walking and shoreline fishing, and a cultural park surrounding the heiau, the cultural sites and 'Alula for community use. Additional Alternative 1 community areas would include facilities and space for community use, including programs of the Kona Kai Ola Community Foundation, which supports community programs in health care, culture, education, and employment training for the local community, especially to native Hawaiians. Like the original proposed plan, Alternative 1 includes 40 percent of the land in parks, roads, open spaces, swim lagoons and community use areas.

2.1.2 Alternative 2: Golf Course Feature

Alternative 2 was among the alternatives discussed at a community charrette in September 2003. It includes a golf course, which is a permitted use in the DLNR agreement and DHHL lease. As Figure H illustrates, an 18-hole championship golf course would occupy 222 acres on the southern portion of the project site. As with the proposed project, Alternative 2 includes an 800-slip marina on a minimum of 45 acres.

To support the economic viability of the project, other Alternative 2 uses include:

- Golf course clubhouse on three acres
- 1,570 visitor units on 88 acres fronting the marina
- 118 acres of commercial uses
- 23 acres of community uses

Community uses in Alternative 2 include an amphitheater, a canoe facilities park, a community health center, a Hawaiian cultural center and fishing village, a marine science center and employment training center. The sea water lagoon features contained in the proposed project and Alternative 1 are not included in this alternative.

2.1.3 Alternative 3: No Action

In Alternative 3, the project site would be left vacant, and the proposed marina, hotel and time-share facilities, commercial and marina industrial complexes, and community-oriented uses would not be realized.

The economic viability and sustainability of the project is determined by the density and uses proposed. Because JDI is obligated to develop an 800 slip marina for the State, complete road improvements, and provide various public enhancement features at its own expense, the density proposed for the income generating features of the development must be sufficient to provide an acceptable level of economic return for JDI. The market study, which is discussed in Section 4.6, reviewed various development schemes and determined that the currently proposed density and mix is the optimum to meet the anticipated financing and development cost obligations for the public features associated with the development.

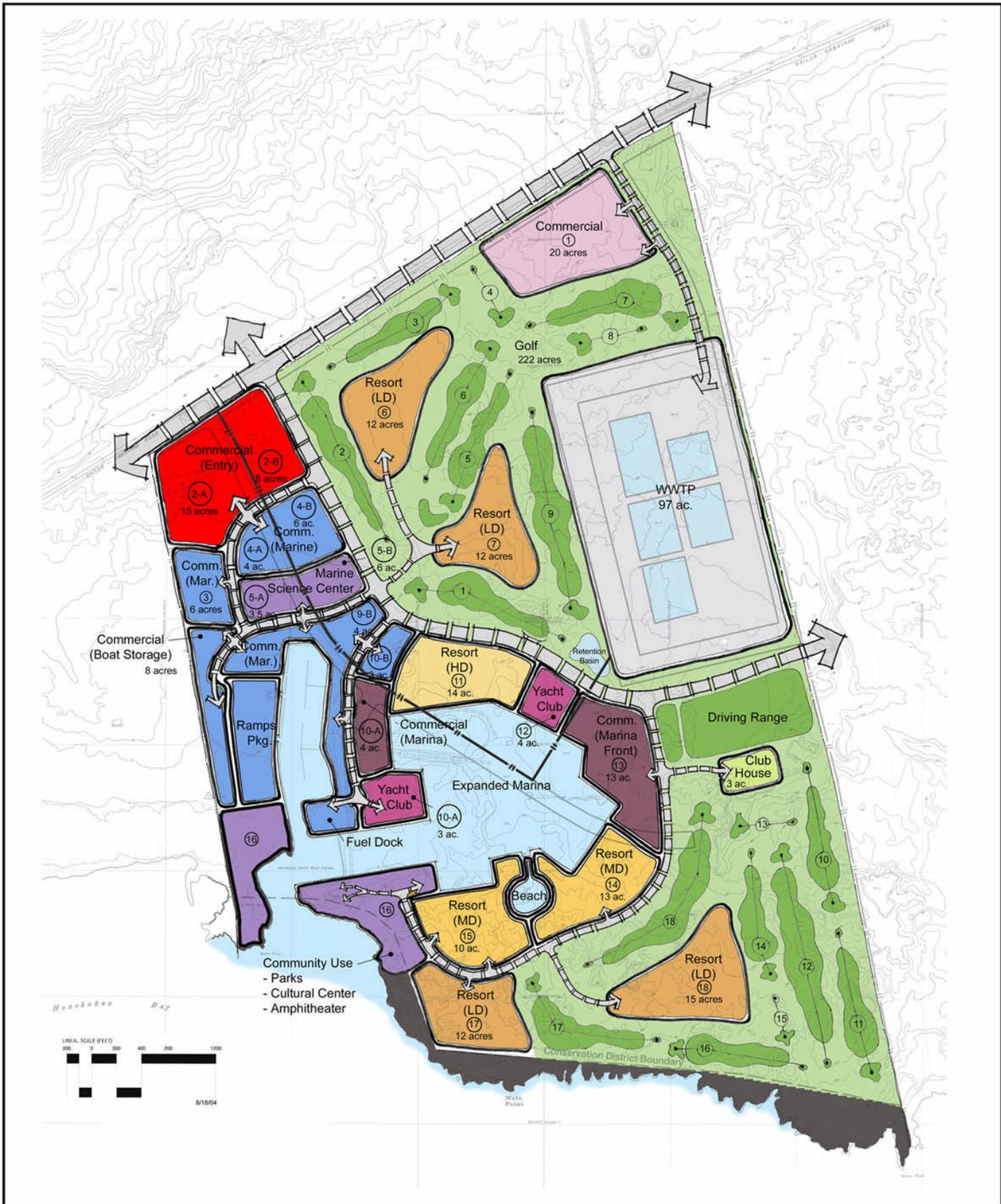


Figure H. Alternative 2: Golf Course Alternative

Legend

LINE TYPE	ACRES	Comments/Use
Commercial	20	Commercial
Resort	22	Resort
Marine	24	Marine
Marine (Mar.)	26	Marine (Mar.)
Marine (Mar.)	28	Marine (Mar.)
Marine (Mar.)	30	Marine (Mar.)
Marine (Mar.)	32	Marine (Mar.)
Marine (Mar.)	34	Marine (Mar.)
Marine (Mar.)	36	Marine (Mar.)
Marine (Mar.)	38	Marine (Mar.)
Marine (Mar.)	40	Marine (Mar.)
Marine (Mar.)	42	Marine (Mar.)
Marine (Mar.)	44	Marine (Mar.)
Marine (Mar.)	46	Marine (Mar.)
Marine (Mar.)	48	Marine (Mar.)
Marine (Mar.)	50	Marine (Mar.)
Marine (Mar.)	52	Marine (Mar.)
Marine (Mar.)	54	Marine (Mar.)
Marine (Mar.)	56	Marine (Mar.)
Marine (Mar.)	58	Marine (Mar.)
Marine (Mar.)	60	Marine (Mar.)
Marine (Mar.)	62	Marine (Mar.)
Marine (Mar.)	64	Marine (Mar.)
Marine (Mar.)	66	Marine (Mar.)
Marine (Mar.)	68	Marine (Mar.)
Marine (Mar.)	70	Marine (Mar.)
Marine (Mar.)	72	Marine (Mar.)
Marine (Mar.)	74	Marine (Mar.)
Marine (Mar.)	76	Marine (Mar.)
Marine (Mar.)	78	Marine (Mar.)
Marine (Mar.)	80	Marine (Mar.)
Marine (Mar.)	82	Marine (Mar.)
Marine (Mar.)	84	Marine (Mar.)
Marine (Mar.)	86	Marine (Mar.)
Marine (Mar.)	88	Marine (Mar.)
Marine (Mar.)	90	Marine (Mar.)
Marine (Mar.)	92	Marine (Mar.)
Marine (Mar.)	94	Marine (Mar.)
Marine (Mar.)	96	Marine (Mar.)
Marine (Mar.)	98	Marine (Mar.)
Marine (Mar.)	100	Marine (Mar.)



JACOBY DEVELOPMENT, INC.

2.2 Alternatives Analysis

As discussed in Section 2.1, the proposed Kona Kai Ola project (also referred to as “proposed project”) is defined by development requirements related for a marina and the related uses that would be needed to generate a reasonable rate of return that covers development costs.

Beginning with Section 2.2.1, the alternative development concepts are comparatively assessed for potential impacts that may reasonably be expected to result from each alternative. Following is an overview of the primary observations of such assessment.

Alternative 1 includes half of the State-required boat slips and 60 percent of the proposed hotel and time-share units and, due to the decreased density, this alternative would generate significantly less environmental and socio-economic impacts. A harbor water quality model found the reduction of the volume of the new marina basin by about half (approximately 25 acres) significantly improved the water circulation and quality. Further, the reduced number of boat slips would generate less boat traffic, thereby reducing congestion and the need to mitigate impacts further by the widening of the existing harbor channel.

A project with fewer hotel and time-share units and increased commercial space with a longer (14 years) absorption period would change the mix of employment offered by the project, and slightly increase the overall employment count. The public costs/benefits associated with Alternative 1 would change, compared to the proposed project, with a general increase in tax collections, and a general decrease in per capita costs. Detailed discussion of Alternative 1 potential economic impacts are provided in Section 4.6.6. Comparisons of levels of impact are presented throughout this FEIS.

While this analysis might indicate that the 25-acre marina in Alternative 1 would be the more prudent choice, the DLNR agreement establishes the minimum size and slip capacity of the marina at 45 acres and 800 slips, respectively. Amendments to the DLNR agreement would be required in order to allow Alternative 1 to proceed as the preferred alternative. Hence, selection of the preferred alternative is an unresolved issue at the writing of this FEIS.

Alternative 2, the golf course alternative, was not previously considered to be the preferred alternative primarily because market conditions at the time of project development might not likely support another golf course. Further, DHHL has a strategy goal to have more revenue-generating activities on the commercial lease lands within the project area. In addition, concerns have been expressed as to environmental impacts of coastal golf courses, including the potential adverse impact on Kona’s water supply if potable water is used for golf course irrigation.

While Alternative 3, the no-project alternative, would not generate adverse impacts related to development of these lands associated with the construction and long-term operations, it would also not allow for an expanded public marina that would meet public need and generate income for the public sector. Further, the no-project alternative would foreclose the opportunity to create a master-planned State-initiated development that would result in increased tax revenue, recreation options and community facilities. Crucial privately-funded improvements, such as the marina, regional roadway and circulation improvements, and improvements to the existing wastewater treatment plant, would not be implemented. Private funds toward the development of community-oriented facilities such as parks, other recreational facilities, and public access would not be contributed.

~~Hence, the only valid alternative to the proposed project is the no-action alternative. In this alternative, the project site would be left vacant, and the proposed marina, hotel and time share facilities, commercial and marina industrial complexes, and community-oriented uses would not be realized.~~

~~The no-project alternative would therefore not generate adverse impacts associated with the construction and long-term operations would not occur.~~

~~Likewise, the creation of a master-planned state-initiated development, resulting in increased employment, tax revenue, recreation options and community facilities, would not be created. Privately funded improvements, such as the marina, regional roadway and circulation improvements, and improvements to the existing wastewater treatment plant, would not be implemented. Private funds toward the development of community-oriented facilities such as parks, other recreational facilities and public access would not be contributed.~~

~~Further, the creation of revenue-producing businesses on the DHHL property to fund homestead programs would not occur, resulting in fewer potential benefits for Hawaiians.~~

~~Hence, the agreements and leases between the State and JDI indicate that the no-action alternative is not in the public interest has been rejected at this time.~~

2.2.1 Impact Comparison

Grading and Excavation

The proposed project requires grading and excavation. Both actions may impact groundwater due to rainfall runoff during construction. Alternative 1 would require a significantly smaller excavation for the marina basin and would therefore carry a lesser risk of potential adverse effects on water quality. Alternative 2 would require the same basin excavation as the proposed project, and would also include extensive grading and filling to build the golf course, the latter of which would generate additional impacts. Alternative 3 would result in no change to the geography, topography and geology.

Further discussion on grading and excavation is contained in Section 3.3.

Natural Drainage

Most precipitation infiltrates into the porous ground at the site, and no significant sheet flow is likely. Alternative 1 would generate similar levels of impacts on natural drainage as those of the proposed project and thus require similar mitigation measures. The golf course in Alternative 2 would not be as porous since the site would be graded, soil would be placed, and grass and other landscaping would be grown. Sheet flow and runoff can occur on a golf course, and drainage patterns might change. Alternative 3 would result in no change to the existing natural drainage pattern. Further discussion on natural drainage is contained in Section 3.4.

Air Quality

Air quality will be affected by construction activities, as well as pollutants from vehicular, industrial, natural, and agricultural sources. Alternative 1 would generate less construction air quality impacts than the proposed project due to the reduced amount of intensive groundwork associated with the smaller marina basin and fewer long-term impacts by reducing traffic 35 and 40 percent during, respectively, AM and PM peak traffic times. Construction of Alternative 2 would result in fugitive dust and exhaust from equipment and is expected to generate the same level of air quality impact as the proposed project. Alternative 3 would result in no change to existing air quality. Further discussion on air quality is contained in Section 3.5.

Terrestrial Environment

To provide additional habitat for shorebirds and some visiting seabirds, the project proposes to construct a brackishwater pond area suitable for avian fauna, including stilts, coots and ducks. While habitat expansion is beneficial, there is also a possibility that these species may be exposed to activity that may harm them. Alternative 1 would not include a brackish water pond, but will include 5 acres of seawater features, which is 74 percent less than the 19 acres of seawater features in the proposed project. While this would reduce beneficial impacts, it would also decrease exposure to potentially harmful activity. Alternative 2 does not include the brackish water pond features, but would include drainage retention basins that would attract avian fauna and expose them to chemicals used to maintain golf course landscaping. While Alternative 3 would result in no increase in potentially harmful activity, it would also not provide additional habitat for avian fauna. Further discussion on the terrestrial environment is contained in Section 3.7.

Groundwater

Groundwater at the project site occurs as a thin basal brackish water lens. It is influenced by tides and varies in flow direction and salt content. The existing Honokōhau Harbor acts as a drainage point for local groundwater. Any impact to groundwater flow from the proposed harbor is likely to be localized. The proposed marina basin will not result in any significant increase in groundwater flow to the coastline, but rather a concentration and redirection of the existing flows to the harbor entrance.

There will be differences in the flow to the marina entrance between the proposed project and Alternative 1. Alternative 1, being smaller in size, will have less impact on groundwater flow than the proposed marina. Alternative 2 will have a similar impact to groundwater quality as the proposed project. Alternative 2 may also impact water quality by contributing nutrients and biocides to the groundwater from the golf course. Alternative 3 would result in no change in existing groundwater conditions. Further discussion on groundwater is contained in Section 3.8.1.

Surface Water

There are no significant natural freshwater streams or ponds at the site, but there are brackish anchialine pools. Surface water at the project site will be influenced by rainfall. Runoff typically percolates rapidly through the permeable ground. The proposed project will include some impermeable surfaces, which together with building roofs, will change runoff and seepage patterns.

Alternative 1 is a lower density project that is expected to have proportionally less impact on surface water and runoff patterns and less potential impact on water quality than the proposed project. Alternative 2 would have more impact on surface water quality than the proposed project due to fertilizers and biocides carried by runoff from the golf course. Alternative 3 would result in no change to surface water conditions. Further discussion on surface water is contained in Section 3.8.2.

Nearshore Environment and Coastal Waters

The potential adverse impacts to the marine environment from the proposed project are due to the construction of an 800-slip marina and the resulting inflow of higher salinity seawater and inadequate water circulation, both of which are anticipated to impair water quality to the extent of falling below applicable standards. One possible mitigation measure is to significantly reduce the size of the marina expansion.

The reduced marina size (from 45 to 25 acres) and reduced lagoon acreage in Alternative 1 are expected to result in a proportionate reduction in seawater discharging into the new harbor and increased water circulation. Alternative 2 includes the same marina basin size and is therefore subject to the same factors that are expected to adversely affect water quality.

In the existing Honokōhau Harbor, water quality issues focus on the potential for pollutants, sediments, mixing and discharge into the nearshore marine waters. Before the harbor was constructed, any pollutants entrained within the groundwater were believed to have been diffused over a broad coastline.

The water quality in the proposed harbor depends on several components. These include salinity, nutrients, and sediments that come from the ocean, rainfall runoff, water features with marine animals, and dust. The smaller project offered as Alternative 1 is expected to produce a reduced amount of pollutants and reduce the risk of adverse impact upon water quality.

It is notable that the 45-acre marina basin planned in the proposed project and Alternative 2 only becomes viable from a water quality impact standpoint if the additional brackish groundwater inflow into the new marina exceeds 60 mgd. The resulting flushing from such inflow would be expected to better maintain water quality. However, it is unclear whether 60 mgd of brackish groundwater would be available. As proposed in Alternative 1, reduction of the volume of the new marina basin by 45 percent will significantly improve the flushing and water quality because the lower volume can be flushed by the available groundwater flow.

In addition, there could be higher rainfall runoff from the Alternative 2 golf course into the harbor, because the grassed golf course will be less porous than the natural surface. The golf course will also require relatively high levels of fertilizer, biocides, and irrigation, all of which could contribute to adverse water quality impacts.

Further discussion on nearshore environment and coastal waters is contained in Section 3.9.1.

Anchialine Pools

Anchialine pools are located north of Honokōhau Harbor, and south of the harbor on the project site. The marine life in these pools is sensitive to groundwater quality, and changes due to construction and operation of the project could degrade the viability of the pool ecosystem. In the southern complex, 3 anchialine pools with a combined surface area of 20m² would be eliminated due to the harbor construction in the proposed project and Alternatives 1 and 2.

Predicting the extent of change in groundwater flow is difficult if not impossible even with numerous boreholes and intense sampling. The actual flow of groundwater towards the sea is minimal today, and tidal measurements show that tide fluctuations represent more than 90 percent in actual harbor tides. The fluctuations occur simultaneous with the ocean/harbor tide, which indicate a vertical and horizontal pressure regime between bore hole 6 and the ocean and harbor. Hence, the tides alone create a mixing system that increases salinity, as the flow approaches the point of discharge which will be either the channel or the shore. Another factor that could influence groundwater quality is the increased local recharge from irrigation between the channel and shore. This will add fresh water to the lens locally but is not quantified at this time.

Quantification of these impacts, including the flow of groundwater through each pond, is therefore extremely difficult. The shallow lavas are of the pahoehoe type and have a relatively high horizontal permeability. In surface depressions or undulations, the pahoehoe lavas have a tendency to lose vertical permeability from sedimentation thus restricting water exchange within the individual pools. This is normally reflected in both the salinity and temperature and this information has been adequately studied in the pools.

Changes in groundwater quality may or may not impact biological communities in the anchialine and estuarine environment. In either case, it is important to understand these relationships to effectively manage the resource. If there is significant deviation from the baseline especially in regard to nutrients, pathogens, and toxins, a mitigation plan to determine the cause and take decisive appropriate action will be implemented.

Due to the uncertainty of changes in groundwater flow and quality due to marina construction, the variability in impacts between the proposed project and Alternatives 1 and 2 is unknown at this time. Alternative 3 would result in no change in groundwater flow. While this would eliminate the potential for adverse impacts, Alternative 3 would also continue the pattern of existing degradation related to human activity and the introduction of alien species. Further discussion on anchialine pools is contained in Section 3.9.2.

Marine Fishing Impacts

The proposed marina will increase the number of boats in the area and it is reasonable to assume that a portion of these new boats will engage in fishing activities. The increase in boats in the area would be primarily related to the marlin and tuna / pelagic fishery, coral reefs due to extractive fisheries, and SCUBA activities. The pressure on fish and invertebrate stocks is expected to increase with or without the marina. Harbor expansion provides the opportunity to address existing conditions to consolidate, focus, and fund management and enforcement activities at one location.

Compared to the proposed project, Alternative 1 would result in a 21 percent decrease in boat traffic, thereby lessening the potential for marine fishing impacts. The level of impacts in Alternative 2 would be similar to that of the proposed project. Alternative 3 would result in no change in existing marine fishing conditions, and no opportunity to address already existing pressure on fish and invertebrate stocks. Further discussion on marine fishing impacts is contained in Section 3.9.3.

Cultural and Archaeological Resources

The proposed project will integrate cultural and archaeological resources in the overall development. Archaeological sites recommended for preservation will be preserved, and cultural practices will be encouraged. Kona Kai Ola includes a canoe park, and a cultural park with a focus on Hawaiian maritime cultural heritage of the voyaging canoe. Proposed is a 400-foot shoreline setback that would serve as a buffer between the ocean and developed areas. This coastal area would be protected with a shoreline park with trails and public access parking for walking and shoreline fishing, and a cultural park surrounding the heiau, the cultural sites and 'Alula for community use.

Alternative 1 would contain all of the cultural archaeological features and the shoreline setback area would be 400 feet in the northern portion of the site and increase to 600 feet in the southern portion. Alternative 2 would preserve cultural and archaeological resources, but does not include a 400-foot shoreline setback. Alternative 3 would result in no change to existing cultural and archaeological resources and no addition of cultural and community facilities and activities. Further discussion on cultural and archaeological resources is contained in, respectively, Sections 4.1 and 4.2.

Noise

Project-generated noise is due to construction equipment and blasting, boats, marina activities, vehicle traffic, and the Kealakehe Wastewater Treatment Plant operations. Alternative 1 would generate less noise impacts due to reduced construction activities, fewer boats, less traffic and less on-site activity. Alternative 2 would also generate less noise due to reduced traffic and less on-site activity, but noise related to the excavation of the marina basin and an increase in the number of boats would be similar to that of the proposed project. Further discussion on noise impacts is presented in Section 4.4.

Socioeconomic Impacts

The proposed project will generate an increase in de facto population of an estimated 5,321 persons due to the increase in hotel and time-share units. The estimated de facto population increase in Alternative 1 is 37 percent less, at 3,363 persons, than the proposed project. The de facto population increase in Alternative 2 is similar to Alternative 1.

Employment in the commercial components will nearly double in Alternative 1, from a stabilized level of 1,429 full-time equivalent (FTE) positions in the proposed project to 2,740 in the Alternative 1.

Under Alternative 1, the total operating economic activity at Kona Kai Ola will increase due to the added commercial space more than off-setting the fewer visitor units, moving upward from \$557.6 million per year to circa \$814.3 million annually. The total base economic impact resulting from development and operation of Alternative 1 will similarly be higher by between 35 and 45 percent than that of the proposed project.

Alternative 1, which has a reduced marina size of 25 acres, and fewer hotel and time-share units, would have a meaningful market standing, create significant economic opportunities, and provide a net benefit to State and County revenues. From a market perspective, a smaller Kona Kai Ola would still be the only mixed use community in the Keahole to Kailua-Kona Corridor offering competitive hotel and time-share product.

The estimated absorption periods for marketable components of Alternative 1 are generally shorter than those for the same components in the proposed project. Marina slips under Alternative 1 are estimated to be absorbed within 2 years after groundbreaking, as compared with 9 years for absorption of slips in the proposed project. Hotel rooms under Alternative 1 are estimated to be absorbed within 4 years after groundbreaking, as compared with 7 years under the proposed project. Time-share units would be absorbed within 10 years under Alternative 1, while 15 years are projected under the proposed project. Due to the planned increase in commercial facilities under Alternative 1, the absorption period of commercial space is estimated at 14 years, as compared with 8 years for absorption of such facilities under the proposed project.

The State and County will still both receive a net benefit (tax receipts relative to public expenditures) annually on a stabilized basis under the Alternative 1. The County net benefits will be some \$12.2 million per year under the Alternative 1 versus \$14.9 million under the proposed project. The State net benefits will increase under the Alternative 1 to about \$37.5 million annually, up substantially from the \$11.4 million in the proposed project.

Due to the lower de facto population at build-out, the effective stabilized public costs for both the State and County will decline meaningfully under the Alternative 1, dropping from \$7.7 million annually for the County and \$36.5 million for the State, to \$4.9 million and \$23 million per year, respectively.

Alternative 3 would result in no increase in de facto population and improvement to economic conditions. Further discussion on social and economic impacts are contained in, respectively, Sections 4.5 and 4.6.

Vehicular Traffic

The proposed project will impact the nearby road network that currently is congested during peak traffic times. The proposed project includes roadway improvements that would reduce the impact and improve roadway conditions for the regional community.

Alternative 1 includes the same roadway system improvements as the proposed project, yet would reduce vehicular traffic by 35 percent when compared to the proposed project. Alternative 2 would have similar traffic conditions and roadway improvements as Alternative 1. Alternative 3 would result in no increase in traffic and no roadway improvements.

Marina Traffic Study

The increase in boat traffic due to the proposed 800-slip marina would cause entrance channel congestion during varying combinations of existing and new marina peak traffic flow. Worst case conditions of active sport fishing weekend and summer holiday recreational traffic result in traffic volumes exceeding capacity over a short afternoon period. Mitigation to address boat traffic in the proposed project include widening the entrance channel, traffic control, implementation of a permanent traffic control tower, or limiting vessel size.

Alternative 1 would result in a 21 percent reduction in boat traffic congestion under average existing conditions and ten percent reduction during peak existing conditions. The reduction to 400 slips also reduces the impacts of congestion at the entrance channel, thereby reducing the need for any modifications to the entrance channel.

Alternative 2 would have the same level of boat traffic as the proposed project. Alternative 3 would not meet the demand for additional boat slips and would not generate additional boat traffic. Further discussion on marina traffic is contained in Section 4.8.

Police, Fire and Medical Services

The proposed project will impact police, fire and medical services due to an increase in de facto population and increased on-site activity. Alternatives 1 and 2 would have similar levels of impact as the proposed project due to increased on-site activity. Further discussion on police, fire and medical services are contained, respectively, in Sections 4.10.1, 4.10.2 and 4.10.3.

Drainage and Storm Water Facilities

The proposed project will increase drainage flows, quantities, velocities, erosion, and sediment runoff.

Alternative 1 involves a reduction of the project density that would reduce storm runoff from the various land uses due to a reduction in impervious surfaces associated with hotel and time-share development and to the creation of more open space. However, roadway areas will increase by about 30 percent in Alternative 1. Storm runoff from proposed streets would therefore increase; thus requiring additional drainage facilities and possibly resulting in no net savings. The golf course in Alternative 2 may also change drainage characteristics from those of the proposed project and may not reduce impacts. Alternative 3 would result in no change in existing conditions and no improvements to drainage infrastructure. Further discussion on drainage and storm water facilities is contained in Section 4.10.5

Wastewater Facilities

The proposed development is located within the service area of the Kealakehe WWTP and a sewer system will be installed that connects to the WWTP. The sewer system will be comprised of a network of gravity sewers, force mains, and pumping stations which collect and convey wastewater to the existing Kealakehe WWTP. Project improvements will incorporate the usage of recycled / R1 water. Improvements implemented by the proposed project will also accommodate the needs of the regional service population.

Alternative 1 would generate approximately 10 percent less wastewater flow than the proposed project. Wastewater flow in Alternative 2 is undetermined. Alternative 3 would result in no additional flow, as well as no improvements that will benefit the regional community. Further discussion on wastewater facilities is contained in Section 4.10.6.

Potable Water Facilities

The proposed project average daily water demand is estimated at 1.76 million gallons per day. Existing County sources are not adequate to meet this demand and source development is required. The developer is working with DLNR and two wells have been identified that will produce a sustainable yield that will serve the project. These wells will also serve water needs beyond the project.

Alternative 1 would result in net decrease of about five percent of potable water demand. Alternative 2 may have a lower water demand than the proposed project as long as potable water is not used for irrigation. Alternative 3 would result in no additional flow, as well as no source development that will benefit the regional community. Further discussion on potable water facilities is contained in Section 4.10.8.

Energy and Communications

Regarding Alternative 1, preliminary estimates for electrical, telecommunications, and cable resulted in a net demand load that remains similar to the proposed project. Further discussion on energy and communications is contained in Section 4.10.9.1.

The proposed project will increase the demand for electrical energy and telecommunications. The demand would be reduced in Alternative 1 because the number of boat slips and units would decrease. Similarly, Alternative 2 would have fewer units than the proposed project and therefore reduce energy demands. Further reduction in energy demand for either alternative could be achieved by using seawater air conditioning (SWAC) and other energy reduction measures, as planned by the developer. Further discussion on energy and telecommunications is contained in Section 4.10.9.2.

Water Features and Lagoons

The proposed project includes a brackishwater pond, lagoons, and marine life exhibits supplied by clean seawater. The water features in Alternative 1 would significantly decrease by 74 percent from 19 acres in the proposed project to five acres in Alternative 1. This decrease in water features would result in a corresponding decrease in water source requirements and seawater discharge. Alternative 2 does not include the seawater features. Alternative 3 would result in no additional demand for water source requirements and seawater discharge.

2.2.2 Conformance with Public Plans and Policies

State of Hawai'i

Chapter 343, Hawai'i Revised Statutes

Compliance with this chapter is effected, as described in Section 5.1.1 in regard to the proposed project and the alternatives discussed.

- State Land Use Law, Chapter 205, Hawai'i Revised Statutes

The discussion in Section 5.1.2 is directly applicable to Alternative 1, the proposed project. Alternative 1 will involve a setback of 400 feet that increases to 600 feet along the southern portion of the project site's shoreline area. Alternative 2 does not provide for such a setback, but may still require approvals from DLNR for cultural, recreational, and community uses and structures within the Conservation district.

- Coastal Zone Management Program, Chapter 205A, Hawai'i Revised Statutes

Recreational Resources:

In addition to the discussion of consistency with the associated objective and policies, as described in Section 5.1.3, the reduction from the proposed project's 800-slip marina to a 400-slip marina under Alternative 1 will still expand the region's boating opportunities and support facilities. The existing harbor entrance will still be utilized under this alternative; however, potential risks relating to boat traffic and congestion in the marina entrance area will be reduced significantly. The 400-600 foot shoreline setback, public parks, trails, cultural areas, community facilities, and marine science center remain important recreational components under Alternative 1.

Alternative 2 includes a golf course component, which would add a more passive recreation to the active and social components, such as boating, fishing, swimming, trails, walkways, parks, marine life, educational and interactive areas that are also part of the project. The golf course would enhance the range of leisure and recreational opportunities offered at Kona Kai Ola.

Alternative 2, like the proposed project, will expand the region's boating opportunities and support facilities through its 800-slip marina. However, the potential adverse impacts of increased boat traffic from the size of the marina are significant enough to offset the benefits of increased boating opportunities.

Coastal Ecosystems:

The discussion in Section 5.1.3 is directly applicable to Alternative 1.

Alternative 1 not only reduces the number of slips proposed by 50 percent, but it also reduces the size of the marina from 45 acres to 25 acres. The 25-acre marina will increase the body of water within the existing harbor, but to a significantly lesser extent than the proposed project's estimated increase, which is also applicable to the 45-acre size that is proposed for the marina under Alternative 2.

The findings of the Harbor Water Quality Modeling Study conclude that a reduction in the size of the harbor expansion is an alternative that will mitigate the risk of significant impacts upon water quality within the marina and existing harbor. Accordingly, the reduction in both the number of slips and the size of the marina basin under Alternative 1, in combination with proper facilities design, public education, and enforcement of harbor rules and regulations, would result in fewer long-term impacts to water quality and coastal ecosystems. Short-term (construction-related) impacts would likely remain the same although the reduction in the total acreage of excavation is expected to result in a shorter duration of such impacts.

In addition to its 800-slip marina and potential adverse impacts upon water quality and the marine environment, Alternative 2 includes a golf course component, which has the potential to impact coastal ecosystems by increasing the nutrient loading in surface runoff and groundwater and also by introducing pesticides, herbicides, and other chemicals common in golf course use and management into the nearshore waters surrounding the project site.

Economic Uses

Although reduced in the number of slips, the smaller marina under Alternative 1 will nevertheless serve public demand for more boating facilities in West Hawai'i and is consistent with the objective and policies and discussion set forth in Section 5.1.3. The economic impacts of Alternative 2, while comparable to those of the proposed project's marina development, are notably marginal as to the golf course component, based on the marketability analysis that indicates a condition of saturation within the region.

Coastal Hazards

The discussion and considerations set forth in Section 5.1.3 are also applicable to Alternatives 1 and 2 and indicate compliance with the objective and policies addressed. Tsunami risks mainly affect the large shoreline setback area that is proposed for the project and Alternative 1. Alternative 2 projects a transient accommodation site that is partially within the tsunami hazard zone and thus carries a higher hazard risk. However, the essential requirement for these alternatives, as well as the proposed project, is a well-prepared and properly implemented evacuation plan.

Beach Protection

Discussion and considerations set forth in Section 5.1.3 are also applicable to Alternatives 1 and 2 and indicate compliance with the objective and policies addressed. Alternative 1 and, to a lesser extent, Alternative 2, will retain the shoreline area in its natural condition.

Similar to the proposed project, Alternative 1 provides for a shoreline setback of considerable width within which no structure, except for possible culturally-related structures, would be allowed. Alternatives 1 and 2 will thus be designed to avoid erosion of structures and minimize interference with natural shoreline processes.

Marine Resources

The discussion in Section 5.1.3 is also applicable to Alternative 1 which is described to be an alternative that is specifically projected to mitigate anticipated adverse impacts on water quality and the marine environment that might otherwise result from the original harbor design and scale, which is also incorporated in Alternative 2. The reduced marina size under Alternative 1 is projected to meet water quality standards and enable greater compliance with the objective and policies addressed in this section.

Alternative 2 includes a golf course component and thus the potential to adversely impact marine resources by increasing the nutrient loading in surface runoff and groundwater and also by introducing pesticides, herbicides, and other chemicals common in golf course use and management into the nearshore waters surrounding the project site.

Hawai'i State Plans, Chapter 226, Hawai'i Revised Statutes

Section 226-4 (State goals), 5 (Objectives and policies for population, and 6 (Objective and policies for economy in general):

The discussion in Section 5.1.4 is applicable to Alternatives 1 and 2, in addition to the proposed project. These development concepts generally conform to the goals, objectives, and policies set forth in these sections because they will provide some degree of economic viability, stability, and sustainability for future generations. Kona Kai Ola will convert essentially vacant land into a mixed-use development with a distinctive marina and boating element, providing a wide range of recreational, business, and employment opportunities to the community.

Section 226-8 Objective and policies for the economy – the visitor industry:

Alternatives 1 and 2 will be consistent with the State's economic objective and policies relating to the tourism industry for the same reasons that are discussed in regard to the proposed project in Section 5.1.4. They will incorporate JDI's commitment to sustainability principles in the planning and design of the development concepts in Alternatives 1 and 2. Although the total hotel and time-share unit count is reduced to approximately 1,500 in Alternatives 1 and 2, the transient accommodations component of these alternatives will still further the State's objective and policies for increased visitor industry employment opportunities and training, foster better visitor understanding of Hawai'i's cultural values, and contribute to the synergism of this mixed-use project concept that addresses the needs of the neighboring community, as well as the visitor industry.

Section 226-11 Objectives and policies for the physical environment: land-based, shoreline and marine resources:

Alternative 1 is expected to involve less potential adverse impacts upon these environmental resources than the proposed project. Likewise, and Alternative 2 would have less adverse impact because of its reduction in the size of the marina and in the total hotel and time-share unit count. Alternative 1 carries less potential risk to water quality and related impacts upon the marine environment and anchialine pool ecosystems. Although approximately three anchialine pools are expected to be destroyed, the great majority of pools will be preserved within and outside of the proposed 400-foot shoreline setback.

The golf course component in Alternative 2 has the potential to impact marine resources by increasing the nutrient loading in surface runoff and groundwater and also by introducing pesticides, herbicides, and other chemicals common in golf course use and management into the marina basin and nearshore waters surrounding the project site. It also has the potential to adversely affect the anchialine pools by introducing the chemicals into the pond systems.

Section 226-12 Objective and policies for the physical environment: scenic, natural beauty, and historic resources:

The discussion in Section 5.1.4 is directly applicable to Alternative 1 and describes the compliance with the objective and policies addressed.

The golf course component of Alternative 2 would create a park-like view that would potentially enhance the beauty of the project site and surrounding areas when considered in combination with the existing rugged natural beauty of the area.

Just as with the proposed project, Alternatives 1 and 2 would also be designed to blend with the natural terrain and to honor and protect the cultural history, resources, and practices of these lands.

Section 226-13 Objectives and policies for the physical environment: land, air and water quality:

As stated above, because of the reduction in both the number of slips and the size of the marina basin, with proper facilities design, public education and enforcement of harbor rules and regulations, Alternative 1 is anticipated to cause fewer long-term impacts to water quality than either the proposed project or Alternative 2. Based on the findings of the Harbor Water Quality Modeling Study, water quality resulting from a reduced marina basin size as proposed under Alternative 1 is expected to be similar to existing conditions.

As previously noted, Alternative 2 has the potential to adversely impact water quality by increasing the nutrient loading in surface runoff and groundwater by introducing pesticides, herbicides and other chemicals common in golf course development and maintenance into the marina basin and nearshore waters surrounding the project site.

Section 226-14 Objectives and policies for facility systems - general:

Alternatives 1 and 2 will conform to the objective and policies of this section on the grounds that are discussed in regard to the proposed project in Section 5.1.4. The master-planning and phasing of the project concepts under these alternatives will be coordinated with associated public and private infrastructural planning and related private and public infrastructural financing. The cost of the marina construction and project-related infrastructure is to be borne by the developer, resulting in considerable savings for the public. In addition, the projected lease revenue from these public lands will provide additional public benefits by establishing a revenue stream for capital improvements and maintenance of a range of State facilities.

Section 226-15 Objectives and policies for facility systems - solid and liquid wastes:

In addition to the developer's commitment to sustainable development design, the project will involve upgrades to the County of Hawai'i's Kealakehe Wastewater Treatment Plant to meet current needs, as well as the project's future needs. This commitment is applicable to Alternatives 1 and 2, as well as the proposed project that is discussed in Section 5.1.4.

Section 226-16 Objectives and policies for facility systems – water:

The discussion of water conservation methods and the need to secure additional potable water sources in Section 5.1.4 is also applicable to Alternative 1 and demonstrates conformity to the objective and policies for water facilities. Alternative 2 involves greater irrigation demands in regard to its golf course component and greater potable water demands for human consumption than those for Alternative 1. Alternative 2 is expected to face more serious challenges in securing adequate and reliable sources of water.

Section 229-17 Objectives and policies for facility systems – transportation:

Alternatives 1 and 2 will conform to this objective and policies because they will present water transportation opportunities, including the possible use of transit water shuttles to Kailua-Kona, as described in regard to the proposed project in Section 5.1.4.

Section 226-18 Objectives and policies for facility systems – energy:

Alternatives 1 and 2 conform to these objective and policies through the use of energy efficient design and technology and commitment to the use and production of renewable energy to serve the project's needs. Solar energy production, solar hot water heating, and the use of deep cold seawater for cooling systems are currently identified as means of saving substantial electrical energy costs for the community and the developer.

Section 226-23 Objectives and policies for socio-cultural advancement – leisure:

Alternative 1 conforms to this objective and related policies for the reasons offered in Section 5.1.4 in regard to the proposed project. Alternative 1 will be of greater conformity with the policy regarding access to significant natural and cultural resources in light of the 400-600 foot shoreline setback that has been designed for this alternative.

Although it does not propose the considerable shoreline setback that is planned for Alternative 1, Alternative 2 is consistent with this objective and related policies in incorporating opportunities for shoreline-oriented activities, such as the walking trails. In addition, the golf course component adds a more passive recreation alternative to the active and social components, such as boating, fishing, swimming, trails, walkways, parks, marine life educational and interactive areas that are also part of the project. The golf course would enhance the range of leisure and recreational opportunities offered at Kona Kai Ola.

Section 226-25 Objectives and policies for socio-cultural advancement-culture:

The discussion in Section 5.1.4 is relevant to Alternatives 1 and 2 and demonstrate their conformity the objective and policies of this section.

Both alternatives involve the preservation and protection of cultural features that have been identified by the Cultural Impact Assessment and archaeological studies for the project area. Both provide for public shoreline access, and both will continue the policy of close consultation with the local Hawaiian community and cultural and lineal descendants in the planning of cultural resource preservation and protection.

Section 226-103 Economic priority guidelines:

Alternatives 1 and 2 conform to these guidelines for the same reasons that are set forth in Section 5.1.4. They involve private investment in a public project that will create economic diversification through a mix of marina, industrial, commercial, visitor, and cultural facilities. This presents a wide range of entrepreneurial opportunities, long-term employment opportunities, and job training opportunities.

Section 226-104 Population growth and land resources priority guidelines:

As described in Section 5.1.4, the policy support for the proposed project also extends to the similar development concepts considered in Alternatives 1 and 2. Those alternatives conform to the guidelines of this section because they involve an urban development under parameters and within geographical bounds that are supported by the County's General Plan, a preliminary form of the Kona Community Development Plan, the County's Keahole to Kailua Regional Development Plan, and the reality of being located along the primary commercial/industrial corridor between Keahole Airport and Kailua-Kona. As with the proposed project, the development concepts of Alternatives 1 and 2 are essentially alternatives for the implementation and "in-filling" of the urban expansion area in North Kona.

DHHL Hawai'i Island Plan

This 2002 plan projects DHHL's Honokōhau makai lands for commercial use. As compared to the proposed project and Alternative 2, Alternative 1 presents an expanded commercial component that provides greater compliance with the plan, while addressing certain beneficiaries' concerns about the scale of the marina originally required in the Project. Alternative 2 also conforms to the recommended commercial uses in the makai lands but to a lesser degree than Alternative 1 because of its more limited commercial component. Like the proposed project, its marina size and number of slips raise environmental issues, as more specifically discussed in Part 3, and community concerns.

County of Hawai'i General Plan

HCGP Section 4 – Environmental Quality Goals, Policies and Courses of Action:

Alternative 1 is consistent with this section. It presents a reduction in both the number of slips and the size of the marina basin that, in combination with proper facilities design, public education and enforcement of harbor rules and regulations, would result in very few long term impacts to water quality. Based on the findings of the Harbor Water Quality Modeling Study, water quality would remain similar to existing conditions.

Alternative 2 is the least consistent with this section. In addition to the potential significant impacts of its 800 slip marina basin, its golf course component has the potential to adversely impact marine resources by increasing the nutrient loading in surface runoff and groundwater and also by introducing pesticides, herbicides and other chemicals common in golf course use and management into the nearshore waters surrounding the project site. It also has the potential to adversely affect the anchialine pools beyond their current conditions by introducing such substances into the pool systems.

HCGP Section 7 – Natural Beauty Goals and Policies:

Alternative 2 conforms to some degree with this section. Its golf course component would create a park-like view that would potentially enhance the beauty of the project site and surrounding areas when considered in combination with the existing rugged natural beauty of the area, as demonstrated in other makai golf courses within the region.

HCGP Section 8 – Natural Resources and Shoreline:

Alternative 1 is most consistent with the goals and policies of this section. It would require considerably less marina excavation than the proposed project and Alternative 2 and would reduce the potential risk of long-term adverse impacts to water quality. Based on the findings of the Harbor Water Quality Modeling Study, water quality would remain similar to existing conditions with the degree of reduction in marina basin size that is proposed under Alternative 1. This reduction is also expected to reduce potential impacts upon anchialine pools and their ecosystems, as well as shoreline and marine resources that are affected by water quality. Alternative 1 also retains the shoreline preservation and protection concepts that are proposed in and described for the Project.

HCGP Section 10 – Public Facilities Goals and Policies:

The discussion in Section 5.2.1. in relation to the proposed project is applicable to Alternatives 1 and 2. Improvements to public facilities are integral to the Kona Kai Ola development. The provision of additional boat slips and numerous road improvements, including a makai extension of Kuakini Highway south to Kailua-Kona are incorporated into plans for the project's development. In light of these elements, Alternatives 1 and 2 are consistent with the goals and policies of this section.

HCGP Section 11 – Public Utility Goals, Policies:

As with the proposed project, Alternatives 1 and 2 are consistent with the goals and policies of this section, based on the relevant grounds set forth in Section 5.2.1. The developer is committed to design, fund, and develop environmentally sensitive and energy efficient utility systems to the extent possible, as described previously in Part 5. Its master planning provides for the coordinated development of such systems with the objective of achieving significant savings for the public. As previously-mentioned example, the project development involves the upgrading of the Kealakehe Wastewater Treatment Plant.

HCGP Section 12 – Recreation:

Alternative 1 is consistent with the goals, policies, and courses of action for North Kona in this section.

Although the number of slips is reduced under Alternative 1, the region's boating opportunities and support facilities will still be expanded. The existing marina entrance would still be utilized under this alternative. However, concerns relating to increased activity leading to increased congestion in the marina entrance area would be mitigated to a certain extent. The 400-600 foot shoreline setback, public parks, trails, cultural areas, community facilities and marine science center remain important components of Alternative 1.

The golf course component of Alternative 2 would add a more passive recreation to the active and social components, such as boating, fishing, swimming, trails, walkways, parks, marine life, educational and interactive areas that are also part of the project. The golf course would enhance the range of leisure and recreational opportunities offered at Kona Kai Ola. Alternative 2 is also considered to be consistent with this section.

HCGP Section 13 and 13.2 – Transportation:

The reduced marina component under Alternative 1 will still provide transportation opportunities and provide for possible use of transit water shuttles to Kailua-Kona, although to a lesser degree than under the proposed project and Alternative 2. However, in each scenario, internal people-movers are planned, and numerous roadway improvements are planned for coordination with public agencies, including but not limited to the construction of the Kuakini Highway extension between Honokōhau and Kailua-Kona. Accordingly, both Alternatives 1 and 2 are consistent with the goals, policies, and courses of action for North Kona under these sections of the General Plan.

HCGP Section 14.3 – Commercial Development:

For the reasons presented in the discussion under Section 226-104 of the State Plan, the planned commercial component under Alternatives 1 and 2 are consistent with this section.

HCGP Section 14.8 – Open Space:

Alternatives 1 and 2 are consistent with the goals and policies of this section. Alternative 1 provides a considerable (400-600 foot) shoreline setback along the entire ocean frontage of the project site as a means of protecting the area's scenic and open space resources, as well as natural and cultural resources. Although it does not incorporate the shoreline setback planned in Alternative 1, Alternative 2 provides a golf course component would contribute to the amount of open space that is currently proposed and allow additional view corridors to be created.

Community Development Plans

Community development plans are being formulated for different regions in the County in order to supplement the County's General Plan. The Kona Kai Ola project is located in the Kona Community Development Plan (CDP) area. Maps associated with the preliminary work phases

of the Kona CDP include the Kona Kai Ola project site within the “Preferred Urban Growth” boundary of the North Kona district. The Kona CDP process is guided by a Steering Committee composed of a broad cross-section of the community. The Steering Committee will eventually complete its work and recommend the CDP’s adoption.

After the DEIS was published, the Kona CDP has progressed to the development of plans for the major urban growth corridor north of Kailua-Kona. The Kona CDP has produced a draft plan showing a transit oriented development that includes a midlevel public transit corridor along the mauka residential elevation, and a makai transit corridor that runs along a proposed new frontage road just makai and parallel to Queen Kaahumanu Highway. The development plan for Alternative 1 includes the Kuakini Highway as part of this proposed frontage road and transit line from Kailua Kona to the Kealakehe area, along with a transit stop at Kona Kai Ola. The Alternative 1 plan also includes a road that could be extended to be part of the proposed frontage road should it be approved and implemented. In addition, the Kona CDP has continued to emphasize the principles of smart growth planning with mixed use urban areas where people can live, work, play and learn in the same region. Kona Kai Ola has been specifically designed to be consistent with this policy in order to provide a stable employment base close to where people live in the mauka residential areas already planned for DHHL and HHFDC lands.

It should be noted that currently and over the years, the 1990 Keāhole to Kailua Development Plan (K-to-K Plan) guides land use actions by the public and private sectors. It is intended to carry out the General Plan goals and policies related to the development of the portion of North Kona area, including the Kona Kai Ola site. The “Preferred Growth Plan” of the Keāhole to Kailua Development Plan identifies the project site as a new regional urban center to include commercial, civic, and financial business related uses, an expanded “Harbor Complex,” a shoreline road, and a shoreline park. The proposed project and the development concepts in Alternatives 1 and 2 are therefore consistent with the recommendations in the Keāhole to Kailua Development Plan.

Hawai'i County Zoning

As shown on Figure AA, the project site is zoned “Open”. Under Section 25-5-160 of the Hawai'i County Code, “The O (Open) district applies to areas that contribute to the general welfare, the full enjoyment, or the economic well-being of open land type use which has been established, or is proposed. The object of this district is to encourage development around it such as a golf course and park, and to protect investments which have been or shall be made in reliance upon the retention of such open type use, to buffer an otherwise incompatible land use or district, to preserve a valuable scenic vista or an area of special historical significance, or to protect and preserve submerged land, fishing ponds, and lakes (natural or artificial tide lands)”.

Some of the proposed uses at Kona Kai Ola are permitted uses in the Open zone such as:

- Heiau, historical areas, structures, and monuments;
- Natural features, phenomena, and vistas as tourist attractions;
- Private recreational uses involving no aboveground structure except dressing rooms and comfort stations;

- Public parks;
- Public uses and structures, as permitted under Section 25-4-11.

In addition to those uses permitted outright, the following uses are permitted after issuance of a use permit:

- Yacht harbors and boating facilities; provided that the use, in its entirety, is compatible with the stated purpose of the O district.
- Uses considered directly accessory to the uses permitted in this section shall also be permitted in the O district.

The proposed time-share and hotel units and commercial uses would not be consistent with the zoning designation of "Open". Project implementation therefore requires rezoning of portions of the project to the appropriate zoning category or use permits for certain uses.

Special Management Area

As shown in Figure AB, the entire project area up to the highway is within the coastal zone management zone known as the Special Management Area ("SMA"). At the County level, implementation of the CZM Program is through the review and administering of the SMA permit regulations. Kona Kai Ola complies with and implements the objectives and policies of the Coastal Zone Management (CZM) Program, and a full discussion is provided in Section 5.1.3. The development concepts in the proposed project and Alternatives 1 and 2 will be subject to applicable SMA rules and regulations.