STATE OF HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
Division of Forestry and Wildlife
Honolulu, Hawai'i 96813

December 14, 2018

Chairperson and Members
Board of Land and Natural Resources
State of Hawai'i
Honolulu, Hawai'i

Land Board Members:

SUBJECT: REQUEST APPROVAL OF THE SHLACHTER FOREST STEWARDSHIP MANAGEMENT PLAN AND FOREST STEWARDSHIP AGREEMENT WITH MARC SHLACHTER, TMK (3) 1-1-027:011, (3) 1-1-027:012, (3) 1-1-027:013, PUNA, ISLAND OF HAWAI'I

AND

REQUEST APPROVAL OF DECLARATION OF EXEMPTION TO CHAPTER 343, HAWAI'I REVISED STATUTES FOR THE PROJECT

BACKGROUND:

The State of Hawai'i Forest Stewardship Program (FSP) provides technical and financial assistance to private landowners and land managers committed to the stewardship, conservation, and restoration of important forest resources across the state. These private properties provide a variety of public benefits for the residents of Hawai'i, including but not limited to fresh water capture and production, decreased soil erosion, wildlife habitat, forest products, recreational and educational opportunities, and local jobs. The assistance provided by FSP enables private landowners to develop and implement long-term multi-resource management plans to conserve, restore, and maintain forested areas on their property.

The Forest Stewardship Program was established through Chapter 195F-6, Hawai'i Revised Statutes (HRS) and provides the Department of Land and Natural Resources with the authority to provide financial assistance to approved Forest Stewardship projects for private landowners to manage, protect, and restore important natural resources on forested and formerly forested properties. The Forest Stewardship Program is implemented pursuant to Chapter 195F, HRS, and Section 109, Hawai'i Administrative Rules (HAR). The program provides cost-share reimbursement for the development of long-term forest management plans and for the implementation of approved Forest Stewardship management plans.

ITEM C- 2

To participate in FSP, interested landowners and managers follow a sequence of application steps in the process of developing a long-term Forest Stewardship management plan. All interested landowners submit their project for review by the Forest Stewardship Advisory Committee (FSAC). The FSAC reviews the project based on program eligibility requirements and assures the proposed project is in line with the program's goals of conservation, restoration and/or forest production. Further, the FSAC recommends the development of and reviews all Forest Stewardship management plans. The Forest Stewardship management plan is created by landowners in partnership with natural resource professional/experts and reviewed and approved by both Division and the FSAC, and may be recommended for approval by the Department.

The award of cost-share support for Forest Stewardship management plan implementation follows a similar process to the development of a management plan. Upon approval of a project's Forest Stewardship management plan, the FSAC reviews the implementation schedule and budget summary to ensure that the practice costs are reasonable and follow the program's approved cost-share rates. The FSAC recommends cost-share support for project implementation based on the 10-year implementation schedule that is submitted to the Board of Land and Natural Resources (Board) for consideration. Review and approval of the Forest Stewardship project and management plan, as well as authorization of cost-share support for the project by the Board is required for the Department to enter into the Forest Stewardship Agreement. The Division has previously worked with the Department of the Attorney General to develop a Forest Stewardship Agreement template (Attachment A) for eligible projects.

The Shlachter Forest Stewardship project proposes to enhance and maintain approximately 9.7 acres of native forest on Tax Map Key numbers (3) 1-1-027:011, (3) 1-1-027:012, (3) 1-1-027:013, in the Fern Acres subdivision in Hawai'i County. The Forest Stewardship project area is designated by the State of Hawai'i as Agriculture District and as Agriculture by the County of Hawai'i. The project is located between the communities of Kea'au and Volcano on the windward side of Hawai'i Island. Wao Kele O Puna is adjacent to the project area along the southern boundary. The proposed FSP project area contains a relatively intact mixed native overstory and a partially invaded understory. The landowners seek to protect, improve, and enrich the existing native forest through the exclusion of ungulates, removal of invasive weed species, and planting of native species.

The FSAC approved the Shlachter Forest Stewardship management plan at their meeting on April 20, 2018 and the State Forester/Division Administrator approved the Forest Stewardship Management Plan on NOV 1 1 2018 (Attachment B).

DISCUSSION:

The Division is requesting approval of a Forest Stewardship Agreement with Shlachter for the implementation of the Shlachter Forest Stewardship management plan and project. Over the course of the 10-year management plan, the landowner intends to protect, improve, and enrich the existing native forest through the exclusion of ungulates, removal of invasive weed species, and planting of native species on 9.7 acres. The project area is broken down into four different management units numbered 1-4. The vegetation on the property consists of a mixed native overstory of 'ōhi'a

(*Metrosideros polymorpha*), kōlea (*Myrsine lessertiana*), and kāwa'u (*Ilex anomala*). The understory is composed of patches of native uluhe (*Dicranopteris linearis*) and hāpu'u (*Cibotium glaucum*), as well as several invasive weeds species such as strawberry guava (*Psidium cattleianum*), clidemia (*Clidemia herta*), and kahili ginger (*Hedychium gardnerianum*). Management approaches for this project include ungulate removal, invasive weed control, and reforestation with native species.

The first management activity will be the installation of an ungulate proof fence along the perimeter of the property and the removal of pigs from the project area. During years one and two, a trail will be installed to provide access to the forest for the landowners and management activities. Sites will be prepared for planting primarily through manual and chemical weed control methods. Primary targets for weed removal include strawberry guava, clidemia, and glory bush (*Tibouchina urvilleana*). Given that the forest in somewhat intact, various native species such as koa (*Acacia koa*), 'ōhi'a, māmaki (*Pipturus albidus*), and ahu'awa (*Cyperus javanicus*) will be hand planted only in areas where invasive weeds are removed. To mitigate the threat of Rapid 'Ōhi'a Death, management activities that may cause damage to 'ōhi'a trees will be avoided. Tree species such as koa, lama (*Diospyros sandicensis*), and 'ōlapa (*Cheirodendron trigynum*) have been designated as alternatives to replace 'ōhi'a, should trees become infected. Ongoing maintenance, such as weed control and monitoring, will be done on a regular basis after the initial planting and throughout the 10 years of the contract.

A total of **$60,410.95** in state Forest Stewardship funding is requested to provide cost-share support for the Shlachter Forest Stewardship management plan and the Shlachter Forest Stewardship Agreement. Marc Shlachter will be contributing an equal amount of **$60,410.95** toward the implementation of their project through the FSP. The costs associated with the proposed practices are consistent with the intensity of management required for this type of project. Cost-share funds are provided as reimbursement payments for implementation of approved management practices through the State fiscal year 2029. In addition, Marc Shlachter has agreed to continue maintenance of the installed Forest Stewardship practices for an additional ten years following the completion of the state cost-share contributions, or through State fiscal year 2039.

CHAPTER 343 – ENVIRONMENTAL ASSESSMENT

In accordance with the requirements of Chapter 343, Hawai'i Revised Statutes (HRS), and Section 11-200-8, Hawai'i Administrative Rules (HAR), and the Exemption List for the Department of Land and Natural Resources as approved by the Environmental Council on June 5, 2015, the subject project is exempt from the preparation of an environmental assessment pursuant to the exemption classes listed in Attachment C.

AGENCIES CONSULTED:

- U.S Department of Agriculture- Natural Resources Conservation Service
- U.S Department of Interior- Fish and Wildlife Service
- DLNR- Commission on Water Resource Management
- County of Honolulu- Department of Planning

RECOMMENDATIONS:

That the Board:

1. Approve the Shlachter Forest Stewardship management plan;

2. Approve cost-share support in the amount of **$60,410.95** for the implementation of the Shlachter Forest Stewardship management plan;

3. Authorize the Chairperson to amend, finalize and execute a Forest Stewardship Agreement with Marc Shlachter to participate in the State Forest Stewardship Program subject to the following:

   A. Availability of State Forest Stewardship funds; and
   B. Review and approval as to form of the Forest Stewardship Agreement by the Department of the Attorney General.

4. Declares, after considering the potential effects of the proposed project as provided by Chapter 343, HRS, and Chapter 11-200, HAR, that this project will likely have minimal or no significant effect on the environment and is therefore exempt from the preparation of an environmental assessment under the exemption classes listed in the Declaration of Exemption (Attachment C).

Respectfully Submitted,

for DAVID G. SMITH, Administrator
Division of Forestry and Wildlife

APPROVED FOR SUBMITTAL:

Suzanne D. Case, Chairperson

Attachment: (Attachment A, B, C)

NATIVE FOREST MANAGEMENT PLAN

Fern Forest – Glenwood, Hawai'i Island

Marc Shlachter, MD. on his native forest property in Glenwood.

PO Box 250
Pa'auilo, HI 96776
Tel +1 808 776 9900

Responsible Forester:

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Forest Solutions Inc.

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1. CLIENT AND PROPERTY INFORMATION

1.1. Client

Landowner Name:	Marc Shlachter, MD
Address:	PO Box 207 Laie, HI 96762
Email:	marcb.shlachter@gmail.com
Phone | Fax:	+1 (808) 798-9604
TMK number:	(3)-1-1-027:011, (3)-1-1-027:012,
State and County Zoning:	(3)-1-1-027:013 Agriculture (3a)
Total property acreage:	10.2 GIS acres
Proposed stewardship area:	9.7 acres
Elevational range:	2,170 ft – 2,180 ft ASL
Slope:	0% - 5% - undulating pāhoehoe
Streams, gulches:	None. Yes, small lava tubes

1.2. Consultant

Company:	Forest Solutions, Inc.
Name:	Nicholas Koch
Title:	Forester
Address:	P.O. Box 250 Pa'auilo, HI 96776
Email:	nick_koch@forestsolutionsinc.com
Phone | Fax:	+1 (808) 776-9900 x 2 | +1 (808) 776-9901
Signature:	

I. Forest Stewardship Plan Signature Page

Applicant Certification: I have reviewed this Forest Stewardship Plan and hereby certify that I concur with the recommendations contained within. I agree that resource management activities implemented on the lands described shall be done so in a manner consistent with the practices recommended herein.

Prepared for: Marc Shlachter
Applicant's Name

Applicant's Signature: Marc Shlachter

Date: 10/30/2018

Professional Resource Consultant Certification:
I have prepared (or revised) this Forest Stewardship Plan. Resource professionals have been consulted and/or provided input as appropriate during the preparation of this plan.

Prepared by: Forest Solutions Inc

Professional Resource Consultant's Signature/Date: Nicholas Koch 29 October 2018

Professional Resource Consultant's Name: Nicholas Koch

State Forester's Approval: This plan meets the criteria established for Forest Stewardship Plans by Hawaii's Forest Stewardship Advisory Committee. The practices recommended in the plan are eligible for funding according to state of Hawaii Forest Stewardship Program guidelines and administrative rules.

Approved by: for David G. Smith
State Forester's Name

State Forester's Signature:

Date: 11/7/2018

Forest Stewardship Advisory Committee Approval: This plan was reviewed and approved by the Forest Stewardship Advisory Committee on 4/20/2018.
Date of approval

2. Executive Summary

This forest management plan (FMP) contemplates the maintenance and improvement of 9.7 acres of intact native forest in the Fern Acres subdivision, between Kea'au and Volcano communities on Windward Hawai'i Island. This forest is located on three contiguous lots under a single ownership with a combined area of 10.2 GIS acres. Upon one of these lots there is a dwelling, yard and driveway that together encumber 0.5 acres.

The objectives of this management plan include:

i. Maintenance and improvement of existing native forest canopy
ii. Protection of forest from ungulates and invasive weed species
iii. Enhance accessibility of the native forest

The scope of this FMP spans ten (10) years from date of initial implementation, and strives to protect, improve and enrich the native forest that remains on the property. In addition, to facilitate management activities, a 2,450 ft foot trail will be cleared to assist with forest restoration activities in the inaccessible interior of the property. To ameliorate the chances of introducing weeds and rapid 'ōhi'a death, the trail will be built manually, kept narrow and wind through existing weed patches in the forest. Tree cutting will be minimized.

Implementation of this plan will reduce factors deleterious to forest health in the medium to long term and plant native enrichment species. By replacing weeds with native species and removing pressure from ungulates (pigs), the slow decline and simplification of the forest into weeds will be reversed.

Serious threats, in the form of Rapid Ohia Death are expected in this area, however it is the intent of this plan to ameliorate the effect of disease through the proactive improvement of forest health. Alternative species to replace the ecological niche that 'ōhi'a occupies are contemplated as a matter of necessity, though the preference is to keep the forest in its original state.

The main activities needed to accomplish the objectives set forth above include:

- Year 1: Build a perimeter hog-proof fence
- Years 2 &3: Establish a trail system to provide access
- Years 4-6: Remove invasive weed pests & re-occupy site with native species
- Years 7-10: Maintain weed free conditions

3. Introduction

The Shlachter's long term plan for their land centers around the improvement of the existing native forest on their property for the benefit of wildlife and native species as well as their own enjoyment. The original forest canopy remains largely intact, with an aggressive cohort of weeds dominating the understory, a common condition of the lots in this and other subdivisions in the Glenwood area.

Dr Shlacter practices medicine on Oahu, this property allows he and his wife to be in touch with nature and experience the native Hawaiian forest up close. They have an affinity for the native flora and fauna, yet the impenetrable understory weeds limit their ability to enjoy the property as well as harming the forest.

3.1. Project background and objectives

The principal objectives for this forest management plan are:

i. Maintain and improve existing native forest canopy
ii. Protect forest from ungulates
iii. Replace weeds with native trees and shrubs
iv. Enhance access to the forest

The ultimate purpose for this property is to maintain a native forest dominated by 'ōhi'a, 'ōlapa, kōlea, olomea, uluhe and other Hawaiian species adapted to this area.

The two main tools to accomplish this objective are to fence the property and to remove invasive weed species using spot herbicides and hand pulling. Efforts are concentrated in the first 5 years, where the second 5 years are dedicated to maintaining the weed free status and improving the probability of success.

3.2. Site description

3.2.1. Parcel location, access and infrastructure

The three adjacent parcels are part of the Fern Forest Vacation Estates subdivision in the Puna District, Island of Hawaii, TMKs (3) 1-1-027:011, (3) 1-1-027:012, and (3) 1-1-027:013. Property elevation is 2,170 ft, change within the lots is minimal, though there are considerable pāhoehoe lava outcrops, up to 8 ft in height throughout the property. This is typical of this area, with a geologically recent pāhoehoe lava flow. There are several cavities within the lava outcrops, some of which have skylights

The property is located in the Fern Forest subdivision, accessed by a paved road (Captain's Drive) and improved gravel road (Jungle King Ave). Access by 2wd conventional to the dwelling is possible in all weather conditions (**Figure 1**). There is power to the property, water is obtained via catchment of abundant rainfall.

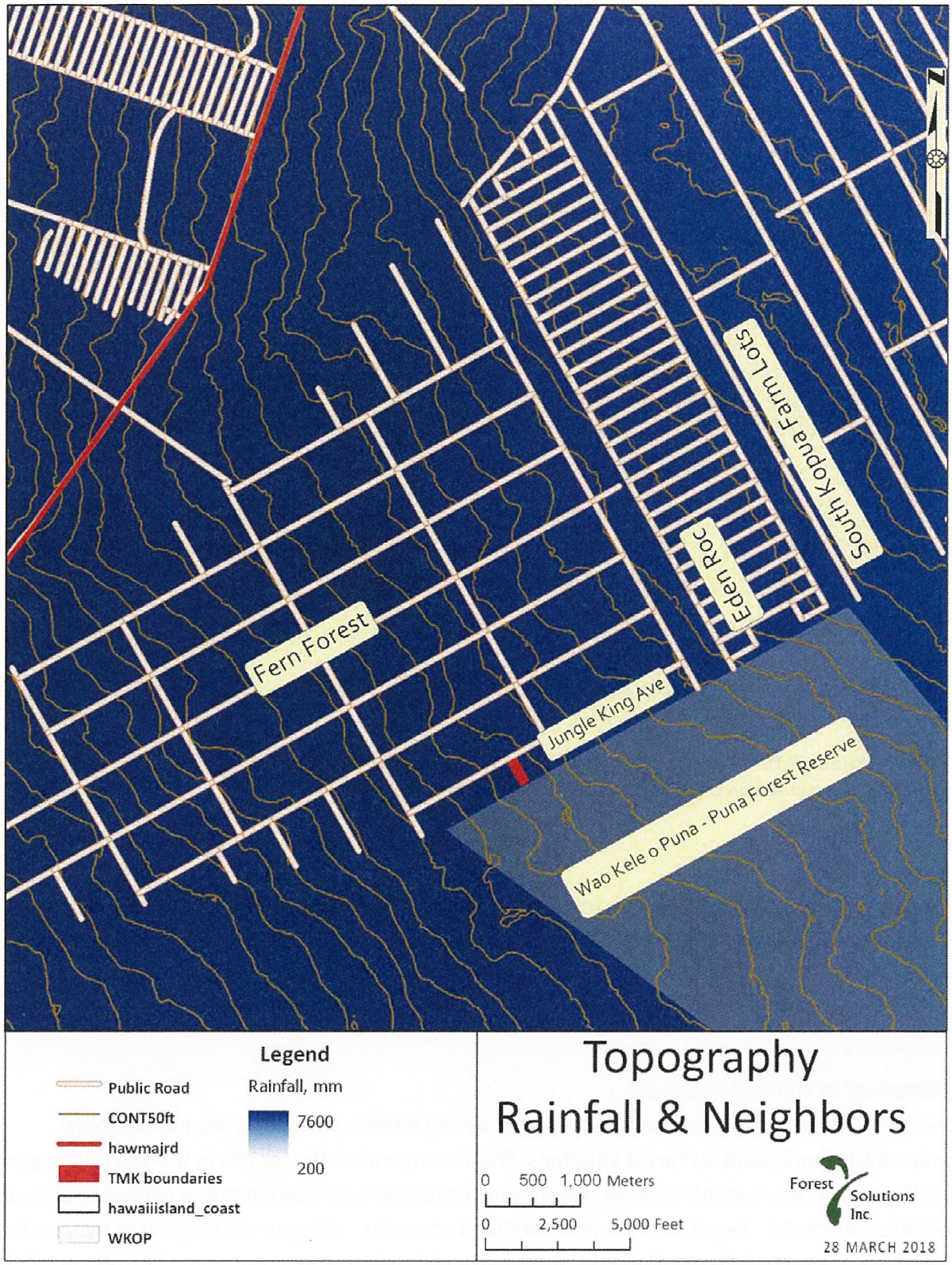


Figure 1. The Shlachter Property is located on the last mauka-makai road (Jungle King Ave) in the Fern Forest subdivision. Property is composed of 3 contiguous TMKs under a single ownership. Access from highway 11 is via S. Glenwood Road (paved).

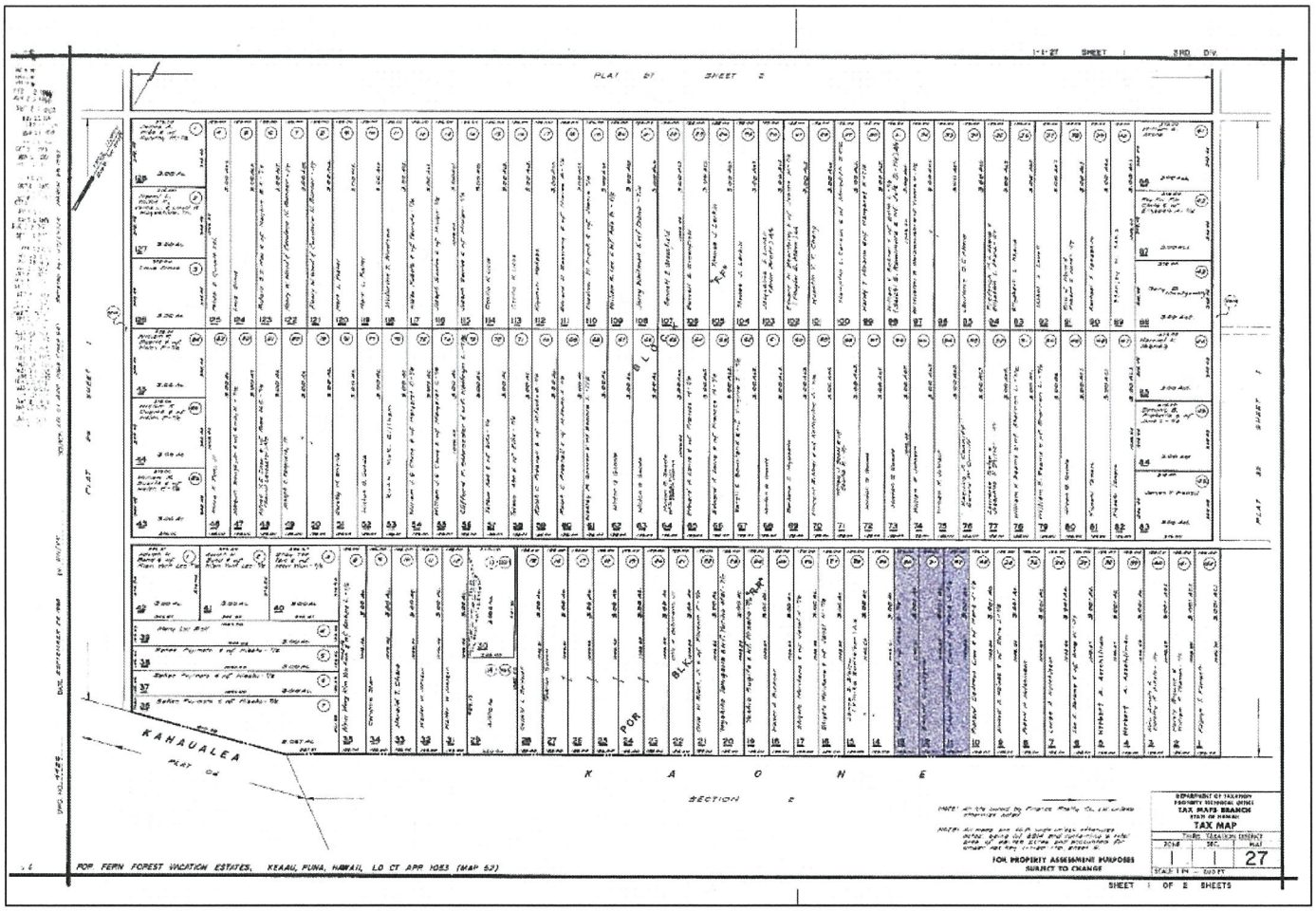


Figure 2. County of Hawai'i Tax Map Key details for lots (3) 1-1-027:011, (3) 1-1-027:012, and (3) 1-1-027:013. The subject property is surrounded on three sides by the Fern Forest subdivision.

Site History

3.2.1.1. Land use history

The property was part of the subdivisions that occurred in the 1960s and 1970s in the Puna district of Hawaii Island. There has not been any mechanical disturbance of the forest on the lot other than the creation of the original road access and clearing of the house pad and surrounding garden and small clearings on the adjoining properties. The native forest on the property is in good condition, albeit with a heavy load of invasive weeds.

3.2.1.2. Historical or cultural resources

No historical or cultural items have been found either during owner site visits or during the forest reconnaissance trip conducted by Forest Solutions. This forest, and all the forests in the surrounding area are part of the Wao Akua, or realm of the gods, where pre-contact activity was limited to gathering of medicinal plants and forest birds. As a result, there is less likelihood of encountering archaeological or historic features on the site. There are no large lava tubes on the property and only one exposed cavity (visually empty) was

found near the dwelling. A full archaeological survey has not been conducted.

3.2.1.3. Aesthetic values and infrastructure

The property has excellent access via 2wd all-weather roads, with a short section of gravel road maintained by the Fern Forest Road Association. The property is characteristic of the area: flat to gently sloping and enveloped by the native forest. This is the farthest street from the Hawaii Belt road, providing a sense of isolation and retreat to nature.

All three lots share a South boundary with Wao Kele o Puna, a 26,000-acre forest reserve in the heart of Puna owned by the Office of Hawaiian Affairs (OHA). The intent in Wao Kele o Puna (WKOP) is to maintain and enhance native forest conditions within the reserve, which is wholly compatible with the uses ascribed to this property and enhancing its inherent value.

The aesthetic value of this property is in the constant communion with nature in a forested setting which contains existing intact native forest. Views are limited by trees and forest which continues back from the dwelling into the 26,000-acre reserve next door.

Aside from a short driveway to the house on the property, related catchment tank, power installations and garden, there is no further infrastructure on the property.

3.3. Flora

3.3.1. Forest type

The main defined, original forest type present on the parcels is very shallow wet ʻōhiʻa-hāpuʻu thicket type 162X[1]. The dominant native tree species is ʻōhiʻa, which are present in most size classes from 3" to 5" diameter through trees as large 10" to 12" diameter. The forest ranges from 60% to 70% native tree cover, and overall contains at least 50% native forest species on a per-acre basis. Where uluhe fern dominates the understory, it has excluded weed cover, particularly of lower stature arthrostema and clidemia.

Much of the forested area shows at least some degree of invasion by alien shrubs, grasses, and trees (guava). Left unchecked, these populations will come to dominate the forest.

Figure 3. Although this forest is highly invaded, there is still a healthy native canopy and remnants of other mid canopy species, such as 'ie'ie. Management focus is to work with and build upon this existing forest structure.

3.3.2. Canopy

The dominant vegetation on the property includes a mixed overstory of *Metrosideros polymorpha* (ʻōhiʻa), *Myrsine lessertiana* (kōlea), *Ilex anomala* (kāwaʻu), and *Cheirodendron triginum* (ʻōlapa). The ʻōhiʻa component includes mostly healthy trees, yet some individuals suffer from some degree of ʻōhiʻa dieback. Rapid ʻōhiʻa death (ROD), a devastating vascular fungal disease prevalent in the neighboring WKOP was not observed on the property.

[1]https://esis.sc.egov.usda.gov/ESDReport/fsReport.aspx?approved=yes&repType=regular&id=F162XY504HI

3.3.3. Understory

The understory is composed of heterogeneous patches of native *Dicranopteris linearis* (uluhe fern), and *Cibotium glaucum* (hāpu'u fern) as well as several species of highly invasive weeds *Hedychium gardnerianum* (Kahili ginger), *Clidemia hirta* (clidemia), *Arthrostema ciliatum* (arthrostema) *Psidium cattleianum* (strawberry guava), *Tibouchina urvilleana* (glory bush), *Rubus ellipticus* (Himalayan yellow-berry), *Rubus rosifolius* (thimbleberry) and *Rubus arugutus* (blackberry).

Figure 4. Some areas of the forest are highly invaded with strawberry guava, arthrostema and other invasive species, others are intact or have been cleared recently (right)

3.3.4. Endangered flora

Though not encountered in the survey, there is a report of an endangered species of *Clermontia* (hāhā). The area is definitely habitat for this species, and it could still be encountered in the future. The management prescriptions contemplated in this plan are consistent with protecting this species.

3.3.5. Forest health

The remaining native forest, is invaded and declining over time, due to weed competition and pig damage. There are no symptoms of Rapid 'Ōhi'a Death (ROD) on the trees on this property despite a loss of over 50% of 'ōhi'a in neighboring Wao Kele o Puna Forest Reserve.

It is likely that ROD will begin to affect this and other lots in the Fern Forest area. Fortunately, this forest still has abundant hapu'u and uluhe

Figure 5. Feral pigs are the main source of weeds and destruction of hapu'u ferns, an important mid-canopy species. There is a high level of pig activity in the forest owing to the undeveloped nature of the subdivision and a large reservoir within neighboring Wao Kele o Puna.

ferns, which will be an important native canopy component as the overstory ʻōhiʻa declines while replacement species such as kopiko dominate the canopy.

There is a large feral pig population in the area, drawing on the empty lots adjacent to the Shlachters and also a large reservoir of pigs in the 26,000-acre Wao Kele o Puna Forest Reserve. In this forest type, which features thin soils on pāhoehoe lava, the presence of pigs rooting around in the understory is the main source of weed propagules. The pig population is large enough result in the destruction of standing hapuʻu ferns, by tusking and digging around them until they fall and then eating the fleshy core.

3.3.6. Hydrology

3.3.6.1. Streams and wetlands

The property has no streams or wetlands. In spite of the extreme rainfall, most of the water seeps into cracks in the pāhoehoe rock substrate. The organic soils are very wet, however.

3.3.7. Geology and lava tubes

There are several small lava tubes/lava bubbles on the property, where subsidence during the flow has resulted in underground cavities with skylights. None of these are particularly deep or large, with heights of 4 ft or less and diameters of less than 10 ft.

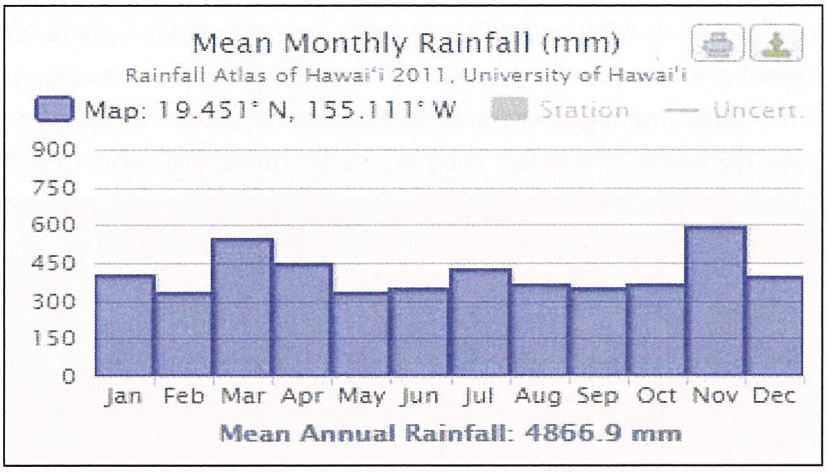


Figure 7. The property has abundant, even excessive and consistent year-round rainfall, receiving almost 5 meters (190 inches) of rain per year, among the highest on the inhabited portions of Hawaiʻi island.

Figure 6. This medium sized lava cavity (not a tube) is found just South of the dwelling. There is enough room to crawl around inside with difficulty.

3.4. Rainfall

Mean annual rainfall in this location is quite high, ranging from above 300 to over 450 mm per month consistently throughout the year (**Figure 6**)[2]. There is no risk of drought or fire owing to this level of rainfall. No uncontrolled forest fires have ever been reported in this area.

3.5. Soils

The major soil type across the property, which is within Map Unit 651, is the Keei slightly decomposed plant material. This is a thin, organic soil (70% organic matter)

[2] Giambelluca, T.W., Q. Chen, A.G. Frazier, J.P. Price, Y.-L. Chen, P.-S. Chu, J.K. Eischeid, and D.M. Delparte, 2013: Online Rainfall Atlas http://rainfall.geography.hawaii.edu/interactivemap.html

with a depth to a root restrictive layer of 2 to 10 inches (5 to 35 cm). Soil is well drained, not flooded. Notably, these soils are not hydric in spite of being in an area of extremely high rainfall.

The geology of the area is very recent, under 1,000 years of age, which accounts for the very shallow soils that are derived principally from the organic material falling on the surface and decomposing.

3.6. Fauna

3.6.1. Threatened and endangered species

Although not seen on the property, the area supports both *Buteo solitarius* ('io) and *Lasirus cinereus semotus* ('ope'ape'a – Hawaiian hoary bat), both are common in upland forests on Hawai'i island. Also, potentially present are bird species *Asio flammeus* (pueo), *Vestiaria coccinea* ('i'iwi) and *Himatione sanguinea* ('apapane). Of the forest management practices recommended in this plan, none has any potential to negatively impact these T/E fauna, and in fact their implementation will serve to enhance habitat availability and connectivity.

Figure 8. Pigs are continually rooting up the understory species and creating mosquito habitat, such as this wallow in the background. Note also the abundant clidemia and arthrostema, which are also moved around by pigs.

3.6.2. Non-native fauna

Ground birds, including kalij pheasant (*Lophura leucomelanos*) were observed on the property, and although their direct impacts on the forest are small, they may assist with dispersal of certain invasive weed seeds. Other common birds include the Northern cardinal (*Cardinalis cardinalis*), saffron finch (*Sicalis flaveola*), red-crested cardinal (*Paroaria coronate*) and Japanese white-eye (*Zosterops japonicus*), all of which are introduced species. There were no native bird species encountered during the property visits, likely due to mosquitoes.

Feral pigs are a source of constant forest disturbance and introduction of weed seeds. For this particular forest, they are the main source of forest decline aside from the possible arrival of rapid 'ōhi'a death. The only long-term effective way to manage this problem is to fence the property with woven wire.

3.7. Threat assessment

Table 1. Summary of threats to the native forest ecosystem, Marc Shlachter property, Fern Forest

Threat	Rating	Avoidable?	Management action

Ungulates	**High**	**Yes**	**Build fence**
Invasive weeds	**High**	**Yes**	**Fence and reduce population**
Fire	None	N/A	N/A
Volcanic	Medium	No	N/A
Human misuse	**Medium**	**Yes**	**Fence to prevent dumping**
Pests, pathogens	**High**	**No**	**plant alternates to 'ohi'a**
Flooding	None	N/A	N/A

A matrix of threats and mitigation actions are presented in **Table 1**, the main threats to this forest are, in order of importance:

1. Weeds
2. Pigs
3. Rapid ʻŌhiʻa Death

3.7.1. Invasive species

By a large margin, invasive species present the most serious persistent threat to integrity of native Hawaiian forest ecosystems. This property is no exception, weeds are the most important threat to this forest, consuming water and nutrients and shading out less competitive native plants. Weeds must be controlled and replaced by native plants if this forest is to change direction from one of decline to slow recovery. Controlling weeds alone, however will not recover this forest. Such weed control must be accompanied by the elimination of the existing pig population.

3.7.2. Ungulates

The high feral pig population is constantly weakening the native hapuʻu tree fern population, providing a ready vector for weed seeds and constantly uprooting the thin soils. In order to make any progress on native forest improvements, the pigs must be removed. This will accomplish three things: 1) Staunch the loss of hapuʻu tree ferns, 2) Reduce weed seed introductions and 3) Reduce water ponding in hapuʻu and wallows that favor mosquito breeding.

3.7.3. Fire

No fire risk exists on this property aside from a structural fire in the house. Forest is extremely wet year-round.

3.7.4. Flood risk

There is no flood risk on this property. Water may pond temporarily in lava benches, pig wallows and the like, yet the prevailing slope and lack of streams nearby remove any chance of flooding.

3.7.5. Human misuse

Intentional damage by human activity can be a nuisance problem, greatly mitigated by a locked fence. The trail has been designed to not be visible from Jungle King Ave to deter hunters from using property as access for Wao Kele o Puna. Illegal dumping, always a problem in Hawaii, is particularly common in the Glenwood area, best controlled with a fence and locked gate.

4. Management Prescriptions

4.1. Resource concern

The main resource concern on this property, in NRCS terms, is degraded plant condition- Excessive plant pest pressure[3]. The practices and methods discussed in this section relate to improving the native forest from its current disturbed and weedy condition to an ungulate-free healthy native forest.

4.2. Property level prescriptions

4.2.1. Fence, NRCS code 382 - Fence

The entire 10.2-acre property will be fenced a perimeter of 3,020 feet. A small excavator will be used to clear a 4 ft wide path along the boundary, avoiding native trees where possible and following the existing survey markers. Hapu'u fern encountered along the fence-line right of way that must be removed will be de-fronded and either planted just off the fence-line (ideally over weeds) or extracted to the house pad area and later used for regeneration of the forest. Snags and dying trees that are likely to fall upon the fence once installed will be felled and moved to the side where they can serve as nurse logs. 'Ōhi'a damaged during the fencing operation will be felled and stacked to avoid the spread of rapid 'ōhi'a death

The guiding principle of fence clearing is to obtain the minimum width necessary for a viable, easily maintained permanent fenceline at a reasonable cost. This does not mean creating a wide opening on both sides of the property which is inconsistent with the management objectives for the forest. Open areas are liable to become weed patches in the future, so care must be used to reduce native forest clearing. Stiff hogwire panels should be considered in areas where the fence corridor is narrow due to healthy native vegetation. Stiff panels allow the construction of the fence with less ground and surrounding forest disturbance.

After clearing, the same equipment will be used to install fence hardware in accordance with NRCS specifications for the practice. Fence will be a standard 4 ft hog-wire fence with graduated holes, a barb wire against the ground. Fence skirts will be installed where the topography limits the woven wire stretch limits to prevent undermining by pigs. Skirts must be directed toward the outside of the fence.

A lower stature (30 inches) fence is an alternative that has been reported to work nearby for pigs. It is less costly and easier to maintain. However, such a stature would not prevent unauthorized hunting on the property, for which a taller fence is a deterrent and is therefore warranted.

Note that the cost estimate contemplated in the budget includes both the clearing and also the installation of the fence on wet pāhoehoe rock. Installation of a fence on open rock ground is currently $ 10.00 per foot, we estimate an additional $ 5-7 per foot for the clearing process. Given the magnitude of this project, it is recommended that at least 3 and preferably 5 bids be sought.

4.2.2. Trail, NRCS code N/A

A 2,450-foot trail is planned to both provide access and improve landowner enjoyment of the restored native forest. The forest in its current state is difficult to traverse, taking over 1 hour of hard labor to reach the rear

[3] Pacific Islands Area Resource Concerns and Planning Criteria. September 2017. Available: https://efotg.sc.egov.usda.gov/treemenuFS.aspx, accessed March 25, 2018

of the property. This trail also serves as a convenient boundary between forest management units (FMUs). The trail design is simple owing to the light, occasional use that is contemplated.

This trail will be built by manually clearing vegetation on a variable width, approximately 3-foot path, avoiding damage to larger native trees and especially to ʻōhiʻa. The trail will link weed patch to weed patch, substituting invaded forest for access and ameliorating the damage caused by the clearing. The heads of hapuʻu tree fern that unavoidably must be removed will be re-planted in the forest as trail building takes place.

Trail surface will be the surrounding soil, with occasional corduroy (logs placed next to one another across the trail close to each other so as to form a wear surface) in wet areas and pāhoehoe cracks. Trail will not be terraformed, merely finding the best path through the lava outcrops and native trees.

Trail construction is split between years 1 and 2 to reduce up-front burden on landowner.

4.2.3. Fence monitoring, NRCS code 472 – Access control

The fence will require periodic maintenance primarily to address fallen trees and tunneling where pigs can get under the fence. This is incidental, not particularly costly or difficult and is part of routine property maintenance. Lava tubes or rock overhangs can also allow pigs access to the property; monitoring for such access will be therefore necessary.

4.3. Stand level prescriptions

4.3.1. Forest management units & practices summary

For ease of management on the 9.7 forested acres contemplated in this plan, four management units have been assigned. These are presented in **Table 2**.

Table 2. Forest Management Units (FMUs) and their prescriptions

Forest Management Unit	Size (acres)	Prescription
Dwelling	0.5	Not in management plan
1	2.2	Control weeds, spot plant with native species
2	2.8	Control weeds, spot plant with native species
3	2.2	Control weeds, spot plant with native species
4	2.5	Control weeds, spot plant with native species
Total Property (3 TMKs)	10.2	Fence perimeter with hog-wire, install access trail

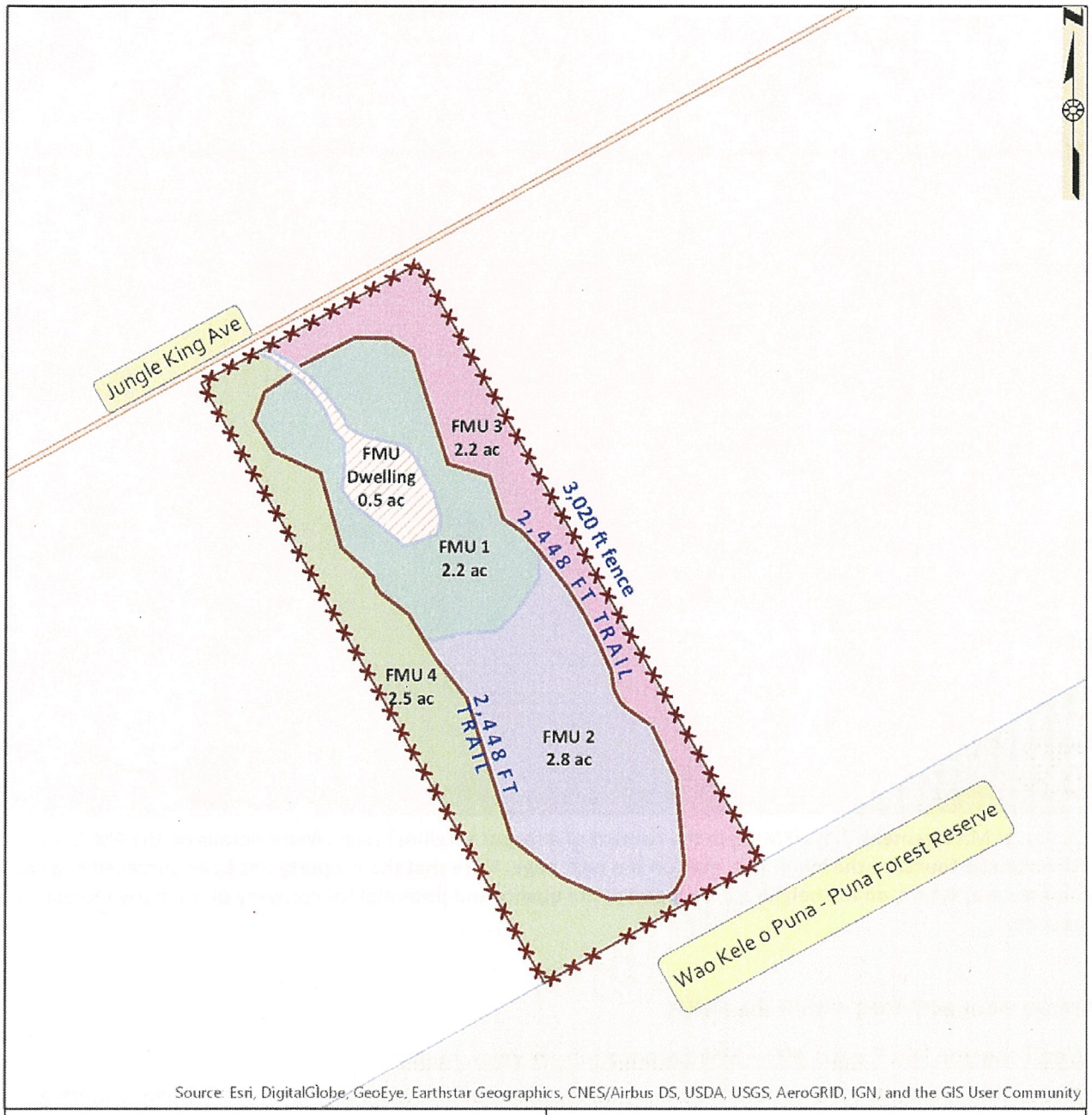
The forest management units (FMUs) are set out to break up the workload over a series of years rather than any natural forest breaks. The entire property could be considered a single stand, with little difference between FMUs.

Within each FMU therefore, the prescription is the same:

Table 3. Management prescriptions for forest management units on the Shlachter property

Practice	NRCS code	Timing
Weed control / Site prep.	490	Years 3-6, after fence and trail building in years 1-2
Tree & shrub establishment	612	Years 4-7, concurrent with woody residue treatment
Nutrient management	590	Years 4-7, concurrent with tree & shrub establishment
Herbaceous weed control	315	Years 5-9, for 2 years following planting

Forest Management Summary Map



Legend

Forest Management Unit
- Dwelling
- 1
- 2
- 3
- 4

- Public Road
- Trail
- hawaiiisland_coast
- Ownership boundary
- WKOP

0 25 50 Meters

0 50 100 200 300 Feet

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28 MARCH 2018

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Figure 10. Forest Management Units (FMUs) in the context of a recent satellite image. More details on the FMUs and prescriptions can be found on the larger plat map on the next page. Note that the property has been surveyed and the encroachments are, in fact, on the neighboring property. The quality and potential for recovery of the native forest can plainly be seen.

4.4. Management activities within the FMUs

4.4.1. Weed control, NRCS code 490 – Site preparation, manual, heavy

The object of this prescription is to remove heavy infestations of strawberry guava, glory bush, clidemia, Himalayan yellow-berry, blackberry and thimbleberry among other invasive weeds. Initial control will be the most difficult and costly, and will, together with fencing, benefit the forest the most. Spot maintenance entries later in the planning horizon (years 5-10) are covered in section **4.4.6**.

For larger specimens of strawberry guava, chemical brush management will be accomplished using a frill treatment frill / drill (see **Figure 11**Error! Reference source not found.) application of at least 3 ml triclopyr (Garlon 4, Element 4), but the same trees are easily killed using only 1 or 2 ml of aminopyralid (Milestone) or aminocyclopyrachlor (Perspective, which has a cocktail of other active ingredients as part of the product). An

advantage of frill applications is that they can be carried out in light rain, an obvious advantage on this property. Frill is preferred over foliar application since less chemical is used and the use is targeted only to the weed.

The small and medium multi-stem shrub species glory bush, arthrostema and clidemia will be controlled with a foliar application of a small amount glyphosate 1.5 % (roundup) with imazapyr (Polaris AC). If available, Streamline (aminocyclopyrachlor, metsulfuron methyl) is effective using a foliar application on smaller guava as well as other brush species. Otherwise, commercial products Perspective or Viewpoint also offer the amincocyclopyrachlor active ingredient in combination with other herbicides.

Ginger can be controlled by manual uprooting and hanging root ball in nearby brush to prevent contact with soil (small populations) or by a combination of a small amount of glyphosate 1 % (roundup) with Escort (metsulfuron methyl). A slow control of ginger is ideal, allowing the herbicides to take their effect in the basal corms to eliminate the clumps in a single application.

Figure 11. Frill (left), drill (center), or single incision (right) methods for administering optimized doses of herbicides to invasive tree species. Effective herbicide agents for this application type include Milestone, Polaris AC, Roundup PowerMax, and Garlon 4 / Element 4; effects vary strongly by target species. (Right image: Leary et al. 2012

4.4.2. Tree and shrub establishment - NRCS code 612 – Tree/Shrub establishment

The purpose of planting is to re-occupy the sites opened by removing weed cover and fill in the understory, not wholesale forest replacement. We estimate that 70 trees per acre, or about ¼ of full stocking density will be sufficient to fill in around existing native trees, ferns and uluhe. Naturally, seedlings will be planted closer – between 3 and 5 feet apart- in areas where there is a clearing to provide shade to the soil surface and discourage weed growth.

Table 4. Recommended planting species list. For each canopy layer, species higher on the list are better.

Species name	Species	Form	type	growth
groundcovers				
ala'ala wai nui	*Peperomia sp.*	herb	groundcover	fast
ʻōhelo 'ai	*Vaccinium reticulatum*	sm. shrub	groundcover	slow
nutgrass	*Scleria testacea*	herb	groundcover	medium
ahu'awa	*Cyperus javanicus*	sedge	groundcover	fast
lower to mid-canopy				
māmaki	*Pipturus albidus*	shrub	sub-canopy	fast
pilo	*Coprosma montana*	tree	sub-canopy	medium
hapu'u fern	*Cibotium glaucum*	tree fern	sub-canopy	medium
maile	*Alyxia oliviformis*	vine	sub-canopy	medium
ʻākala	*Rubus hawaiiensis*	shrub	sub-canopy	fast
kōlea lau nui	*Myrsine lessertiana*	tree	sub-canopy	medium
ʻōhelo kau lā'au	*Vaccinium reticulatum*	shrub	sub-canopy	medium
ʻōlapa	*Cheirodendron trigynum*	tree	sub-canopy	medium
kōpiko	*Psychotria hawaiiensis*	tree	sub-canopy	medium
olomea	*Perrottetia sandwicensis*	tree	sub-canopy	medium
canopy				
ʻōhiʻa	*Metrosideros polymorpha*	tree	canopy	slow
kōpiko	*Psychotria hawaiiensis*	tree	canopy	slow
lama	*Diospyros sanwicensis*	tree	canopy	v. slow
ʻiliahi	*Santalum paniculatum*	tree	canopy	slow
Alternatives to ʻōhiʻa				
koa	*Acacia koa*	tree	canopy	fast
ohe mauka	*Tetraplasandra oahuensis*	tree	canopy	slow
lama	*Diospyros sanwicensis*	tree	canopy	v slow
hapu'u fern	*Cibotium glaucum*	tree fern	sub-canopy	medium
ʻōlapa	*Cheirodendron trigynum*	tree	sub-canopy	medium

Seedlings will be procured from local nurseries (Aileen's nursery, Hilo; Native Nursery, Maui, others as available) using seed stock from Hawai'i Island sources as close to the property as possible. The following species list is offered as a guide for planting, listed by canopy layer and order of preference. Species higher on the list for each canopy layer are preferable, either because they are faster growing (claim site sooner), because they are easier to propagate and are therefore more economical or they are generally more available.

Hand planting will be accomplished using a tree spade or hand mattock as appropriate for the nursery stock. The soil surface should be perforated to a depth slightly greater than the length of the seedling root stock, and the seedling should be placed into this hole. The root collar should be marginally lower than the level of the soil, between 1/8" and 1/4", with the root mass oriented vertically; the tip of the root mass should not bend outwards (so-called "J-rooting"). Soil is then compacted lightly around the root system.

4.4.3. Nutrient management, NRCS code 590 – Nutrient management

A crown fertilizer treatment assists with early seedling growth and development. It will consist of a 2-oz. dose of slow release, 10-12-month (Osmocote or Nutricote) fertilizer distributed evenly within a 6" diameter area centered on the seedling stem. Care should be taken to avoid concentrating fertilizer in one particular area, as this nutrient inundation can lead to toxic effects and tree mortality, even with slow release formulations. A second fertilizer treatment at eight (8) months after planting may be required and is included here to be used as needed. The parcel is located in a high-rainfall area, with acid organic soils so nutrient leaching is a concern and the seedlings will likely need additional nutrients at the eight-month point.

Table 5. Fertilizer recommendations

Formula (N-P-K)	Treatment	Timing
10-30-10+	2 oz / tree, crown 12" in diameter	At planting
11-52-00	4 oz / tree, crown at dripline	8 months

4.4.4. Weed control, NRCS code 315 – Herbaceous Weed Control

Both selective and broad-spectrum herbicides will be used as necessary for controlling competition after planting through approximately two (2) years of age, or the point where the young forest canopy begins to close. Two competition control entries are expected per year. In the event that the dominant weed species are grasses, herbicides with grass-specific modes of action may be applied directly over the entire planting area. These compounds do not affect broadleaf biochemistry and are thus safe for use without physical barriers around seedlings. Examples of these grass-specific herbicides are fluazifop (Fusilade DX) and quizalofop (Assure II). On the other hand, the weed species assemblage may be dominated by broadleaf species, necessitating use of more general herbicides such as glyphosate (Roundup PowerMax). Particular weed species, plant size, and time of application all determine the precise formula needed to control weeds. Rather than prescribing a certain formula at this juncture, the land manager should consult with weed control professionals, University of Hawaii Extension, with the management planner, and / or with the chemical label at the time of application.

Competition control is planned for the first and second year after planting. Given the closed canopy, cool conditions and constant cloud cover, it is expected that this will not need to be repeated for more than 2 years post-planting aside from occasional brush management covered below by incipient weed management.

4.4.5. Forest Health and Protection - NRCS code 595 - Integrated pest management

Planted seedling care

Maintaining healthy seedlings is the first and best defense against pests and pathogens, yet some level of disease or pest infestation may be unavoidable even in healthy plantings. This plan prescribes an integrated pest management (IPM) approach to dealing with pests and pathogens. The IPM framework involves three sequential assessments, (1) monitoring potential pest agents, (2) identifying threshold densities or populations at which pests cause unacceptable economic damage, and (3) identifying and applying the most effective control agent. To control insect pests in IPM, the first step is to identify potential pest species. This requires a monitoring program that can take on varying degrees of sophistication.

The specific control method will necessarily depend on the severity and nature of infestation. A localized, acute infestation can be controlled using conventional chemical methods, such as dinotefuran (Safari 20 SG) or spirotetramat (Movento). Longer lived and larger infestations cannot be controlled chemically and the best option is to either 1) change the environment such that it no longer favors the pest or 2) select species that are not being affected by the pest.

Rapid 'ōhi'a death

The largest threat to this forest, and in need of management action is rapid 'ōhi'a death. It is likely that some or all of the 'ōhi'a on the property will become infected. If a tree becomes infected and dies, the current prescription is to fell the tree while avoiding damage to others, buck into small segments, stack and tarp the resulting wood pile to limit disease propagules. The budget thus proposed is a contingency to account for ROD rather than a direct prescription.

4.4.6. Weed control after the 10 year planning horizon

By the end of the planning period the planted seedlings will have created enough canopy cover so that the continued maintenance of the property is minimal. However, some maintenance will be needed in perpetuity to keep the weed population in check, this forest will not remain clear of weeds on its own.

It is important to note that this forest will remain intact only if it is subject to forest management over a long term. The first 10 years of this management plan will recover its original structure and function, however the continual presence of weeds species on all sides, to say nothing of new introductions means that this forest will forever need to have a degree of maintenance to remain viable. This maintenance is not onerous, mainly keeping fence maintained and spot control of weeds once or twice per year.

5. Budget and Schedule

The preceding management R_x are planned around a specific budget and implementation schedule for each FMU. Each R_x is assigned to a corresponding USDA NRCS code, and is given a per-unit cost. **Budgets have been prepared such that costs are allocated to each of the five FMU types as well as separated by operational year. The net project budget sums to $124,916.20, which is a per acre cost of $12,877.96 or an average annual per acre cost of $1,287.80. Of this, the applicant is expected to contribute 50% or $62,458.1 over the life of the project.**

Costs for this project are somewhat driven by scale. With a relatively small number of acres each year, the cumulative mobilization results in relatively higher per acre figures than could be expected in a larger forest setting. The obligate use of manual methods also contributes to cost, as the project is simply too small to mechanize operations efficiently. Finally, the weeds that are present on the property are some of the most difficult weeds to control in the state.

This budget is a plan for possible expenditures by year, actual expenditures will vary as the project develops and methods are refined. It is likely that the actual costs will be lower than those projected in the budget tables below.

5.1. 10-year budget summary

A ten-year budget summary is presented below, with a detailed annual budget in the ensuing pages. Some of the expenses, such as fencing (year 1), trail building (years 1-2) and site preparation (years 3-6) are more or less fixed based on the work needed. Other budget items, such as herbaceous weed control and integrated pest management are necessarily dependent onsite conditions; weed pressure in the former, ROD infestation (or lack of) in the latter.

Table 6. Ten-year budget summary

Period	Applicant	FSP	Combined
Year 1	$ 34,217.90	$ 34,217.90	$ 68,435.79
Year 2	$ 5,228.75	$ 5,228.75	$ 10,457.50
Year 3	$ 2,307.35	$ 2,307.35	$ 4,614.70
Year 4	$ 4,076.35	$ 4,076.35	$ 8,152.70
Year 5	$ 3,937.85	$ 3,937.85	$ 7,875.70
Year 6	$ 4,183.85	$ 4,183.85	$ 8,367.70
Year 7	$ 2,659.85	$ 2,659.85	$ 5,319.70
Year 8	$ 1,691.85	$ 1,691.85	$ 3,383.70
Year 9	$ 1,284.85	$ 1,284.85	$ 2,569.70
Year 10	$ 822.35	$ 822.35	$ 1,644.70
Total:	**$ 60,410.95**	**$ 60,410.95**	**$ 120,821.89**

5.2. Detailed annual budget

Table 7. Annual budget for forest management activities in project years 1 through 4.

Activity	NRCS code	Cost unit[1]	Field Annual	Bdry 3020 ft	Trail 2448 ft	1 2.2 ac	2 2.8 ac	3 2.2 ac	4 2.5 ac
Year 1 (2019)			**Month**						
Management plan	---	$4,896	1	$ 4,896	$ -	$ -	$ -	$ -	$ -
Fence construction	382	$18	7	$ 54,360	$ -	$ -	$ -	$ -	$ -
Forest trail construction	---	$7.5	8	$ -	$ 9,180	$ -	$ -	$ -	$ -
Year subtotal:	---	---	---	$ 59,256	$ 9,180	$ -	$ -	$ -	$ -
NRCS%	---	---	---	50%	50%	50%	50%	50%	50%
Applicant share:	---	---	---	$ 29,628	$ 4,590	$ -	$ -	$ -	$ -
FSP Share:	---	---	---	$ 29,628	$ 4,590	$ -	$ -	$ -	$ -
Year 1 Applicant total:	**$**	**34,217.90**			**Year 1 FSP Total:**				**$34,217.90**
Year 2 (2020)			**Month**						
Access control (fence maint)	472	$0.15	7	$ 453	$ -	$ -	$ -	$ -	$ -
Forest trail construction	---	$7.50	7	$ -	$ 9,180	$ -	$ -	$ -	$ -
Integrated pest mgmt.	595	$85.0	7	$ -	$ -	$ 187	$ 238	$ 187	$ 213
Year subtotal:	---	---	---	$ 453	$ 9,180	$ 187	$ 238	$ 187	$ 213
NRCS%	---	---	---	50%	50%	50%	50%	50%	50%
Applicant share:	---	---	---	$ 227	$ 4,590	$ 94	$ 119	$ 94	$ 106
FSP Share:	---	---	---	$ 227	$ 4,590	$ 94	$ 119	$ 94	$ 106
Year 2 Applicant total:	**$**	**5,228.75**			**Year 2 FSP Total:**				**$5,228.75**
Year 3 (2021)			**Month**						
Access control (fence maint)	472	$0.15	7	$ 453	$ -	$ -	$ -	$ -	$ -
Trail maintenance	---	$0.15	7	$ -	$ 367	$ -	$ -	$ -	$ -
Site preparation, manual, heavy	490	$1,350	8	$ -	$ -	$ 2,970	$ -	$ -	$ -
Integrated pest mgmt.	595	$85	7	$ -	$ -	$ 187	$ 238	$ 187	$ 213
Year subtotal:	---	---	---	$ 453	$ 367	$ 3,157	$ 238	$ 187	$ 213
NRCS%	---	---	---	50%	50%	50%	50%	50%	50%
Applicant share:	---	---	---	$ 227	$ 184	$ 1,579	$ 119	$ 94	$ 106
FSP Share:	---	---	---	$ 227	$ 184	$ 1,579	$ 119	$ 94	$ 106
Year 3 Applicant total:	**$**	**2,307.35**			**Year 3 FSP Total:**				**$2,307.35**
Year 4 (2022)			**Month**						
Access control (fence maint)	472	$0.15	7	$ 453	$ -	$ -	$ -	$ -	$ -
Trail maintenance	---	$0.15	7	$ -	$ 367	$ -	$ -	$ -	$ -
Site preparation, manual, heavy	490	$1,350	7	$ -	$ -	$ -	$ 3,780	$ -	$ -
Herbaceous weed control	315	$190	3	$ -	$ -	$ 418	$ -	$ -	$ -
Tree estab. Seedlings (70 tpa)	612	$6	4	$ -	$ -	$ 924	$ -	$ -	$ -
Tree estab. Planting (70 tpa)	612	$2	4	$ -	$ -	$ 308	$ -	$ -	$ -
Nutrient management	590	$150	4	$ -	$ -	$ 660	$ -	$ -	$ -
Herbaceous weed control	315	$190	11	$ -	$ -	$ 418	$ -	$ -	$ -
Integrated pest mgmt.	595	$85.00	11	$ -	$ -	$ 187	$ 238	$ 187	$ 213
Year subtotal:	---	---	---	$ 453	$ 367	$ 2,915	$ 4,018	$ 187	$ 213
NRCS%	---	---	---	50%	50%	50%	50%	50%	50%
Applicant share:	---	---	---	$ 227	$ 184	$ 1,458	$ 2,009	$ 94	$ 106
FSP Share:	---	---	---	$ 227	$ 184	$ 1,458	$ 2,009	$ 94	$ 106
Year 4 Applicant total:	**$**	**4,076.35**			**Year 4 FSP Total:**				**$4,076.35**

Table 8. Annual budget for forest management activities in project years 5 through 7.

Activity	NRCS code	Cost unit[1]	Field Annual	Bdry 3020 ft	Trail 2448 ft	1 2.2 ac	2 2.8 ac	3 2.2 ac	4 2.5 ac
Year 5 (2023)			**Month**						
Access control (fence maint)	472	$0.15	7	$ 453	$ -	$ -	$ -	$ -	$ -
Trail maintenance	---	$0.15	7	$ -	$ 367	$ -	$ -	$ -	$ -
Site preparation, manual, heavy	490	$1,350	7	$ -	$ -	$ -	$ -	$ 2,970	$ -
Herbaceous weed control	315	$190	8	$ -	$ -	$ -	$ 532	$ -	$ -
Tree estab. Seedlings (70 tpa)	612	$6	8	$ -	$ -	$ -	$ 1,176	$ -	$ -
Tree estab. Planting (70 tpa)	612	$2	8	$ -	$ -	$ -	$ 392	$ -	$ -
Nutrient management	590	$150	8	$ -	$ -	$ -	$ 420	$ -	$ -
Herbaceous weed control	315	$190	8	$ -	$ -	$ 209	$ 532	$ -	$ -
Integrated pest mgmt.	595	$85.00	8	$ -	$ -	$ 187	$ 238	$ 187	$ 213
Year subtotal:	---	---	---	$ 453	$ 367	$ 396	$ 3,290	$ 3,157	$ 213
NRCS%	---	---	---	50%	50%	50%	50%	50%	50%
Applicant share:	---	---	---	$ 227	$ 184	$ 198	$ 1,645	$ 1,579	$ 106
FSP Share:	---	---	---	$ 227	$ 184	$ 198	$ 1,645	$ 1,579	$ 106
Year 5 Applicant total:	**$**	**3,937.85**		**Year 5 FSP Total:**					**$3,937.85**
Year 6 (2024)			**Month**						
Access control (fence maint)	472	$0.15	7	$ 453	$ -	$ -	$ -	$ -	$ -
Trail maintenance	---	$0.15	7	$ -	$ 367	$ -	$ -	$ -	$ -
Site preparation, manual, heavy	490	$1,350	7	$ -	$ -	$ -	$ -	$ -	$ 3,375
Herbaceous weed control	315	$190	8	$ -	$ -	$ -	$ -	$ 418	$ -
Tree estab. Seedlings (70 tpa)	612	$6	8	$ -	$ -	$ -	$ -	$ 924	$ -
Tree estab. Planting (70 tpa)	612	$2	8	$ -	$ -	$ -	$ -	$ 308	$ -
Nutrient management	590	$150	8	$ -	$ -	$ -	$ -	$ 330	$ -
Herbaceous weed control	315	$190	8	$ -	$ -	$ 418	$ 532	$ 418	$ -
Integrated pest mgmt.	595	$85.00	8	$ -	$ -	$ 187	$ 238	$ 187	$ 213
Year subtotal:	---	---	---	$ 453	$ 367	$ 605	$ 770	$ 2,585	$ 3,588
NRCS%	---	---	---	50%	50%	50%	50%	50%	50%
Applicant share:	---	---	---	$ 227	$ 184	$ 303	$ 385	$ 1,293	$ 1,794
FSP Share:	---	---	---	$ 227	$ 184	$ 303	$ 385	$ 1,293	$ 1,794
Year 6 Applicant total:	**$**	**4,183.85**		**Year 6 FSP Total:**					**$4,183.85**
Year 7 (2025)			**Month**						
Access control (fence maint)	472	$0.15	7	$ 453	$ -	$ -	$ -	$ -	$ -
Trail maintenance	---	$0.15	7	$ -	$ 367	$ -	$ -	$ -	$ -
Herbaceous weed control	315	$190	8	$ -	$ -	$ -	$ -	$ -	$ 475
Tree estab. Seedlings (70 tpa)	612	$6	8	$ -	$ -	$ -	$ -	$ -	$ 1,050
Tree estab. Planting (70 tpa)	612	$2	8	$ -	$ -	$ -	$ -	$ -	$ 350
Nutrient management	590	$150	8	$ -	$ -	$ -	$ -	$ -	$ 375
Herbaceous weed control	315	$190	8	$ -	$ -	$ -	$ 532	$ 418	$ 475
Integrated pest mgmt.	595	$85.00	8	$ -	$ -	$ 187	$ 238	$ 187	$ 213
Year subtotal:	---	---	---	$ 453	$ 367	$ 187	$ 770	$ 605	$ 2,938
NRCS%	---	---	---	50%	50%	50%	50%	50%	50%
Applicant share:	---	---	---	$ 227	$ 184	$ 94	$ 385	$ 303	$ 1,469
FSP Share:	---	---	---	$ 227	$ 184	$ 94	$ 385	$ 303	$ 1,469
Year 7 Applicant total:	**$**	**2,659.85**		**Year 7 FSP Total:**					**$2,659.85**

Table 9 Annual budget for forest management activities in project year 8 through 10.

Activity	NRCS code	Cost unit[1]	Field Annual	Bdry 3020 ft	Trail 2448 ft	1 2.2 ac	2 2.8 ac	3 2.2 ac	4 2.5 ac
Year 8 (2026)			**Month**						
Access control (fence maint)	472	$0.15	7	$ 453	$ -	$ -	$ -	$ -	$ -
Trail maintenance	---	$0.15	7	$ -	$ 367	$ -	$ -	$ -	$ -
Competition control	315	$370	7	$ -	$ -	$ -	$ -	$ 814	$ 925
Integrated pest mgmt.	595	$85.00	7	$ -	$ -	$ 187	$ 238	$ 187	$ 213
Year subtotal:	---	---	---	$ 453	$ 367	$ 187	$ 238	$ 1,001	$ 1,138
NRCS%	---	---	---	50%	50%	50%	50%	50%	50%
Applicant share:	---	---	---	$ 227	$ 184	$ 94	$ 119	$ 501	$ 569
FSP Share:	---	---	---	$ 227	$ 184	$ 94	$ 119	$ 501	$ 569
Year 8 Applicant total:	**$**	**1,691.85**		**Year 8 FSP Total:**					**$1,691.85**
Year 9 (2027)			**Month**						
Access control (fence maint)	472	$0.15	7	$ 453	$ -	$ -	$ -	$ -	$ -
Trail maintenance	---	$0.15	7	$ -	$ 367	$ -	$ -	$ -	$ -
Herbaceous weed control	315	$190	7	$ -	$ -	$ -	$ -	$ -	$ -
Tree estab. Seedlings (70 tpa)	612	$6	7	$ -	$ -	$ -	$ -	$ -	$ -
Tree estab. Planting (70 tpa)	612	$2	7	$ -	$ -	$ -	$ -	$ -	$ -
Nutrient management	590	$150	7	$ -	$ -	$ -	$ -	$ -	$ -
Herbaceous weed control	315	$190	7	$ -	$ -	$ -	$ -	$ -	$ 475
Integrated pest mgmt.	595	$85	7	$ -	$ -	$ -	$ -	$ -	$ 213
Year subtotal:	---	---	---	$ 453	$ 367	$ -	$ -	$ -	$ 688
NRCS%	---	---	---	50%	50%	50%	50%	50%	50%
Applicant share:	---	---	---	$ 227	$ 184	$ -	$ -	$ -	$ 344
FSP Share:	---	---	---	$ 227	$ 184	$ -	$ -	$ -	$ 344
Year 9 Applicant total:	**$**	**753.85**		**Year 9 FSP Total:**					**$753.85**
Year 10 (2028)			**Month**						
Access control (fence maint)	472	$0.15	7	$ 453	$ -	$ -	$ -	$ -	$ -
Trail maintenance	---	$0.15	7	$ -	$ 367	$ -	$ -	$ -	$ -
Integrated pest mgmt.	595	$85.00	7	$ -	$ -	$ 187	$ 238	$ 187	$ 213
Year subtotal:	---	---	---	$ 453	$ 367	$ 187	$ 238	$ 187	$ 213
NRCS%	---	---	---	50%	50%	50%	50%	50%	50%
Applicant share:	---	---	---	$ 227	$ 184	$ 94	$ 119	$ 94	$ 106
FSP Share:	---	---	---	$ 227	$ 184	$ 94	$ 119	$ 94	$ 106
Year 10 Applicant total:	**$**	**822.35**		**Year 10 FSP Total:**					**$822.35**

5.3. Schedule

Table 10. Plan of operations during project years 1 through 4.

Activity	NRCS code	Year	Start month	Field					
				Bdry	Trail	1	2	3	4
Year 1 (2019)									
Management plan	---	2019	1						
Fence construction	382	2019	7						
Forest trail construction	655	2019	8						
Year 2 (2020)									
Access control (fence maint)	472	2020	7						
Forest trail construction	655	2020	7						
Integrated pest mgmt.	595	2019	7						
Year 3 (2021)									
Access control (fence maint)	472	2019	7						
Trail maintenance	472	2014	7						
Site preparation, manual, heavy	490	2014	8						
Integrated pest mgmt.	595	2014	7						
Year 4 (2022)									
Access control (fence maint)	472	2014	7						
Trail maintenance	472	2014	7						
Site preparation, manual, heavy	490	2014	7						
Herbaceous weed control	315	2014	3						
Tree estab. Seedlings (70 tpa)	612	2014	4						
Tree estab. Planting (70 tpa)	612	2014	4						
Nutrient management	590	2014	4						
Herbaceous weed control	315	2014	11						
Integrated pest mgmt.	595	2014	11						

Table 11. Plan of operations during project years 5 through 7.

Activity	NRCS code	Year	Start month	Field					
				Bdry	Trail	1	2	3	4
Year 5 (2023)									
Access control (fence maint)	472	2014	7	■					
Trail maintenance	472	2014	7		■				
Site preparation, manual, heavy	490	2014	7					■	
Herbaceous weed control	315	2014	8				■		
Tree estab. Seedlings (70 tpa)	612	2014	8				■		
Tree estab. Planting (70 tpa)	612	2014	8				■		
Nutrient management	590	2014	8				■		
Herbaceous weed control	315	2014	8			■	■		
Integrated pest mgmt.	595	2014	8			■	■	■	■
Year 6 (2024)									
Access control (fence maint)	472	2014	7	■					
Trail maintenance	472	2014	7		■				
Site preparation, manual, heavy	490	2014	7						■
Herbaceous weed control	315	2014	8					■	
Tree estab. Seedlings (70 tpa)	612	2014	8					■	
Tree estab. Planting (70 tpa)	612	2014	8					■	
Nutrient management	590	2014	8					■	
Herbaceous weed control	315	2014	8			■	■	■	
Integrated pest mgmt.	595	2014	8			■	■	■	■
Year 7 (2025)									
Access control (fence maint)	472	2014	7	■					
Trail maintenance	472	2014	7		■				
Herbaceous weed control	315	2014	8						■
Tree estab. Seedlings (70 tpa)	612	2014	8						■
Tree estab. Planting (70 tpa)	612	2014	8						■
Nutrient management	590	2014	8						■
Herbaceous weed control	315	2014	8				■	■	■
Integrated pest mgmt.	595	2014	8			■	■	■	■

Table 12. Plan of operations during project years 8 through 10.

Activity	NRCS code	Year	Start month	Field					
				Bdry	Trail	1	2	3	4
Year 8 (2026)									
Access control (fence maint)	472	2014	7	■					
Trail maintenance	---	2014	7		■				
Competition control	315	2014	7					■	■
Integrated pest mgmt.	595	2014	7			■	■	■	■
Year 9 (2027)									
Access control (fence maint)	472	2014	7	■					
Trail maintenance	---	2014	7		■				
Herbaceous weed control	315	2014	7						
Tree estab. Seedlings (70 tpa)	612	2014	7						
Tree estab. Planting (70 tpa)	612	2014	7						
Nutrient management	590	2014	7						
Herbaceous weed control	315	2014	7						■
Integrated pest mgmt.	595	2014	7						■
Year 10 (2028)									
Access control (fence maint)	472	2014	7	■					
Trail maintenance	---	2014	7		■				
Integrated pest mgmt.	595	2014	7			■	■	■	■

6. References

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Exhibit A

STATE OF HAWAII
FOREST STEWARDSHIP AGREEMENT

This AGREEMENT, made this _____ day of _____ _____, 20___, by and between the BOARD OF LAND AND NATURAL RESOURCES, STATE OF HAWAII ("STATE"), by its Chairperson, whose address is 1151 Punchbowl Street, Honolulu, Hawaii 96813, and _____, ("LANDOWNER") whose address and federal and state taxpayer identification numbers are as follows:_____

_____

_____

Business address *Federal and state taxpayer identification numbers*

RECITALS

WHEREAS, Chapter 195F, Hawaii Revised Statutes (HRS), provides for the establishment of a forest stewardship program to encourage and assist private landowners in managing, protecting, and restoring important watersheds, native vegetation, fish and wildlife habitats, isolated populations of rare and endangered plants, and other forest lands that are not recognized as potential natural area reserves; and

WHEREAS, in accordance with HRS Chapter 195F and Title 13, Subtitle 5, Part 1, Chapter 109 of the Hawaii Administrative Rules (HAR), the LANDOWNER has applied, and qualifies, for participation in the forest stewardship program; and

WHEREAS, the LANDOWNER has submitted a forest stewardship management plan, as set forth in Exhibit A hereto, that the STATE agrees is consistent with the policies, goals, and objectives of the forest stewardship program; and

WHEREAS, the STATE desires to assist the LANDOWNER in implementing the forest stewardship management plan with financial and other assistance; and

WHEREAS, money is available to fund this agreement pursuant to: Act 195, SLH 1993, Hawaii Revised Statutes, Section 247-7.

NOW, THEREFORE, in consideration of the promises contained in this AGREEMENT, the STATE and the LANDOWNER agree as follows:

A. SCOPE OF SERVICES

The LANDOWNER hereby agrees to implement the forest stewardship management plan set forth in Exhibit A and the project described in the "Scope of Services" set forth in Attachment S1 in proper and satisfactory manner as determined by the STATE, both of which are hereby made a part of this AGREEMENT. The STATE hereby agrees to assist the LANDOWNER in implementing the forest stewardship management plan, all in accordance with the terms and conditions set forth in Attachments S1, S2, S3, S4, S5, and S6, attached hereto.

B. COMPENSATION

The LANDOWNER shall be compensated for performance of the project under this AGREEMENT according to the "Compensation and Payment Schedule," set forth in Attachment S2, which is hereby made a part of this Agreement.

C. TIME OF PERFORMANCE

The performance required of the LANDOWNER under this AGREEMENT shall be completed in accordance with the "Time of Performance" set forth in Attachment S3, which is hereby made a part of this AGREEMENT.

D. CERTIFICATE OF EXEMPTION FROM CIVIL SERVICE

The "State of Hawaii Certificate of Exemption from Civil Service," set forth in Attachment S4, is hereby made a part of the AGREEMENT.

E. OTHER TERMS AND CONDITIONS

The "State of Hawaii Special and General Conditions for Forest Stewardship Program Agreements," set forth in Attachment S5, and the General Conditions attached hereto, are hereby made a part of this AGREEMENT. For the purposes of this AGREEMENT the term "CONTRACTOR" in the "General Conditions" shall mean the LANDOWNER.

F. STANDARDS OF CONDUCT DECLARATION

The "Standards of Conduct Declaration" by LANDOWNER, set forth in Attachment S6, is hereby made a part of this AGREEMENT. For the purposes of this AGREEMENT the term "CONTRACTOR" in the "Standards of Conduct Declaration" shall mean the LANDOWNER.

Exhibit A

IN WITNESS WHEREOF, the parties execute this AGREEMENT by their signatures to be effective as of the date first above written.

STATE

By _____
Chairperson of the Board of Land and Natural Resources

_____
Print Name

Date_____

LANDOWNER

By_____

_____
Print Name

Date_____

Approved by the Board of
Land and Natural Resources on

_____.

APPROVED AS TO FORM:

_____
Deputy Attorney General

Exhibit A

LANDOWNER'S ACKNOWLEDGMENT

STATE OF HAWAII)
) SS.
COUNTY OF _____)

On this _____ day of _____, 20____, before me personally appeared_____, to me personally known, who being by me duly sworn, did say the he/she is the_____ _____, the LANDOWNER named in the foregoing instrument, and the he/she is authorized to sign said instrument on behalf of the LANDOWNER, and acknowledges that he/she executed said instrument as the free act and deed of the LANDOWNER.

_____
Notary Public, State of Hawaii

_____

My Commission Expires:_____

Date of the Notarized Document: _____
Number of Pages: _____
Identification or Description of the Document being Notarized: _____
_____
_____
Printed Name of Notary: _____ _____ Circuit
_____
Notary's Signature and Notary's Official Stamp or Seal Date

STATE OF HAWAII

CONTRACTOR'S STANDARDS OF CONDUCT DECLARATION

For the purposes of this declaration:

"Agency" means and includes the State, the legislature and its committees, all executive departments, boards, commissions, committees, bureaus, offices; and all independent commissions and other establishments of the state government but excluding the courts.

"Controlling interest" means an interest in a business or other undertaking which is sufficient in fact to control, whether the interest is greater or less than fifty per cent (50%).

"Employee" means any nominated, appointed, or elected officer or employee of the State, including members of boards, commissions, and committees, and employees under contract to the State or of the constitutional convention, but excluding legislators, delegates to the constitutional convention, justices, and judges. (Section 84-3, HRS).

On behalf of _____, CONTRACTOR, the undersigned does declare as follows:

1. CONTRACTOR ☐ is* ☐ is not a legislator or an employee or a business in which a legislator or an employee has a controlling interest. (Section 84-15(a), HRS).
2. CONTRACTOR has not been represented or assisted personally in the matter by an individual who has been an employee of the agency awarding this Contract within the preceding two years and who participated while so employed in the matter with which the Contract is directly concerned. (Section 84-15(b), HRS).
3. CONTRACTOR has not been assisted or represented by a legislator or employee for a fee or other compensation to obtain this Contract and will not be assisted or represented by a legislator or employee for a fee or other compensation in the performance of this Contract, if the legislator or employee had been involved in the development or award of the Contract. (Section 84-14 (d), HRS).
4. CONTRACTOR has not been represented on matters related to this Contract, for a fee or other consideration by an individual who, within the past twelve (12) months, has been an agency employee, or in the case of the Legislature, a legislator, and participated while an employee or legislator on matters related to this Contract. (Sections 84-18(b) and (c), HRS).

CONTRACTOR understands that the Contract to which this document is attached is voidable on behalf of the STATE if this Contract was entered into in violation of any provision of chapter 84, Hawaii Revised Statutes, commonly referred to as the Code of Ethics, including the provisions which are the source of the declarations above. Additionally, any fee, compensation, gift, or profit received by any person as a result of a violation of the Code of Ethics may be recovered by the STATE.

* Reminder to Agency: If the "is" block is checked and if the Contract involves goods or services of a value in excess of $10,000, the Contract must be awarded by competitive sealed bidding under section 103D-302, HRS, or a competitive sealed proposal under section 103D-303, HRS. Otherwise, the Agency may not award the Contract unless it posts a notice of its intent to award it and files a copy of the notice with the State Ethics Commission. (Section 84-15(a), HRS).

CONTRACTOR

By _____
(Signature)

Print Name _____

Print Title _____

Name of Contractor _____

_____

Date _____

Attachment - S1

STATE OF HAWAII

SCOPE OF SERVICES

SECTION 1 - SCOPE OF WORK

1.1 MANAGEMENT AREA - The project area to be managed is the _____ Forest Stewardship project area; TMK NUMBER(S) _____as designated on maps found in _____to this AGREEMENT.

1.2 THE PRIMARY OBJECTIVES - The STATE and LANDOWNER shall direct their efforts under this AGREEMENT to do the following: fund the management of and manage the natural resources of the _____ Forest Stewardship project area ("Forest Stewardship project area") in accordance with the MANAGEMENT PLAN, attached as _____ to this AGREEMENT, and all approved amendments thereto, with the intention of _____ in the ….. community.

1.3 SCOPE OF WORK - The LANDOWNER shall perform the following technical and professional services:

(a) Management plan. The LANDOWNER shall carry out the management activities outlined in the approved MANAGEMENT PLAN, attached as _____ to this AGREEMENT.

(b) Consultation. The LANDOWNER shall be available for consultation regarding progress, upon request by the STATE.

1.4 AUTHORITY TO CARRY OUT MANAGEMENT PLAN - The LANDOWNER hereby represents that it has authority to carry out the MANAGEMENT PLAN and that it is the landowner of "Forest Stewardship project area" as defined in Section 195F-2, Hawaii Revised Statutes, as amended.

1.5 NO INCONSISTENT ACTIVITIES - The LANDOWNER shall not take any action on the "Forest Stewardship project area", which will undermine or conflict with the approved MANAGEMENT PLAN.

II. SECTION 2 - CONTROL AND PROGRESS OF THE WORK

STATE OF HAWAII

SCOPE OF SERVICES

2.1 REPORTS - The LANDOWNER shall submit to the STATE, reports showing work accomplished at the following times:

(a) Progress Reports. A progress report shall be due on December 31 of each year under this AGREEMENT for which funding has been approved. This report shall include a description of the approved MANAGEMENT PLAN accomplishments and activities, areas needing technical advice, an accounting of expenditures with documentation, and proposed modifications to the current year's management activities. This report shall be submitted to the STATE within 30 days following the due date. If the LANDOWNER would like more than 2 reimbursements per year, a progress report shall accompany each reimbursement request and the "Forest Stewardship project area" shall be made available for a site visit by Department of Land and Natural Resources personnel.

(b) Annual Report. An annual report shall be due on or before June 30 of each year under this AGREEMENT for which funding has been approved. In the event the contract is executed less than 6 months prior to June 30, then no annual report is due on June 30 of that year. This report shall include a description of MANAGEMENT PLAN accomplishments and activities, areas needing technical advice, and proposed modifications to the next year's approved management objectives, projects and budget. This report shall also include a detailed accounting of expenditures for the preceding 12-month period to provide the basis for the annual reconciliation of the STATE's and the LANDOWNER's respective shares of funding as determined pursuant to Attachment S2, Section 1.1. This report shall be submitted to the STATE within 60 days of due date. This report may also request, subject to approval by the STATE, changes to the management plan, for either or both the practice implementation schedule and/or the budget/payment schedule in order to best consolidate and rectify the past year's outcomes or lack thereof.

STATE OF HAWAII

SCOPE OF SERVICES

2.2 DELEGATION OF AUTHORITY - As used herein and throughout this AGREEMENT, unless the context clearly indicates otherwise, the STATE shall include the State of Hawaii Department of Land and Natural Resources and its authorized employees, agents and representatives.

STATE OF HAWAII

COMPENSATION AND PAYMENT SCHEDULE

SECTION 1 – PAYMENT

1.1 SCOPE OF PAYMENT -

(a) STATE's Payment. In full satisfaction of the STATE's funding share of the approved MANAGEMENT PLAN, which is contingent upon satisfactory completion by the LANDOWNER of the management activities described in the approved MANAGEMENT PLAN, attached as Exhibit A to this AGREEMENT, the STATE agrees to pay the LANDOWNER a total sum not to exceed ___ . _____ 00/100 Dollars ($_____) according to the schedule outlined below that includes fiscal year 20XX through 20XX for completion of the management activities described in the approved MANAGEMENT PLAN. Payments shall be made by the STATE to the LANDOWNER as partial annual reimbursements for actual expenditures made by the LANDOWNER in completing the management activities described in the approved MANAGEMENT PLAN only after the corresponding progress or annual report has been reviewed by the STATE and all reported management activity accomplishments have been verified following an inspection of the "Forest Stewardship project area" by the STATE. Actual expenditures may include but are not limited to in-kind services such as heavy equipment operation and sources of labor. All funds to be paid by the STATE to the LANDOWNER shall be encumbered on an annual basis for the forthcoming fiscal year provided that the STATE has approved the continuation of management activities outlined in ……..._____ of this AGREEMENT for the forthcoming fiscal year.

If in any fiscal year the allocated annual funds are not exhausted due to the LANDOWNER not completing all management activities described in the MANAGEMENT PLAN for that year, the LANDOWNER may request that these funds be incorporated in the following year's encumbrances to complete the management activities which were not completed. If there are sufficient funds available to accommodate LANDOWNER's request and the STATE approves the

request, this change will be incorporated by written amendment to the AGREEMENT.

If in any fiscal year the STATE does not appropriate, and/or the STATE does not approve the expenditure of, funds sufficient to meet the STATE's funding share of the approved MANAGEMENT PLAN, this AGREEMENT shall automatically terminate without penalty at the end of the last fiscal year for which any funds have been appropriated and approved, subject to Attachment S5, Section 4.1, regarding partial State funding.

(b) LANDOWNER's Share. In full satisfaction of the LANDOWNER's funding share of the approved MANAGEMENT PLAN, the LANDOWNER agrees to fully complete the management activities described in the approved MANAGEMENT PLAN, and to initially assume all corresponding actual annual expenditures in expectation of the STATE's partial reimbursement for satisfactory completion of these management activities. Expenditures for implementation of the approved MANAGEMENT PLAN which are less than the amounts allocated in the approved budget may be made by the LANDOWNER in its discretion so long as the quality of materials and work as called for in the approved MANAGEMENT PLAN are not adversely affected.

STATE OF HAWAII

COMPENSATION AND PAYMENT SCHEDULE

PATRICK & SHEILA CONANT FOREST STEWARDSHIP

PROJECT BUDGET/PAYMENT SCHEDULE:

YEAR	Total Budget	Land Owner share	State Share
1			
2			
3			
4			
5			
6			
7			
8			
9			
10			
Total			

1.2 PAYMENT SCHEDULE –

(a) Progress Payment. Within 30 days following receipt of the progress report as provided in Attachment S1, Section 2.1(a) for each year for which the STATE has agreed to pay the LANDOWNER as outlined in the schedule above and for which funding has been appropriated, the STATE shall pay to the LANDOWNER a portion of the STATE's funding share of the approved MANAGEMENT PLAN as a partial reimbursement of actual expenditures made to complete approved management activities. This payment shall be subject to the LANDOWNER's satisfactory completion of the corresponding approved management activities described in the approved MANAGEMENT PLAN, attached as Exhibit A to this AGREEMENT, and calculated on the basis of actual expenditures made by the LANDOWNER. This payment shall also be subject to the STATE's approval of such progress report.

(b) Annual/Final Payment. Within 30 days of receipt of the annual report as provided in Attachment S1, Section 2.1(b), the STATE shall pay to the LANDOWNER the balance of the STATE's approved annual funding share. This payment shall be subject to the LANDOWNER's satisfactory completion of the corresponding

annual management activities described in the approved MANAGEMENT PLAN, attached as Exhibit A to this AGREEMENT, and calculated on the basis of actual expenditures made by the LANDOWNER.

(1) Annual or Final Acceptance and Payment - Annual or final acceptance means a written notice from the STATE to the LANDOWNER advising the LANDOWNER of the satisfactory fulfillment of the AGREEMENT's annual or final requirements.

1.3 UNAUTHORIZED WORK - The LANDOWNER shall not receive matching STATE funds for management activities not designated in the approved MANAGEMENT PLAN. All work completed by the LANDOWNER prior to receipt of a fully-executed copy of this AGREEMENT, and prior to STATE approval of funding for any subsequent years and prior to STATE approval of any subsequent amendments to the approved MANAGEMENT PLAN, shall be at the LANDOWNER's own volition and risk, including work performed during the period of any deliberations by the STATE in anticipation of approval; provided, however, that if funding and/or amendments applicable to such work are subsequently approved, the LANDOWNER may be paid for such work even if performed prior to such approval.

SECTION 2 - FISCAL RECORDS MAINTENANCE, RETENTION, AND ACCESS

2.1 The LANDOWNER shall maintain, in accordance with generally acceptable accounting practices, fiscal records and supporting documents and related files, papers and reports that adequately reflect all direct and indirect expenditures and management and fiscal practices materially related to the LANDOWNER's performance of services paid for by State funds under this AGREEMENT.

(a) The STATE, the Comptroller of the State of Hawaii, and any of their authorized representatives, the committees (and their staff) of the Legislature of the State of Hawaii, and the Legislative Auditor of the State of Hawaii shall have the right of access to any book, document, paper, file, or other records of the LANDOWNER

that is materially related to the performance by the LANDOWNER of services funded by the STATE under this AGREEMENT, in accordance with generally accepted audit procedures, for the purposes of monitoring and evaluating the LANDOWNER's performance of services and the LANDOWNER's management program and fiscal practices to assure the proper and effective expenditure of funds under this AGREEMENT; provided, however, that no party conducting any such audit or examination shall copy, distribute, or retain any of such information or records, with the understanding that it is not the intention that the LANDOWNER's financial and other records and information be made public.

(b) The right of access shall not be limited to the required retention period but shall last as long as the records are retained. The LANDOWNER shall retain all records related to the LANDOWNER's performance of services funded under this AGREEMENT for at least 3 years after the date of submission of the LANDOWNER's annual reports for any designated period and payment for such expenditures by the STATE in accordance with its matching share, except that if any litigation, claim, negotiation, investigation, audit, or other action involving the records has been started before the expiration of the 3-year period, the LANDOWNER shall retain the records until completion of the action and resolution of all issues that arise from it or until the end of the regular 3-year retention period, whichever occurs later.

STATE OF HAWAII

TIME OF PERFORMANCE

SECTION 1 - EXECUTION OF AGREEMENT

1.1 EXECUTION OF AGREEMENT - This AGREEMENT shall be promptly executed by the STATE and the LANDOWNER upon approval by each party.

1.2 CERTIFICATION AND APPROVAL OF AGREEMENT - This AGREEMENT shall not be considered binding upon the STATE, unless the availability of the funds therefore has been duly certified as prescribed by Section 103-39, Hawaii Revised Statutes, as amended. Further, this AGREEMENT shall not be considered to be fully executed unless the Office of the Attorney General of the State of Hawaii has approved this AGREEMENT as to form.

SECTION 2 - TERM

2.1 INITIAL TERM - The initial term will be for a minimum of _____(__) years following the completion of any and all management practices for which the LANDOWNER has received cost-share assistance. Accordingly, this AGREEMENT shall commence on the date of full execution hereof and shall be in effect until _____; subject, however to earlier termination as provided in this AGREEMENT.

2.2 STATE FUNDING CONDITION - This AGREEMENT is subject to continued funding of the STATE's share of the approved management budget as outlined in Attachment S2, Section 1.1. Annual funding is provided by the Conveyance Tax pursuant to Act 195, SLH 1993, Section 247-7, Hawaii Revised Statutes, whereby twenty-five percent of the amount collected from this tax shall be paid into the natural area reserve fund from which funds are dispersed to the natural area partnership and forest stewardship programs, and by way of Act 269, SLH 2000 to projects undertaken in accordance with watershed management plans. Payments are then made through the forest stewardship program to reimburse landowners for implementing approved stewardship management practices. Any balance remaining in this fund at the end of any fiscal year shall be carried forward

STATE OF HAWAII

TIME OF PERFORMANCE

into the fund for the next fiscal year. If in any fiscal year the STATE does not appropriate, and/or the STATE does not approve the expenditure of, funds sufficient to meet its share of the approved management budget, this AGREEMENT shall automatically terminate without penalty at the end of the last fiscal year for which any funds have been appropriated and approved, subject to Attachment S5, Section 4.1, regarding partial State funding.

STATE OF HAWAII

CERTIFICATE OF EXEMPTION FROM CIVIL SERVICE

1. By Heads of Departments Delegated by the Director of the Department of Human Resources Development ("DHRD").*

Pursuant to a delegation of the authority by the Director of DHRD, I certify that the services to be provided under this Contract, and the person(s) providing the services under this Contract are exempt from the civil service, pursuant to § 76-16, Hawaii Revised Statutes (HRS).

_____ (Signature) _____ (Date)

_____ (Print Name)

_____ (Print Title)

* This part of the form may be used by all department heads and the heads of attached agencies to whom the Director of DHRD expressly has delegated authority to certify § 76-16, HRS, civil service exemptions. The specific paragraph(s) of § 76-16, HRS, upon which an exemption is based should be noted in the contract file. If an exemption is based on § 76-16(b)(15), the contract must meet the following conditions:

(1) It involves the delivery of completed work or product by or during a specific time;
(2) There is no employee-employer relationship; and
(3) The authorized funding for the service is from other than the "A" or personal services cost element.

NOTE: Not all attached agencies have received a delegation under § 76-16(b)(15). If in doubt, attached agencies should check with the Director of DHRD prior to certifying an exemption under § 76-16(b)(15). Authority to certify exemptions under §§76-16(b)(2), and 76-16(b)(12), HRS, has not been delegated; only the Director of DHRD may certify §§ 76-16(b)(2), and 76-16(b)(12) exemptions.

2. By the Director of DHRD, State of Hawaii.

I certify that the services to be provided under this Contract, and the person(s) providing the services under this Contract are exempt from the civil service, pursuant to §76-16, HRS.

_____ (Signature) _____ (Date)

_____ (Print Name)

_____ (Print Title, if designee of the Director of DHRD)

STATE OF HAWAII

SPECIAL CONDITIONS

SECTION 1 – INSPECTIONS

1.1 The STATE shall have the right to make inspections of the "Forest Stewardship project area" after prior notice to the LANDOWNER. In addition, the STATE shall be obligated to inspect the work on the "Forest Stewardship project area" not less frequently than once per year under this AGREEMENT, and more frequently in the case of a LANDOWNER default as provided in Section 4.1(d) below or when the LANDOWNER makes more than 2 reimbursement requests per year as provided in Attachment S1, Section 2.1. The STATE shall notify the LANDOWNER within a reasonable time thereafter of any perceived defaults in the LANDOWNER's implementation of the approved MANAGEMENT PLAN. The LANDOWNER hereby represents that it has authority to allow access to the "Forest Stewardship project area" by the STATE in connection with this AGREEMENT, conditional upon receipt of a liability waiver, acceptable to the LANDOWNER for all state personnel visiting the "Forest Stewardship project area".

SECTION 2 - AMENDMENTS

2.1 The LANDOWNER may propose for approval by the STATE, and the STATE may approve, minor alterations to the approved MANAGEMENT PLAN, which will not have a material adverse impact on the achievement of the overall management objectives of the approved MANAGEMENT PLAN. This includes minor changes to the practice implementation schedule and/or changes in the budget/payments schedule so long as the total management activities do not subtract from or exceed the total scope of the approved MANAGEMENT PLAN and the budget/payments schedule does not exceed the total annual budget allocations up to and including the budget request for that year, and so long as the STATE has sufficient funding available to accommodate such a request.

2.1 The LANDOWNER may propose for approval by the STATE, and the STATE may approve, significant changes to the approved MANAGEMENT PLAN or budget to adapt to current conditions. Significant amendments to the approved MANAGEMENT PLAN shall include an amended budget, which will increase the overall STATE's funding share

above the total amount set forth in the approved budget/payment schedule. The STATE shall make the proposed amendments available for public review prior to final approval.

2.3 The proposed amendments may include, without limitation, re-establishment of management priorities, increase or reduction of the specified work, increases to the budget/payments schedule, or time for performance of specified tasks, all as determined considering the natural conditions of the "Forest Stewardship project area," existing management priorities, threats, potential for decline of the natural resource during any period under consideration, availability of specialized labor or technical expertise, permitting requirements and time needed to obtain permits, and other material factors.

2.4 Any proposed expenditures which will increase the overall STATE's funding share above the amount set forth in the approved budget of the approved MANAGEMENT PLAN, which are proposed either as a result of additional costs required to implement the approved MANAGEMENT PLAN or as a result of amendments to the approved MANAGEMENT PLAN, must be mutually agreed upon in advance by and between the STATE and the LANDOWNER. If so agreed upon the approval of these expenditures shall be incorporated in written amendment to this AGREEMENT.

2.5 Economic Hardship. Notwithstanding other provisions of this AGREEMENT, in the event that the LANDOWNER determines in good faith that it is financially unable without undue economic hardship to fulfill its funding share as provided in Attachment S2, Section 1.1(b), or to carry out fully the management activities described in the approved MANAGEMENT PLAN, attached as Exhibit A to this AGREEMENT, within the budget and time period established thereby, the LANDOWNER may apply to the STATE to renegotiate the terms thereof.

(a) Negotiation of Amendment. In such event, the STATE and the LANDOWNER shall meet and negotiate in good faith an acceptable amendment to the approved MANAGEMENT PLAN that seeks to accomplish the significant objectives of the approved MANAGEMENT PLAN reasonably within the LANDOWNER's

financial means. The amendment may include, without limitation, re-establishment of management priorities and reduction and/or deferral of the specified work, involving significant costs, and/or extension of time for performance of specified tasks, all as determined considering the natural conditions of the "Forest Stewardship project area," existing management priorities, threats, potential for decline of the natural resource during any period under consideration, other potential sources of funding, and other material factors.

(b) Disputes. If the STATE and the LANDOWNER are unable to agree reasonably and in good faith on a suitable amendment to the approved MANAGEMENT PLAN, the parties shall refer any such disputes to arbitration as provided in the General Conditions, Section 11.

(c) No Termination for Economic Hardship. This provision shall not be construed to allow the LANDOWNER or the STATE to terminate this AGREEMENT for economic hardship; it is rather intended to provide a mechanism for reasonable revisions to the approved MANAGEMENT PLAN for economic hardship.

SECTION 3 - PAYBACK OF STATE FUNDS

3.1 In the event that the LANDOWNER sells, conveys, or otherwise transfers LANDOWNER's right, title, or interest in the "Forest Stewardship project area," or any portion thereof, during the initial term of this AGREEMENT as defined in Attachment S3, Section 2.1, the LANDOWNER shall within 90 days of the sale, conveyance or transfer of title or interest in the "Forest Stewardship project area," pay back to the STATE a portion of the amount paid by the STATE to the LANDOWNER pursuant to this AGREEMENT. The amount to be paid back to the STATE shall be that fraction of the total matching funds received by the LANDOWNER under this AGREEMENT that is equal to the fraction of the "Forest Stewardship project area" that is sold, conveyed or otherwise transferred by the LANDOWNER.

STATE OF HAWAII

SPECIAL CONDITIONS

3.2 In the event that the LANDOWNER sells, conveys, or otherwise transfers LANDOWNER's right, title, or interest in the "Forest Stewardship project area," or any portion thereof, during the initial term of this AGREEMENT as defined in Attachment S3, Section 2.1, the LANDOWNER will not be required to reimburse the STATE as set forth in Attachment S5, Section 3.1 for the cost-share assistance received if the person(s) who acquire the property contractually agree to assume full responsibility for this AGREEMENT for the initial term of the AGREEMENT, including but not limited to management and financial responsibilities and penalties contained herein. See Agenda Item _____, as amend, approved at the Board of Land and Natural Resources ……..._____ meeting. Nothing in this provision shall relieve the LANDOWNER of its obligations under this AGREEMENT.

SECTION 4 - TERMINATION; DEFAULT; PENALTY PAYBACK

4.1 TERMINATION OF THE AGREEMENT - It is mutually agreed that this AGREEMENT may be terminated for any one of the following reasons on the following terms:

(a) No State Funding. This AGREEMENT shall be terminated if the STATE does not approve funding for the forthcoming fiscal year of the approved MANAGEMENT PLAN. In such event, this AGREEMENT shall automatically terminate without penalty at the end of the funding period then in effect.

(b) Partial State Funding. This AGREEMENT may be terminated by the LANDOWNER if the STATE approves only a portion of its share of funding for the forthcoming fiscal year as outlined in the budget provided in the approved MANAGEMENT PLAN.

(1) In such event, the LANDOWNER shall elect, by written notice to the STATE, either:

(A) to terminate this AGREEMENT without penalty at the end of the funding period then in effect; or

(B) to revise the approved MANAGEMENT PLAN and budget in the LANDOWNER's reasonable discretion to accomplish significant management goals which can reasonably be funded with the amount of STATE funding actually approved.

(c) Transfer to Government Agency. This AGREEMENT may be terminated without penalty if the "Forest Stewardship project area" is transferred or sold to a government agency committed to forest stewardship and that possesses the technical and professional skills to manage the "Forest Stewardship project area" natural resources.

(d) LANDOWNER Default. This AGREEMENT may be terminated by the STATE upon substantial evidence that progress being made by the LANDOWNER in carrying out the approved MANAGEMENT PLAN is inadequate, incorrect, or insufficient to substantially complete on a timely basis the work called for in the approved MANAGEMENT PLAN subject to the lack of performance notification provisions set forth below.

(1) Penalties Apply. In the event of termination for default in accordance with these provisions, the penalty payback provisions set forth below shall apply.

(2) Lack of Performance Notification. In such event, the STATE may terminate for default, provided the STATE adheres to the following procedures for notice and opportunity to cure prior to termination:

(A) The STATE shall first notify the LANDOWNER in writing of any perceived inadequacy, incorrectness or insufficient progress. The STATE and the LANDOWNER shall meet within two weeks

thereafter, and every three months thereafter until one year following the date of the notice, and discuss in good faith the perceived failure and the reasons therefore and any subsequent progress or lack thereof. If the reason for the failure is a good faith inability of the LANDOWNER to carry out the terms of the MANAGEMENT PLAN for reasons beyond the LANDOWNER's reasonable control, including without limitation economic hardship as described in Attachment S5, Section 2.5 above, the STATE and the LANDOWNER shall specifically consider the need to amend the approved MANAGEMENT PLAN, including extending the time to carry out the work called for in the approved MANAGEMENT PLAN and/or revising the budget established in the approved MANAGEMENT PLAN, subject to the provisions of Attachment S1, Section 1.5 and Attachment S5, Section 2 of this AGREEMENT regarding amendments to this AGREEMENT and the approved MANAGEMENT PLAN. Following the date of the notice, the STATE shall be obligated to inspect the "Forest Stewardship project area" once each quarter after notifying the LANDOWNER, to determine the updated status of the perceived default.

(B) Following the expiration of the one year period following notice of default given by the STATE to the LANDOWNER and failure of the LANDOWNER to remedy the default, or to make significant progress to remedy the default if by its nature the default cannot reasonably be remedied within one year, the STATE may elect to notify the LANDOWNER of its intention to terminate this AGREEMENT for default. Such notice shall be in writing, shall state that the STATE will terminate the AGREEMENT for default on a date not less than 3 months thereafter if the LANDOWNER

does not remedy the default, or to make significant progress to remedy the default if by its nature the default cannot reasonably be remedied within 3 months, and shall specify that penalties as provided under this AGREEMENT shall apply.

(C) If the LANDOWNER fails to remedy the default within 3 months thereafter, or to make significant progress to remedy the default if by its nature the default cannot reasonably be remedied within 3 months, the STATE may terminate this AGREEMENT effective immediately for default by written notice thereof to the LANDOWNER.

(D) The STATE shall be deemed to have complied with these provisions if it attempts in good faith to meet with the LANDOWNER and to inspect the "Forest Stewardship project area" as provided above, whether or not the LANDOWNER cooperates in such procedures.

(3) All disputes regarding default and termination under this AGREEMENT, which cannot be resolved by the parties, shall be referred to arbitration as provided in the General Conditions, Section 11.

(4) If the LANDOWNER has not fully performed its work under this AGREEMENT on expiration or termination of this AGREEMENT, the STATE may withhold the final payment to the LANDOWNER pending full completion of the LANDOWNER's work. This withheld payment shall be paid by the STATE to the LANDOWNER on final acceptance and tax clearance as provided in Attachment S2, Section 1.2 (b) and the General Conditions, Section 17.

STATE OF HAWAII

SPECIAL CONDITIONS

4.2 PENALTY PAYBACK -

(a) Payback and Penalties. In the event that the LANDOWNER defaults on this AGREEMENT as provided in Attachment S5, Section 4.1(d) above and the STATE has followed the Lack of Performance Notification procedures as outlined in Attachment S5, Section 4.1(d)(2) above, the LANDOWNER shall promptly pay to the STATE the following payback and penalty monies:

(1) Refund of State Funds - 3 Years. All funds paid from the initial date of this AGREEMENT by the STATE to the LANDOWNER in the previous 3 years (or such portion thereof as STATE shall have funded if this AGREEMENT shall have been in effect for less than 3 years) shall be returned to the STATE. In the event that this AGREEMENT shall have been in effect for more than 3 years, the LANDOWNER shall be liable to pay back State funds for the immediately preceding 3 years. In addition, the LANDOWNER shall pay to the STATE a penalty of two percent of the total of funds that are returned to the STATE.

(b) No Other Party Liable. Only the LANDOWNER receiving State funding under the FOREST STEWARDSHIP PROGRAM shall be liable to the STATE under this AGREEMENT for the payback and penalty.

(c) Disputes. The LANDOWNER shall have the right to submit any disputes to the arbitration procedure as outlined in the General Conditions, Section 11 if it feels that the imposition of payback, and/or additional penalties is unwarranted.

4.3 VIOLATIONS OF AGREEMENT - It is expressly understood and agreed that violations which are not caused by the LANDOWNER shall not constitute or give rise to a default by the LANDOWNER under this AGREEMENT and no penalty provisions shall apply to the LANDOWNER.

STATE OF HAWAII

SPECIAL CONDITIONS

4.4 EFFECT OF EMINENT DOMAIN -

(a) Full Condemnation. If any action in eminent domain for the condemnation of the fee title of the entire "Forest Stewardship project area" described herein is filed, or if the "Forest Stewardship project area" is acquired in lieu of eminent domain for a public improvement by a public agency or person or whenever there is any such action or acquisition by the federal government or the state government or any person, instrumentality or agency acting under authority or power of the federal government or the state government, this AGREEMENT shall be deemed null and void without penalty as to the land actually being condemned or so acquired as of the date the action is filed, and upon the termination of such a proceeding, this AGREEMENT shall be null and void without penalty for all land actually taken or acquired.

(b) Partial Condemnation. When such an action to condemn or acquire less than all the entire "Forest Stewardship project area" is filed, this AGREEMENT shall be deemed null and void without penalty as to the portion so condemned or acquired.

(c) Adjustment of approved MANAGEMENT PLAN. The land actually taken by the means set forth above in this Section shall be removed from this AGREEMENT and the approved MANAGEMENT PLAN and budget adjusted accordingly on a reasonable basis by the STATE and the LANDOWNER.

SECTION 5 - INCORPORATION OF CHAPTER 195F, HAWAII REVISED STATUTES

5.1 Incorporation. The provisions of chapter 195F, Hawaii Revised Statutes, as amended, are incorporated by reference into this AGREEMENT. In the event that there is any conflict between the provisions of this AGREEMENT and the provisions of chapter 195F, Hawaii Revised Statutes, the latter shall be controlling.

STATE OF HAWAII

SPECIAL CONDITIONS

5.2 Renumbering. In the event that chapter 195F, or any of the sections under chapter 195F, Hawaii Revised Statutes, are renumbered, any references to the chapter or sections in this AGREEMENT shall be deemed renumbered accordingly.

EXHIBIT A

_____ Forest Stewardship Management Plan.

GENERAL CONDITIONS

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GENERAL CONDITIONS

1. Coordination of Services by the STATE. The head of the purchasing agency ("HOPA") (which term includes the designee of the HOPA) shall coordinate the services to be provided by the CONTRACTOR in order to complete the performance required in the Contract. The CONTRACTOR shall maintain communications with HOPA at all stages of the CONTRACTOR'S work, and submit to HOPA for resolution any questions which may arise as to the performance of this Contract. "Purchasing agency" as used in these General Conditions means and includes any governmental body which is authorized under chapter 103D, HRS, or its implementing rules and procedures, or by way of delegation, to enter into contracts for the procurement of goods or services or both.

2. Relationship of Parties: Independent Contractor Status and Responsibilities, Including Tax Responsibilities.

   a. In the performance of services required under this Contract, the CONTRACTOR is an "independent contractor," with the authority and responsibility to control and direct the performance and details of the work and services required under this Contract; however, the STATE shall have a general right to inspect work in progress to determine whether, in the STATE'S opinion, the services are being performed by the CONTRACTOR in compliance with this Contract. Unless otherwise provided by special condition, it is understood that the STATE does not agree to use the CONTRACTOR exclusively, and that the CONTRACTOR is free to contract to provide services to other individuals or entities while under contract with the STATE.

   b. The CONTRACTOR and the CONTRACTOR'S employees and agents are not by reason of this Contract, agents or employees of the State for any purpose, and the CONTRACTOR and the CONTRACTOR'S employees and agents shall not be entitled to claim or receive from the State any vacation, sick leave, retirement, workers' compensation, unemployment insurance, or other benefits provided to state employees.

   c. The CONTRACTOR shall be responsible for the accuracy, completeness, and adequacy of the CONTRACTOR'S performance under this Contract. Furthermore, the CONTRACTOR intentionally, voluntarily, and knowingly assumes the sole and entire liability to the CONTRACTOR'S employees and agents, and to any individual not a party to this Contract, for all loss, damage, or injury caused by the CONTRACTOR, or the CONTRACTOR'S employees or agents in the course of their employment.

   d. The CONTRACTOR shall be responsible for payment of all applicable federal, state, and county taxes and fees which may become due and owing by the CONTRACTOR by reason of this Contract, including but not limited to (i) income taxes, (ii) employment related fees, assessments, and taxes, and (iii) general excise taxes. The CONTRACTOR also is responsible for obtaining all licenses, permits, and certificates that may be required in order to perform this Contract.

   e. The CONTRACTOR shall obtain a general excise tax license from the Department of Taxation, State of Hawaii, in accordance with section 237-9, HRS, and shall comply with all requirements thereof. The CONTRACTOR shall obtain a tax clearance certificate from the Director of Taxation, State of Hawaii, and the Internal Revenue Service, U.S. Department of the Treasury, showing that all delinquent taxes, if any, levied or accrued under state law and the Internal Revenue Code of 1986, as amended, against the CONTRACTOR have been paid and submit the same to the STATE prior to commencing any performance under this Contract. The CONTRACTOR shall also be solely responsible for meeting all requirements necessary to obtain the tax clearance certificate required for final payment under sections 103-53 and 103D-328, HRS, and paragraph 17 of these General Conditions.

   f. The CONTRACTOR is responsible for securing all employee-related insurance coverage for the CONTRACTOR and the CONTRACTOR'S employees and agents that is or may be required by law, and for payment of all premiums, costs, and other liabilities associated with securing the insurance coverage.

g. The CONTRACTOR shall obtain a certificate of compliance issued by the Department of Labor and Industrial Relations, State of Hawaii, in accordance with section103D-310, HRS, and section 3-122-112, HAR, that is current within six months of the date of issuance.

h. The CONTRACTOR shall obtain a certificate of good standing issued by the Department of Commerce and Consumer Affairs, State of Hawaii, in accordance with section 103D-310, HRS, and section 3-122-112, HAR, that is current within six months of the date of issuance.

i. In lieu of the above certificates from the Department of Taxation, Labor and Industrial Relations, and Commerce and Consumer Affairs, the CONTRACTOR may submit proof of compliance through the State Procurement Office's designated certification process.

3. Personnel Requirements.

a. The CONTRACTOR shall secure, at the CONTRACTOR'S own expense, all personnel required to perform this Contract.

b. The CONTRACTOR shall ensure that the CONTRACTOR'S employees or agents are experienced and fully qualified to engage in the activities and perform the services required under this Contract, and that all applicable licensing and operating requirements imposed or required under federal, state, or county law, and all applicable accreditation and other standards of quality generally accepted in the field of the activities of such employees and agents are complied with and satisfied.

4. Nondiscrimination. No person performing work under this Contract, including any subcontractor, employee, or agent of the CONTRACTOR, shall engage in any discrimination that is prohibited by any applicable federal, state, or county law.

5. Conflicts of Interest. The CONTRACTOR represents that neither the CONTRACTOR, nor any employee or agent of the CONTRACTOR, presently has any interest, and promises that no such interest, direct or indirect, shall be acquired, that would or might conflict in any manner or degree with the CONTRACTOR'S performance under this Contract.

6. Subcontracts and Assignments. The CONTRACTOR shall not assign or subcontract any of the CONTRACTOR'S duties, obligations, or interests under this Contract and no such assignment or subcontract shall be effective unless (i) the CONTRACTOR obtains the prior written consent of the STATE, and (ii) the CONTRACTOR'S assignee or subcontractor submits to the STATE a tax clearance certificate from the Director of Taxation, State of Hawaii, and the Internal Revenue Service, U.S. Department of Treasury, showing that all delinquent taxes, if any, levied or accrued under state law and the Internal Revenue Code of 1986, as amended, against the CONTRACTOR'S assignee or subcontractor have been paid. Additionally, no assignment by the CONTRACTOR of the CONTRACTOR'S right to compensation under this Contract shall be effective unless and until the assignment is approved by the Comptroller of the State of Hawaii, as provided in section 40-58, HRS.

a. Recognition of a successor in interest. When in the best interest of the State, a successor in interest may be recognized in an assignment contract in which the STATE, the CONTRACTOR and the assignee or transferee (hereinafter referred to as the "Assignee") agree that:

(1) The Assignee assumes all of the CONTRACTOR'S obligations;

(2) The CONTRACTOR remains liable for all obligations under this Contract but waives all rights under this Contract as against the STATE; and

(3) The CONTRACTOR shall continue to furnish, and the Assignee shall also furnish, all required bonds.

b. Change of name. When the CONTRACTOR asks to change the name in which it holds this Contract with the STATE, the procurement officer of the purchasing agency (hereinafter referred to as the "Agency procurement officer") shall, upon receipt of a document acceptable or satisfactory to the

Agency procurement officer indicating such change of name (for example, an amendment to the CONTRACTOR'S articles of incorporation), enter into an amendment to this Contract with the CONTRACTOR to effect such a change of name. The amendment to this Contract changing the CONTRACTOR'S name shall specifically indicate that no other terms and conditions of this Contract are thereby changed.

c. Reports. All assignment contracts and amendments to this Contract effecting changes of the CONTRACTOR'S name or novations hereunder shall be reported to the chief procurement officer (CPO) as defined in section 103D-203(a), HRS, within thirty days of the date that the assignment contract or amendment becomes effective.

d. Actions affecting more than one purchasing agency. Notwithstanding the provisions of subparagraphs 6a through 6c herein, when the CONTRACTOR holds contracts with more than one purchasing agency of the State, the assignment contracts and the novation and change of name amendments herein authorized shall be processed only through the CPO's office.

7. Indemnification and Defense. The CONTRACTOR shall defend, indemnify, and hold harmless the State of Hawaii, the contracting agency, and their officers, employees, and agents from and against all liability, loss, damage, cost, and expense, including all attorneys' fees, and all claims, suits, and demands therefore, arising out of or resulting from the acts or omissions of the CONTRACTOR or the CONTRACTOR'S employees, officers, agents, or subcontractors under this Contract. The provisions of this paragraph shall remain in full force and effect notwithstanding the expiration or early termination of this Contract.

8. Cost of Litigation. In case the STATE shall, without any fault on its part, be made a party to any litigation commenced by or against the CONTRACTOR in connection with this Contract, the CONTRACTOR shall pay all costs and expenses incurred by or imposed on the STATE, including attorneys' fees.

9. Liquidated Damages. When the CONTRACTOR is given notice of delay or nonperformance as specified in paragraph 13 (Termination for Default) and fails to cure in the time specified, it is agreed the CONTRACTOR shall pay to the STATE the amount, if any, set forth in this Contract per calendar day from the date set for cure until either (i) the STATE reasonably obtains similar goods or services, or both, if the CONTRACTOR is terminated for default, or (ii) until the CONTRACTOR provides the goods or services, or both, if the CONTRACTOR is not terminated for default. To the extent that the CONTRACTOR'S delay or nonperformance is excused under paragraph 13d (Excuse for Nonperformance or Delay Performance), liquidated damages shall not be assessable against the CONTRACTOR. The CONTRACTOR remains liable for damages caused other than by delay.

10. STATE'S Right of Offset. The STATE may offset against any monies or other obligations the STATE owes to the CONTRACTOR under this Contract, any amounts owed to the State of Hawaii by the CONTRACTOR under this Contract or any other contracts, or pursuant to any law or other obligation owed to the State of Hawaii by the CONTRACTOR, including, without limitation, the payment of any taxes or levies of any kind or nature. The STATE will notify the CONTRACTOR in writing of any offset and the nature of such offset. For purposes of this paragraph, amounts owed to the State of Hawaii shall not include debts or obligations which have been liquidated, agreed to by the CONTRACTOR, and are covered by an installment payment or other settlement plan approved by the State of Hawaii, provided, however, that the CONTRACTOR shall be entitled to such exclusion only to the extent that the CONTRACTOR is current with, and not delinquent on, any payments or obligations owed to the State of Hawaii under such payment or other settlement plan.

11. Disputes. Disputes shall be resolved in accordance with section 103D-703, HRS, and chapter 3-126, Hawaii Administrative Rules ("HAR"), as the same may be amended from time to time.

12. Suspension of Contract. The STATE reserves the right at any time and for any reason to suspend this Contract for any reasonable period, upon written notice to the CONTRACTOR in accordance with the provisions herein.

a. Order to stop performance. The Agency procurement officer may, by written order to the CONTRACTOR, at any time, and without notice to any surety, require the CONTRACTOR to stop all or any part of the performance called for by this Contract. This order shall be for a specified

period not exceeding sixty (60) days after the order is delivered to the CONTRACTOR, unless the parties agree to any further period. Any such order shall be identified specifically as a stop performance order issued pursuant to this section. Stop performance orders shall include, as appropriate: (1) A clear description of the work to be suspended; (2) Instructions as to the issuance of further orders by the CONTRACTOR for material or services; (3) Guidance as to action to be taken on subcontracts; and (4) Other instructions and suggestions to the CONTRACTOR for minimizing costs. Upon receipt of such an order, the CONTRACTOR shall forthwith comply with its terms and suspend all performance under this Contract at the time stated, provided, however, the CONTRACTOR shall take all reasonable steps to minimize the occurrence of costs allocable to the performance covered by the order during the period of performance stoppage. Before the stop performance order expires, or within any further period to which the parties shall have agreed, the Agency procurement officer shall either:

(1) Cancel the stop performance order; or

(2) Terminate the performance covered by such order as provided in the termination for default provision or the termination for convenience provision of this Contract.

b. Cancellation or expiration of the order. If a stop performance order issued under this section is cancelled at any time during the period specified in the order, or if the period of the order or any extension thereof expires, the CONTRACTOR shall have the right to resume performance. An appropriate adjustment shall be made in the delivery schedule or contract price, or both, and the Contract shall be modified in writing accordingly, if:

(1) The stop performance order results in an increase in the time required for, or in the CONTRACTOR'S cost properly allocable to, the performance of any part of this Contract; and

(2) The CONTRACTOR asserts a claim for such an adjustment within thirty (30) days after the end of the period of performance stoppage; provided that, if the Agency procurement officer decides that the facts justify such action, any such claim asserted may be received and acted upon at any time prior to final payment under this Contract.

c. Termination of stopped performance. If a stop performance order is not cancelled and the performance covered by such order is terminated for default or convenience, the reasonable costs resulting from the stop performance order shall be allowable by adjustment or otherwise.

d. Adjustment of price. Any adjustment in contract price made pursuant to this paragraph shall be determined in accordance with the price adjustment provision of this Contract.

13. Termination for Default.

a. Default. If the CONTRACTOR refuses or fails to perform any of the provisions of this Contract with such diligence as will ensure its completion within the time specified in this Contract, or any extension thereof, otherwise fails to timely satisfy the Contract provisions, or commits any other substantial breach of this Contract, the Agency procurement officer may notify the CONTRACTOR in writing of the delay or non-performance and if not cured in ten (10) days or any longer time specified in writing by the Agency procurement officer, such officer may terminate the CONTRACTOR'S right to proceed with the Contract or such part of the Contract as to which there has been delay or a failure to properly perform. In the event of termination in whole or in part, the Agency procurement officer may procure similar goods or services in a manner and upon the terms deemed appropriate by the Agency procurement officer. The CONTRACTOR shall continue performance of the Contract to the extent it is not terminated and shall be liable for excess costs incurred in procuring similar goods or services.

b. CONTRACTOR'S duties. Notwithstanding termination of the Contract and subject to any directions from the Agency procurement officer, the CONTRACTOR shall take timely, reasonable, and

necessary action to protect and preserve property in the possession of the CONTRACTOR in which the STATE has an interest.

c. Compensation. Payment for completed goods and services delivered and accepted by the STATE shall be at the price set forth in the Contract. Payment for the protection and preservation of property shall be in an amount agreed upon by the CONTRACTOR and the Agency procurement officer. If the parties fail to agree, the Agency procurement officer shall set an amount subject to the CONTRACTOR'S rights under chapter 3-126, HAR. The STATE may withhold from amounts due the CONTRACTOR such sums as the Agency procurement officer deems to be necessary to protect the STATE against loss because of outstanding liens or claims and to reimburse the STATE for the excess costs expected to be incurred by the STATE in procuring similar goods and services.

d. Excuse for nonperformance or delayed performance. The CONTRACTOR shall not be in default by reason of any failure in performance of this Contract in accordance with its terms, including any failure by the CONTRACTOR to make progress in the prosecution of the performance hereunder which endangers such performance, if the CONTRACTOR has notified the Agency procurement officer within fifteen (15) days after the cause of the delay and the failure arises out of causes such as: acts of God; acts of a public enemy; acts of the State and any other governmental body in its sovereign or contractual capacity; fires; floods; epidemics; quarantine restrictions; strikes or other labor disputes; freight embargoes; or unusually severe weather. If the failure to perform is caused by the failure of a subcontractor to perform or to make progress, and if such failure arises out of causes similar to those set forth above, the CONTRACTOR shall not be deemed to be in default, unless the goods and services to be furnished by the subcontractor were reasonably obtainable from other sources in sufficient time to permit the CONTRACTOR to meet the requirements of the Contract. Upon request of the CONTRACTOR, the Agency procurement officer shall ascertain the facts and extent of such failure, and, if such officer determines that any failure to perform was occasioned by any one or more of the excusable causes, and that, but for the excusable cause, the CONTRACTOR'S progress and performance would have met the terms of the Contract, the delivery schedule shall be revised accordingly, subject to the rights of the STATE under this Contract. As used in this paragraph, the term "subcontractor" means subcontractor at any tier.

e. Erroneous termination for default. If, after notice of termination of the CONTRACTOR'S right to proceed under this paragraph, it is determined for any reason that the CONTRACTOR was not in default under this paragraph, or that the delay was excusable under the provisions of subparagraph 13d, "Excuse for nonperformance or delayed performance," the rights and obligations of the parties shall be the same as if the notice of termination had been issued pursuant to paragraph 14.

f. Additional rights and remedies. The rights and remedies provided in this paragraph are in addition to any other rights and remedies provided by law or under this Contract.

14. Termination for Convenience.

a. Termination. The Agency procurement officer may, when the interests of the STATE so require, terminate this Contract in whole or in part, for the convenience of the STATE. The Agency procurement officer shall give written notice of the termination to the CONTRACTOR specifying the part of the Contract terminated and when termination becomes effective.

b. CONTRACTOR'S obligations. The CONTRACTOR shall incur no further obligations in connection with the terminated performance and on the date(s) set in the notice of termination the CONTRACTOR will stop performance to the extent specified. The CONTRACTOR shall also terminate outstanding orders and subcontracts as they relate to the terminated performance. The CONTRACTOR shall settle the liabilities and claims arising out of the termination of subcontracts and orders connected with the terminated performance subject to the STATE'S approval. The Agency procurement officer may direct the CONTRACTOR to assign the CONTRACTOR'S right, title, and interest under terminated orders or subcontracts to the STATE. The CONTRACTOR must still complete the performance not terminated by the notice of termination and may incur obligations as necessary to do so.

c. Right to goods and work product. The Agency procurement officer may require the CONTRACTOR to transfer title and deliver to the STATE in the manner and to the extent directed by the Agency procurement officer:

(1) Any completed goods or work product; and

(2) The partially completed goods and materials, parts, tools, dies, jigs, fixtures, plans, drawings, information, and contract rights (hereinafter called "manufacturing material") as the CONTRACTOR has specifically produced or specially acquired for the performance of the terminated part of this Contract.

The CONTRACTOR shall, upon direction of the Agency procurement officer, protect and preserve property in the possession of the CONTRACTOR in which the STATE has an interest. If the Agency procurement officer does not exercise this right, the CONTRACTOR shall use best efforts to sell such goods and manufacturing materials. Use of this paragraph in no way implies that the STATE has breached the Contract by exercise of the termination for convenience provision.

d. Compensation.

(1) The CONTRACTOR shall submit a termination claim specifying the amounts due because of the termination for convenience together with the cost or pricing data, submitted to the extent required by chapter 3-122, HAR, bearing on such claim. If the CONTRACTOR fails to file a termination claim within one year from the effective date of termination, the Agency procurement officer may pay the CONTRACTOR, if at all, an amount set in accordance with subparagraph 14d(3) below.

(2) The Agency procurement officer and the CONTRACTOR may agree to a settlement provided the CONTRACTOR has filed a termination claim supported by cost or pricing data submitted as required and that the settlement does not exceed the total Contract price plus settlement costs reduced by payments previously made by the STATE, the proceeds of any sales of goods and manufacturing materials under subparagraph 14c, and the Contract price of the performance not terminated.

(3) Absent complete agreement under subparagraph 14d(2) the Agency procurement officer shall pay the CONTRACTOR the following amounts, provided payments agreed to under subparagraph 14d(2) shall not duplicate payments under this subparagraph for the following:

(A) Contract prices for goods or services accepted under the Contract;

(B) Costs incurred in preparing to perform and performing the terminated portion of the performance plus a fair and reasonable profit on such portion of the performance, such profit shall not include anticipatory profit or consequential damages, less amounts paid or to be paid for accepted goods or services; provided, however, that if it appears that the CONTRACTOR would have sustained a loss if the entire Contract would have been completed, no profit shall be allowed or included and the amount of compensation shall be reduced to reflect the anticipated rate of loss;

(C) Costs of settling and paying claims arising out of the termination of subcontracts or orders pursuant to subparagraph 14b. These costs must not include costs paid in accordance with subparagraph 14d(3)(B);

(D) The reasonable settlement costs of the CONTRACTOR, including accounting, legal, clerical, and other expenses reasonably necessary for the preparation of settlement claims and supporting data with respect to the terminated portion of the Contract and for the termination of subcontracts thereunder, together with reasonable storage, transportation, and other costs incurred in connection with the protection or disposition of property allocable to the terminated portion of this Contract. The total sum to be paid the CONTRACTOR under this subparagraph shall not exceed the

total Contract price plus the reasonable settlement costs of the CONTRACTOR reduced by the amount of payments otherwise made, the proceeds of any sales of supplies and manufacturing materials under subparagraph 14d(2), and the contract price of performance not terminated.

(4) Costs claimed, agreed to, or established under subparagraphs 14d(2) and 14d(3) shall be in accordance with Chapter 3-123 (Cost Principles) of the Procurement Rules.

15. Claims Based on the Agency Procurement Officer's Actions or Omissions.

a. Changes in scope. If any action or omission on the part of the Agency procurement officer (which term includes the designee of such officer for purposes of this paragraph 15) requiring performance changes within the scope of the Contract constitutes the basis for a claim by the CONTRACTOR for additional compensation, damages, or an extension of time for completion, the CONTRACTOR shall continue with performance of the Contract in compliance with the directions or orders of such officials, but by so doing, the CONTRACTOR shall not be deemed to have prejudiced any claim for additional compensation, damages, or an extension of time for completion; provided:

(1) Written notice required. The CONTRACTOR shall give written notice to the Agency procurement officer:

(A) Prior to the commencement of the performance involved, if at that time the CONTRACTOR knows of the occurrence of such action or omission;

(B) Within thirty (30) days after the CONTRACTOR knows of the occurrence of such action or omission, if the CONTRACTOR did not have such knowledge prior to the commencement of the performance; or

(C) Within such further time as may be allowed by the Agency procurement officer in writing.

(2) Notice content. This notice shall state that the CONTRACTOR regards the act or omission as a reason which may entitle the CONTRACTOR to additional compensation, damages, or an extension of time. The Agency procurement officer, upon receipt of such notice, may rescind such action, remedy such omission, or take such other steps as may be deemed advisable in the discretion of the Agency procurement officer;

(3) Basis must be explained. The notice required by subparagraph 15a(1) describes as clearly as practicable at the time the reasons why the CONTRACTOR believes that additional compensation, damages, or an extension of time may be remedies to which the CONTRACTOR is entitled; and

(4) Claim must be justified. The CONTRACTOR must maintain and, upon request, make available to the Agency procurement officer within a reasonable time, detailed records to the extent practicable, and other documentation and evidence satisfactory to the STATE, justifying the claimed additional costs or an extension of time in connection with such changes.

b. CONTRACTOR not excused. Nothing herein contained, however, shall excuse the CONTRACTOR from compliance with any rules or laws precluding any state officers and CONTRACTOR from acting in collusion or bad faith in issuing or performing change orders which are clearly not within the scope of the Contract.

c. Price adjustment. Any adjustment in the price made pursuant to this paragraph shall be determined in accordance with the price adjustment provision of this Contract.

16. Costs and Expenses. Any reimbursement due the CONTRACTOR for per diem and transportation expenses under this Contract shall be subject to chapter 3-123 (Cost Principles), HAR, and the following guidelines:

a. Reimbursement for air transportation shall be for actual cost or coach class air fare, whichever is less.

b. Reimbursement for ground transportation costs shall not exceed the actual cost of renting an intermediate-sized vehicle.

c. Unless prior written approval of the HOPA is obtained, reimbursement for subsistence allowance (i.e., hotel and meals, etc.) shall not exceed the applicable daily authorized rates for inter-island or out-of-state travel that are set forth in the current Governor's Executive Order authorizing adjustments in salaries and benefits for state officers and employees in the executive branch who are excluded from collective bargaining coverage.

17. Payment Procedures; Final Payment; Tax Clearance.

a. Original invoices required. All payments under this Contract shall be made only upon submission by the CONTRACTOR of original invoices specifying the amount due and certifying that services requested under the Contract have been performed by the CONTRACTOR according to the Contract.

b. Subject to available funds. Such payments are subject to availability of funds and allotment by the Director of Finance in accordance with chapter 37, HRS. Further, all payments shall be made in accordance with and subject to chapter 40, HRS.

c. Prompt payment.

(1) Any money, other than retainage, paid to the CONTRACTOR shall be disbursed to subcontractors within ten (10) days after receipt of the money in accordance with the terms of the subcontract; provided that the subcontractor has met all the terms and conditions of the subcontract and there are no bona fide disputes; and

(2) Upon final payment to the CONTRACTOR, full payment to the subcontractor, including retainage, shall be made within ten (10) days after receipt of the money; provided that there are no bona fide disputes over the subcontractor's performance under the subcontract.

d. Final payment. Final payment under this Contract shall be subject to sections 103-53 and 103D-328, HRS, which require a tax clearance from the Director of Taxation, State of Hawaii, and the Internal Revenue Service, U.S. Department of Treasury, showing that all delinquent taxes, if any, levied or accrued under state law and the Internal Revenue Code of 1986, as amended, against the CONTRACTOR have been paid. Further, in accordance with section 3-122-112, HAR, CONTRACTOR shall provide a certificate affirming that the CONTRACTOR has remained in compliance with all applicable laws as required by this section.

18. Federal Funds. If this Contract is payable in whole or in part from federal funds, CONTRACTOR agrees that, as to the portion of the compensation under this Contract to be payable from federal funds, the CONTRACTOR shall be paid only from such funds received from the federal government, and shall not be paid from any other funds. Failure of the STATE to receive anticipated federal funds shall not be considered a breach by the STATE or an excuse for nonperformance by the CONTRACTOR.

19. Modifications of Contract.

a. In writing. Any modification, alteration, amendment, change, or extension of any term, provision, or condition of this Contract permitted by this Contract shall be made by written amendment to this Contract, signed by the CONTRACTOR and the STATE, provided that change orders shall be made in accordance with paragraph 20 herein.

b. No oral modification. No oral modification, alteration, amendment, change, or extension of any term, provision, or condition of this Contract shall be permitted.

c. Agency procurement officer. By written order, at any time, and without notice to any surety, the Agency procurement officer may unilaterally order of the CONTRACTOR:

(A) Changes in the work within the scope of the Contract; and

(B) Changes in the time of performance of the Contract that do not alter the scope of the Contract work.

d. Adjustments of price or time for performance. If any modification increases or decreases the CONTRACTOR'S cost of, or the time required for, performance of any part of the work under this Contract, an adjustment shall be made and this Contract modified in writing accordingly. Any adjustment in contract price made pursuant to this clause shall be determined, where applicable, in accordance with the price adjustment clause of this Contract or as negotiated.

e. Claim barred after final payment. No claim by the CONTRACTOR for an adjustment hereunder shall be allowed if written modification of the Contract is not made prior to final payment under this Contract.

f. Claims not barred. In the absence of a written contract modification, nothing in this clause shall be deemed to restrict the CONTRACTOR'S right to pursue a claim under this Contract or for a breach of contract.

g. CPO approval. If this is a professional services contract awarded pursuant to section 103D-303 or 103D-304, HRS, any modification, alteration, amendment, change, or extension of any term, provision, or condition of this Contract which increases the amount payable to the CONTRACTOR by at least $25,000.00 or ten per cent (10%) of the initial contract price, whichever increase is higher, must receive the prior approval of the CPO.

h. Tax clearance. The STATE may, at its discretion, require the CONTRACTOR to submit to the STATE, prior to the STATE'S approval of any modification, alteration, amendment, change, or extension of any term, provision, or condition of this Contract, a tax clearance from the Director of Taxation, State of Hawaii, and the Internal Revenue Service, U.S. Department of Treasury, showing that all delinquent taxes, if any, levied or accrued under state law and the Internal Revenue Code of 1986, as amended, against the CONTRACTOR have been paid.

i. Sole source contracts. Amendments to sole source contracts that would change the original scope of the Contract may only be made with the approval of the CPO. Annual renewal of a sole source contract for services should not be submitted as an amendment.

20. Change Order. The Agency procurement officer may, by a written order signed only by the STATE, at any time, and without notice to any surety, and subject to all appropriate adjustments, make changes within the general scope of this Contract in any one or more of the following:

(1) Drawings, designs, or specifications, if the goods or services to be furnished are to be specially provided to the STATE in accordance therewith;

(2) Method of delivery; or

(3) Place of delivery.

a. Adjustments of price or time for performance. If any change order increases or decreases the CONTRACTOR'S cost of, or the time required for, performance of any part of the work under this Contract, whether or not changed by the order, an adjustment shall be made and the Contract modified in writing accordingly. Any adjustment in the Contract price made pursuant to this provision shall be determined in accordance with the price adjustment provision of this Contract. Failure of the parties to agree to an adjustment shall not excuse the CONTRACTOR from proceeding with the Contract as changed, provided that the Agency procurement officer promptly and duly makes the provisional adjustments in payment or time for performance as may be reasonable. By

proceeding with the work, the CONTRACTOR shall not be deemed to have prejudiced any claim for additional compensation, or any extension of time for completion.

b. Time period for claim. Within ten (10) days after receipt of a written change order under subparagraph 20a, unless the period is extended by the Agency procurement officer in writing, the CONTRACTOR shall respond with a claim for an adjustment. The requirement for a timely written response by CONTRACTOR cannot be waived and shall be a condition precedent to the assertion of a claim.

c. Claim barred after final payment. No claim by the CONTRACTOR for an adjustment hereunder shall be allowed if a written response is not given prior to final payment under this Contract.

d. Other claims not barred. In the absence of a change order, nothing in this paragraph 20 shall be deemed to restrict the CONTRACTOR'S right to pursue a claim under the Contract or for breach of contract.

21. Price Adjustment.

a. Price adjustment. Any adjustment in the contract price pursuant to a provision in this Contract shall be made in one or more of the following ways:

(1) By agreement on a fixed price adjustment before commencement of the pertinent performance or as soon thereafter as practicable;

(2) By unit prices specified in the Contract or subsequently agreed upon;

(3) By the costs attributable to the event or situation covered by the provision, plus appropriate profit or fee, all as specified in the Contract or subsequently agreed upon;

(4) In such other manner as the parties may mutually agree; or

(5) In the absence of agreement between the parties, by a unilateral determination by the Agency procurement officer of the costs attributable to the event or situation covered by the provision, plus appropriate profit or fee, all as computed by the Agency procurement officer in accordance with generally accepted accounting principles and applicable sections of chapters 3-123 and 3-126, HAR.

b. Submission of cost or pricing data. The CONTRACTOR shall provide cost or pricing data for any price adjustments subject to the provisions of chapter 3-122, HAR.

22. Variation in Quantity for Definite Quantity Contracts. Upon the agreement of the STATE and the CONTRACTOR, the quantity of goods or services, or both, if a definite quantity is specified in this Contract, may be increased by a maximum of ten per cent (10%); provided the unit prices will remain the same except for any price adjustments otherwise applicable; and the Agency procurement officer makes a written determination that such an increase will either be more economical than awarding another contract or that it would not be practical to award another contract.

23. Changes in Cost-Reimbursement Contract. If this Contract is a cost-reimbursement contract, the following provisions shall apply:

a. The Agency procurement officer may at any time by written order, and without notice to the sureties, if any, make changes within the general scope of the Contract in any one or more of the following:

(1) Description of performance (Attachment 1);

(2) Time of performance (i.e., hours of the day, days of the week, etc.);

(3) Place of performance of services;

(4) Drawings, designs, or specifications when the supplies to be furnished are to be specially manufactured for the STATE in accordance with the drawings, designs, or specifications;

(5) Method of shipment or packing of supplies; or

(6) Place of delivery.

b. If any change causes an increase or decrease in the estimated cost of, or the time required for performance of, any part of the performance under this Contract, whether or not changed by the order, or otherwise affects any other terms and conditions of this Contract, the Agency procurement officer shall make an equitable adjustment in the (1) estimated cost, delivery or completion schedule, or both; (2) amount of any fixed fee; and (3) other affected terms and shall modify the Contract accordingly.

c. The CONTRACTOR must assert the CONTRACTOR'S rights to an adjustment under this provision within thirty (30) days from the day of receipt of the written order. However, if the Agency procurement officer decides that the facts justify it, the Agency procurement officer may receive and act upon a proposal submitted before final payment under the Contract.

d. Failure to agree to any adjustment shall be a dispute under paragraph 11 of this Contract. However, nothing in this provision shall excuse the CONTRACTOR from proceeding with the Contract as changed.

e. Notwithstanding the terms and conditions of subparagraphs 23a and 23b, the estimated cost of this Contract and, if this Contract is incrementally funded, the funds allotted for the performance of this Contract, shall not be increased or considered to be increased except by specific written modification of the Contract indicating the new contract estimated cost and, if this contract is incrementally funded, the new amount allotted to the contract.

24. Confidentiality of Material.

a. All material given to or made available to the CONTRACTOR by virtue of this Contract, which is identified as proprietary or confidential information, will be safeguarded by the CONTRACTOR and shall not be disclosed to any individual or organization without the prior written approval of the STATE.

b. All information, data, or other material provided by the CONTRACTOR to the STATE shall be subject to the Uniform Information Practices Act, chapter 92F, HRS.

25. Publicity. The CONTRACTOR shall not refer to the STATE, or any office, agency, or officer thereof, or any state employee, including the HOPA, the CPO, the Agency procurement officer, or to the services or goods, or both, provided under this Contract, in any of the CONTRACTOR'S brochures, advertisements, or other publicity of the CONTRACTOR. All media contacts with the CONTRACTOR about the subject matter of this Contract shall be referred to the Agency procurement officer.

26. Ownership Rights and Copyright. The STATE shall have complete ownership of all material, both finished and unfinished, which is developed, prepared, assembled, or conceived by the CONTRACTOR pursuant to this Contract, and all such material shall be considered "works made for hire." All such material shall be delivered to the STATE upon expiration or termination of this Contract. The STATE, in its sole discretion, shall have the exclusive right to copyright any product, concept, or material developed, prepared, assembled, or conceived by the CONTRACTOR pursuant to this Contract.

27. Liens and Warranties. Goods provided under this Contract shall be provided free of all liens and provided together with all applicable warranties, or with the warranties described in the Contract documents, whichever are greater.

28. Audit of Books and Records of the CONTRACTOR. The STATE may, at reasonable times and places, audit the books and records of the CONTRACTOR, prospective contractor, subcontractor, or prospective subcontractor which are related to:

a. The cost or pricing data, and

b. A state contract, including subcontracts, other than a firm fixed-price contract.

29. Cost or Pricing Data. Cost or pricing data must be submitted to the Agency procurement officer and timely certified as accurate for contracts over $100,000 unless the contract is for a multiple-term or as otherwise specified by the Agency procurement officer. Unless otherwise required by the Agency procurement officer, cost or pricing data submission is not required for contracts awarded pursuant to competitive sealed bid procedures.

If certified cost or pricing data are subsequently found to have been inaccurate, incomplete, or noncurrent as of the date stated in the certificate, the STATE is entitled to an adjustment of the contract price, including profit or fee, to exclude any significant sum by which the price, including profit or fee, was increased because of the defective data. It is presumed that overstated cost or pricing data increased the contract price in the amount of the defect plus related overhead and profit or fee. Therefore, unless there is a clear indication that the defective data was not used or relied upon, the price will be reduced in such amount.

30. Audit of Cost or Pricing Data. When cost or pricing principles are applicable, the STATE may require an audit of cost or pricing data.

31. Records Retention.

(1) Upon any termination of this Contract or as otherwise required by applicable law, CONTRACTOR shall, pursuant to chapter 487R, HRS, destroy all copies (paper or electronic form) of personal information received from the STATE.

(2) The CONTRACTOR and any subcontractors shall maintain the files, books, and records that relate to the Contract, including any personal information created or received by the CONTRACTOR on behalf of the STATE, and any cost or pricing data, for at least three (3) years after the date of final payment under the Contract. The personal information shall continue to be confidential and shall only be disclosed as permitted or required by law. After the three (3) year, or longer retention period as required by law has ended, the files, books, and records that contain personal information shall be destroyed pursuant to chapter 487R, HRS or returned to the STATE at the request of the STATE.

32. Antitrust Claims. The STATE and the CONTRACTOR recognize that in actual economic practice, overcharges resulting from antitrust violations are in fact usually borne by the purchaser. Therefore, the CONTRACTOR hereby assigns to STATE any and all claims for overcharges as to goods and materials purchased in connection with this Contract, except as to overcharges which result from violations commencing after the price is established under this Contract and which are not passed on to the STATE under an escalation clause.

33. Patented Articles. The CONTRACTOR shall defend, indemnify, and hold harmless the STATE, and its officers, employees, and agents from and against all liability, loss, damage, cost, and expense, including all attorneys fees, and all claims, suits, and demands arising out of or resulting from any claims, demands, or actions by the patent holder for infringement or other improper or unauthorized use of any patented article, patented process, or patented appliance in connection with this Contract. The CONTRACTOR shall be solely responsible for correcting or curing to the satisfaction of the STATE any such infringement or improper or unauthorized use, including, without limitation: (a) furnishing at no cost to the STATE a substitute article, process, or appliance acceptable to the STATE, (b) paying royalties or other required payments to the patent holder, (c) obtaining proper authorizations or releases from the patent holder, and (d) furnishing such security to or making such arrangements with the patent holder as may be necessary to correct or cure any such infringement or improper or unauthorized use.

34. Governing Law. The validity of this Contract and any of its terms or provisions, as well as the rights and duties of the parties to this Contract, shall be governed by the laws of the State of Hawaii. Any action at law or in equity to enforce or interpret the provisions of this Contract shall be brought in a state court of competent jurisdiction in Honolulu, Hawaii.

35. Compliance with Laws. The CONTRACTOR shall comply with all federal, state, and county laws, ordinances, codes, rules, and regulations, as the same may be amended from time to time, that in any way affect the CONTRACTOR'S performance of this Contract.

36. Conflict Between General Conditions and Procurement Rules. In the event of a conflict between the General Conditions and the procurement rules, the procurement rules in effect on the date this Contract became effective shall control and are hereby incorporated by reference.

37. Entire Contract. This Contract sets forth all of the agreements, conditions, understandings, promises, warranties, and representations between the STATE and the CONTRACTOR relative to this Contract. This Contract supersedes all prior agreements, conditions, understandings, promises, warranties, and representations, which shall have no further force or effect. There are no agreements, conditions, understandings, promises, warranties, or representations, oral or written, express or implied, between the STATE and the CONTRACTOR other than as set forth or as referred to herein.

38. Severability. In the event that any provision of this Contract is declared invalid or unenforceable by a court, such invalidity or unenforceability shall not affect the validity or enforceability of the remaining terms of this Contract.

39. Waiver. The failure of the STATE to insist upon the strict compliance with any term, provision, or condition of this Contract shall not constitute or be deemed to constitute a waiver or relinquishment of the STATE'S right to enforce the same in accordance with this Contract. The fact that the STATE specifically refers to one provision of the procurement rules or one section of the Hawaii Revised Statutes, and does not include other provisions or statutory sections in this Contract shall not constitute a waiver or relinquishment of the STATE'S rights or the CONTRACTOR'S obligations under the procurement rules or statutes.

40. Pollution Control. If during the performance of this Contract, the CONTRACTOR encounters a "release" or a "threatened release" of a reportable quantity of a "hazardous substance," "pollutant," or "contaminant" as those terms are defined in section 128D-1, HRS, the CONTRACTOR shall immediately notify the STATE and all other appropriate state, county, or federal agencies as required by law. The Contractor shall take all necessary actions, including stopping work, to avoid causing, contributing to, or making worse a release of a hazardous substance, pollutant, or contaminant, and shall promptly obey any orders the Environmental Protection Agency or the state Department of Health issues in response to the release. In the event there is an ensuing cease-work period, and the STATE determines that this Contract requires an adjustment of the time for performance, the Contract shall be modified in writing accordingly.

41. Campaign Contributions. The CONTRACTOR is hereby notified of the applicability of 11-355, HRS, which states that campaign contributions are prohibited from specified state or county government contractors during the terms of their contracts if the contractors are paid with funds appropriated by a legislative body.

42. Confidentiality of Personal Information.

a. Definitions.

"Personal information" means an individual's first name or first initial and last name in combination with any one or more of the following data elements, when either name or data elements are not encrypted:

(1) Social security number;

(2) Driver's license number or Hawaii identification card number; or

(3) Account number, credit or debit card number, access code, or password that would permit access to an individual's financial information.

Personal information does not include publicly available information that is lawfully made available to the general public from federal, state, or local government records.

"Technological safeguards" means the technology and the policy and procedures for use of the technology to protect and control access to personal information.

b. Confidentiality of Material.

(1) All material given to or made available to the CONTRACTOR by the STATE by virtue of this Contract which is identified as personal information, shall be safeguarded by the CONTRACTOR and shall not be disclosed without the prior written approval of the STATE.

(2) CONTRACTOR agrees not to retain, use, or disclose personal information for any purpose other than as permitted or required by this Contract.

(3) CONTRACTOR agrees to implement appropriate "technological safeguards" that are acceptable to the STATE to reduce the risk of unauthorized access to personal information.

(4) CONTRACTOR shall report to the STATE in a prompt and complete manner any security breaches involving personal information.

(5) CONTRACTOR agrees to mitigate, to the extent practicable, any harmful effect that is known to CONTRACTOR because of a use or disclosure of personal information by CONTRACTOR in violation of the requirements of this paragraph.

(6) CONTRACTOR shall complete and retain a log of all disclosures made of personal information received from the STATE, or personal information created or received by CONTRACTOR on behalf of the STATE.

c. Security Awareness Training and Confidentiality Agreements.

(1) CONTRACTOR certifies that all of its employees who will have access to the personal information have completed training on security awareness topics relating to protecting personal information.

(2) CONTRACTOR certifies that confidentiality agreements have been signed by all of its employees who will have access to the personal information acknowledging that:

(A) The personal information collected, used, or maintained by the CONTRACTOR will be treated as confidential;

(B) Access to the personal information will be allowed only as necessary to perform the Contract; and

(C) Use of the personal information will be restricted to uses consistent with the services subject to this Contract.

d. Termination for Cause. In addition to any other remedies provided for by this Contract, if the STATE learns of a material breach by CONTRACTOR of this paragraph by CONTRACTOR, the STATE may at its sole discretion:

(1) Provide an opportunity for the CONTRACTOR to cure the breach or end the violation; or

(2) Immediately terminate this Contract.

In either instance, the CONTRACTOR and the STATE shall follow chapter 487N, HRS, with respect to notification of a security breach of personal information.

e. Records Retention.

(1) Upon any termination of this Contract or as otherwise required by applicable law, CONTRACTOR shall, pursuant to chapter 487R, HRS, destroy all copies (paper or electronic form) of personal information received from the STATE.

(2) The CONTRACTOR and any subcontractors shall maintain the files, books, and records that relate to the Contract, including any personal information created or received by the CONTRACTOR on behalf of the STATE, and any cost or pricing data, for at least three (3) years after the date of final payment under the Contract. The personal information shall continue to be confidential and shall only be disclosed as permitted or required by law. After the three (3) year, or longer retention period as required by law has ended, the files, books, and records that contain personal information shall be destroyed pursuant to chapter 487R, HRS or returned to the STATE at the request of the STATE.