

STATE OF HAWAI'I
DEPARTMENT OF LAND AND NATURAL RESOURCES
OFFICE OF CONSERVATION AND COASTAL LANDS
Honolulu, Hawai'i

File No: HA-3860
180-Day Exp. Date: June 24, 2020

June 12, 2020

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

REGARDING: Conservation District Use Application (CDUA) HA-3860 for the Perry Single Family Residence, Farm, and Associated Improvements.

**APPLICANT/
LANDOWNER:** Nicholas Perry & Rodrigo Gonzalez

AGENT: James M. Leonard of JM Leonard Planning, LLC

LOCATION: 32-2471 Stone Road, Pīhā, North Hilo, Hawai'i

**TAX MAP KEYS
(TMKs):** (3) 3-2-004:040

AREA OF PARCEL: 3.212 acres

USE: Structures - 4,221 square feet; Landscaping & Associated Improvements - ~21,576 square feet

SUBZONE: General

DESCRIPTION OF AREA/CURRENT USE

The subject property is old sugarcane land that is undeveloped and is located in the General Subzone of the State Land Use Conservation District (see **Exhibit 1**). The parcel is primarily covered in vegetation that consists of secondary shrubland and forest dominated by strawberry guava, Asian melastome, and uluhe fern that grew in after the decline of plantation sugar in the area (see **pages 2 to 8 of Exhibit 1**). The property is located on Stone Road off of Pīhā-Kahuku Road in the North Hilo District of the Island of Hawai'i (see **Exhibit 2**). According to the application, the surrounding properties consist of a number of single-family residences and small-scale farms in a rural residential area of Hilo.

The approximately 3.212-acre property sits at an elevation of about 1,178 ft above mean sea level. Annual rainfall for the area and property is approximately 187 inches per year and experiences an average temperature around 68 degrees Fahrenheit. No streams are within or border the property itself; however, Waikaumalo Stream and its tributary Kalaeha Stream are located on adjacent parcels (see page 2 to Exhibit 1).

The lava flows that underlie the parcel are covered in a thick layer of volcanic ash derived from the Kohala and Mauna Kea volcanoes dated from 4,000 to 14,000 years before present. The soils found on the property are classified as Kaiwiki highly organic hydrous silty clay loam. This deep ash-derived soil is highly productive for farming. Kawiki hydrous silty clay loams are fairly well drained but have medium to high runoff. Locally boggy conditions can develop when this soil is compressed by cultivation, vehicles, or animals.

Hazards

The volcanic hazard mapping produced by the U.S. Geological Survey places the property in Lava Flow Hazard Zone 8 on a scale of ascending risk from 9 (low) to 1 (high). The relatively low hazard risk is due to Mauna Kea being an inactive volcano. Zone 8 includes areas that have had no lava flows in the last 750 years and only a low percentage of areas covered by lava in the past 10,000 years. Volcanic hazards near the property are thus very low.

On the other hand, the island of Hawai'i experiences high seismic activity and structures that are poorly designed or built are at risk from major earthquake damage. The entire island of Hawai'i is within the Earthquake Zone 4 according to the County Building Codes. The applicants understand that there are hazards associated with homes in this geologic setting and have made the decision that a residence in the subject area is not imprudent to construct or inhabit. They also understand and accept that there may be added structural requirements to address potential seismic hazards for any new construction.

A Flood Zone Map obtained from the State's Flood Hazard Assessment Tool website shows that the subject property is in Flood Zone X which is defined as areas that are outside of the 500-year floodplain. There is no risk of tsunami inundation as the parcel is outside both the tsunami evacuation and dam evacuation zones. As mentioned before, no streams are within or border the property itself; however, Waikaumalo Stream and its tributary Kalaeha Stream are located on adjacent parcels. The applicants are unaware of the streams ever overtopping their streambanks and it does not appear that the proposed use will be affected by stream flooding.

Flora and Fauna

No prior botanical surveys are known to have been conducted on the property. The *Manual of the Flowering Plants of the Hawaiian Islands* by Gagne and Cuddihy (1990) has classified the natural vegetation in areas with similar geology, elevation, and rainfall as Lowland Wet Forest. Lowland Wet Forests are typically dominated by 'ōhi'a trees, uluhe, hapu'u ferns, and a large variety of trees, shrubs, ferns, and herbs.

The property shows signs of being previously disturbed. Historical maps and aerial photos show that nearly the entire property had been used for sugar cultivation during the prior century up to the early 1970's and that it has remained fallow since that time.

The vegetation presently found on the project site is a mixed native and non-native low stature forest dominated by the non-natives strawberry guava (*Psidium cattleianum*) and Asian melastome (*Melastoma candidum*) as well as the native fern uluhe. In the understory, non-native grasses, ferns and weeds dominate, including sword fern (*Nephrolepis multiflora*) and the highly invasive Koster's curse (*Clidemia hirta*). A few native species such as hapu'u (*Cibotium glaucum*), neneleau (*Rhus sandwicensis*), pakahakaha (*Lepisorus thunbergianus*), and wawae'iole (*Lycopodiella cernua*) are found sparsely in scattered locations on the property. Several native sedges and the ferns kikawaio (*Christella cyatheoides*) and pala'a (*Sphenomeris chinensis*) are more widely distributed. According to the applicants, all of the native plants found on the property are common in the region, on the island, and throughout the Hawaiian Islands. Importantly, no 'ōhi'a trees were present on the parcel, although some were within the gulch on neighboring properties. No rare, threatened or endangered plant species have been observed or are present on the parcel.

During several site visits in 2019, the applicant's consultants observed very few individual birds on the property and detected four bird species. These included the Japanese white-eyes (*Zosterops japonicus*), northern cardinals (*Cardinalis cardinalis*), spotted doves (*Streptopelia chinensis*), and striped doves (*Geopelia striata*). No native birds were identified, but it is likely that the project site is occasionally utilized by the Hawai'i 'amakihi (*Hemignathus virens*) as some populations of this native honeycreeper appear to have adapted to the mosquito borne diseases of the Hawaiian lowlands.

As with all of East Hawai'i, several endangered native terrestrial vertebrates may be present in the general area and may overfly, roost, nest, or utilize resources of the property. These include the endangered Hawaiian hawk (*Buteo solitarius*), the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*), the endangered Hawaiian petrel (*Pterodroma sandwichensis*), the endangered band-rumped storm petrel (*Oceanodroma castro*), and the threatened Newell's shearwater (*Puffinus auricularis newelli*). Of these, only the Hawaiian hoary bat is likely to have any substantial presence on the project site, as the nesting requirements for the other species are not present.

Although there is no habitat for native waterbirds on the property, some may utilize nearby Waikaumalo Stream. In the Hilo-Hāmākua Coast in general, waterbirds are found in streams, estuaries, natural and artificial ponds, and wetlands. The most common native waterbird is the indigenous black-crowned night heron, or 'auku'u (*Nycticorax nycticorax hoactli*). This bird is likely present at times in the general area of the property. It is also not unusual to spot the wide-ranging, friendly, but endangered Hawaiian goose or nēnē (*Branta sandwicensis*) in various parts of the island. Far less likely to be seen in the property's streams are two endangered waterbirds that are occasionally present in the Hāmākua coast: the Hawaiian duck or koloa maoli (*Anas wyvilliana*), and the Hawaiian coot or 'alae ke'oke'o (*Fulica alai*). Of these, only the koloa maoli is noted in streams somewhat similar to Waikaumalo. No waterbirds were observed during any of the field visits to the property.

Aside from the Hawaiian hoary bat, all mammals in the project area are all introduced species, including feral cats (*Felis catus*), feral pigs (*Sus scrofa*), small Indian mongooses (*Herpestes a. auropunctatus*) and various species of rats (*Rattus* spp.). Several species of non-native reptiles and amphibians are also likely present. Coqui frogs (*Eleutherodactylus coqui*) were heard and

other species of frog may be present. None of these non-native vertebrates are of conservation concern and all are deleterious to native flora and fauna.

Historic/Cultural

An archeological assessment survey and a cultural impact assessment were prepared for the property. No gathering of plant or animal material was noted from the property. No consulted individuals with ties to and history with the area had any specific information concerning this area and no archaeological features were present. No specific traditional cultural sites or practices were identified to exist or have taken place within the property. However, a couple who live and hunt in the area expressed concerns that landowners from elsewhere who move to the Pihā area and begin to block access or express concern about pig hunting in undeveloped Conservation lands near their properties.

According to the application, the applicants and their proposed construction of a single-family residence, farm, and related improvements on the project site will not harm any cultural resources nor will it impede access to the forest reserve for pig hunting or cultural utilization of forest resources. The applicants understand, appreciate, and welcome the practices of local hunters and their efforts in reducing the feral pig population in the area as feral pigs cause damage to vegetation such as the applicants' proposed use (farm - orchard and garden) as well as to native vegetation.

Part of the CDUA process requires that the applicant submit a Hawai'i Revised Statutes (HRS), 6E form developed by the State Historic Preservation Division (SHPD). Pursuant to HRS, §6E-42, prior to any agency or officer of the State [in this case the Board] approves any project involving a permit, license, certificate, land use change, subdivision, or other entitlement for use, which may affect historic property, aviation artifacts, or a burial site, the agency or office [OCCL] shall advise SHPD prior to any approval and allow SHPD an opportunity to review and comment on the effect of the proposed project on historic properties.

On March 10, 2020, SHPD issued the property owners a Chapter 6E-42 Historic Preservation Review letter and OCCL's request for SHPD's concurrence with the "No Historic Properties Affected" determination for the proposed use (SHPD Log No. 2019.01685 & 2019.02826; Doc. No. 2003SN04). This letter reviewed and accepted the applicants' and project's archaeological inventory survey as well as its archaeological assessment. Based on the information provided to SHPD, SHPD has concurred with OCCL's determination that there would be "no historic properties affected" by the applicants and property owners' proposed uses and that the permit issuance process may proceed.

PROPOSED USE

The applicants are proposing to construct a one story 1,500 sq ft residence that will consist of 3 bedrooms, 2 bathrooms, with a kitchen, living and dining area, and library (see page 2 of Exhibit 3). The residence will be connected by a 1,553 sq ft lanai to a 327 sq ft farm utility room and 287 sq ft greenhouse structure. The applicants are also proposing to construct a 120 sq ft chicken coop to house about a dozen chickens, a 144 sq ft equipment and tool storage utility shed, and a 290 sq

ft 15,000 gallon water tank which will flank the proposed greenhouse. A paved driveway and perimeter fencing with a gate at the entry are also planned as part of the construction. The total area of development for the proposed single-family residence and associated structures is 4,221 sq ft (see page 1 of Exhibit 3).

The roof of the home will feature a solar reflective coating to reduce solar gain to the house as well as photovoltaic panels for electrical generation and solar water heating. Telecommunications will be by cellular phones and in combination with a satellite dish for internet connection. The walls will be fiber cement and painted in earth tones. Aluminum or polycarbonate awnings, low emissivity metal panels, and “greenwall” trellises will be placed near the windows and the sides of the proposed structures to help cool them. Water will be provided through the rain catchment system and its 290 sq ft 15,000-gallon water storage tank. Wastewater will be treated by a septic system that will have a tank capacity of 1,000 gallons as well as an absorption field of approximately 390 sq ft and will be in conformance with all Department of Health regulations.

Access to the parcel is off Stone Road, which extends off a Pihā-Kahuku Road, and is a short local road providing access to a cluster of lots within the Pihā Homestead Subdivision. The proposed house site covers an approximate area of a ¼ (.25) acre and is a fairly level portion of the property that has been previously disturbed. The proposed site for the residence will reduce grading requirements which will be limited to the requirements of the driveway, parking and turnaround areas, and the foundations for the single-family residence and farm support structures. The applicants also intend to leave the northeast and southeast sides of the property undisturbed to provide a natural buffer as part of the 25-foot setback and minimize potential impacts that clearing could cause on these steeper sides of the property to Stone Road and the nearby gulches.

In addition to the single-family residence, the applicants are proposing to create a farm on their property and have drafted an Agricultural Management Plan for as part of their Conservation District Use Application for this land use (see Exhibit 4). The applicants’ lot was once used for agricultural purposes but has remained fallow since the decline of industrial sugar cultivation in the late 1970s. As part of their proposed agricultural uses, the applicants are planning to plant a fruit tree orchard and vegetable garden for home consumption and these will be supported by the proposed greenhouse, the utility/agricultural work room, chicken coop (to house approximately 10 hens and 2 roosters), farm shed, and the 15,000 gallon water catchment tank. Most of the primarily non-native vegetation would be hand-cleared to accommodate the proposed fruit tree orchard and vegetable garden. Fruit trees that the applicants have identified for the proposed orchard include: citrus, avocado, sapote, lychee, durian, jackfruit, soursop, coconut, mango, papaya, macadamia, jaboticaba, and banana (see page 4 of Exhibit 3).

The Agricultural Management Plan was created with the aim of minimizing the environmental impacts of farming while keeping with the values of the Conservation District. Best Management Practices have been formulated through consultation with the University of Hawai’i, Manoa College of Tropical Agriculture and Human Resources. These include short-term measures to control erosion and sedimentation related to the relatively small amount of ground disturbing activities.

There will also be long-term practices for soil, nutrient, pest, and crop management. Cultivation practices will minimize tillage, add organic material to the soil, and establish ground covers. These objectives would be achieved by digging holes for planting trees rather than grading or tilling while maintaining some existing ground cover but mainly replacing it with *Arachis glabrata*, which is a

highly erosion resistant, nitrogen-fixing and non-invasive groundcover, and adding mulch from onsite composting and green-waste. Soil removed for holes will be bermed around individual plantings. Best Management Practices for nutrient management will monitor and regulate the application of nutrients to the soil according to the specific crop nutrient requirements. Nutrient management also includes selecting and using the appropriate organic manure amendments, which can help build and stabilize soils while reducing the need for chemical nutrients. Pests will be managed through integrated pest management stressing pest-resistant crops, biocontrol, removal of pests, and, only where necessary, safe and effective storage, handling and application of organic pesticides. Finally, there will be regular and ongoing monitoring of soil, water and plant conditions for early identification of potential environmental or biological threats and for maintenance of optimum crop growing conditions. The applicant and landowner are experienced in growing fruit trees and vegetables and expect to be fully capable of establishing and managing the farm in conformance with the Agriculture Management Plan.

Additional landscaping is planned for the property and will cover planting areas associated with the driveway, house site, and orchard areas (see page 4 of Exhibit 3). A combination of foxtail palms and hapu'u ferns are planned along either side of the driveway to provide an accent and definition to the entryway. Near the single-family residence, ornamental plantings are planned and will include a mix of native and polynesian trees and plants including the native hapu'u pulu fern and neneleau which were commonly found in the area prior to the period of sugar cultivation. Other ornamentals planned in this area include the native hala, native hibiscus, plumeria, Cape jasmine, and gardenia. As stated above, the applicants are proposing to utilize "greenwalls" which are vertical trellises and will be planted with a Rex Begonia vine. These greenwalls are planned in areas along the sides of the house and associated structures to help both protect the structures from the weather and provide a pleasing integration of the structure with its surroundings. Due to the area's high average rainfall year round, no irrigation system is planned or deemed necessary for the applicants' proposed agricultural and landscape uses on the property.

OTHER ALTERNATIVES CONSIDERED:

Alternative 1: No Action. Under the No Action Alternative, the residence would not be built. The lot would remain unused except for temporary camping and picnicking by the owners. The Environmental Assessment considers the No Action Alternative as the baseline by which to compare environmental effects from the project.

Alternative 2: Proposed Project, Alternative House Sites, and Alternative Uses. The proposed project and its location are described above. The location of the home site was chosen because it allows a relatively straight-forward path for the proposed driveway and offers a good view in the makai direction.

Many other locations on the property could also theoretically serve as the site for a residence, but there are no substantial differences in terms of environmental resources or impacts among the alternative potential building sites on this property. For this reason, no other site for the single-family residence has been considered.

No other alternative uses for the property that are identified in the Conservation District Rules (HAR 13-5) as allowable uses in the Conservation District, such as a commercial tourist nature park, are desired by the applicants, and thus none are addressed in the Environmental Assessment.

SUMMARY OF COMMENTS

The Office of Conservation and Coastal Lands referred the application, as well as the Draft Environmental Assessment (EA) to the following agencies and organizations for review and comment:

State Agencies:

DLNR, Division of Conservation and Resource Enforcement
DLNR, Division of Aquatic Resources
DLNR, Engineering Division
DLNR, Division of Forestry and Wildlife
DLNR, Hawai'i District Land Office
DLNR, Na Ala Hele
Office of Hawaiian Affairs

County Agencies:

County of Hawai'i, Department of Planning
County of Hawai'i, Fire Department

In addition, this application was also sent to the nearest public library, the Hilo Public Library, to make this information readily available to those who may wish to review it.

Comments were received by the following agencies and individuals and summarized by Staff as follows:

THE STATE

DEPARTMENT OF LAND AND NATURAL RESOURCES

Division of Conservation and Resource Enforcement:

Comments: No Comments.

Engineering Division:

Comments: No additional Comments.

Division of Forestry and Wildlife:

Comments: No Comments.

Hawai'i District Land Office:

Comments: No Comments.

Nā Ala Hele:

Comments: No Comments.

Office of Conservation and Coastal Lands (OCCL):

Comments: Please clarify if the single-family residence will be slab on grade or post and pier. Please discuss the dimensions and requirements for outfitting the gully with a culvert for the entrance of the driveway and address the comments offered by the Commission on Water Resources Management (CWRM) during the Early Consultation for Environmental Assessment. Please clarify the use of “greenwalls” for the single-family residence: what is a “greenwall” and how does a “greenwall” work?

Applicant’s response: I am in receipt of your letter that summarizes OCCL’s comments and also attaches all other comment letters on the Draft EA for the subject project, which was provided by Trevor Fitzpatrick to project planner James Leonard.

In the interest of a complete record on comments to the EA/CDUA, I would first like to acknowledge receipt of comment letters from various DLNR divisions and programs as well as other agencies contained within form memos circulated by your office. We acknowledge here the *no-comment* or *no-additional comments* remarks of the Division of Conservation and Resource Enforcement, the Division of Forestry and Wildlife, Hawai’i Island Land Division, the Engineering Division, the Nā Ala Hele Program and the County of Hawai’i Planning Department.

The comments from your office are summarized below, along with our responses to each:

1. *Construction method.*

The house will be slab on grade.

2. *Culvert in gully.*

Concerning the comments made during early consultation by the Commission on Water Resources Management, the water source for drinking water will be catchment, as stated in the Draft EA. To elaborate on the description provided in Section 3.1.1 of the Draft EA, the drainage over which the expected 2-foot diameter, 24-foot long culvert will be installed is not a stream. Instead, it is a very minor gully of the type that is universal on the rolling topography of former cane land and would not meet any definitions of a stream. Water only flows temporarily after heavy rains through a minor depression covered with California grass that lacks a stream bed or streambanks. This information has been added to the Final EA. Therefore, a SCAP would not appear to be required. No stream diversion works are planned.

3. *Greenwall description.*

A greenwall is a vertical trellis affixed to the side of a building and planted with ornamental vines, e.g. *Begonia rex* (not considered invasive in Hawai’i). The plants help protect the wall from the weather and cool the building by reducing the solar radiation reaching a building’s surface. They

also provide a pleasing appearance. The greenwall is not involved in structural support. This information has been added to the Final EA.

Thank you for circulating the EA and CDUA for review by DLNR and other agencies.

COUNTY OF HAWAI'I

COUNTY OF HAWAI'I PLANNING DEPARTMENT

Comments: No Comments.

COMMENTS FROM THE PUBLIC

MR. KEN CHURCH, Hakalau

Comments: Mr. Church's comments have been attached as **Exhibit 5**. In summary, Mr. Church supports the applicants' use of the property for agricultural uses. Mr. Church's comments center around the applicants' potential interest in pursuing their proposed agricultural use as a nonconforming use on the property due to its previous history of sugar cultivation instead of filing a Conservation District Use Application (CDUA), and whether the applicants had found the CDUA process as a burdensome barrier to the potential development and utilization of their property for their desired purposes or in the advancement of the agricultural goals of the State.

Applicant's response: Thank you for the comment letter dated January 24, 2020. We appreciate your support for granting of the CDUP. After consulting with Mr. Perry, I would like to answer to your specific comments:

1. *Agriculture as a non-conforming use on the property.* Although a case can be made that the proposed agricultural activities is simply a continuation of a non-conforming use that ended in the 1970s, the sugar cane plantings long ago reverted to partially native forest/shrubland. As such, the applicants believed a CDUA was the most appropriate mechanism for achieving their plans.
2. *The application reduces the agricultural capacity of the State of Hawaii by restricting operations.* Although it does not seem credible that decisions made on this small property could affect the agricultural production of the State of Hawai'i, Mr. Perry's goals are to conduct the type of agricultural operations he and his partner desire to have for their own sustenance, not to advance agricultural policy or production in the State. As such, the application is appropriate.

ANALYSIS

Following review and acceptance for processing, the Applicant was notified, by correspondence dated December 28, 2019 that:

1. The proposed uses are identified land uses in the General subzone of the Conservation District, pursuant to the Hawai'i Administrative Rules (HAR), §13-5-23 L-1 **AGRICULTURE** (D-1) Agriculture, within an area of more than one acre, defined as the planting, cultivating, and harvesting of horticultural crops, floricultural crops, or forest products, or animal husbandry. A management plan approved simultaneously with the permit, is also required. The introduction of invasive plant species is prohibited; and HAR, §13-5-24, R-7, **SINGLE FAMILY RESIDENCE** (D-1) A single family residence that conforms to design standards as outlined in Chapter 13-5, HAR. Please be advised, however, that this finding does not constitute approval of the proposal;
2. Pursuant to HAR §13-5-40 HEARINGS, a Public Hearing will not be required;
3. In conformance with Chapter 343, Hawaii Revised Statutes (HRS), as amended, and Chapter 11-200.1, HAR, a finding of no significant impact to the environment (FONSI) is anticipated for the proposed project; and
4. The subject area is not located in the Special Management Area (SMA).

The Final EA/Finding of No Significant Impact (FONSI) was issued by the DLNR Chairperson and published in the March 23, 2020 edition of the Office of Environmental Quality Control's *The Environmental Notice*.

CONSERVATION CRITERIA

The following discussion evaluates the merits of the proposed land use by applying the criteria established in §13-5-30, HAR.

- 1) *The proposed use is consistent with the purpose of the Conservation District.*

The objective of the Conservation District is to conserve, protect, and preserve the important natural resources of the State through appropriate management and use to promote their long-term sustainability and the public health, safety, and welfare. The applicants have stated that they are committed to management of the site in a manner that will support this objective.

The development of the single-family residence and agricultural use are in conformance with the purpose of the Conservation District. The single-family residence and agriculture are identified land uses within the General Subzone of the Conservation District and each land use requires a Board Permit for such use. The applicants are proposing to maintain the natural vegetative buffer of approximately 25ft along the downslope boundaries of the property to help minimize any potential impacts to the nearby Waikaumalo and Kalahea Streams which border adjacent properties and are approximately 200 to 300 ft away from the subject property. Additionally, the Agricultural Management Plan has been drafted with the goal of protecting the natural resources of the site and surrounding area by implementing measures to help prevent erosion and sedimentation from the property.

No Archaeological and cultural resources have been identified on the property. The applicants have stated that they will not impede access to the forest reserve for pig hunting or cultural utilization of forest resources. The applicants understand, appreciate, and welcome the practices of local hunters and their efforts in reducing the feral pig population in the area as feral pigs cause damage to vegetation such as the applicants' proposed agricultural use as well as to native vegetation.

- 2) *The proposed land use is consistent with the objectives of the Subzone of the land on which the use will occur.*

The objective of the General Subzone is to designate open space where specific conservation uses may not be defined, but where urban use would be premature. A Single Family Residence is an identified land use pursuant to HAR, §13-5-24, R-7, SINGLE FAMILY RESIDENCE (D-1) A single family residence that conforms to design standard as outlined in Chapter 13-5. Agriculture is also an identified land use pursuant to HAR, §13-5-23 L-1 AGRICULTURE (D-1) Agriculture, within an area of more than one acre, defined as the planting, cultivating, and harvesting of horticultural crops, floricultural crops, or forest products, or animal husbandry. A management plan approved simultaneously with the permit, is also required. The introduction of invasive plant species is prohibited

The design and construction of the single-family residence conforms to the design standards set forth in §13-5, HAR. The applicants have developed an Agricultural Management Plan under the requirements of HAR, §13-5-23 L-1 AGRICULTURE (D-1) and Exhibit 3 Management Plan Requirements to guide the implementation of their planned agricultural uses in a manner that respects the area's natural resources. The applicants are committed to managing their property in a manner that is protective of the natural resources present. The proposed uses are similar to the land uses found on surrounding parcels. Staff believes the proposed land uses are consistent with the objectives of the subzone, provided identified mitigation and best management practices are adhered to.

- 3) *The proposed land use complies with the provisions and guidelines contained in Chapter 205A, HRS entitled "Coastal Zone Management", where applicable.*

The objectives, policies, and guidelines of the Coastal Zone Management (CZM) program contained in Chapter 205A, Hawai'i Revised Statutes (HRS), are focused on the preservation, protection, and where possible, the restoration of the natural resources of the coastal zone in Hawai'i. The proposed land use is outside the Special Management Area (SMA) that lies near the shoreline and is thus not subject to County SMA rules. Furthermore, the use complies with all CZM provisions and guidelines. The property is 1,178 feet above sea level and well removed from the coast and will not affect beaches, recreation, or access. Best Management Practices to avoid polluted runoff will protect streams and any indirect impact to coastal biota, water quality, or ecosystems. No impact to economic uses or management of the coastal zone would occur. Based on the lack of

impact to any aspect of coastal resources, the proposed action would be fully compliant with the provisions and guidelines contained in Chapter 205A pertaining to Coast Zone Management.

- 4) *The proposed land use will not cause substantial adverse impact to existing natural resources within the surrounding area, community or region.*

Because of the relatively minor nature of the project and the lack of threatened or endangered plant species or pristine native ecosystems, Staff believes that the proposed single-family residence is not likely to cause adverse biological impacts. The applicants have identified a number of mitigation measures that will be implemented during the construction and duration of the proposed land uses that should minimize or eliminate the interference, nuisance, harm, or hazard that the project may cause.

As previously stated, the applicants are supportive and welcome the efforts of local hunters to the Pihā area to help reduce the feral pig population which can have detrimental effects to native and agricultural vegetation such as those planned for the project. Through the careful site planning and design of the proposed facilities along with the applicant's commitment towards responsible management of the site, the implementation of the applicants' proposed uses will help to conserve, protect, and preserve the natural resources of the area.

- 5) *The proposed land use, including buildings, structures and facilities, shall be compatible with the locality and surrounding areas, appropriate to the physical conditions and capabilities of the specific parcel or parcels.*

The proposed uses are consistent with single-family residential and agricultural uses in the area. As part of the Pihā-Kahuku Homestead Subdivision, the parcel and surrounding properties were made available to family farmers for homesteading purposes in the early 1900s and there are a number of residences and farms presently found in the area.

The proposed project would consist of a relatively modest single-story residence that would utilize less than .25 of an acre for the home and its associated structures. The single-family residence would be built in a previously disturbed and relatively level area in the eastern corner of the property. The home has been designed to fit to the existing topography and in accordance with the criteria of the Single-Family Residential Standards HAR, §13-5 and Exhibit 4 and to be compatible with its environs and appropriate to the existing conditions of the property. The majority of the property, encompassing approximately 2.5 acres, would be put to agricultural use as orchard areas for tropical fruits and nuts with the areas cleared by hand and trees planted in individual holes to minimize area of ground disturbance and potential for soil erosion. The property was historically part of the plantation lands that were put into agricultural use due to their ideal characteristics of having deep soils, relatively level terrain, and an abundance of regular rainfall. The proposed action would allow for the residential and agricultural uses of the property in a manner that would be compatible with the character of the surrounding area and appropriate to the capabilities of the parcel.

- 6) *The existing physical and environmental aspects of the land, such as natural beauty and open space characteristics, will be preserved or improved upon, whichever is applicable.*

The site does not contain unique features either topographically or geologically. The proposed use of the subject property for a single-family residence, agriculture, and associated improvements will help conserve, protect, and preserve the natural features of the area. Construction of the single-family residence would also afford the owner the opportunity to utilize the property in the manner that it was originally intended with the creation of the Pihā Homestead Subdivision as a largely self-sufficient and sustainable farm generating produce for the family's sustenance and use. The landscaping planned with the proposed residence is intended to integrate the structure with the surrounding environment and will include a mix of native and Polynesian trees, shrubs, and plants that are appropriate to the area including native plants that were commonly found in the area but had been displaced by the prior large-scale sugar cultivation in the region. Staff believes the open space characteristics of the area will be preserved.

- 7) *Subdivision of land will not be utilized to increase the intensity of land uses in the Conservation District.*

No subdivision of land is proposed for this project.

- 8) *The proposed land use will not be materially detrimental to the public health, safety and welfare.*

Staff believes the proposed land use will not be materially detrimental to the public health, safety, and welfare as mitigated. With the incorporation of an appropriately designed and operated individual wastewater system, combined with other BMPs identified, the proposed residential land use will not result in materially detrimental impacts to public health, safety, and welfare.

CULTURAL IMPACT ANALYSIS:

The subject property does not contain any springs, land features, or caves that might be of cultural importance. The property has been previously disturbed due to its prior use for sugar cultivation. A Cultural Impact Assessment was completed for the parcel. No cultural resources or practices were identified on the vacant property. No consulted individuals with ties to and history with the area had any specific information concerning the property and no archaeological features were discovered on site. No traditional gathering of resources has been observed or is known to take place on the property.

As part of the oral consultations with residents of the area in development of the application, one couple noted their use of Stone Road as a means of accessing the forest lands that are located about 1.5 miles *mauka* of the property. The proposed improvements and use of the property would have

little or no impact on the public use of Stone Road, nor would it impede access to the forest reserve for pig hunting or cultural utilization of forest resources. The Applicants understand the practices of local hunters and welcome their efforts in reducing the feral pig population in the area which can negatively impact gardens and orchards as well as native plants.

Although no specific cultural resources or practices have been associated with the property, it is recognized that the streams in the area may be accessed for fishing and gathering of shellfish in the traditional and non-traditional context. The property is sufficiently removed from these streams being about 200-300 feet away and separated by a road and interceding properties so that the development and use of the property would have no impact on any current or future traditional use of the streams and their resources in the area. No party reviewing the Draft EA supplied any cultural information.

DISCUSSION

The proposed project entails a single-family residence, farm or agricultural use and associated structures, driveway improvements, a perimeter fence with a gate at the property entrance, and utilities consisting of a water catchment tank, rooftop solar photovoltaic panels for electricity and water heating, and an individual wastewater system meeting all regulatory requirements. Telecommunications will be handled with the use of cellular phones in combination with a satellite dish for internet connection.

The single-family residence is slab on grade 1,500 sq ft 1-story structure and will have 3-bedrooms, 2-bathrooms, with a kitchen, living and dining area, and library. The residence will be connected by a 1,553 sq ft lanai to a 327 sq ft farm utility room and 287 sq ft greenhouse structure. There will also be a 120 sq ft chicken coop to house about a dozen chickens, a 144 sq ft equipment and tool storage utility shed, and a 290 sq ft 15,000 gallon water tank which will flank the proposed greenhouse. The total area of development for the proposed single-family residence and associated structures is 4,221 sq ft.

The proposed residence is consistent with Chapter 13-5, Hawaii Administrative Rules, Exhibit 4, Single Family Residential Standards. Compatibility provisions such as the use of earth toned or compatible colors with the surrounding area will be utilized on the exterior of the residence.

An Agricultural Management Plan was prepared for the Conservation District Use Permit application and the applicants' proposed farm. The Agriculture Management Plan aims to minimize the environmental impacts of agricultural practices and the proposed farm to the extent feasible while keeping with the values of the Conservation District. To meet these goals, improvements to the property and farm operation and management will meet the following objectives:

- Siting improvements in areas previously disturbed for sugar cane cultivation, taking advantage of the existing topography so as to minimize the amount of grading required.
- Maintaining a buffer area along the steep slopes on the eastern end of the property that lead to an off-property gulch, to preserve that area in its natural state for water quality

protection.

- Implementing a program of Agricultural Best Management Practices aimed at optimizing home consumption crop production while minimizing potential environmental or health impacts from farm activities.
- Removal and ongoing monitoring and control of invasive species that cover most of the property.

These Best Management Practices include short-term practices meant to control erosion and sedimentation related to the small amount of ground disturbing activities associated with plantings for the farm and orchard. There will also be long-term practices for soil, nutrient, pest and crop management. The applicants have stated that they are experienced in growing fruit trees and vegetables and expect to be fully capable of establishing and managing the farm in conformance with the Agriculture Management Plan.

The areas grading or grubbing will be confined to those areas required for construction of the single-family residence, farm structures, and driveway. In the orchard, the areas to be planted will be cleared by hand and the trees would be planted in individual holes to minimize the amount of ground disturbance required. Additionally, as indicated on the Landscape Plan, buffer areas would be established along the downslope boundaries of the property that border Stone Road. These are also generally the steepest areas on the property and most prone to erosion. Their inclusion as buffer areas that will be left undisturbed along the downslope boundaries limits the potential areas of disturbance and provides an additional measure to minimize the potential for soil movement from the site. While most of the invasive species that currently dominate the property will be removed in the course of development and management of the property, use of the property as the owners' primary residence will allow the applicants to serve as stewards for the property.

Based on the information provided, staff believes that the project will have negligible adverse environmental or ecological effects provided that best management practices and mitigation measures as described in the application and environmental assessment, and as required by rule or laws, are fully implemented.

RECOMMENDATION

Based on the preceding analysis, staff recommends that the Board of Land and Natural Resources APPROVE Conservation District Use Application HA-3860 and its Agricultural Management Plan (**Exhibit 4**) for a Single Family Residence, Farm, and Associated Improvements located at 32-2471 Stone Road, Pīhā, North Hilo, Hawai'i, TMK (3) 3-2-004:040 subject to the following conditions:

1. The permittee shall comply with all applicable statutes, ordinances, rules, and regulations of the federal, state, and county governments, and applicable parts of this chapter;

2. The permittee, its successors and assigns, shall indemnify and hold the State of Hawai'i harmless from and against any loss, liability, claim, or demand for property damage, personal injury, and death arising out of any act or omission of the applicant, its successors, assigns, officers, employees, contractors, and agents under this permit or relating to or connected with the granting of this permit;
3. The permittee shall comply with all applicable Department of Health administrative rules;
4. The single family residence shall not be used for rental or any other commercial purposes unless approved by the board. Transient rentals are prohibited, with the exception of wilderness camps approved by the board;
5. The permittee shall provide documentation (e.g., book and page or document number) that the permit approval has been placed in recordable form as a part of the deed instrument, prior to submission for approval of subsequent construction plans;
6. Before proceeding with any work authorized by the department or the board, the permittee shall submit four copies of the construction plans and specifications to the chairperson or an authorized representative for approval for consistency with the conditions of the permit and the declarations set forth in the permit application. Three of the copies will be returned to the permittee. Plan approval by the chairperson does not constitute approval required from other agencies;
7. Unless otherwise authorized, any work or construction to be done on the land shall be initiated within one year of the approval of such use, in accordance with construction plans that have been signed by the chairperson, and shall be completed within three years of the approval of such use. The permittee shall notify the department in writing when construction activity is initiated and when it is completed;
8. All representations relative to mitigation set forth in the accepted application and environmental assessment or impact statement for the proposed use are incorporated as conditions of the permit;
9. The permittee shall plan to minimize the amount of dust generating materials and activities. Material transfer points and on-site vehicular traffic routes shall be centralized. Dusty equipment shall be located in areas of least impact. Dust control measures shall be provided during weekends, after hours and prior to daily start-up of project activities. Dust from debris being hauled away from the project site shall be controlled. Landscaping and dust control of cleared areas will be initiated promptly;
10. The permittee shall notify the Office of Conservation and Coastal Lands (OCCL) in writing prior to the initiation and upon completion of the project;
11. Should historic remains such as artifacts, burials or concentration of charcoal be encountered during construction activities, work shall cease immediately in the vicinity

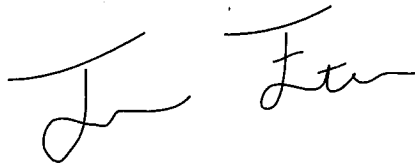
of the find, and the find shall be protected from further damage. The contractor shall immediately contact SHPD (692-8015), which will assess the significance of the find and recommend an appropriate mitigation measure, if necessary;

12. The permittee shall utilize Best Management Practices for the proposed project;
13. During construction, appropriate mitigation measures shall be implemented to minimize impacts to the aquatic environment, off-site roadways, utilities, and public facilities;
14. The single-family residence shall conform to the single-family residential standards included as Exhibit 4 of the Hawai'i Administrative Rules, Chapter 13-5;
15. The permittee understands and agrees that the permit does not convey any vested right(s) or exclusive privilege;
16. In issuing the permit, the department and board have relied on the information and data that the permittee has provided in connection with the permit application. If, subsequent to the issuance of the permit such information and data prove to be false, incomplete, or inaccurate, this permit may be modified, suspended, or revoked, in whole or in part, and the department may, in addition, institute appropriate legal proceedings;
17. When provided or required, potable water supply and sanitation facilities shall have the approval of the department of health and the county department of water supply;
18. Where any interference, nuisance, or harm may be caused, or hazard established by the use, the permittee shall be required to take measures to minimize or eliminate the interference, nuisance, harm, or hazard;
19. Obstruction of public roads, trails, and pathways shall be avoided or minimized. If obstruction is unavoidable, the permittee shall provide alternative roads, trails, or pathways acceptable to the department;
20. During construction, appropriate mitigation measures shall be implemented to minimize impacts to off-site roadways, utilities, and public facilities;
21. The permittee shall obtain a county building or grading permit or both for the use prior to final construction plan approval by the department;
22. Artificial light from exterior lighting fixtures, including but not limited to floodlights, uplights, or spotlights used for decorative or aesthetic purposes, shall be prohibited if the light directly illuminates or is directed to project across property boundaries toward the shoreline and ocean waters, except as may be permitted pursuant to section 205A-71, HRS. All exterior lighting shall be shielded to protect the night sky;
23. The permittee acknowledges that the approved work shall not hamper, impede, or otherwise limit the exercise of traditional, customary, or religious practices of native

Hawaiians in the immediate area, to the extent the practices are provided for by the Constitution of the State of Hawai'i, and by Hawai'i statutory and case law;

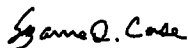
24. Any landscaping shall be appropriate to the site location and shall give preference to plant materials that are endemic or indigenous to Hawai'i. The introduction of invasive plant species is prohibited;
25. Trees taller than 15 feet shall not be removed or trimmed during the Hawai'i Hoary bat birthing and pup rearing season from June 1st to September 15th;
26. If land clearing occurs between March 1 and September 30, a pre-construction hawk nest search by a qualified ornithologist using standard methods will be conducted. If Hawaiian Hawks are present, no land clearing will be allowed until October, when hawk nestlings will have fledged;
27. If 'ōhi'a are found on the property during implementation of the proposed project, Rapid 'Ōhi'a Protocol shall be observed. There shall be no transport of 'ōhi'a to and from the property as well as no soil transport from the property;
28. Other terms and conditions as may be prescribed by the Chairperson; and
29. Failure to comply with any of these conditions shall render this Conservation District Use Permit void under Chapter 13-5, as determined by the chairperson or board.

Respectfully submitted,



Trevor Fitzpatrick, Staff Planner
Office of Conservation and Coastal Lands

Approved for submittal:



SUZANNE D. CASE., Chairperson
Board of Land and Natural Resources

Signature: *SAM LEMMO*

Email: sam.j.lemmo@hawaii.gov

TMK: (3) 3-2-004:040 Perry/Gonzalez Parcel

0 100 200 400 Feet

Perry and Gonzalez TMK: (3) 3-2-004:040

Conservation Subzones

CONDIST

	General
	Resource
	Limited
	Protective
	Special
	Undesignated

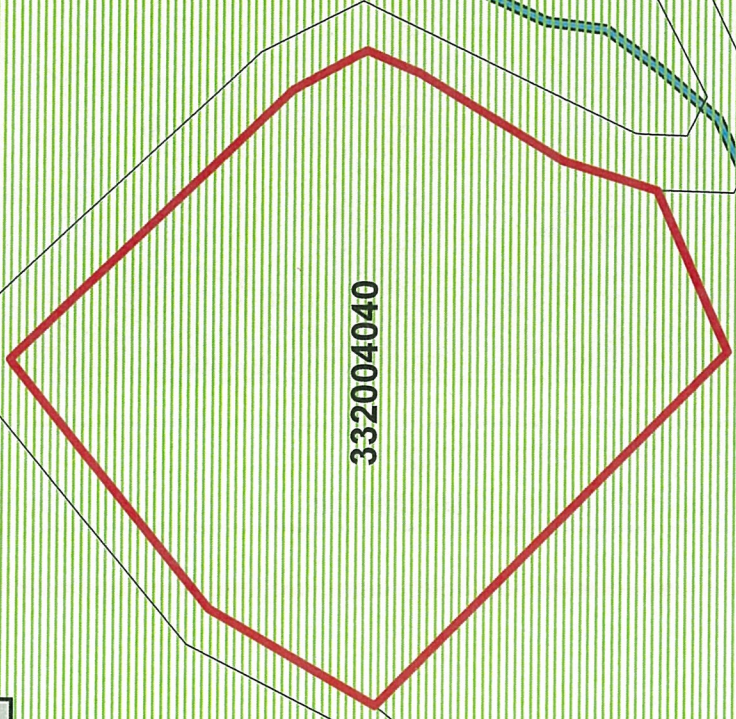
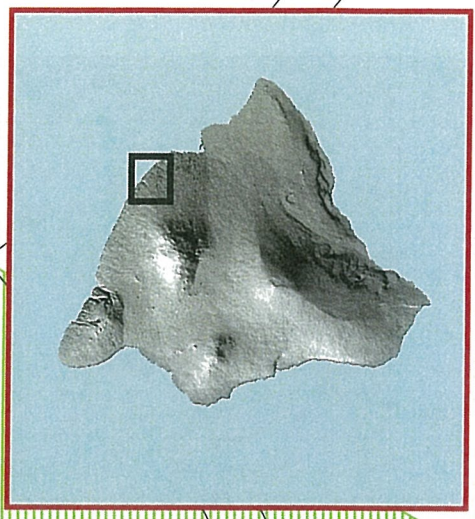
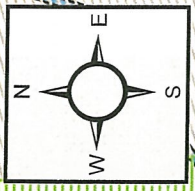


Exhibit 1
Page 1 of 8

PERRY SINGLE FAMILY RESIDENCE AND FARM - CONSERVATION USE PERMIT APPLICATION



Figure 3 Vicinity Map
Perry Single-Family Residence Conservation District Use Permit Application





Figure 5. Google Earth (2017) aerial image showing the current study area.



Figure 6. Stone Road along the northeastern boundary of the study area, view to the south.



Figure 7. Kalaeha Stream Gulch along the southeastern edge of the study area, view to the east.



Figure 8. Fence line along the southwestern boundary of the study area, view to the southwest.



Figure 9. Typical vegetation cover within the study area, view to the northwest.

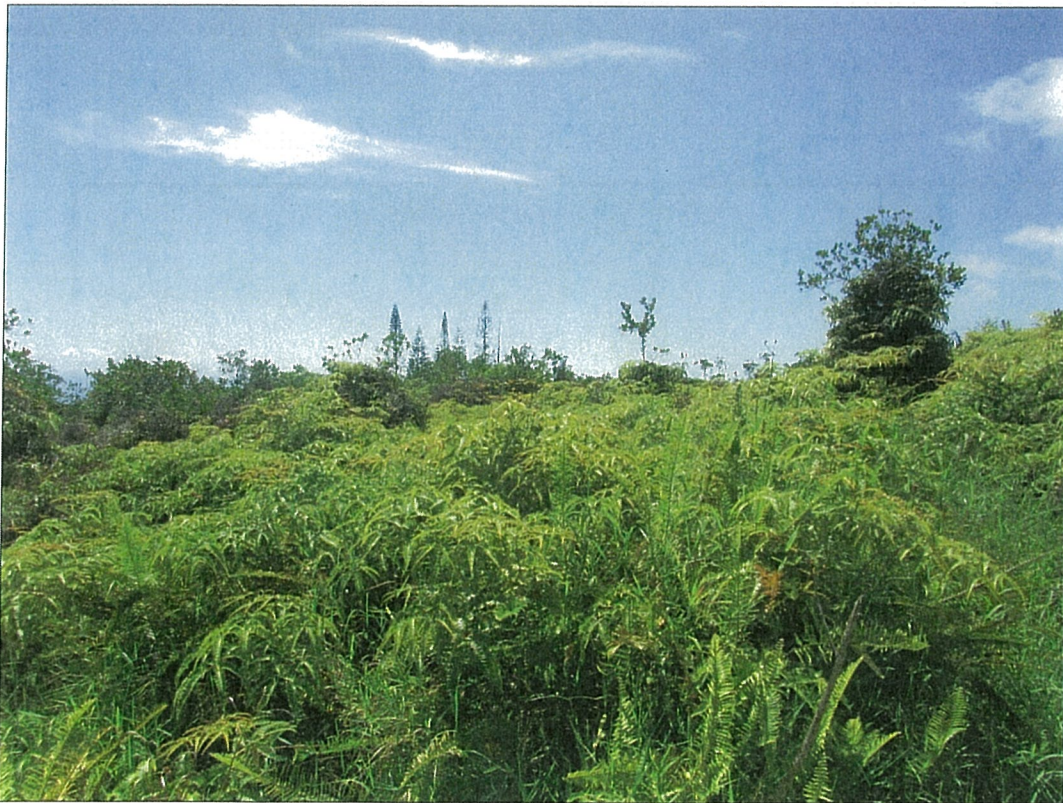


Figure 10. Thick *uluhe* growing within the western corner of the study area, view to the east.

Figure 8 Site Photos



Mauka view from near the northern property corner, showing the existing access drive off Stone Road (referred to locally a Cross Road) on the right and the property to the left.



View east across the property in the direction of the proposed house site which would be in the area of the tall Cook pines shown in the background.

PERRY SINGLE FAMILY RESIDENCE AND FARM - CONSERVATION USE PERMIT APPLICATION



View southeast from near the eastern property boundary showing the typical uluhe fern groundcover found over much of the property.



View east from the area of the proposed house site toward the direction of the existing Cook pines (to be removed), Stone Road (not visible) and the Kalaeha Stream gulch in the distance.

Figure 8 SITE PHOTOS
Perry Single Family Residence

Conservation District
Use Permit Application

Exhibit 1

Page 7 of 8



Figure 11. Hand cleared vegetation and pine trees in the eastern corner of study area, view to the northwest.



Exhibit 2 Location Map

Perry/Gonzalez SFR, Farm,
& Associated Improvements

Piha, North Hilo, Hawaii

Legend

- Hilo and Honokaa
- ▲ Hilo Forest Reserve
- ▲ Mauna Kea
- 📌 Perry/Gonzalez Parcel

Honokaa

Perry/Gonzalez Parcel

Google Earth

© 2020 Google

Hilo



description

lot area:

3.212 ac
140,204 sf

developed area:

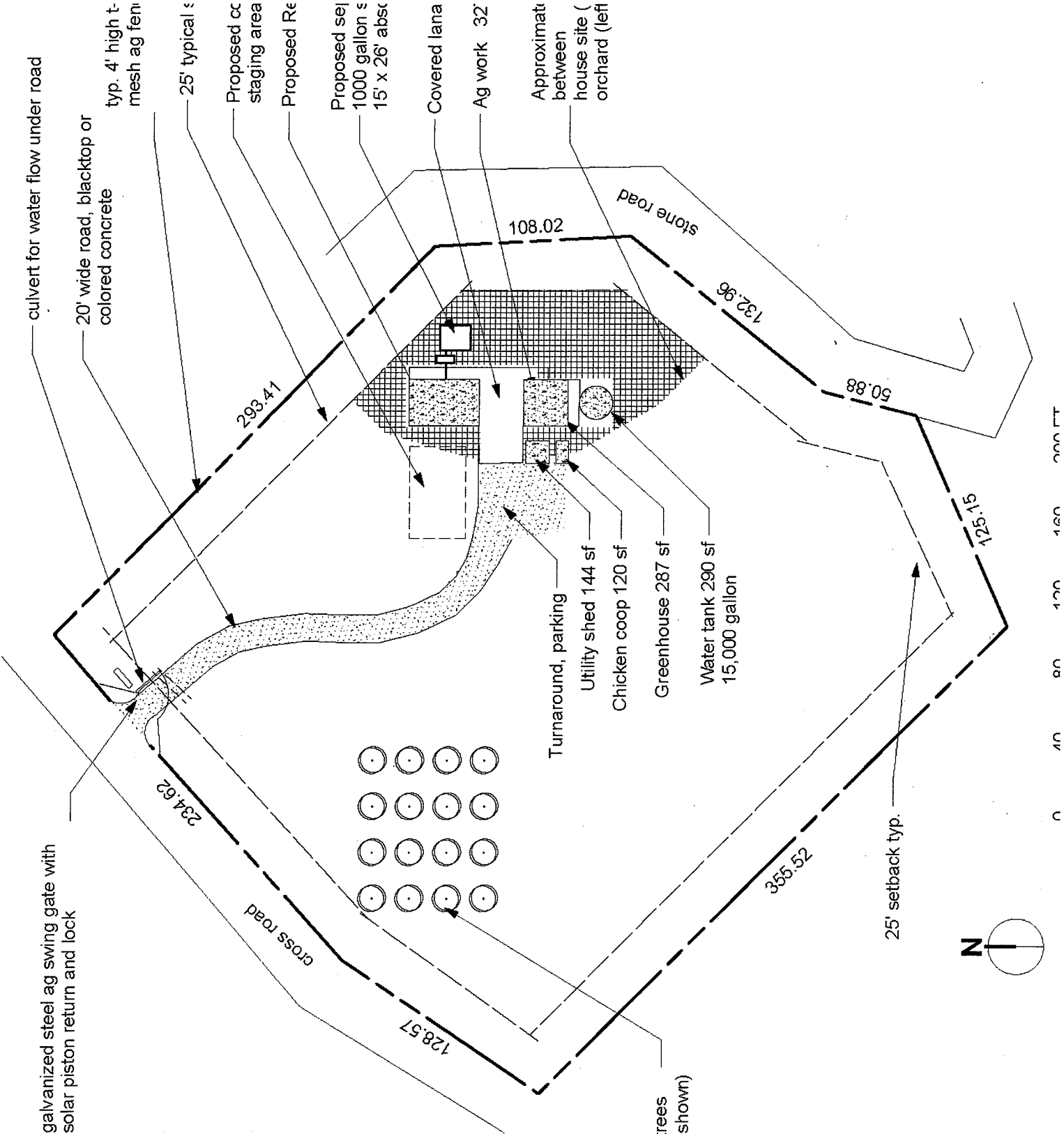
residence: 290 sf
1500 sf
1553 sf
3343 sf

agricultural areas:

144 sf
327 sf
287 sf
120 sf

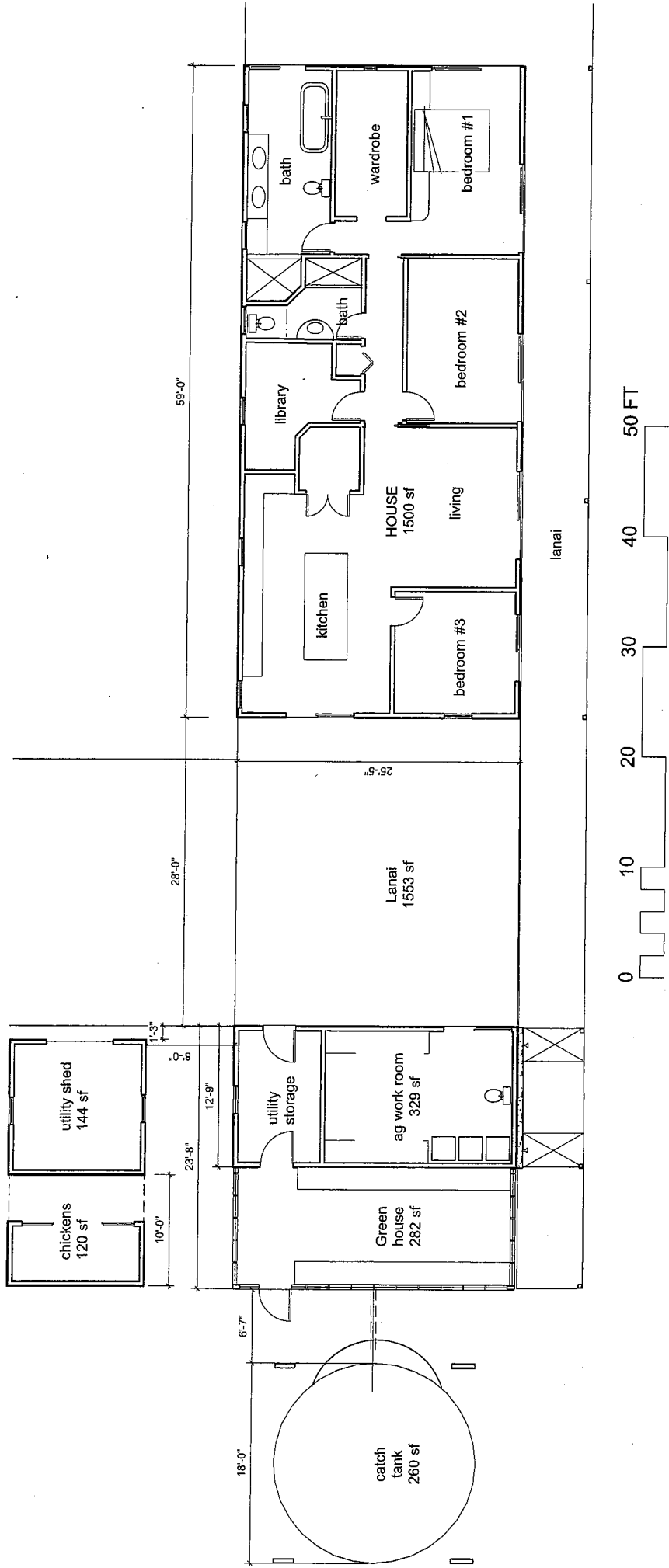
total developed area: 4221 sf

Orchard of fruit trees
(typical spacing shown)



ence

40

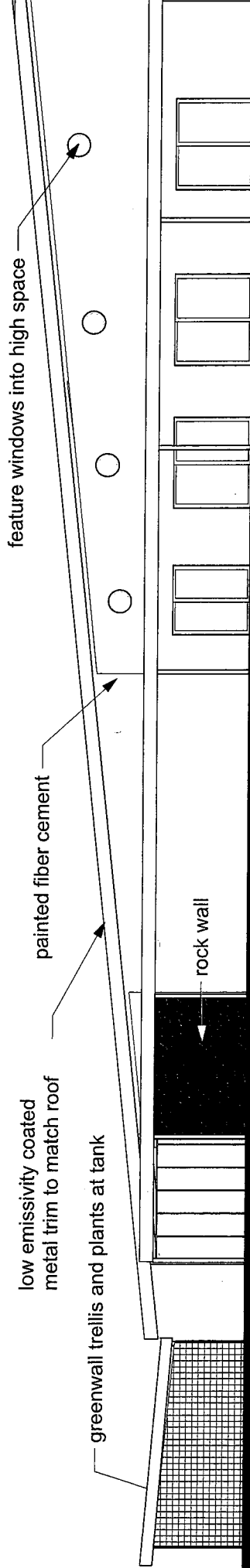


structures floor plan

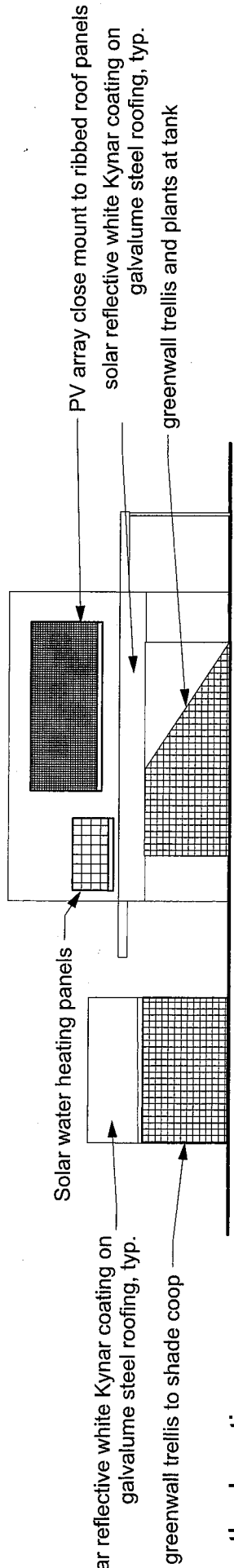
Residence

3-3-2-4: 40

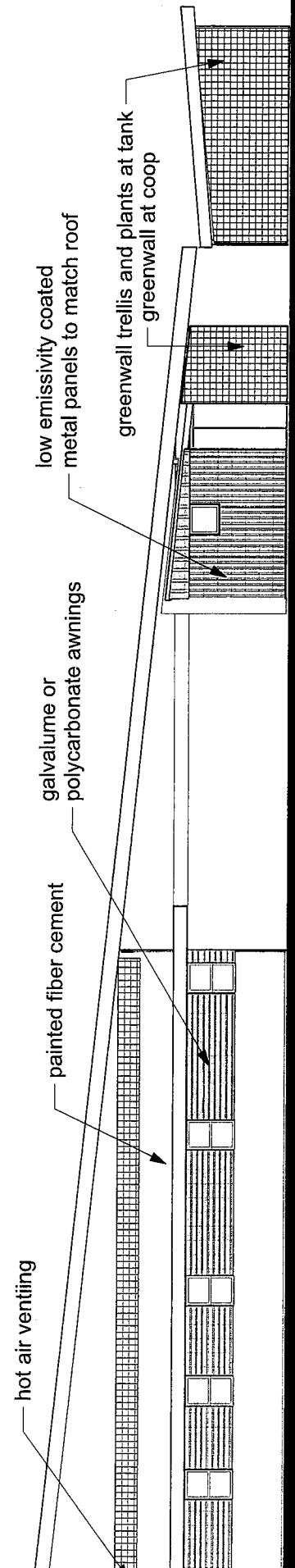
tone Road, Piha, Hawaii



... elevation



outh elevation



(west) elevation

Name _____ **Botanical Name** _____

- (*Rus sandwicensis*)
- (*Citrus* spp.)
- (*Persea Americana*)
- (*Sapotaceae* spp.)
- (*Litchi chinensis*)
- (*Durio zibethinus*)
- (*Artocarpus heterophyllus*)
- (*Annona muricata*)
- (*Cocos nucifera*)
- (*Mangifera indica*)
- (*Carica papaya*)
- (*Macadamia integrifolia*)
- (*Plinia cauliflora*)
- (*Musa acuminata*)
- (*Plumeria* spp.)
- (*Pandanus tectorius*)

(*Cibotium glaucum*)

- (*Hibiscus brackenridgei*)
- (*Gardenia jasminoides*)
- (*Jasmine sambac*)

(*Archis glabrata*)

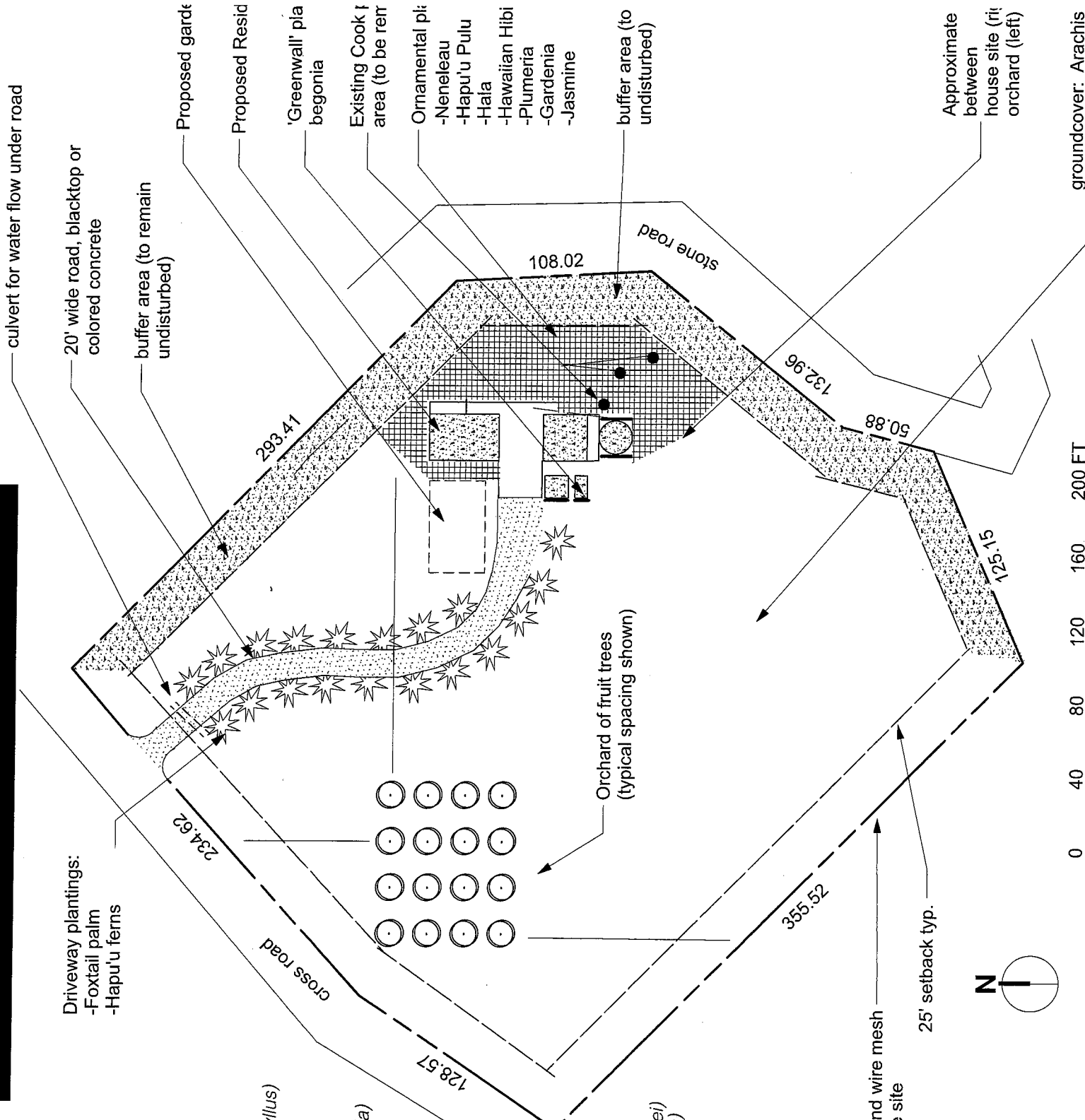
a'o hau hele)

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40

'iha, Hawaii



groundcover: Arachis

Approximate house site (ri orchard (left)

Orchard of fruit trees (typical spacing shown)

Proposed gardt

Proposed Resid

'Greenwall' pia begonia

Existing Cook t area (to be reir)

Ornamental pi: -Neneleau -Hapu'u Pulu -Hala -Hawaiian Hibi -Plumeria -Gardenia -Jasmine

buffer area (to undisturbed)

Approximate house site (ri orchard (left)

groundcover: Arachis

culvert for water flow under road

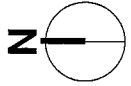
20' wide road, blacktop or colored concrete

buffer area (to remain undisturbed)

Driveway plantings: -Foxtail palm -Hapu'u ferns

4' high t-bar and wire mesh fencing, entire site

25' setback typ.



200 FT

160

120

80

40

0

293.41

234.62

128.57

108.02

355.52

132.96

50.88

123.15

cross road

stone road

APPENDIX A

AGRICULTURAL MANAGEMENT PLAN

**Perry Single Family Residence and Farm
Conservation District Use Permit Application**

AGRICULTURAL MANAGEMENT PLAN

Prepared For: Nicholas Perry and Rodrigo Gonzalez
Prepared by: J M Leonard Planning, LLC

December 2019

PERRY SINGLE FAMILY RESIDENCE AND FARM - CONSERVATION USE PERMIT
APPLICATION

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AGRICULTURAL MANAGEMENT PLAN

I. INTRODUCTION

A. Project Location, Setting and Site Characteristics

The approximately 3.212-acre coastal property is located in the State Conservation District, General Subzone, in Ninole, North Hilo District, Island of Hawaii. The property is located near the 1,178-foot elevation at the western end of Stone Road, within the upper portions of the Pihā Homestead Subdivision and is identified as TMK Parcel: (3) 3-2-04: 040. No streams or water features are found on the property; however, the prominent Waikaumalo Stream and its associated gulch extends along the northern boundary of the Pihā Homestead Subdivision and the top of the gulch is about 200 feet from the property at its closest point. The smaller Kalaeha Stream which extends within the subdivision and eventually joins with the Waikaumalo Stream, is separated from the subject property by Stone Road that borders property along its northeast and southeast boundaries. The property is bordered by various other properties with homes and small-scale farming on the north, south and *mauka* directions. *Makai* of the Perry property is a vacant property. (See **Site Location and TMK Maps in Figures 1 and 2**, for Reference).

The property is located in a historically farming area which had been used for commercial sugar cane cultivation up to later part of the prior century, originally as part of the Hakalau Plantation Company operations, which were eventually acquired by C. Brewer and Company. From the historical maps of the area, however, it appears that that the subject property and nearby parcels were no longer cultivated and has remained fallow from about 1973 when these properties were included into the State Conservation District designated lands. Presently, the vegetation consists of a secondary shrubland and forest dominated by strawberry guava, Asian melastome and the native *uluhe* fern that has grown in after over a century of sugar cultivation.

The project site receives an average of about 187 inches of rain annually, with a mean annual temperature of approximately 68 degrees Fahrenheit. Winds in the area are dominantly northeast trades, replaced periodically by winds with a southerly component. The southerly winds are often accompanied by volcanic haze, or vog, during years when Kilauea Volcano is erupting.

Perry Single Family Residence and Farm, Conservation District Use Application
AGRICULTURAL MANAGEMENT PLAN

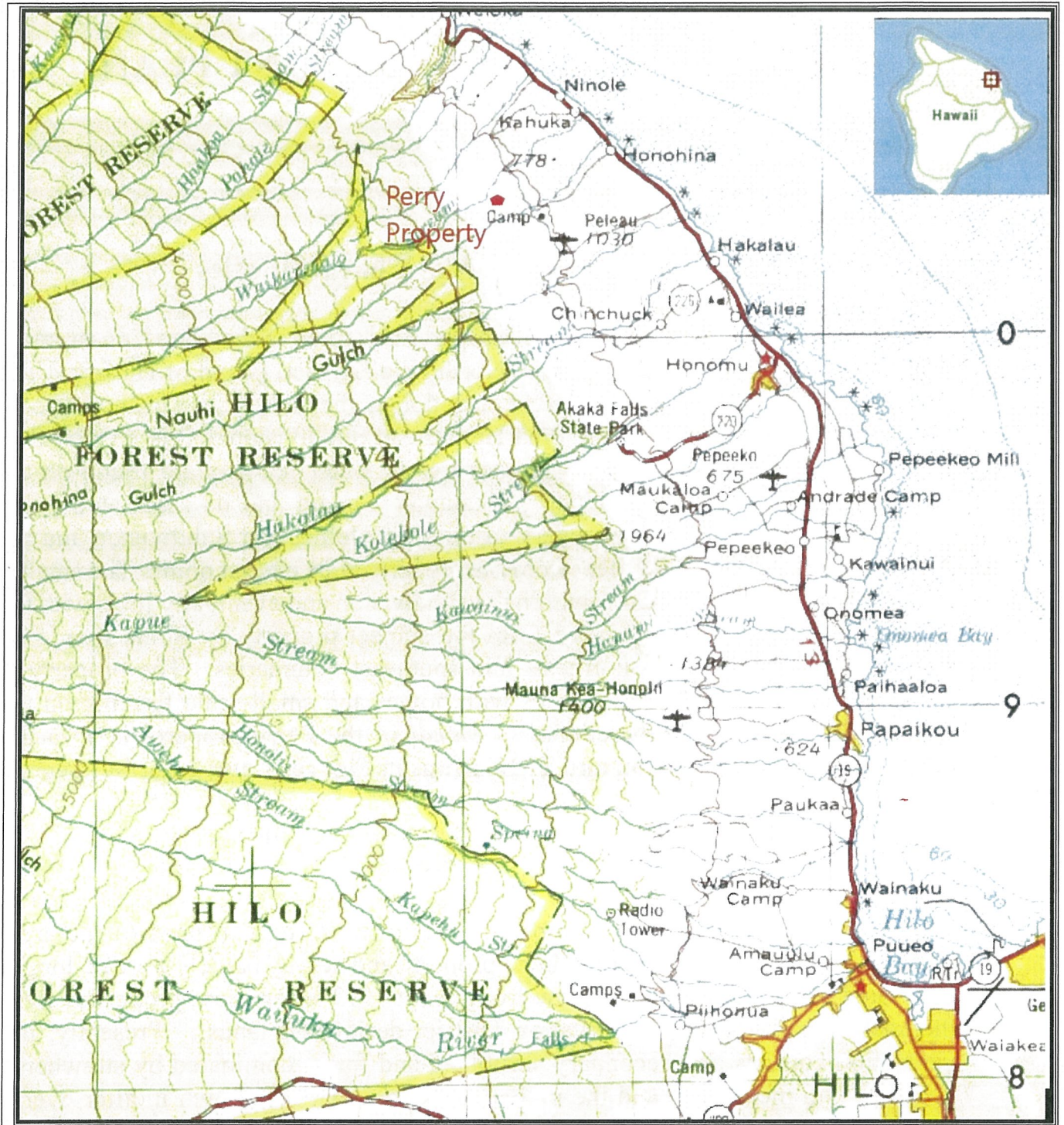


Figure 1
Island and Regional Location Map **Agricultural Management Plan**
Perry Single Family Residence and Farm

Perry Single Family Residence and Farm, Conservation District Use Application
 AGRICULTURAL MANAGEMENT PLAN

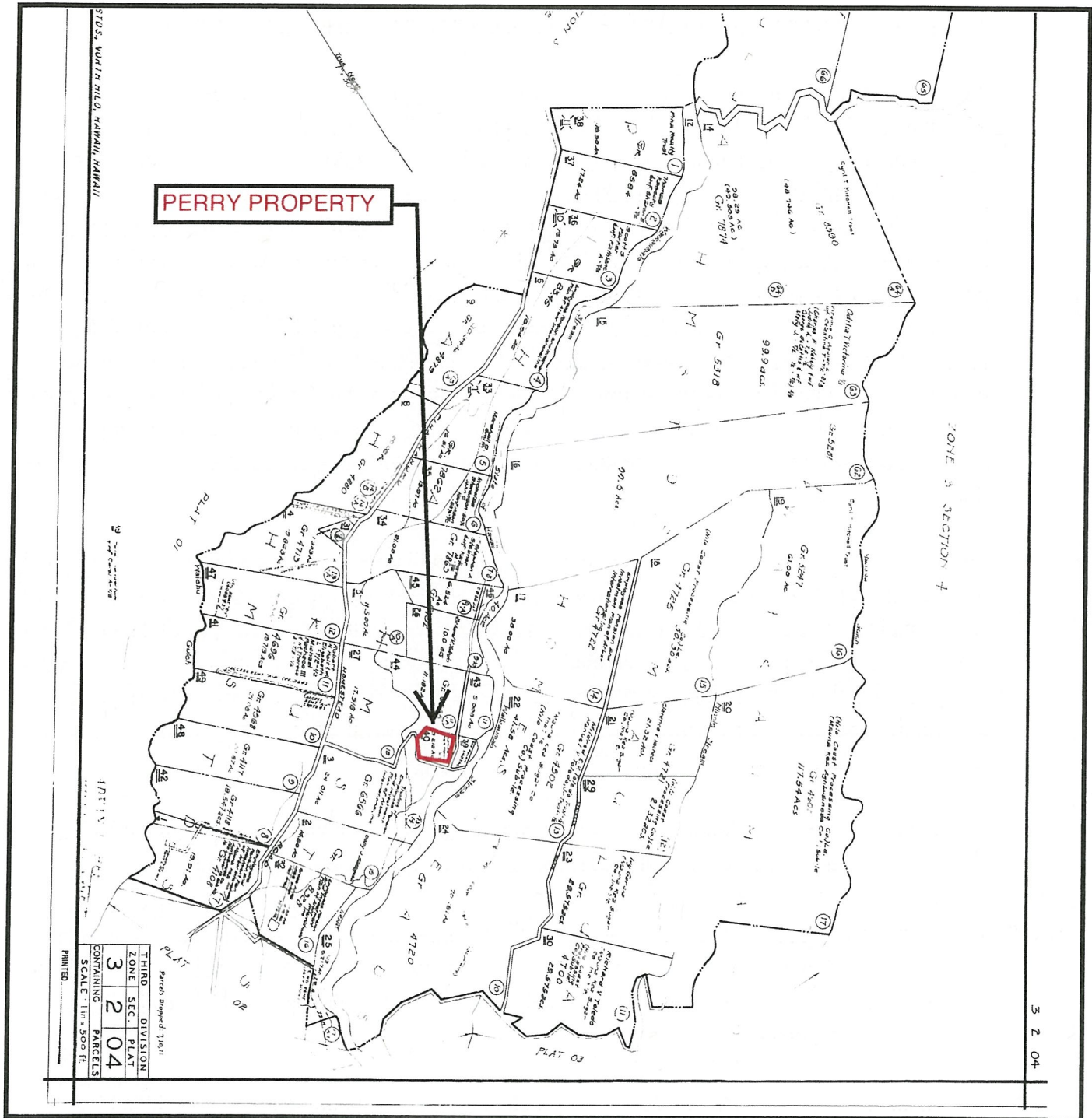


Figure 2
 TMK Map (Parcel 3) 1-5-010:031
 Perry Single Family Residence and Farm
 Agricultural Management Plan

B. Perry Farm Agricultural Management Plan: Overview

The property owners, Nicholas Perry and Rodrigo Gonzalez, plan to establish, in accordance with this Agricultural Management Plan (Plan), a sustainable farm on approximately 2.5 acres of the property. The Plan seeks to serve as a guide in the process of establishing a sustainable and fully organic farm on lands which were once productive farm lands and are now fully covered in a thick vegetation consisting of primarily strawberry guava, Brazilian glory tree, lantana, *uluhe* fern, and a mix of primarily alien grasses and vines and shrubs. While the property had been in sugar cultivation for over a hundred years, it has remained fallow for over 40 years after being designated as part of the State Conservation District lands due to its proximity to the Waikaumalo and Kahaeha Streams and their associated gulches. Thus, this Plan has been prepared with a clear recognition of the particular environmental sensitivity of the area, and the environment characteristics of the site itself.

Overall, the Plan has been prepared with the goals of protecting the natural resources of the site and minimizing the potential impacts to the site and surrounding area, while creating a sustainable, healthy and productive farm environment for providing food and resources to the Perry family. In meeting these goals, the planned improvements to the property, particularly in reference to the farm operation and management, have been planned in accordance with the following planning objectives:

- Siting the farm related structural improvements in previously disturbed and relatively level areas to minimize the amount of grading required;
- Maintaining protective vegetative buffer areas along the downslope boundaries of the property, especially in the area of nearby streams, with the aim of minimizing the potential movement of soil from the property and potential impacts to nearby streams;
- Implementing construction related Best Management Practices (BMP's) for erosion and sedimentation control in conjunction with all farm related construction;
- Implementing a program for the systematic removal and control of the invasive and weedy species that cover or encroach into portions of property, replanting with native species that are common and appropriate to the area, and the long-

term monitoring of affected areas aimed at evaluating the effectiveness of the control methods;

- Implementing a phased, thus manageable, program for clearing orchard areas for planting, followed by immediate replanting of a suitable ground cover aimed at minimizing the potential for soil erosion from cleared areas;
- Implementing a program of Agricultural Best Management Practices (BMPs), as described in Section IV this Plan, aimed at maximizing the soil development and food and resource production while minimizing the potentially negative environmental or health related impacts that could otherwise result from farm-related activities.

Agricultural BMPs presented in this Plan have been formulated through consultation of the University of Hawai‘i-Manoa, College of Tropical Agriculture and Human Resource’s *Best Management Practices to Manage Non-Point Pollution in Agriculture* (Abbas and Fares 2009). These include short-term practices meant to control erosion and sedimentation related to any ground disturbing activities. The Plan also includes recommended long-term practices for soil, nutrient, pest and crop management, including cultivation practices that seek to minimize tillage, add organic material to the soils and establish ground covers. These practices include planting trees in individual holes rather than grading or tilling the area and using the soil removed from holes to create a berm around individual plantings; maintaining an effective ground cover in disturbed portions of the orchard areas by means of replacing the existing scrub vegetation with an effective and erosion resistant groundcover; and adding mulch from onsite composting and green-waste plantings as a means of nutrient enhancement, soil retention and soil building. The BMPs for nutrient management included in the Plan are aimed at monitoring and regulating the application of nutrients to the soil according to the specific crop nutrient requirements. These practices include selecting and using the appropriate organic manure amendments, which can help build and stabilize soils while reducing the need for chemical nutrients. As part of the recommended BMPs for pest management, pests can be managed through integrated pest management strategy that stresses use pest-resistant crops, biological control, removal and eradication of affected plants, and, only where necessary, safe and effective storage, handling and application of organic pesticides. Finally, the Plan includes recommendations on regular and ongoing monitoring of the farm soil, water and plant conditions for early identification of potential environmental or biological threat, and for maintenance of optimum growing conditions for the selected crops.

II. DESCRIPTION OF PROPOSED AGRICULTURAL ACTIVITIES AND SUPPORTING FACILITIES

Among the supporting facilities for the farm would be a water storage tank that would be used for domestic and agricultural purposes and located adjacent to the house. The roof of the house is designed as an integrated roof catchment system that would direct all runoff to a 15,000 gallon storage tank located at the lower end of the shed-type roof. Within the house structure and separated from the living area of the home by a large lanai/carport area, would be a small greenhouse for planting starts and specialty plants and an agricultural workroom for the processing and storage of the farm produce. Additional farm related structures, as shown in the **Site Plan in Figure 3**, include a 144-sf farm utility shed and 120-sf chicken coop, which would be located adjacent to the driveway parking area and the area of the agricultural workroom and greenhouse. The farm/utility shed will be used to house the farm tools, equipment, animal feed, chemicals, fertilizers and soil supplements and the chicken-coop would be sized to house approximately a dozen hens. In addition, the property will be completely fenced with the use of an agricultural-type, wire-mesh fencing as a means of controlling intrusion from feral pigs that are particularly evident in the area. For reference, the **Floor Plan and Landscape Plan for the Residence/Farm Structures** are shown in **Figures 4 and 5**.

description

lot area:

3.212 ac
140,204 sf

sed developed area:

residence:

290 sf
1500 sf
1553 sf
3343 sf

agricultural areas:

144 sf
327 sf
287 sf
120 sf

oped area: 4221 sf

galvanized steel ag swing gate with solar piston return and lock

culvert for water flow under road

20' wide road, blacktop or colored concrete

typ. 4' high t-bar and mesh ag fencing, entire

25' typical setback

Proposed constructor staging area 30' x 50'

Proposed Residence 1

Proposed septic system 1000 gallon septic tank 15' x 26' absorption bed

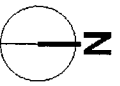
Covered lanai 1438 sf

Ag work 327 sf

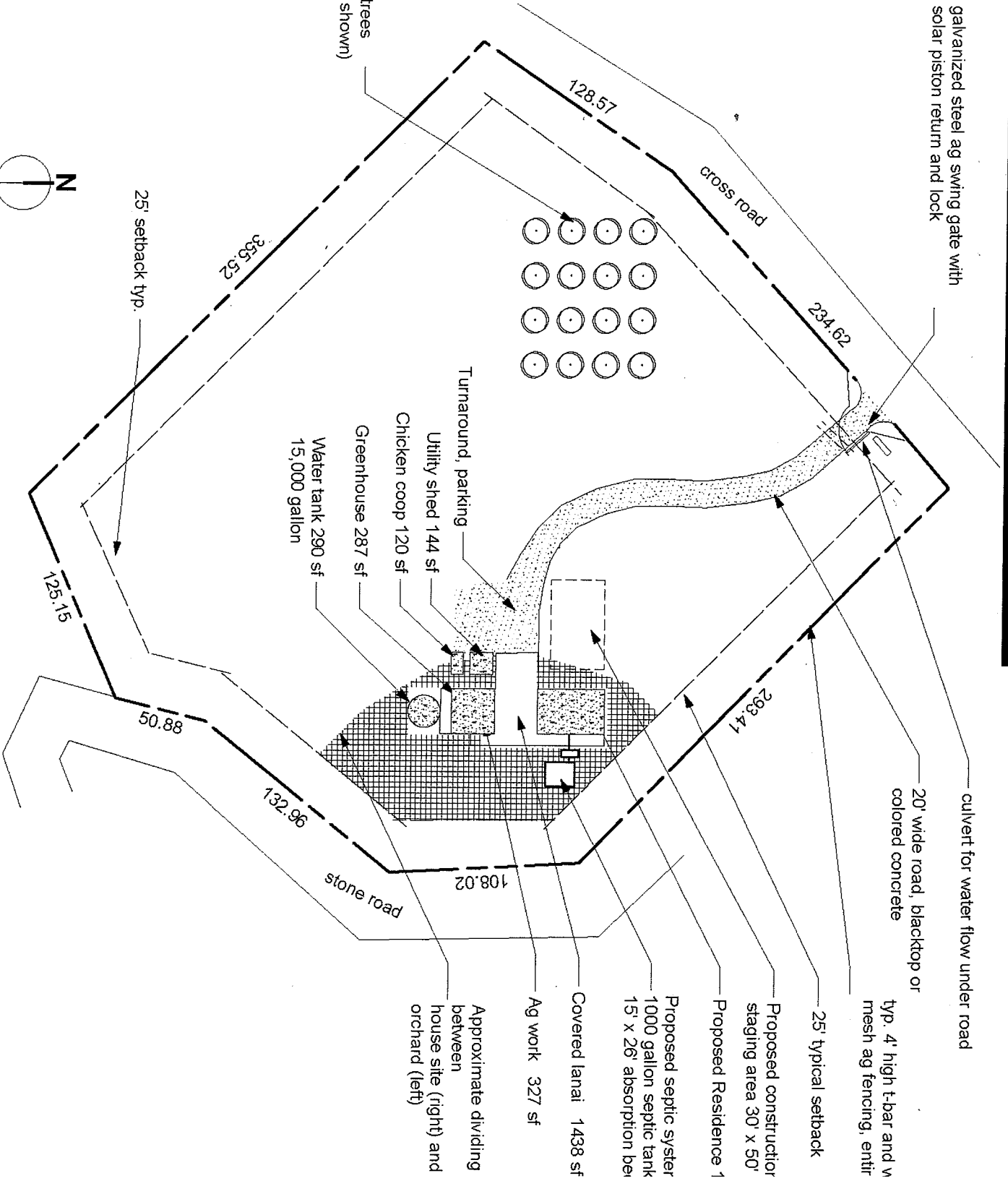
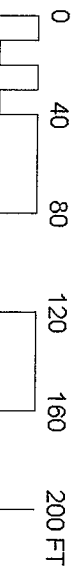
Approximate dividing between house site (right) and orchard (left)

Orchard of fruit trees (typical spacing shown)

25' setback typ.



site plan



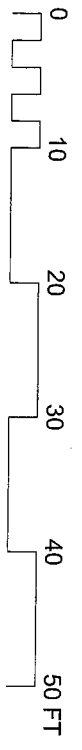
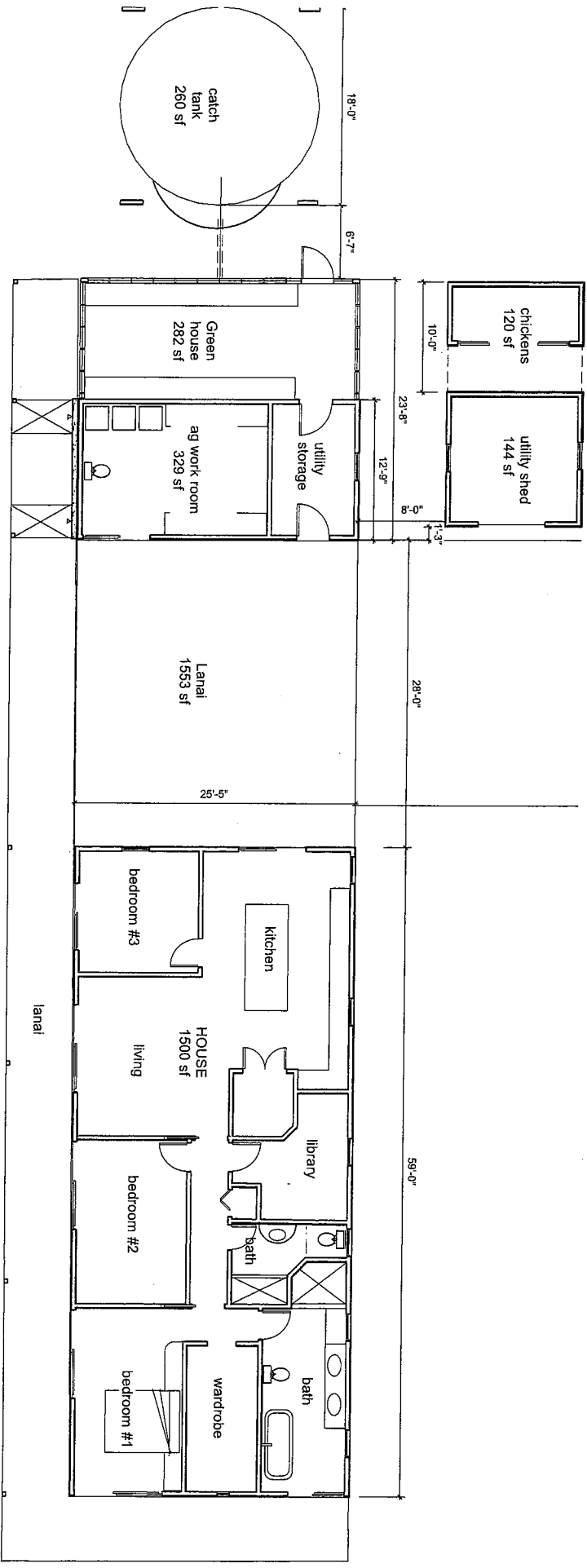
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4: 40

1, Piha, Hawaii

tolasperryviolin@gmail.com

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structures floor plan

residence

1-2-4: 40

3 Road, Piha, Hawaii

ail:nicholasperryviolin@gmail.com

Client Name _____ **Botanical Name** _____

(Neneleau)

- (Rus sandwicheensis)
- (Citrus spp.)
- (Persea Americana)
- (Sapotaceae spp.)
- (Litchi chinensis)
- (Durio zibethinus)
- (Artocarpus heterophyllus)
- (Annona muricata)
- (Cocos nucifera)
- (Mangifera indica)
- (Carica papaya)
- (Macadamia integrifolia)
- (Plinia cauliflora)
- (Musa acuminata)
- (Plumeria spp.)
- (Pandanus tectorius)

s (Ma'o hau hele)
 (Hibiscus brackenridgei)
 (Gardenia jasminoides)
 (Jasmine sambac)

(Archis glabrata)

Driveway plantings:
 -Foxtail palm
 -Hapu'u ferns

culvert for water flow under road
 20' wide road, blacktop or colored concrete
 buffer area (to remain undisturbed)

Proposed Resid

Proposed garde

'Greenwall' plan
 begonia

Existing Cook p
 area (to be rem

Ornamental ple
 -Neneleau
 -Hapu'u Pulu
 -Hala
 -Hawaiian Hibis
 -Plumeria
 -Gardenia
 -Jasmine

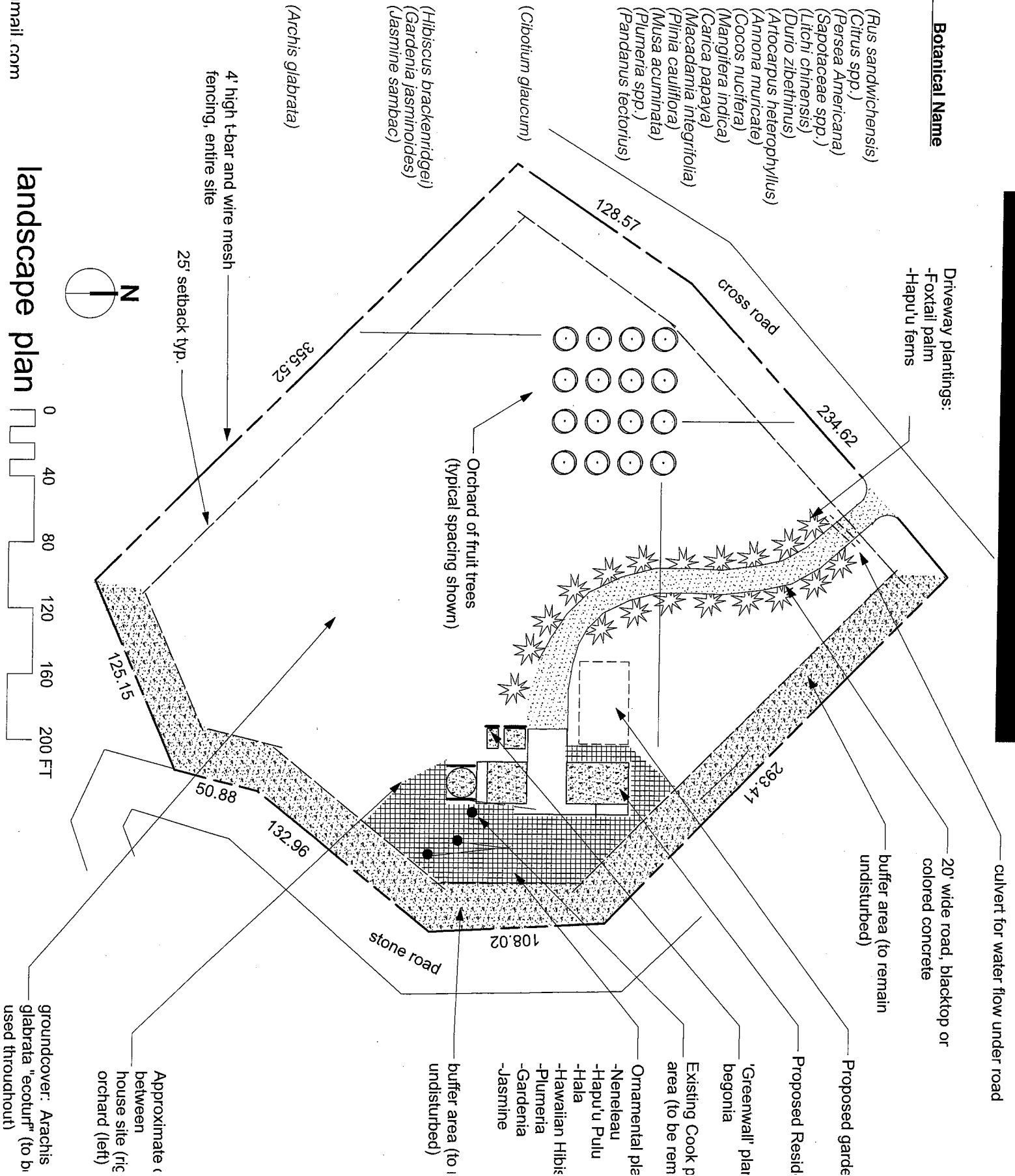
buffer area (to i
 undisturbed)

Approximate c
 between
 house site (fig
 orchard (left)

groundcover: Archis
 glabrata "ecoturf" (to b
 used throughout)

idience
 -4: 40
 rd, Piha, Hawaii
 zholasperrviolin@gmail.com

landscape plan
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III. ASSESSMENT OF AFFECTED NATURAL ENVIRONMENT AND RESOURCES

A. Existing Site Conditions

1. Existing Character and Land Use on the Property

The topography over much of the property is relatively level with the exception of the area of the steep embankments along the northern and eastern boundaries with Stone Road. As mentioned above, the existing vegetation on the property was disturbed many decades ago from sugar cultivation that occurred in the area and included nearly the entire parcel. The commercial sugar cultivation in the area, which extended over 100 years, ended in the early 1970's and the property has remained fallow since. The vegetation now consists of a mix of native and non-native trees and shrubs that are dominated by the invasive strawberry guava (*Psidium cattleianum*), Asian melastome (*Melastoma candidum*), and Koster's curse (*Clidemia hirta*), as well as the particularly common native uluhe fern (*Dicranopteris linearis*), which is found throughout the property, surrounding area and region. The general character of the site is seen in the **Site Photos found in Figure 6**. Currently the property is vacant and unused with the exception of the occasional pruning and weeding that is evident along the gravel access road, referred to as Cross Road, which extends from Stone Road at the property's northern corner.

2. Geology and Soils

The project site is on the southeastern flank of Mauna Kea. The lava flows that underlie it are dated from prior to 14,000 years before the present (BP), although areas several miles upslope have surface flows dated from as recently as 4,000 to 10,000 years BP (Wolfe and Morris 1996). All lava flows in this area are mantled with a thick layer of volcanic ash derived from Kohala and Mauna Kea volcanoes (USGS-HVO: 2009). The soils in the area are classified as Kaiwiki highly organic hydrous silty clay loam, 6 to 20 percent slopes, over most of the property, and Kaiwiki highly organic hydrous silty clay loam, 35 to 100 percent slopes on the eastern fringe, along the eastern boundaries with

FIGURE 6. SITE PHOTOS



Mauka view from near the northern property corner, showing the existing gravel access drive off Stone Road (referred to locally a Cross Road) on the right and the property to the left.



View east across the property in the direction of the proposed house site which would be in the area of the tall Cook pines shown in the background.

FIGURE 6. SITE PHOTOS



View southeast from near the eastern property boundary showing the typical uluhe fern groundcover found over much of the property.



View east from the area of the proposed house site toward the direction of the existing Cook pines (to be removed), Stone Road (not visible) and the Kalaeha Stream gulch in the distance.

Stone Road. The deep, ash-derived soils that developed in this geology and climate nurtured highly productive farming from early Hawaiian times through the century of sugarcane until today. Kaiwiki hydrous silty clay loams are fairly well drained but can have medium to high runoff (U.S. Soil Conservation Service 1973) and boggy conditions can quickly develop when these soils are compressed by cultivation, vehicles or other means.

3. Natural Water Features and Hydrology

As noted earlier, while there are no natural water features such as streams, springs, or ponds found on the property, Waikaumalo Stream and its tributary Kalaeha Stream are located on adjacent properties and extend to about 200 to 300 feet from the property at their closest points. The hydrology of the Island as a whole is such that freshwater in the saturated part of the aquifer forms a lens-shaped body underlain by the denser saltwater from the ocean, and between the freshwater lens and the underlying saltwater is a brackish-water mixing zone. Generally, the freshwater lens is thicker in regions where recharge rates are high or aquifer permeability is low, and thinner where recharge rates are low or permeability is high. This freshwater lens thins out dramatically towards the shoreline, although, on the windward portions of the Island it has generally been found to be sufficiently broad near the shore to be used as a source for potable water for more coastal properties with no access to the County water system. As noted, the property is located at about the 1,150 ft. elevation, making it potentially difficult and costly for well development, and is far removed from a potential connection to the County water system. As such, water for the property's domestic and agricultural use would be from a catchment system integrated with the home design.

4. Flora and Fauna

Flora

In an effort to describe the vegetative character of the site and determine if any rare or endangered species or critical habitats are present, a botanical survey was conducted of the entire property. The survey was conducted by Ron Terry, PhD as part of the preparation of the Draft

Environmental Assessment (Draft EA) and Conservation District Use Application (CDUA) for which this Plan has been prepared and is appended. As noted above, the entire property shows signs of being previously disturbed having been used for sugar cultivation during the prior century. Presently, the vegetation found across the property is a mixed native-non-native low-stature forest dominated by non-native strawberry guava (*Psidium cattleianum*), and Asian melastome (*Melastoma candidum*), and the native *uluhe* fern (*Dicranopteris linearis*). Within the understory, non-native grasses, ferns and weeds dominate, including sword fern (*Nephrolepis multiflora*) and the highly invasive Koster's curse (*Clidemia hirta*). While a few native species such as *hapu'u pulu* (*Cibotium glaucum*), *neneleau* (*Rhus sandwicensis*), *pakahakaha* (*Lepisorus thunbergianus*) and *wawae'iole* (*Lycopodiella cernua*) are only found on the property in a few scattered locations, several native sedges and the ferns, particularly *kikawaio* (*Christella cyatheoides*) and *pala'a* (*Sphenomeris chinensis*) are more widely distributed. All of the native plants found on the property are commonly found in the region, on the island, and for most, throughout the Hawaiian Islands. No rare, threatened or endangered plant species, nor critical habitats were found to be present. Although a few common natives are present, the property was found to be heavily dominated by non-natives. Importantly, no *'ohia* trees were found to be present on the property, although some were viewed nearby, within the gulches on neighboring properties.

Fauna

During several visits in 2019 as part of the flora and faunal survey of the property, Dr. Terry observed very few individual birds on the property and only four species: Japanese white-eyes (*Zosterops japonicus*), northern cardinals (*Cardinalis cardinalis*), spotted doves (*Streptopelia chinensis*), and striped doves (*Geopelia striata*). While Dr. Terry notes that long-term observations would probably reveal a wider range of bird fauna, the relatively low elevation leads to warm temperatures that promote mosquitos, which are inimical to most native birds. None were identified on the property, but it is highly likely that the property is occasionally utilized by the Hawai'i 'amakihi (*Hemignathus virens*), as some populations of this native honeycreeper appear to have adapted to the mosquito-borne diseases of the Hawaiian lowlands.

As with all of East Hawai'i, several endangered native terrestrial vertebrates may be present in the general area and may overfly, roost, nest, or utilize resources of the property. These include the endangered Hawaiian hawk (*Buteo solitarius*), the endangered Hawaiian hoary bat (*Lasiurus cinereus semotus*), the endangered Hawaiian petrel (*Pterodroma sandwichensis*), the endangered band-rumped storm petrel (*Oceanodroma castro*), and the threatened Newell's shearwater (*Puffinus auricularis newelli*).

Although there is no habitat for native waterbirds in the property, some may utilize nearby Waikaumalo Stream. Along the Hilo-Hāmākua Coast in general, waterbirds are found in streams, estuaries, natural and artificial ponds, and wetlands. The most common native waterbird is the indigenous black-crowned night heron, or 'auku'u (*Nycticorax nycticorax hoactli*). This bird is likely present at times in the general area of the property. It is also not unusual to spot the wide-ranging, friendly but endangered Hawaiian goose or nēnē (*Branta sandwicensis*) in various parts of the island. Far less likely to be seen in the property's streams are two endangered waterbirds that are occasionally present in the Hāmākua coast: the Hawaiian duck or *koloa maoli* (*Anas wyvilliana*), and the Hawaiian coot or 'alae ke'oke'o (*Fulica alai*). Of these, only the *koloa maoli* is noted in streams somewhat similar to Waikaumalo. No waterbirds were observed during any of the field visits to the property.

Aside from the Hawaiian hoary bat, all mammals in the project area are all introduced species, including feral cats (*Felis catus*), feral pigs (*Sus scrofa*), small Indian mongooses (*Herpestes a. auropunctatus*) and various species of rats (*Rattus* spp.). Several species of non-native reptiles and amphibians are also likely present. Coqui frogs (*Eleutherodactylus coqui*) were heard. None of these non-native vertebrates are of conservation concern and all are deleterious to native flora and fauna.

Native fish, crustaceans, molluscs, insects and spiders may be present in the project area's streams. Stream biota will be protected by the long distances between the property and stream channels (200 to 300 feet, on adjacent properties) and the series of measures outlined above to prevent erosion and sedimentation and any other impacts to water quality.

5. Archaeological, Cultural, and Historical Resources

As part of the supporting studies for the CDUA, an Archaeological Assessment (AA) of the property, which included a full field survey of the entire property, was conducted by the archaeological firm, ASM Affiliates. Although the north, west and southern portions of the property were found to be largely overgrown with *uluhe* fern and tall grass, the ground visibility was generally adequate to identify any historic properties that may have been present. As a result of the pedestrian survey, no archaeological resources were identified within the subject parcel. A copy of the **Archaeological Assessment Report** is included for reference within **Appendix A of the associated CDUA** for which this Plan has been prepared. It might be noted that, although there have been no archaeological studies of the surrounding properties, the State Historic Preservation Division (SHPD) has issued letters of “no effect” for at least seven parcels within the Pihā and Kahuku Homesteads, a few of which border the subject property. The reason generally given by SHPD, for the determination that development of these parcels would have “no effect” on significant historic sites, was that a review of aerial photographs revealed that intensive cultivation of the land had already fully altered the land. The only other archaeological survey undertaken within the Pihā Homesteads, which was conducted as part of an archaeological assessment for a property located *mauka* of the Perry property, also conducted by AM Affiliates (Clark 2018), also found no archaeological resources within the its study area. Given the findings of the 2018 Archaeological Assessment, the SHPD determination for other parcels within the subdivision, and the long history of extensive cultivation of the property, it was not unexpected that no features would be found on the subject property.

In order to determine if the proposed construction and use of the property could potentially impact any cultural resources or practices in the area, a Cultural Impact Assessment of the property and its history was prepared in August 2019 by ASM Affiliates. The Cultural Impact Assessment, which contains the archival and documentary research, as well as communications and interviews with those organizations and individuals having particular knowledge of the project area, its cultural resources, practices and beliefs, did not reveal any cultural resources or practices occurring on or near the site that may be affected by the construction of the proposed residence.

To elicit consultation as part of the Cultural Impact Assessment, a notice describing the action and location and inviting consultation was published in the Office of Hawaiian Affairs (OHA) newspaper *Ka Wai Ola* (March 2019). To date, there has been no response to this notice. In addition, consultation letters were mailed on July 24, 2019, to William Ailā, Interim Chair for the Department of Hawaiian Home Lands (DHHL); a representative of KAHEA Environmental Alliance, a nonprofit organization; and a representative of the Office of Hawaiian Affairs (OHA); to date, no responses have been received. Additional consultation efforts were made with individuals of the Honohina and Pīhā communities. One potential informant, Robert Nishimoto, said that while he grew up in the area, he moved away some time ago and did not know of any traditional cultural uses or practices of the property itself. He recommended that ASM staff contact three other local residents, who did not respond to ASM's outreach. Two local residents, Jed Cariaga and his partner Natalie Tavares, a couple originally from Ka'ū and Maui, were a contacted and agreed to discuss the proposed project.

Jed Cariaga and Natalie Tavares expressed their general concerns about landowners from elsewhere who move to the land and begin to block access or express concern about pig hunting in undeveloped Conservation lands near their properties. The couple hunt via an old trail that extends from the *mauka* end of Pīhā-Kahuku Road and branches off from the old fence line. They reported that there were disputes when access to the forest were blocked by landowners on the Honohina side of Pīhā. The couple said that another access road, Stone Road, allowed them to shift their hunting activities to the Waikaumalo side of Pīhā between the Kalaeha and Waikaumalo Stream gulches. Because Stone Road, in the area north of the Perry property, extends *mauka* and provides access to forested lands, the couple say they use it frequently to access potential hunting areas. When new landowners bought the parcels surrounding the Perry property, the couple said that they developed working relationships with the new residents to allow access for hunting through their properties. There is generally benefit for the owners, as Mr. Cariaga also gets requests for animal control (feral pigs) and is often hired to work on people's properties in North Hilo to hand clear vegetation.

The proposed construction of a single-family residence, orchard and garden on the subject property will not harm any cultural resources, nor will it impede access to the forest reserve for pig hunting or cultural utilization of

forest resources. The small size of the property, the lack of a true forest, and its location surrounded by roads, driveways and homes, gives it very minimal hunting value. The Applicant understands the practices of local hunters and appreciates and welcomes their efforts in reducing the feral pig population in the area, which can wreak havoc with gardens and orchards as well as native plants and is the reason that the owners plan to fence the entire property with an agricultural-type, wire-mesh fencing.

6. Aquatic Resources

Although there is no habitat for native waterbirds in the property, as noted above in reference to the faunal survey, some may utilize nearby Waikaumalo Stream. In the Hilo-Hāmākua Coast in general, waterbirds are found in streams, estuaries, natural and artificial ponds, and wetlands. The most common native waterbird is the indigenous black-crowned night heron, or 'auku'u (*Nycticorax nycticorax hoactli*). This bird is likely present at times in the general area of the property. It is also not unusual to spot the wide-ranging, friendly but endangered Hawaiian goose or nēnē (*Branta sandwicensis*) in various parts of the island. Far less likely to be seen in the property's streams are two endangered waterbirds that are occasionally present in the Hāmākua coast: the Hawaiian duck or koloa maoli (*Anas wyvilliana*), and the Hawaiian coot or 'alae ke'oke'o (*Fulica alai*). Of these, only the koloa maoli is noted in streams somewhat similar to Waikaumalo. No waterbirds were observed during any of the field visits to the property.

Additionally, native fish, crustaceans, molluscs, insects and spiders may be present in the project area's streams. Stream biota will be protected by the long distances between the property and stream channels (200 to 300 feet, on adjacent properties) and the series of measures outlined above to prevent erosion and sedimentation and any other impacts to water quality.

6. Recreational Resources

There are no parks or formal public recreational areas in the area of the property. The primary recreational resource in the area would be the State Forest Reserve which is located at the mauka end of Pīhā-Kahuku

Road, about 2 miles *mauka* of the subject property, and is occasionally used by residents as an area for hunting wild pig, for both subsistence and recreational purposes. Residents of the area have noted that they have been also using Stone Road to access the State owned forested areas between Waikaumalo and Kalahea Streams for hunting feral pigs, for both subsistence and recreational purposes. The planned agricultural and other uses of the property, however, would have no impact on Stone Road or the public's use of this road to access the State's forest lands and, consequently, would have no impact on the potential recreation resources of the area.

7. Scenic Resources

The primary scenic and open space resource in the project area is the generally open and scenic character of this rural-agricultural region comprised of clusters of farms and unused parcels bordered by the major streams that extend along and cross the large lot homestead subdivision.

In that the owners plan to return the land back into productive agricultural use as a subsistence farm together with a modest one-story home and small agriculture related structures, the proposed use would appear to be very much in keeping with the character of the region and surrounding area. In the process, the visual quality of the land would be changed from the existing mixed native-non-native low-stature forest, which is dominated by mostly non-native and invasive trees and shrubs and the common native *uluhe* fern, to that of a well-managed orchard environment, with most of the existing vegetation found along the steeper edges left undisturbed other than the gradual hand-removal of the invasive strawberry guava, Asian melastome, and Koster's curse, to be replaced with more of the native plantings commonly found on the property, such as the *neneleau* and *hapu'u pulu*. In this context, the proposed use would appear have little impact to the scenic resources of the area and would have the potentially positive impact of curtailing the spread of invasive species in the area and reintroducing native species that were once common to the area but had be displaced by the prior sugar cultivation on the land.

B. Assessment of Potential Environmental Threats

As part of a Draft Environmental Assessment (EA) prepared in support of the Conservation District Use Application for the proposed single-family residence and farm uses on the property, surveys were conducted of the flora, fauna, historical and cultural resources that may be found on the property and no rare, threatened or endangered species were found to be present. In the event that any unanticipated archaeological resources are unearthed within the project site during the proposed farm related activities, work in the immediate vicinity of those resources would be halted and SHPD would be contacted in compliance with Hawai'i Administrative Rules (HAR13§13-280). The major potentially environmentally sensitive resources in the area of the property are the nearby streams that extend to the east and north of the property, along with their associated native fauna. Additionally, as noted above, several endangered or threatened native terrestrial vertebrates may be present in the general area and may overfly, roost, nest, or utilize resources of the property. These include the Hawaiian hawk, the Hawaiian hoary bat, the Hawaiian petrel, the band-rumped storm petrel, and the Newell's shearwater

The precautions for preventing effects to water quality during construction and the farm operations listed in Sections IV-A and B will avoid impacts to stream organisms in Waikaumalo and Kalaeha Streams, which are located on adjacent properties. In order to avoid potential impacts to those endangered or threatened native terrestrial vertebrates listed above, the applicant will commit to certain conditions, which are expected to be proposed for the Conservation District Use Permit (CDUP) being sought by the applicant and which would be needed to implement the planned residential and farm related improvements. Specifically, these include:

- Construction will refrain from activities that disturb or remove shrubs or trees taller than 15 feet between June 1 and September 15, when Hawaiian hoary bats may be sensitive to disturbance.
- If land clearing occurs between the months of March and September, inclusive, a pre-construction hawk nest search by a qualified ornithologist using standard methods will be conducted. If Hawaiian hawk nests are present, no land clearing will be allowed until October, when hawk nestlings will have fledged.
- Any exterior lighting will be shielded from shining upward, in conformance with Hawai'i County Code § 14 – 50 et seq., to minimize the potential for disorientation of seabirds.

III. ASSESSMENT OF NATURAL HAZARDS

A. Flooding and Flood Related Hazards

In relation to potential for flooding or flood related risks, the floodplain status for many areas of the Island of Hawai‘i has been determined by the Federal Emergency Management Agency (FEMA), which produces the National Flood Insurance Program’s Flood Insurance Rate Maps (FIRM). The flood zones for this region were recently mapped, and digital maps and reports are available from the Department of Land and Natural Resources at <http://gis.hawaiiinfip.org/fhat/>. The property, as shown on the **Flood Hazard Assessment Report (FHAR) Map in Figure 7**, is within Flood Zone X, areas outside the mapped 500-year floodplain. Also, being at and above the 1,150-foot elevation, the property is at no risk of tsunami inundation, and it is outside both the tsunami evacuation and any dam evacuation zone. Additionally, proposed action does not appear to be affected in any way by stream flooding, which is restricted to the steep channels of the off-property Waikaumalo and Kalaeha Streams and does not overtop the high stream banks. The proposed home site, farm buildings and driveway are not near and are topographically separated from these two streams, and the driveway does not have to cross either.

Perry Single Family Residence and Farm, Conservation District Use Application
 AGRICULTURAL MANAGEMENT PLAN

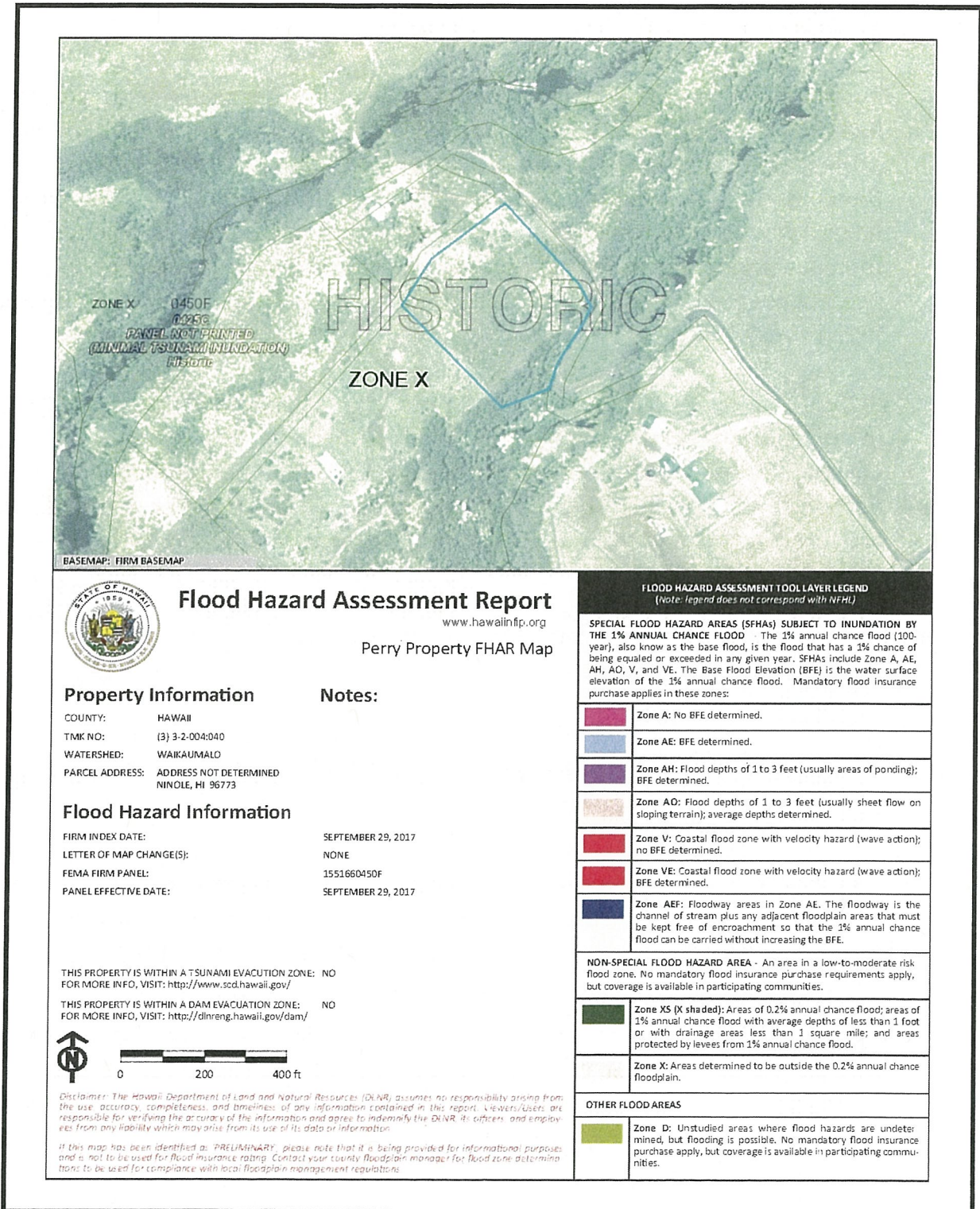


FIGURE 7 FHAR MAP
Perry Residence and Farm

Agricultural Management Plan

B. Geologic and Volcanic Hazards

In terms of exposure to geologic hazards, the entire Big Island is subject to geologic hazards, especially lava flows and earthquakes. The volcanic hazard for the project area, as assessed by the U.S. Geological Survey, is determined to be in Zone 8 on a scale of descending risk from 1 to 9 (Heliker 1990:23). The relatively low hazard risk for this area is because Mauna Kea is an inactive volcano. Zone 8 includes areas that have had no lava flows in the last 750 years, and only a few percent covered by lava in the past 10,000 years. Thus, the risk of volcanic hazard here is very low.

The entire Island of Hawai'i experiences high seismic activity and is at risk from major earthquake damage (USGS 2000), especially to structures that are poorly designed or built, as the 6.7-magnitude quake of October 2006 and the more recent 6.9 quake of May 2018 demonstrated. The portion of the property site proposed for improvement is on a slightly flattened topographic ridge that descends into shallow valleys on either side. There are appropriate setbacks to surrounding steeper slopes, and there does not appear to be a substantial risk at the site from subsidence, landslides or other forms of mass wasting.

IV. DESCRIPTION OF AGRICULTURAL BEST MANAGEMENT PRACTICES (BMP'S)

The following description of BMP recommendations for the farm implementation and operation is taken from the University of Hawaii-Manoa, College of Tropical Agriculture and Human Resource (CTAHR), "*Best Management Practices to Manage Non-Point Pollution in Agriculture*", F. Abbas and A. Fares, June 2009, and from University of Hawaii-Manoa, College of Tropical Agriculture and Human Resource (CTAHR), "*Integrated Pest Management for the Home Gardens: Insect Identification and Control*", R. Ebesu, July 2003.

A. Short-term BMPs (During Implementation)

During the implementation of the farm related improvements, comprising the, construction of the residence with the farm related facilities and the tree

plantings; the primary threats to the environment during these activities would be from the potential for generating particulate dust, erosion and sedimentation as a result of the planned grading activities, which would be concentrated in the areas of the house site and the access drive. As noted, no grading would be associated with the implementation of the orchard areas, as trees would be planted in individual holes with the soil bermed around the tree planting and then protected with mulch. Furthermore, there would be no disturbance to the native ground cover during the process of removing the concentration of invasive trees on the property which are found mostly in the steeper portions along the property boundary and within the proposed buffer area. Consequently, the BMPs to be implemented during this period would be similar to those followed for most construction related activities, which would include:

- Minimizing the total amount of land disturbance required which will be delineated to construction contractor prior to the commencement of any onsite work.
- Construction activities with the potential to produce potential stormwater run-off will not be allowed during periods of unusually heavy rains or storm conditions.
- Prior to the start of construction, contractors will implement erosion and dust control measures to prevent any sediment from leaving the construction areas, especially in the direction of the nearby streams.
- Graded areas will be replanted or otherwise stabilized, as soon as possible following grading activity.

As noted, the ground conditions on the property are such there should be deep ash-derived soils present and given the geologic conditions, there is a medium to high potential for soil erosion present once the soils are exposed. A key component of the Agricultural Management Plan for the property will be to build the soil environment, especially in areas planned for tree plantings and to retain those soils that are present by implementing practical erosion control methods as part of the orchard area clearing and tree planting process. This is the same challenge that the plantation farmers faced in the past and appears to be addressed by avoiding those areas of steeper slopes and retaining an undisturbed vegetative buffer area along these areas, measures which are included as part of the long-term BMPs listed in the following section.

B. Long-term BMP's (Following Implementation/Ongoing)

The BMPs listed below that would be implemented as part of the ongoing farm operations, are designed to minimize the potential environmental and health impacts by curtailing the potential movement of sediments, nutrients, pesticides, or other potential pollutants, while maximizing the efficient use of resources and optimizing crop production. These Long-term BMPs pertaining to soil, water, nutrient, and pest management also require ongoing data collection, record keeping and monitoring to insure their effective implementation.

Soil Management. Effective Soil Management BMPs are aimed at minimizing the potential for soil erosion, surface water run-off, soil compaction or soil loss. The emphasis is placed on cultivation practices that minimize tillage, add organic material to the soils and establishes ground covers. As proposed for the orchard areas of the Property, these objectives would be achieved by integrating the following BMP's for soil management, including:

- Limiting cleared areas to manageable sections, which would be cleared by hand;
- Avoiding cultivating areas of steep slopes
- Creating individual holes for the tree plantings rather than grading or tilling the area for cultivation;
- Creating a soil berm around the individual tree plantings;
- Re-establishing an effective and erosion resistive ground cover in the cleared areas;
- Adding mulch plantings from onsite composting of green-waste around individual plantings; and
- Maintaining vegetative barriers that would remain undisturbed, along the downslope boundaries of planted areas.

The existing ground conditions in the areas where new trees are to be planted, have deep ash-derived soils which have a moderate potential for ponding or soil erosion. The potential of soil erosion on the farm can be effectively eliminated through the integration of the above measures as part of the long-term cultivation practices for the farm. Those soils that are present or added to at the tree plantings can be retained in place by avoiding areas of steep slopes and implementation of the BMPs listed above.

Water Management. The BMPs for water management are generally focused on effective irrigation management, that are aimed at ensuring that the specific crop water requirements are met, while avoiding overwatering and the potential for soil, nutrient, or chemical movement. The BMPs for water management are also aimed at achieving an effective use of the available resources so as to minimize the potential impacts to the ground resources. As noted previously, because of the consistently heavy rainfall in the area, no irrigation system is deemed necessary nor planned for the orchard areas. A portable water system can be used during prolonged dry periods, especially during the early grow-in stage, if needed. In doing so, any watering that is needed, can be directed to the area of the root-ball, thus minimizing the potential for overwatering and soil or nutrient movement for the area of tree planting. Although the demand for water for irrigation purposes is expected to be relatively small, the water that would be used would be collected on-site through the roof catchment system, rather from an on or off-site well, and thus would have no impact on ground water resources.

Nutrient Management. BMPs for nutrient management seek to monitor and regulate the application of nutrients to the soil according to the specific crop nutrient requirements. Nutrient management also includes the selection and use of appropriate organic manure amendments, which can help build and stabilize soils while reducing the need for chemical nutrients. Additionally, effective nutrient management involves the following practices:

- Understand the principles for nutrient management
- Understand the existing soil characteristics, fertility reserves, and nutrient requirements.
- Calibrate the application equipment in order to be able to effectively monitor the rate of nutrient application.
- Implement BMPs for nutrient application (i.e, precautionary measures) to avoid the potential for nutrient leaching.
- Implement BMPs for soil and water conservation to minimize the potential for soil or nutrient movement.

Also, when using livestock manure as a nutrient source, the following should be considered:

- Local, state and federal laws and regulations must be followed during manure application.
- Precautionary measures should be taken to control against accidental leakage, spillage, or runoff from the manure storage site, especially if sited near a water body or source.
- Certain manures, such as chicken manure, can be volatile and contribute a noxious odor to the environment through ammonia emission and efforts should be taken to reduce emissions during manure storage and application.

Pest Management (Pesticide Storage, Handling and Application). The safe and effective handling of pesticides is as important to personal health and safety as it is to environmental protection. The BMPs related to the safe storage, handling and application of pesticides that should be integrated as part of the farm operations, include the following:

- Buy pesticides in small quantities.
- Store them in a secured area.
- Dispose of them in accordance with federal, state, and local regulations.
- Maintain application equipment in working condition and calibrate to ensure recommended rates are applied
- Make sure that the pesticide applicator knows the exact location in the field to be treated.
- Avoid unnecessary application of pesticides.
- Avoid overspray and drift, especial when in close proximity to surface waters.
- Avoid pesticide application when soil moisture status is high, to prevent possible runoff or deep percolation.
- Avoid irrigation right after a pesticide application.
- Establish buffer zones to maintain a safe-distance from wells and surface water (50-100 feet recommended) and do not apply pesticides in buffer zones.
- Avoid repetitive use of the same pesticide, which may lead to pesticide resistance in the pest.
- Read and follow safety directions and maintain appropriate Material Safety Data Sheets.
- Use appropriate protective equipment specified on the pesticide label to minimize unnecessary exposure.

- Formulate a safety plan to provide emergency hand and eye wash facilities for personnel who might be accidentally exposed to pesticides.
- Have a pesticide first-aid kit available when handling pesticides.

Integrated Pest Management (IMP). IMP is a holistic approach to pest management that can reduce the use of pesticides that may potentially impact the environment or the health and safety of those handling them. A successful IPM program involves the application of a mix of cultural, biological and chemical control methods, including pest monitoring, identification and control; the result of which can provide a program for effective pest management with fewer pesticide applications. Essential elements of an effective IPM program include the following:

- Selection of pest-resistant crops.
- Maintaining strict sanitary conditions.
- Including biological controls with mulching.
- Implementing effective insect identification and control.*
- Removal, and eradication of affected plants.
- Effective control and timing of pesticide applications.

*[For Reference on IPM Insect Identification and Control, See: IPM for Home Gardens: Insect Identification and Control, College of Tropical Agriculture and Human Resources (CTAHR), University of Hawaii-Manoa, Honolulu, Ebesu, R., July 2003.]

V. DESCRIPTION OF RESOURCE CONSERVATION MEASURES

Native Vegetation and Natural Habitats

While the existing vegetation on the property includes a mix of native and non-native trees and shrubs that are dominated by the invasive strawberry, Asian malastome, and Koster's curse, as well as the particularly common native *uluhe* fern, which is found throughout the property, and other native trees and plants such as *hapu'u pulu*, *neneleau*, *pakahakaha*, and *wawae'iole* that are occasionally found in scattered locations, a botanical survey of the property determined that there were

no threatened or endangered plant species present, nor were there any critical native habitats found. Also, while there are no water features on or crossing the property, the prominent Waikaumalo Stream and the smaller Kalaeha Stream extend near the property, about 200 to 300 feet away at the closest points, and serve as the primary natural resource in the area, providing a natural habitat for several aquatic species and are likely visited by native waterfowl.

While the relatively small scale of the farming and the distinct topographical and physical separation makes it unlikely that agricultural activities planned for property would have any impact on the nearby streams, several measures are proposed as a part of this Plan that would minimize any potential impact to these natural resources as a result of either ground water infiltration or soil movement. These include measure aimed at minimizing the use of chemical applications for weed control or fertilization, such as the use of on-site generated compost and organic fertilizers and implementing an IPM system for pest control; and measures aimed at the control the erosion of soil from the site, such as avoiding the need for large scale cultivation by planting trees in individual holes, creation of a soil berm and mulching in the area of tree plantings and the prompt establishment of effective and durable groundcovers in the any exposed areas.

Soil and Water Conservation

In that no grading or grubbing is planned in the course of clearing the orchard areas, all new tree plantings will be placed in individual holes and surrounded with a berm of soil, and those areas which are cleared for tree plantings will be replanted with the use of a highly erosion resistant ground cover, such as the perennial peanut, there should be little or no potential for erosion of soil from the site. Likewise, the garden plantings will occur in a defined garden area and contained within raised beds which would effectively retain all soils in place. many of the measures recommended in this Plan, such as the use of composted mulch and organic fertilizers, in addition to helping retain soils in place, are also aimed at further building and enhancing the soil regime.

With regard to water conservation, the area is generally subject to high levels of rainfall throughout the year such that there should be little need for irrigation throughout the farm. What water that would be used for irrigation purposes would be collected on-site from a roof-top water catchment system. Never the less, the need for irrigation can be minimized through a use of regular mulching in the garden and orchard areas, which would have the additional benefit of building

the soil regimen and weed control in these areas. Any additional watering required, especially following the initial plantings or during prolonged dry periods, can be managed with the use of a portable watering system, which would have the benefit of eliminating the need of the laying of irrigation lines and minimizing the potential for over watering in targeted areas. In this way, an effective conservation of soil and water resources can be achieved throughout the farm area.

VI. SCHEDULE AND SEQUENCE OF ACTIVITIES

As noted, a key component to the overall Agricultural Management Plan for the Perry property involves the sequential and phased clearing of the planned orchard sections, the planting of a diverse mix of tropical fruit and nut trees, and the systematic replacement of the existing ground cover in cleared areas, with a highly erosion and weed-resistant ground cover using the “Eco-turf” variety of the perennial peanut; which is a nitrogen fixing legume that would provide additional nutrients to the soil.

In conjunction with this effort, all shrubs and trees from the cleared areas will be cut, chipped, and composted on site to be used as mulch material in the orchard and garden areas. Sequentially, as shown **General Implementation Timetable in Table 1**, the phased clearing of the orchard sections and replanting in the orchard areas, which would take place following the implementation of the necessary access and utility improvements and construction of the planned residence, farm related facilities and the establishment of the garden area; each of which would take place sequentially in the first year following receipt of the necessary permits and approvals. Concurrent with the planting of the orchard areas, a process of removing invasive trees from the project perimeter of the property will be undertaken over a period of 3-5 years. The perimeter area will also be monitored to insure that, once removed, the invasive plants or trees have not intruded into these or the orchard areas and the native plantings in this area are able be reestablished, especially along the perimeters and steeper areas of the property.

TABLE 1. GENERAL IMPLEMENTATION TIMETABLE

ACTION	TIME-FRAME IN MONTHS / (Years)
Obtain Construction Plan Approval/Permitting	10 months
Clearing/Grading of Defined Access and Construction Areas	1 months
Construction of Residence/Utility Shed/ Chicken-Coop/Water Catchment and Storage System	8 months
Implementation of the Garden Area	2-3 months
Phased Clearing of Orchard Sections	Ongoing (2-3 Years)
Planting of Fruit Trees and “Eco-turf” Groundcover in Cleared Areas	Ongoing/Concurrent (2-3 Years)
On-site Composting of Cleared Vegetation	Ongoing/Concurrent (2-3 Years)
Systematic Removal of Invasive Trees/Shrubs at Property Perimeter	Ongoing (3-5 Years)

Note: Action items with time-frames listed in months are sequential and those occurring over years are concurrent.

VII. ONGOING MONITORING AND MAINTENANCE ACTIVITIES

As noted, the complete property will be fenced, using a 4-ft. high, t-bar and wire-mesh agricultural fencing, in order to prevent the intrusion of feral pigs that are common to the area and could otherwise cause extensive damage to orchard and garden areas. The fencing around the entire perimeter will need to be monitored regularly, especially following the initial installation, to ensure that portions have not been broken or compromised. Feral pigs that have customarily used pathways across the property will look for opportunities to breach the fencing, typically by digging beneath the fence in areas where the ground is depressed.

Additionally, regular and ongoing monitoring of the farm soils, water and plant conditions is an important component to identifying potential environmental or biological threats early on; to ensure the effective use of available resources; and to

maintaining optimum growing conditions for the selected garden trees and plants. Close monitoring of the site conditions is also an essential component of an effective IPM program in order to identify the early signs of invasive pests to be managed and beneficial organisms to be encouraged. Ongoing monitoring of those areas cleared of invasive species is also required to ensure the effectiveness of the control methods being applied.

Those areas to be monitored on a regular basis as part of the ongoing farm operations, include the following:

- Tree plantings for signs of nutrient deficiencies and invasive pests;
- Ground conditions for signs of erosion, especially in and around areas that have been irrigated or watered;
- Soil conditions, especially around tree plantings, for signs of overwatering, chemical build-up or nutrient deficiencies; and
- Areas cleared of invasive species for signs of regeneration or introduction of other weed species that are finding opportunity in newly cleared areas.

Similarly, regular monitoring and maintenance of the farm facilities and equipment are important to maintaining safe environmental conditions, especially in the storage of potentially harmful chemicals or volatile compounds; for the safe and effective application of chemicals in the cultivated areas; and the efficient use of available resources. Those areas that require special attention in terms of regular inspection and maintenance include:

- Buildings and the storage areas used for storing fertilizers and chemicals to ensure that they remain dry, safe and secure;
- Application equipment to insure they remain in working conditions and are properly calibrated so that recommended rates are applied; and
- Water storage facilities and equipment to identify any signs of leakage.

January 24, 2020

Re: Perry Single-Family Residence and farm, TMK(s)(3) 3-2-004: 040

Dear Sirs,

Article XI, Section 1, Constitution of the State of Hawaii states.....

*For the benefit of present and future generations, **the State and its political subdivisions shall conserve and protect Hawaii's natural beauty and all natural resources, including land, water, air, minerals, and energy sources, and shall promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State***

The most outstanding **natural resource** likely found on the former field area of the 3 acres of former sugar cane field is its **"Prime Agricultural Soils"**, Class C. The ag. use of South and North Hilo quadrangle lands is described often as **"Scenic"**. I also own land in the South Hilo district. It has been my experience that the DLNR/OCCL has a highly limiting interpretation of what **"Scenic"** means in its interpretation of its Rules.

The ALISH classification for the soil on the Perry property is **Prime type C**.....

*"PRIME AGRICULTURAL LAND is land best suited for the production of food, feed, forage and fiber crops. **The land has the soil quality, growing season, and moisture supply needed to produce sustained high yields of crops economically when treated and managed, including water management, according to modern farming methods.**"*

The ALISH classification system does not differentiate between **existing use vs. capacity to produce agricultural crops** whether or not such use may be determined to have been interrupted for a period of time exceeding one (1) year and subsequently resumed.

The EA and CDUA describe that the historical use of the property was for **'cane production'** dating to a period before the Conservation District was overlaid on the privately owned property.

The property already qualifies for **"Allowed"** rather than **"Allowable"** agricultural production., ref., HAR 13-5-2 **Definition's Rule**.....

***"Nonconforming use"** means the lawful use of any building, premises, or land for any **trade, industry, residence, or other purposes** which is the same as and no greater than that established prior to October 1, 1964, or prior to the inclusion of the building, premises, or land within the conservation district."*

and HAR 13-5-7's **Nonconforming Use Rule**.....

*"§13-5-7 Nonconforming uses and structures. (a) This chapter shall not prohibit the continuance, or repair and maintenance, of nonconforming **land uses and structures as defined in this chapter.**"*

Neither the Definitions Rule nor the Nonconforming Use Rule require 'continuous use', without interruption, in order that land qualify for resumed nonconforming use in the State's Conservation District. This is different than other SLU districts which do.

Agriculture is an **industry and trade** in ag. products results in a commercial use of a property. It is sometimes argued that the Rules provide that 'the nonconforming use has to be the same as, *ie sugar cane cropping*, and not greater than the use at the time the Conservation District was overlaid'. Agriculture is a land use and sugar cane cropping is a type of agricultural use. Sugar cane, pineapple, raising of livestock, agro- forestry and the like are types of agriculture and not specific land uses.

The OCCL repeatedly requires that applicants apply for a **"Conditional Permit"** for ag. use supported by a **"management plan"** to be first reviewed for acceptance for processing and subsequently **"Approved"** by the BLNR rather than advising applicants that former sugar cane properties already qualify for ag. use without any permitting requirements. This is a waste of scarce government resources. The OCCL frequently has raised concerns to the BLNR that it suffers a heavy workload. In my opinion some of the work load is 'self imposed' and discretionary by the OCCL which is not always required by the Rules and particularly is against the State's Constitution in regards to **promoting the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State.**

Particularly management plans are something that the BLNR reviews and approves. Prior approval by the OCCL is not provided for in the Rules in order that an application be accepted for processing yet this is what is often required. The OCCL's implementation of the Rules in this regard is an unnecessary waste of scarce Government resources, adds considerable cost to applicants and delays land use, restricts land use, requires huge volumes of supporting studies, endless negotiations with OCCL staff etc. This was never intended by the law-makers when the State overlaid the conservation district on lands that were in intense ag. use.

HAR 13-5 Rules do not particularly differentiate between personal ag. use and commercial ag. use in its definition of Agricultural use except that commercial use of conservation districted property **generally** is discouraged and suffers a much higher level of submission of documents, review, ongoing review, and permitting, expense **and registration of title restrictions**. Furthermore the OCCL generally presses applicants to use their Prime ag. land only for "personal" ag. use and in a very limited and highly specified way when their property already qualify for more liberally/generally **"Allowed"** nonconforming agricultural use according to HAR 13-5-7's Nonconforming Use Rule.

When one of the most outstanding quality of a property is its Prime ag. soils that is a resource that needs **protection and promotion** by the OCCL as required by the State's Constitution.

The CDU Application process for "**Allowable**" vs. "**Allowed**" ag. is expensive to draft and submit, results in delayed ag. land use etc. Resulting CDU Permits restrict the ag. use of properties in various ways and often require that the terms of the permit be registered against the title of the property which forever limit and restrict ag. use.

This goes against the State's Constitution, quoted above.....

*'State and its political subdivisions shall **promote the development and utilization of these resources in a manner consistent with their conservation and in furtherance of the self-sufficiency of the State**'*

Clearly the DLNR/OCCL is not in compliance with the State's Constitution because it is not **promoting the development and utilization** of the Perry property's Prime ag. soils **'in furtherance of the self-sufficiency of the State'**. The tedium of application effectively discourages and does not promote ag. use.

Particularly the historical field area of the property cannot be described to have any significant resource **greater** than its **Prime ag. soils** with a **high capacity for** their ag. use.

The State Land Use Law, HRS 205-2, states that in establishing district boundaries the **'greatest possible protection be given to lands with a high capacity for intensive cultivation'**. The word "**greatest**" does not need definition. The Statute is succinct in requiring that **'in establishing district boundaries'** **no other** land zoning priority be given to land if it has a **'high capacity for intensive cultivation'**.

The Perry Property has a **'high capacity for intensive cultivation'**. The State intended that while zoning **prime ag. land** into the Conservation District that the DLNR would not effectively burden land owners and would rather allow continued, unrestricted, ag. use of such land in perpetuity and in-as-much the conservation zoning would still be in compliance with the described State Constitutional requirement. It was intended that the DLNR would simply apply its higher level of discretionary review and permitting for further development of new uses for such properties *ie., dwellings etc.*

"Greatest" is a succinct word. The Perry property has a **'high capacity for intensive cultivation'** and a long history of intense agricultural use including uses accessory and incidental to agriculture.

By submitting the Perry application through the highly restrictive, highly conditioned, CDU Permitting process the Perry (or by direction of the OCCL their land use professional consultant/s??) are reducing the agricultural capacity of the State by restricting the Perry property contractually to only be used for highly described, conditional and limited **and** personal ag. use and requiring the conditional permit to be registered against the title of the property.

The OCCL repeatedly effectively forces applicants through a very expensive, time consuming, tedious and limiting Conditional (contractual) form of application by

refusing to accept applications for processing until they conform to the much more restrictive process of applying for a CDUA for ag. use when a property already qualifies for same. While consideration of acceptance of an application by the OCCL for processing is provided for in the Rules as "**complete**", the administrative office of the OCCL is not given the **discretionary** authority to deny acceptance for processing simply because the OCCL believes that the application conforms to its highly **discretionary interpretation** of the Rules. **In this regard discretion is a BLNR authority according to the Rules!**

Please describe.....

- What attempts did the applicant make to secure the unrestricted use of the property for agriculture through the Nonconforming use Rule rather than the highly restrictive conditional permitted CDUA?
- Did the applicant or its representative visit the Sugar Cane Museum, which I believe is located in Papaikau, in order to research and establish "**proof**" ref., HAR 13-5-7 (f) that the historical use of the property was for ag.? The museum has considerable field crop production records, maps and aerial pictures of cane fields including the Perry property.
- Did the OCCL direct the applicant to apply for a permit for ag. use rather than apply for nonconforming ag. use as is provided for in HAR 13-5-7(f)?

*"The burden of proof to establish that the land use or structure is legally nonconforming shall be on the **applicant**. Proof may include historic photos or records showing that the specific area in question was used for agriculture."*

- Did the OCCL require the submission of an ag. use management plan which is not required for the property as it qualifies for nonconforming ag. use already?
- Did the OCCL **promote the development and utilization** of the Perry property's Prime ag. soils as is required by the State's Constitution? Utilization for ag. ought to include substantial utilization in furtherance of the State's desire to be agriculturally self sufficient. Deed restrictions limiting ag. use goes against the State's Constitution.
- Did the OCCL describe to the applicant that the property does not qualify for nonconforming ag. use as such use was interrupted for a period of years? I am aware that this has happened, improperly, in at least one other case.
- Was the Perry application denied being '**accepted for processing**' by the OCCL until the application conformed to their highly '**discretionary**' process of application review for '**completeness**' before accepting it for consideration by the BLNR? It is noteworthy that such '**discretion**' is a BLNR authority and not an authority provided to the OCCL in HAR 13-5 regarding ag. use.
- Did the OCCL describe that only the '**raising of sugar cane**' would be allowed as a nonconforming use? I am aware that this happened in another case.

Please provide a detailed and comprehensive response to these questions.

It is my opinion and direct experience that the OCCL and by extension the DLNR and the BLNR does not have a consistent, evenly applied policy that is in conformance with HRS 183C, HAR 13-5 nor the State's Constitution regarding the processing and approval of applications for **"allowable"** ag. use and/or **"allowed"** nonconforming ag. use on former sugar cane properties. Formal permit applications for Ag. use of such land is effectively **restricted and limited** rather than being **promoted** as is required in the State's Constitution.

It is often argued by the OCCL that the DLNR must preserve and protect various characteristics of land. On-the-other-hand if ag. use is already an **"Allowed"** use then use through the highly regulated CDUPermitting of ag. use should not be restricted through the CDUPermitting processes. Clearly the historical use of the land before the Conservation District was overlaid on it required its clearing, grubbing, cultivation of soils, removal of volunary weedy plant growth, planting of ag. use plants, raising crops etc. It can hardly be argued that regulations be applied now that are preemptive of **"Allowed"** ag. use in order to preserve and protect other conservation qualities of the property.

Again..... the State never intended to interfere with existing uses of land when it overlaid the conservation district onto privately owned properties. Particularly the land use law required/iers that the **'greatest protection be given to land with a high capacity for ag. production'**. **Greatest** is a succinct word. It means that no other consideration be given a higher priority by administrative officials than ag. use of land **with a high capacity for intense ag. use**.

"Hawaii, Legislative Reference Bureau, Public Land Policy in Hawaii: The Multiple-Use Approach, Report No. 1, 1965 (Rev. 1969), Honolulu, p.17.) states.....

*The dual public purposes of preservation and conservation are apparent in the land use law and the forest and water reserve zones law. The land use law speaks of "protecting," "preserving," and "conserving"; it also speaks of uses "not detrimental to a multiple use conservation concept." In multiple use, land is used for two or more purposes (for example, water conservation, timber production, and foraging) **in order to increase the benefits derived from** an area.".....*

I fully support that the Perry property be recognized to qualify for "Allowed" ag. use and that its ag. use not be restricted through the DLNR's CDUPermitting process.

Sincerely,
Ken Church, Hakalau

geometrician

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March 6, 2020

Ken Church
Dockline3@yahoo.ca

Dear Mr. Church:

Subject: Comments on Draft Environmental Assessment (DEA)/Conservation District Use Application (CDUA) for Perry Single-Family Residence in the Conservation District at Pihā, Island of Hawai‘i, TMK 3-3-2-004:040

Thank you for the comment letter dated January 24, 2020. We appreciate your support for granting of the CDUP. After consulting with Mr. Perry, I would like to answer to your specific comments:

1. *Agriculture as a non-conforming use on the property.* Although a case can be made that the proposed agricultural activities is simply a continuation of a non-conforming use that ended in the 1970s, the sugar cane plantings long ago reverted to partially native forest/ shrubland. As such, the applicants believed that a CDUA was the most appropriate mechanism for achieving their plans.
2. *The application reduces the agricultural capacity of the State of Hawaii by restricting operations.* Although it does not seem credible that decisions made on this small property could affect the agricultural production of the State of Hawai‘i, Mr. Perry’s goals are to conduct the type of agricultural operations he and his partner desire to have for their own sustenance, not to advance agricultural policy or production in the State. As such, the application is appropriate.

If you have any questions about the EA, please contact me at (808) 969-7090; for questions about the project, please contact James Leonard, Project Planner, at (808) 896-3459.

Sincerely,



Ron Terry, Principal
Geometrician Associates

Cc: OCCL; James Leonard, Nick Perry, Rodrigo Gonzalez