

DEPARTMENT OF BUSINESS,
ECONOMIC DEVELOPMENT & TOURISM

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Ref. No. P-13222

February 22, 2011

2011 FEB 22 P 12:11
LAND USE COMMISSION
STATE OF HAWAII

To: Orlando Davidson, Executive Director
State Land Use Commission

From: Mary Lou Kobayashi *Mary Lou Kobayashi*
Planning Program Administrator

Subject: DR10-42, Petition for Declaratory Order to Designate Important Agricultural
Lands
Petitioner: Castle & Cooke Homes Hawaii, Inc.
Location: Waialua, Wahiawa, and Waikele, O'ahu
Acreage: Approximately 902.066 Acres

The Office of Planning (OP) has reviewed the Petition, and appreciates the Petitioner's participation in the voluntary process for the designation of important agricultural lands (IAL). The Office supports the Petition with respect to two of the four proposed parcels of land, subject to certain conditions.

The Office recommends the Land Use Commission (LUC) exclude the Dole Plantation and Whitmore parcels from designation as important agricultural lands. The rationale for exclusion of these parcels is discussed in our comments and summary which follow. These parcels are shown and labeled on OP Figure 1, *Proposed IAL Lands and Castle & Cooke Companies' Landholdings*.

We would, however, favorably consider both the Whitmore and Dole Plantation parcels if they were part of a petition for a larger contiguous and cultivable agricultural area with secure access to sufficient irrigation water sources.

Comments and Concerns Regarding the Petition

As LUC is aware, the Petitioner represented in hearings on the Koa Ridge petition (LUC Docket No. A07-775, Castle & Cooke Homes Hawaii) that the designation of IAL was the means to protect agricultural lands, and that the Petitioner would be filing a petition for IAL designation subsequent to the approval of their petition for a boundary amendment. OP appreciates that the Petitioner has acted on that representation with the filing of this Petition, pursuant to the voluntary designation process of §205-45, Hawai'i Revised Statutes (HRS).

OP notes and appreciates that the Petition does not seek the reclassification of other lands for development, and that if approved, the Petitioner voluntarily waives all rights to the land use credits that may be claimed under §205-45(h), HRS.

1. Basis of Review and Comments. OP's review is based on the Petition, Petition exhibits, and public data available on the proposed lands, including analysis of spatial data using geographic information systems (GIS). The GIS analysis is based on digitized survey data; therefore, comments drawn from the GIS analysis will need to be verified with information obtained in the site visit.

In its review, OP has weighed the relative merits of the Petition as a whole and that of the individual parcels with respect to §§205-41 to 205-45 of Part III, Important Agricultural Lands, HRS, and the representations of the Petitioner in LUC Docket No. A07-775.

OP requested comments on the Petition from the U.S. Department of Agriculture's (USDA) Natural Resource Conservation Service (NRCS), Pacific Islands Area Office, and the Department of Land and Natural Resources, Division of Water Resources Management (DLNR-DWRM), to gain additional perspectives regarding the quality of the proposed lands, as well as water resource information relevant to the agricultural irrigation system serving the lands proposed for designation. The NRCS comment letter is attached; comments from DLNR-DWRM will be forwarded when OP receives them.

2. Clarification of information provided in this Petition. Given the short decision-making timeframe for voluntary IAL designation, it is essential that IAL petitions contain sufficient information to facilitate the review of the resource value and long-term use of the lands proposed for designation. OP believes the following information is needed to address data gaps in the evaluation of the merits of the Petition.
 - a. Related to current or planned agricultural use of the lands proposed for designation, §205-45(c)(3). The Petitioner is not the farming entity for any of the parcels, and the Petition does not represent that the lands have agricultural leases of a specified period or provide evidence of some other long-term commitment to the agricultural tenants of the proposed parcels. IAL designation, by itself, does not assure or promote long-term agricultural use of the land. Therefore, it is important to the Commission's decision-making process to see what provisions for long-term agricultural use of the lands exist or are contemplated for the proposed parcels.
 - i. Waialua and Mililani South parcels. The Petitioner should identify permitted structures, including any farm dwellings situated and in use on the land, and what, if any, impact these structures would have on

continued long-term agricultural use by future or new agricultural lessees. The Petitioner should also provide information on the agricultural lease terms and conditions for agricultural tenants, e.g., at a minimum, the type of tenure offered, lengths of leases, allowable uses, provisions for agricultural water, and provisions for terminating leases/licenses.

- ii. Whitmore parcel. The Petition should identify specific plans for, and the agricultural entity/ies that will be involved in putting the Whitmore parcel to productive agricultural use. The Petitioner should also clarify whether there is access to the northern section of this parcel.
 - iii. Waialua parcel. The Petitioner should explain the nature of the agricultural landfill that borders the proposed lands, as seen in the Petition's Exhibit B-1, Park Engineering map dated November 30, 2010. What impacts, if any, will landfill operations have on farming operations on lands proposed for IAL designation?
 - iv. Petitioner should discuss whether or not there are plans to construct farm dwellings and employee housing on the proposed IAL lands pursuant to §205-45.5, HRS.
3. Assessment of proposed land with respect to §§205-42 and 205-44, with specific reference to §205-44(c), Standards and criteria for the identification of important agricultural lands.

The definition of important agricultural lands in §205-42(a), HRS, emphasizes the value of the land for cultivation or productive agricultural use, i.e., its resource value in terms of the agricultural productivity of the land itself. Designation of land that does not have high resource value, or whose productivity is severely constrained by physical conditions or the potential for environmental harm, misrepresents its productive value. Designation of such lands as IAL should be avoided unless it can be explicitly shown that these low resource value lands are not sufficiently protected under the State Agricultural District designation, and require IAL designation to perform their agricultural or agricultural support functions.

Other considerations in determining resource value. OP, as the lead agency for the administration of Chapter 205A, HRS, and the Hawai'i Coastal Zone Management (CZM) Program, must also review the proposed lands with respect to potential environmental impacts and health and safety concerns associated with agricultural use of the lands. The primary CZM concern in evaluating lands for IAL designation is whether there are slope, soil, or hazard conditions that could contribute to: (a) nonpoint source

pollution from agricultural activity on the lands that would impact surface and coastal water quality; or (b) damage and harm from flood and coastal hazards.

The above concerns are integrated in OP's assessment of the proposed lands.

Relative merit of the Petition as a whole. Unlike prior petitions, this Petition does not propose a largely contiguous and intact land area for designation as IAL. The Petitioner is not engaged in farming the proposed lands, nor does the Petition provide evidence of a long-term commitment to agricultural tenants for the proposed lands, as is the case with the other voluntary IAL petitions. As can be seen in OP Figure 1 attached, the proposed lands are discrete, non-contiguous parcels that appear to be residual or remnant landholdings. Therefore, OP did not assess the Petition as a whole, but focused on the relative merit of the individual parcels proposed for designation. This assessment is summarized below.

- a. **Waialua**, 242 acres, TMK No. 6-8-006: 010 (por.). See Figure 2 for an aerial map of the parcel. OP concurs that this parcel meets most of the eight criteria: it is currently under agricultural cultivation; for the most part, it has soil qualities and growing conditions that support cultivation; it is served with irrigation water from Dole Pump 1; it is consistent with County plan land use designations; and has or is near infrastructure that supports agriculture. With respect to its productivity ratings, OP notes that Petition Figure 5A, *Agricultural Lands of Importance to the State of Hawai'i (ALISH)*, shows that less than half of the parcel is classified as Prime. The USDA Soil Survey Geographic (SSURGO) Database classifies the remaining parcel area as not prime farmland, based on limitations to cultivation due to soils. OP notes that the odd parcel configuration, presence of structures of unidentified use onsite, the intruding landfill, and adjacent residential areas could be limiting factors on long-term agricultural use of the parcel.

Summary: OP supports designation of this parcel as IAL, provided there are assurances that water supply for the parcel is maintained and agricultural tenants are provided long-term, stable lease conditions, and uses are limited to uses allowable under §§205-4.5(a)(1), (2), and (3), HRS.

- b. **Mililani South**, 232 acres, TMK No. 9-4-003: 002. See Figure 3 for an aerial map of the parcel. OP concurs that this parcel meets most of the eight criteria: it is currently under agricultural cultivation; it has soil qualities and growing conditions that support cultivation; it is classified with high productivity ratings by both the ALISH and Land Study Bureau (LSB) systems; it is served with irrigation water from the Waiahole Ditch system; it is consistent with County plan

land use designations; and is adequately served by infrastructure that supports cultivation onsite.

Summary: OP supports designation of this parcel as IAL, provided there are assurances that water supply for the parcel is maintained and agricultural tenants are provided long-term, stable lease conditions, and uses are limited to uses allowable under §§205-4.5(a)(1), (2), and (3), HRS.

- c. **Whitmore**, 205 acres, TMK No. 7-1-002: 032 (por.). See Figure 4 for an aerial map of the parcel. OP believes this parcel falls short of key criteria for designation as IAL.

§205-44(c)(1), Land currently used for agricultural production. The Petition states that the land is not currently under agricultural cultivation, although it was previously cultivated in pineapple. There is no identified agricultural user for the proposed land.

§205-44(c)(2), Land with soil qualities and growing conditions that support agricultural production; §205-44(c)(3), Land identified under agricultural productivity rating systems; §205-44(c)(7), Land that contributes to maintaining a critical land mass important to agricultural operating productivity. Portions of the land have soil qualities that are favorable for cultivation and are rated favorably under the ALISH and LSB systems. However, the cultivable area of the parcel is fragmented by an unexplained mauka-makai corridor, and agricultural use of the northern portion of the parcel would be severely constrained by steep slopes and gulches over much of the northern land area (see OP Figure 5, *Slope Conditions for Proposed Lands for Designation as Important Agricultural Lands: Dole Plantation & Whitmore*). The southern portion of the parcel is also impacted, to a lesser degree, by slope conditions that would restrict or limit agricultural use. This yields a parcel configuration that is unfavorable for agriculture on the northern portion and a smaller area suitable for agriculture in the southern portion than is proposed for designation as IAL.

§205-44(c)(5), Land with sufficient quantities of water. The Petition states there is no water supply for the land. Water is available from the County's municipal system, but would require Board of Water Supply approval. It would appear that establishment of a water system for the land would be the responsibility of a future, as yet unidentified, agricultural entity.

The lack of water is of particular concern to OP, because §§205-50(g) and 205-52, HRS, specifically provide for the removal of the IAL designation from

lands if a sufficient supply of water is no longer available to allow profitable farming of the land.

Summary: OP does not support designation of this parcel as IAL, as it fails to meet a critical criterion for water, and further, future agricultural use is uncertain and the cultivable area of the proposed parcel is significantly reduced by topography and parcel configuration.

- d. **Dole Plantation**, 223 acres, TMK No. 6-4-004: 007. See Figure 4 for an aerial map of the parcel. OP believes this parcel does not meet the definition of IAL or sufficiently meet the criteria for designation as IAL.

§205-44(c)(1), Land currently used for agricultural production. Only 31 of 223 acres are currently planted.

§205-44(c)(2), Land with soil qualities and growing conditions that support agricultural production; §205-44(c)(3), Land identified under agricultural productivity rating systems; §205-44(c)(7), Land that contributes to maintaining a critical land mass important to agricultural operating productivity. This parcel is oddly shaped, and except for the area currently cultivated, the cultivable area of the parcel is severely restricted by the Upper Helemano ditch system and reservoir, steep slopes, and gulches, as can be seen in OP Figure 5. The cultivable area is further fragmented by the ditch system and reservoir which preclude cultivation of much of the parcel, and this is reflected in the lack of high ALISH and LSB ratings for much of this parcel.

The parcel does not merit IAL designation due to the unfavorable configuration of the parcel and the degree of fragmentation of the remainder of the cultivable area. OP disagrees with the assertion on page 10 of the Petition that diversified agriculture, unlike monocrops, does not require a single contiguous land mass for agricultural operating productivity. Farmers of all scales benefit from field and parcel configurations that offer efficient layout of infrastructure and agricultural operations. This may be of more importance to a small farmer where marginal increases in infrastructure and operational costs could have a larger impact on farm revenues.

§205-44(c)(8), Land with or near support infrastructure conducive to agricultural productivity, such as transportation to markets, water, or power. OP maintains that agricultural infrastructure—and gulches where they are characterized as drainage systems—should not be designated as IAL. The intent of including this criterion in the IAL legislation was to ensure that designated agricultural land had

access to agricultural infrastructure or had agricultural infrastructure in place. The designation of agricultural infrastructure in and of itself as IAL is a questionable application of the criteria. While these systems are important to successful agriculture, the land itself cannot be cultivated and has no productive value.

OP has always raised concerns about the designation of gulches and agricultural infrastructure as IAL in our responses to other IAL petitions. However, OP has not opposed their inclusion in the designation of IAL in other petitions in part because the gulches and infrastructure systems constituted a very small portion of the total acreage of agricultural lands being designated, and those gulches and agricultural infrastructure served lands that were being designated as IAL.

In the case of the Dole Plantation parcel, however, the system serves none of the other parcels being proposed for IAL designation, and only a fraction of the Dole Plantation parcel.

It is useful and important that the Commission make note of irrigation systems, drainage systems, and other essential agricultural support systems that serve lands proposed for designation as IAL, but it is not critical that these systems themselves be designated as IAL. There are a number of reasons why the designation of infrastructure, including gulches, is neither necessary nor sound policy, including:

- i. As noted earlier, it assigns productive value to the underlying land that isn't there, and overstates the amount of resource land that is capable of cultivation or production;
- ii. It allows access to important agricultural land incentives without requiring a linkage between the system or gulch lands being designated and the designation of other productive lands as IAL, and thus, weakens the incentive for designating IAL;
- iii. IAL tax credits and other incentives for agricultural infrastructure costs can still be claimed even if the infrastructure lands are not designated as IAL, provided the claimant demonstrates that the infrastructure serves lands that have been designated as IAL;
- iv. The acreage of lands with infrastructure and gulches could be included in the total IAL acreage, and thus be included in the total acreage for determining the amount that may be reclassified under a joint petition, and toward the limit on the amount of landholdings that may be designated as IAL;

- v. It does not send a clear message for future petitions, including joint petitions for reclassification, that lands underlying agricultural infrastructure and gulch lands do not meet the criteria for IAL; and
- vi. The underlying lands or gulch lands don't need additional protection from development above and beyond what is currently provided by Chapter 205 Ag District, as they are severely constrained for development.

Summary: OP does not support designation of this parcel as IAL, because the cultivable or productive land area is fragmented and significantly less than the total acreage of the parcel proposed for designation, and the infrastructure system proposed for designation does not serve other parcels proposed for designation as IAL.

4. Other Comments. The Petitioner represented in LUC Docket No. A07-775 (Koa Ridge Makai) that the relocation of their existing agricultural tenants to replacement lands owned by Dole constituted mitigation of the impact on agricultural land due to reclassification. See OP Figures 1 and 4 for the location of the replacement lands that were discussed in the Docket No. A07-775 hearings. The Petitioner also acknowledged that it could take up to three years for the agricultural tenant to reestablish their farm at the Dole replacement lands. There are likely to be costs for the tenant that could be offset through the use of IAL incentives enacted in 2008. However, the replacement lands are not proposed for designation and any relocation costs of their tenant would not be eligible for IAL tax credits or other incentives.

Summary and Recommendations

The Petition proposes to designate lands that would, in part, meet the criteria and definition of important agricultural lands. As a whole, the Petition would not result in designation of large, relatively intact and contiguous blocks of productive land, as evidenced in the other three voluntary petitions filed to date. Further, OP believes that two of the proposed parcels do not meet a cumulative threshold for designation as IAL, and one of the two parcels does not meet the critical criteria of sufficient water to meet agricultural potential at this time.

Therefore, OP recommends that the Commission deny the designation of the Dole Plantation and Whitmore parcels, and approve IAL designation for the Waialua and Mililani South Parcels, subject to the Commission expressly conditioning any granting of the Petition or portion thereof on full compliance with the following to address concerns raised herein:

- (1) The absolute and unconditional waiver of any and all rights to credits under §205-45(h), HRS;

Orlando Davidson
Page 9
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- (2) The granting of long-term agricultural leases for all lands designated as IAL, provided the leases restrict use of the land to uses directly related to agricultural production, such as in §§205-4.5(a)(1), (2), and (3), HRS, and wind energy facilities in conjunction with agricultural production; and
- (3) The commitment of the current water supply to agricultural use on those parcels designated as IAL, until the IAL designation is removed by the Commission.

Thank you for the opportunity to comment on the Petition. If you have any questions, please contact me at 587-2808.

Attachments

c: Mr. Benjamin M. Matsubara, Matsubara-Kotake
Mr. Russell Kokubun, State Department of Agriculture
Mr. David Tanoue, Department of Planning and Permitting, City and County of Honolulu

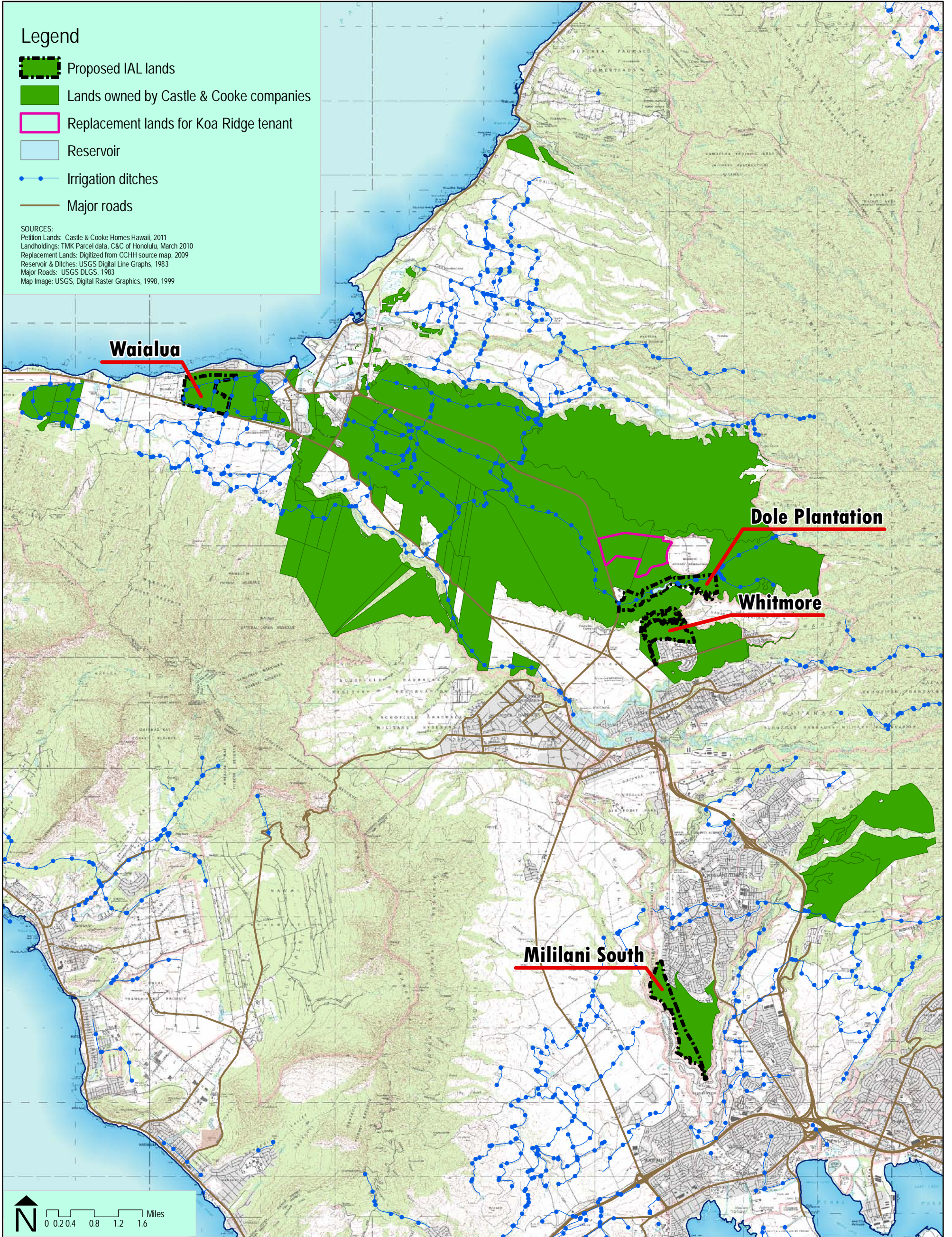


Figure 1
 Location of Proposed IAL Lands and
 Castle & Cooke Companies' Landholdings

DR10-42 Castle & Cooke Homes Hawaii
 Proposed Lands for Designation as Important Agricultural Lands
 December 2010








SOURCES:
 Petition Lands: Castle & Cooke Homes Hawaii, 2011
 Ditches: USGS Digital Line Graphs, 1983
 TMK Parcels: City & County of Honolulu, Mar 2010
 Major Roads: USGS DLGs, 1983
 Coastline: Extracted from USGS DLGs, 1983
 Aerial Image: Google Earth, TerraMetrics/USGS, Jan 2008



Figure 2
Land Proposed for Designation
as Important Agricultural Land:
Waialua, 6-8-006: 010 (por)

DR10-42 Castle & Cooke Homes Hawaii, Inc.

Legend

-  Proposed IAL lands
-  Castle & Cooke/Dole lands
-  Irrigation ditches
-  Major roads
-  Coastline



Office of Planning

Dept of Business, Economic Development & Tourism

This map was produced by the Office of Planning (OP) for planning purposes. It should not be used for boundary interpretations or other spatial analysis beyond the limitations of the data. Information regarding compilation dates and accuracy of the data presented can be obtained from OP.

Map File: DR10-42_CCHH_OP-Fig02.pdf, Feb 22, 2011
 ArcMap File: 20110209-RE_DR10-42_CCHH_Waerial.mxd

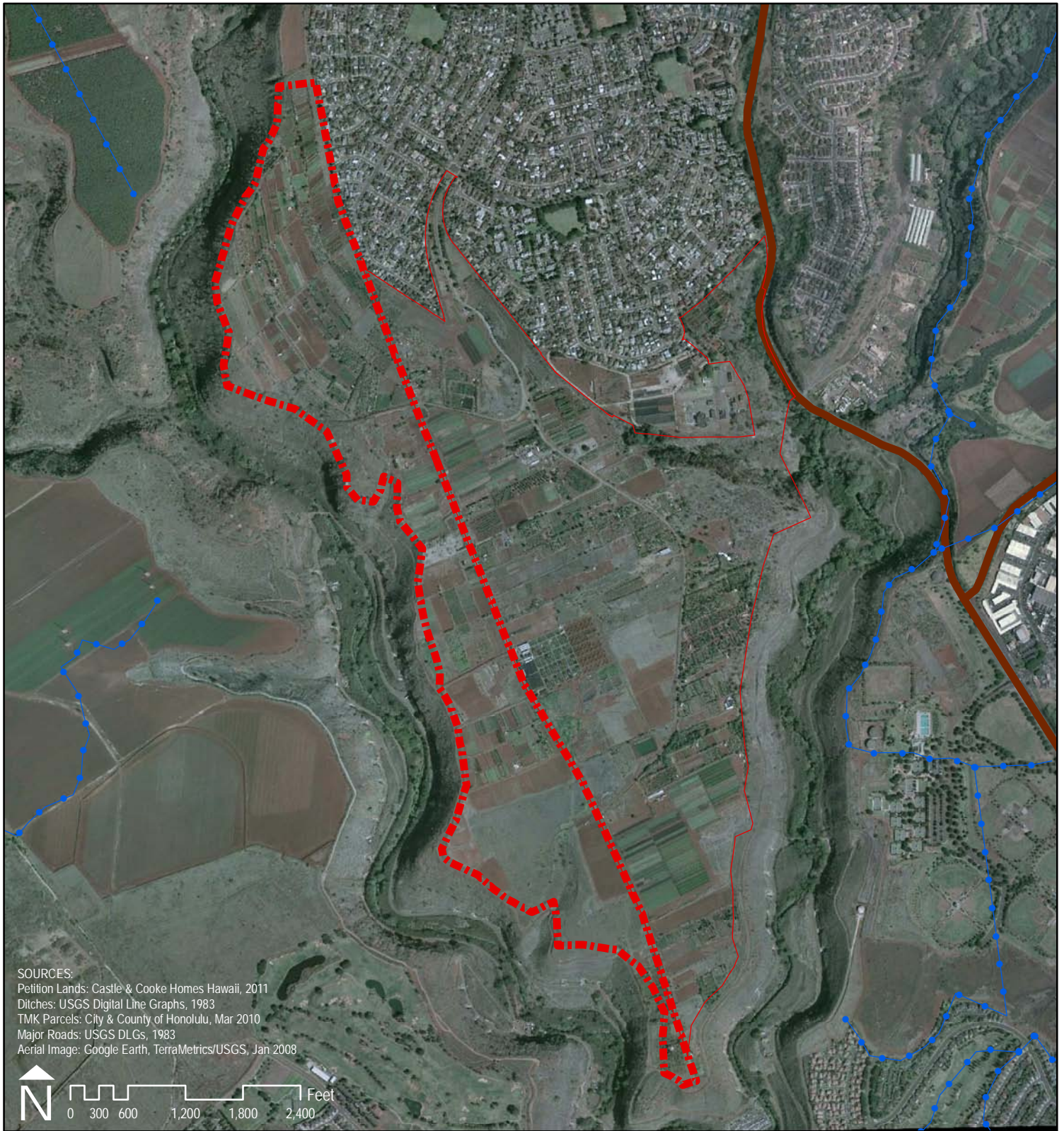


Figure 3
Land Proposed for Designation
as Important Agricultural Land:
Mililani South, 9-4-003: 002

- Legend
-  Proposed IAL lands
 -  Castle & Cooke/Dole lands
 -  Irrigation ditches
 -  Major roads



Office of Planning
 Dept of Business, Economic Development & Tourism

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Map File: DR10-42_CCHH_OP-Fig03.pdf, Feb 22, 2011
 ArcMap File: 20110209-RE_DR10-42_CCHH_MSAerial.mxd

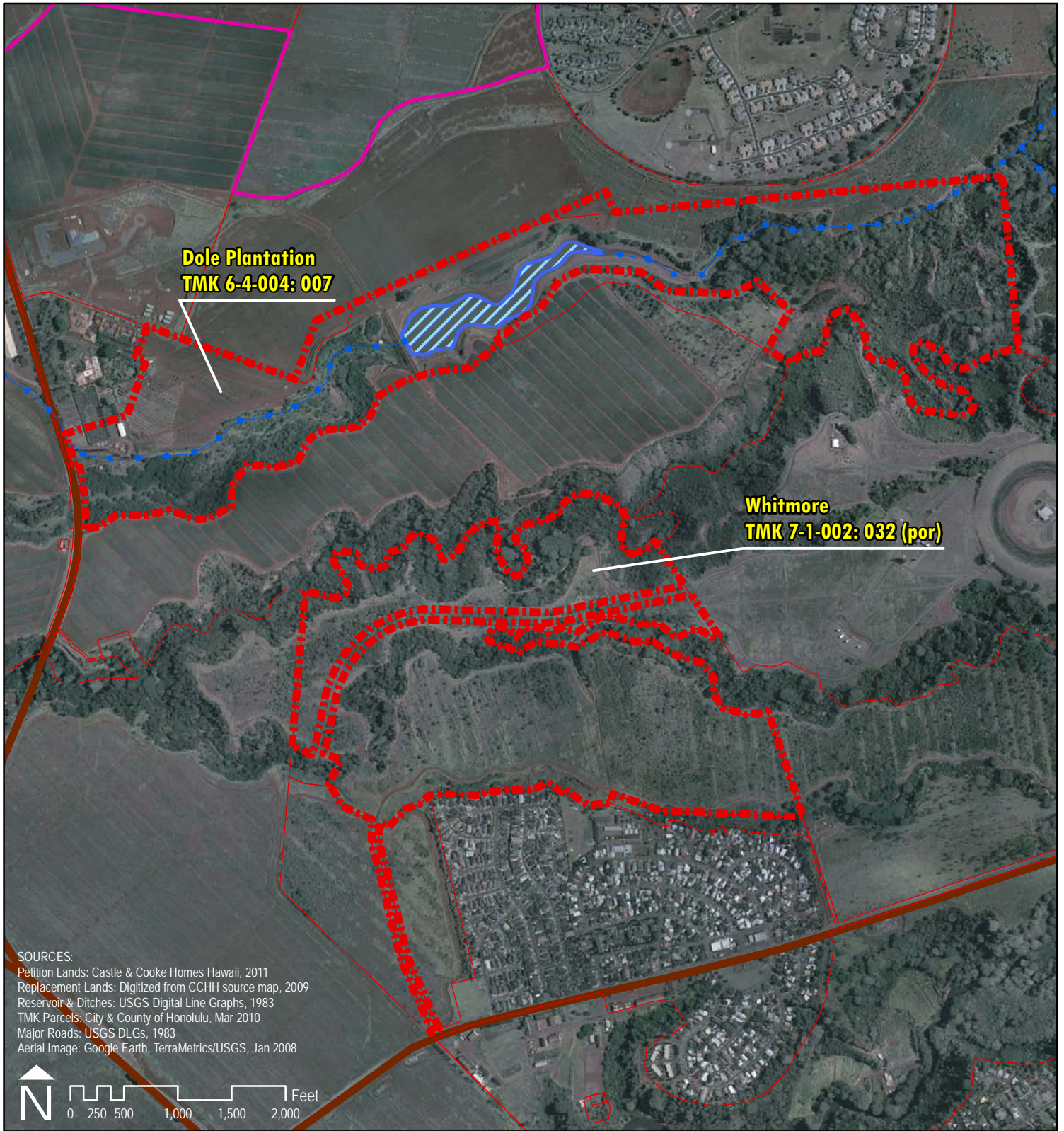


Figure 4
Land Proposed for Designation
as Important Agricultural Land:
Dole Plantation & Whitmore

DR10-42 Castle & Cooke Homes Hawaii, Inc.

- Legend**
- Proposed IAL lands
 - Castle & Cooke/Dole lands
 - A07-775 replacement lands
 - Reservoir
 - Irrigation ditches
 - Major roads



Office of Planning

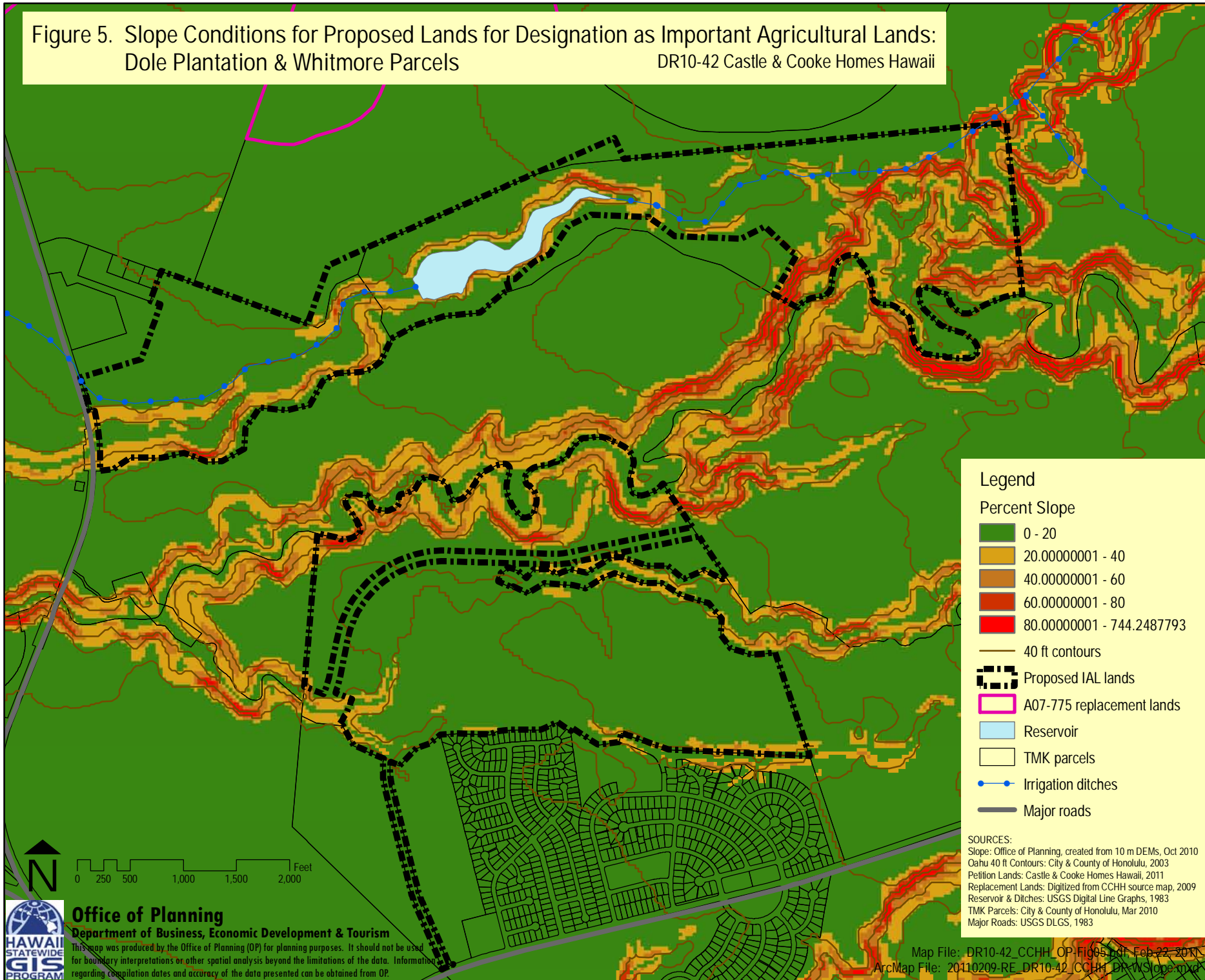
Dept of Business, Economic Development & Tourism

This map was produced by the Office of Planning (OP) for planning purposes. It should not be used for boundary interpretations or other spatial analysis beyond the limitations of the data. Information regarding compilation dates and accuracy of the data presented can be obtained from OP.

Map File: DR10-42_CCHH_OP-Fig04.pdf, Feb 22, 2011
 ArcMap File: 20110209-RE_DR10-42_CCHH_DP-Waerial.mxd

Figure 5. Slope Conditions for Proposed Lands for Designation as Important Agricultural Lands:
Dole Plantation & Whitmore Parcels

DR10-42 Castle & Cooke Homes Hawaii



Legend

Percent Slope

- 0 - 20
- 20.00000001 - 40
- 40.00000001 - 60
- 60.00000001 - 80
- 80.00000001 - 744.2487793

- 40 ft contours
- ⎓ Proposed IAL lands
- ⎓ A07-775 replacement lands
- ⎓ Reservoir
- ⎓ TMK parcels
- ⎓ Irrigation ditches
- ⎓ Major roads

SOURCES:
 Slope: Office of Planning, created from 10 m DEMs, Oct 2010
 Oahu 40 ft Contours: City & County of Honolulu, 2003
 Petition Lands: Castle & Cooke Homes Hawaii, 2011
 Replacement Lands: Digitized from CCHH source map, 2009
 Reservoir & Ditches: USGS Digital Line Graphs, 1983
 TMK Parcels: City & County of Honolulu, Mar 2010
 Major Roads: USGS DLGS, 1983

Office of Planning
 Department of Business, Economic Development & Tourism

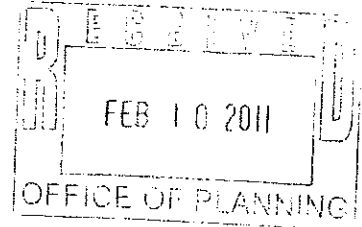
This map was produced by the Office of Planning (OP) for planning purposes. It should not be used for boundary interpretations or other spatial analysis beyond the limitations of the data. Information regarding compilation dates and accuracy of the data presented can be obtained from OP.

HAWAII STATEWIDE GIS PROGRAM

Map File: DR10-42_CCHH_OP-Fig05.pdf Feb 22, 2011
 ArcMap File: 20110209-RE_DR10-42_CCHH_DR-WSlope.mxd



Natural Resources Conservation Service
P.O. Box 50004 Rm. 4-118
Honolulu, HI 96850
808-541-2600



72794

February 9, 2011

Ms. Mary Lou Kobayashi, Planning Program Administrator
Department of Business, Economic Development & Tourism
Office of Planning
PO Box 2359
Honolulu, HI 96804

Dear Ms. Kobayashi,

Thank you for providing the Natural Resource Conservation Service(NRCS) the opportunity to review the Petition for Declaratory Order to designate Important Agricultural Lands for the petitioner Castle and Cooke Homes Hawaii, Inc., of Mililani, Oahu, HI (DR10-42). We have reviewed the documents and confine our commentary to issues within the purview of the NRCS, specifically those related to soil properties that are typically used for assessing the quality and suitability of land for agricultural uses.

After analyses of the data provided by the petitioner, we have concluded that the maps provided in figures number 2B, 2C, 3A, 3B, 3C, 5A, 5B, and 5C from the petitioner's package accurately represents the relative agricultural productivity and areas designated as Agricultural Lands of Importance to the State of Hawaii (ALISH) within the four parcels described in the petition. The information in Table 1 presents an accurate summary of the status of ALISH qualifiers for the four sites.

If you have any questions concerning the soils and related quality and suitability ratings for these project areas, please contact Dr. Cynthia A. Stiles, Assistant State Soil Scientist, by telephone at (808)541-2600 extension 129, or by e-mail at cynthia.stiles@hi.usda.gov

Sincerely,

LAWRENCE T. YAMAMOTO
Director
Pacific Islands Area

Attachment: ALISH Oahu DR10-42

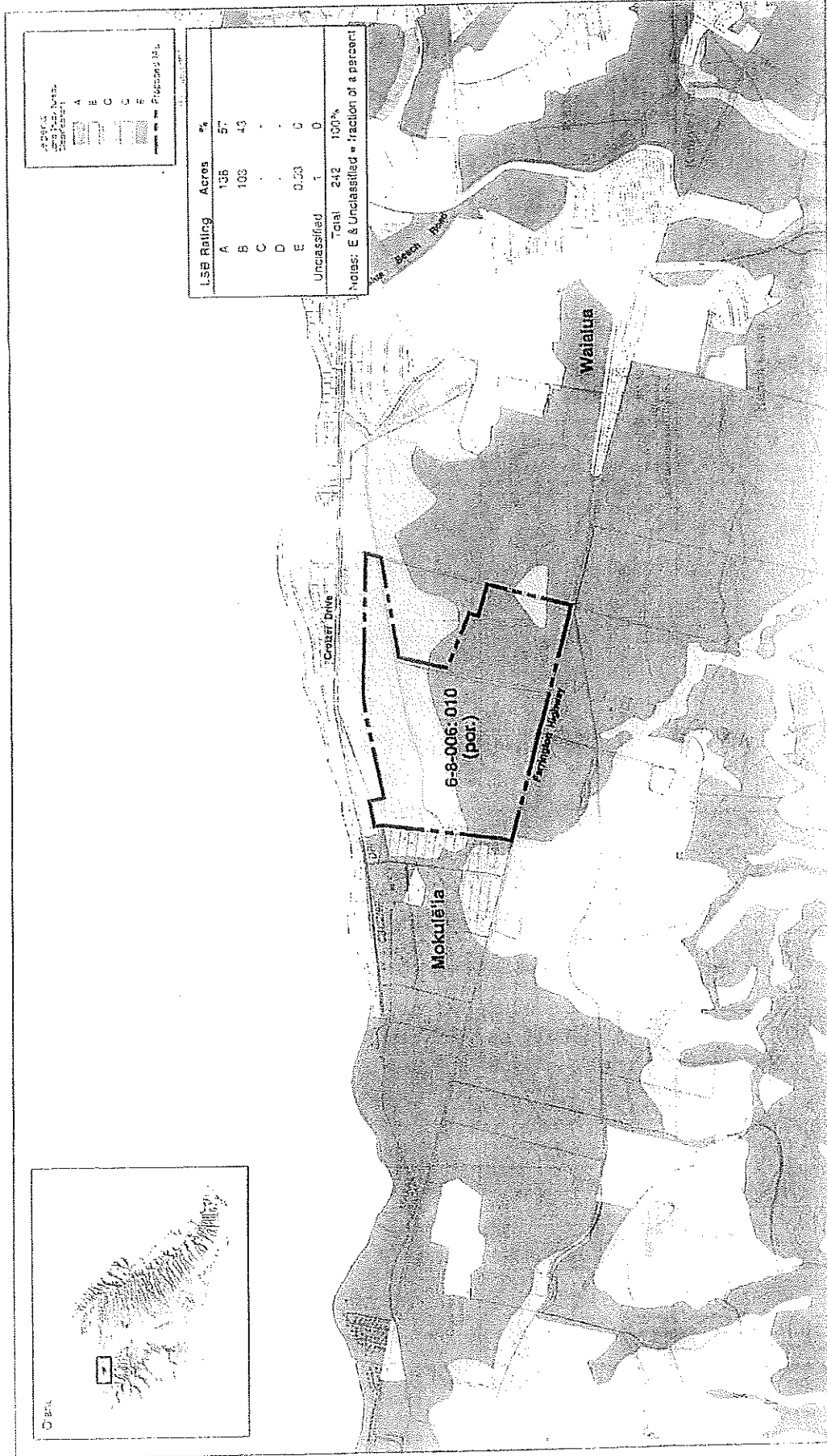
cc: Edwin Muniz, Acting Asst. Director SS & NRA, Pacific Islands Area State Office

Table 1

Castle & Cooke Important Agricultural Lands (12-6-10)

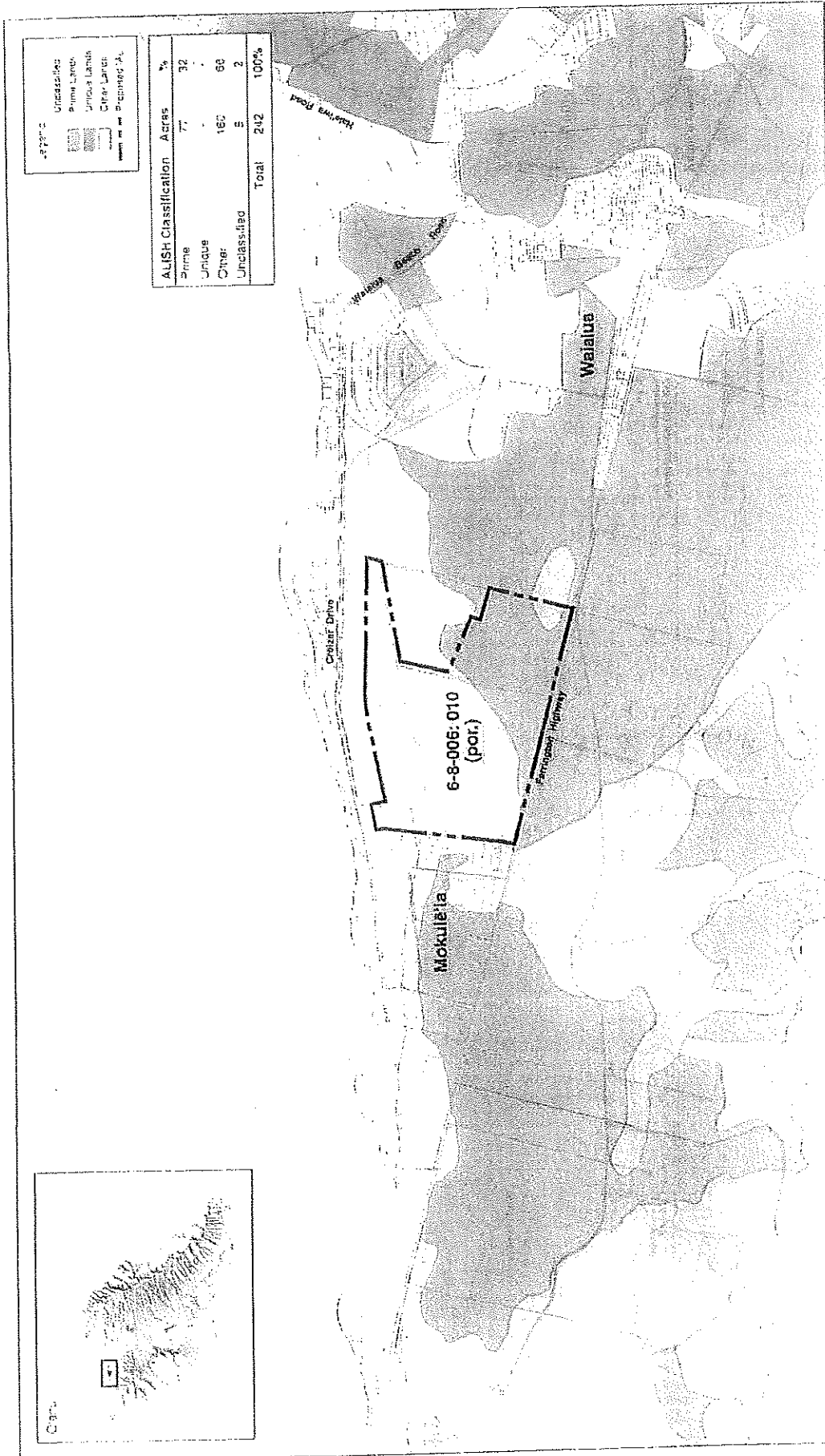
Koa Ridge, LLC										
Description	TMK	Acres	1	2	3	4	5	6	7	8
Waialua	(1) 6-8-006-010	242.085	X	X	X		X	X	X	X
Dole Plantation	(1) 6-4-004-007	222.634	X	X	X		X	X	X	X
Whitmore	(1) 7-1-002:032	205.593		X	X		rain	X	X	X
Mililani South	(1) 9-4-003-002	231.754	X	X	X		X	X	X	X
Total		902.066								

Legend	
1	Land currently used for agricultural production
2	Land with soil qualities and growing conditions that support agricultural production of food, fiber, or fuel and energy producing crops
3	Land identified under agricultural productivity rating systems, such as the Agricultural Lands of Importance to the State of Hawaii (ALISH) system adopted by the Board of Agriculture on January 28, 1977.
4	Land types associated with traditional native Hawaiian agricultural uses, such as taro cultivation, or unique agricultural crops and uses, such as coffee, vineyards, aquaculture, and energy production.
5	Land with sufficient quantities of water to support viable agricultural production.
6	Land whose designation as important agricultural lands is consistent with General, Development, and Community Plans of the County.
7	Land that contributes to maintaining a critical land mass important to agricultural operating productivity.
8	Land with or near support infrastructure conducive to agricultural productivity, such as transportation to markets, water or power.



Waialua FIGURE 3A
 AGRICULTURAL SOILS PRODUCTIVITY RATINGS
 (LSB RATINGS)
 Castle & Cooke Homeas Hawaii, Inc.

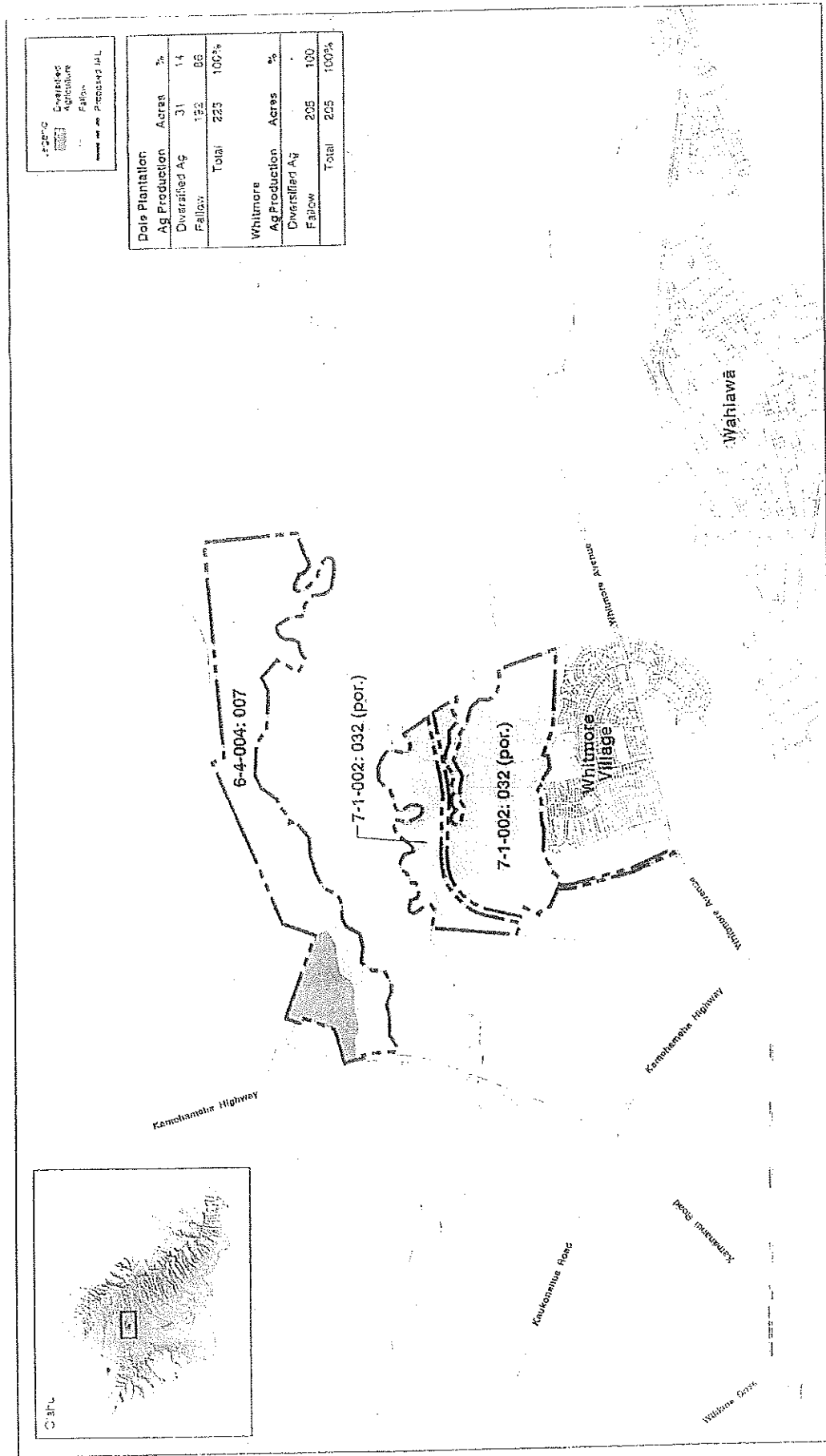
Source: Land Survey Bureau, Coastal Land Classification using 2" and 10" maps, Hawaii, December, 1972
 and State of Hawaii Office of Planning, August 22, C.L.S.B. maps.
 City and County of Honolulu, October 2010, notes for Castle and Cooke subdivision survey 2010
 (Sheet 102201)



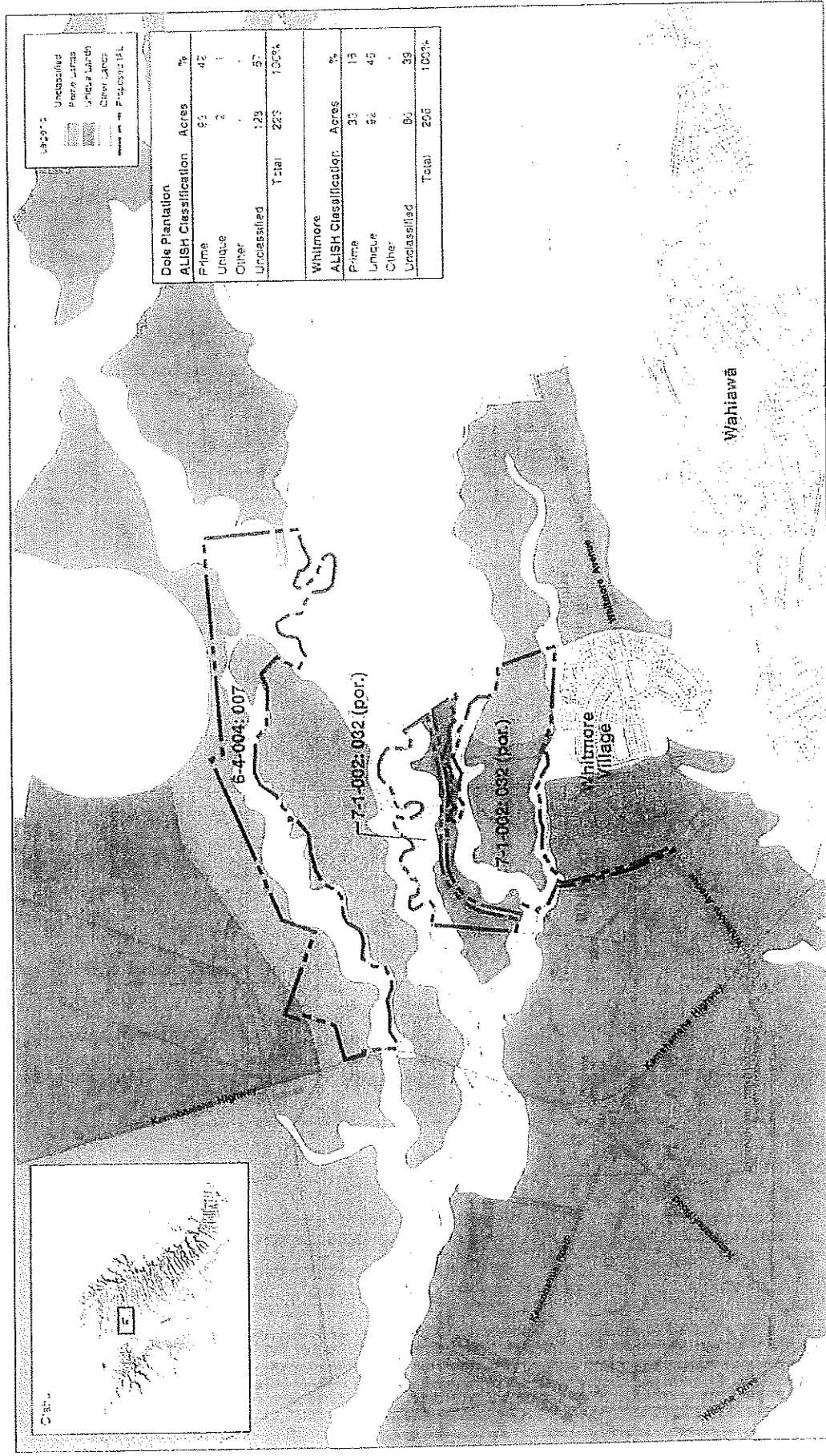
Waialua FIGURE 5A
 AGRICULTURAL LANDS OF IMPORTANCE
 TO THE STATE OF HAWAII (ALISH)
 Castle & Cooke Homestead - IAL

Sources: State of Hawaii, Department of Agriculture, 1:25,000 scale, stadia aerial photograph compiled and dated in 1977; Programs with the assistance of the Soil Conservation Service, U.S. Department of Agriculture, and The College of Tropical Agriculture, University of Hawaii; City and County of Honolulu, Census 2010; atlas with Castle and Cooke subdivision survey data (graticular vectors).

756 1:50,000 Scale
 December 2010
 Prepared by: [Logo] [Name] [Address]

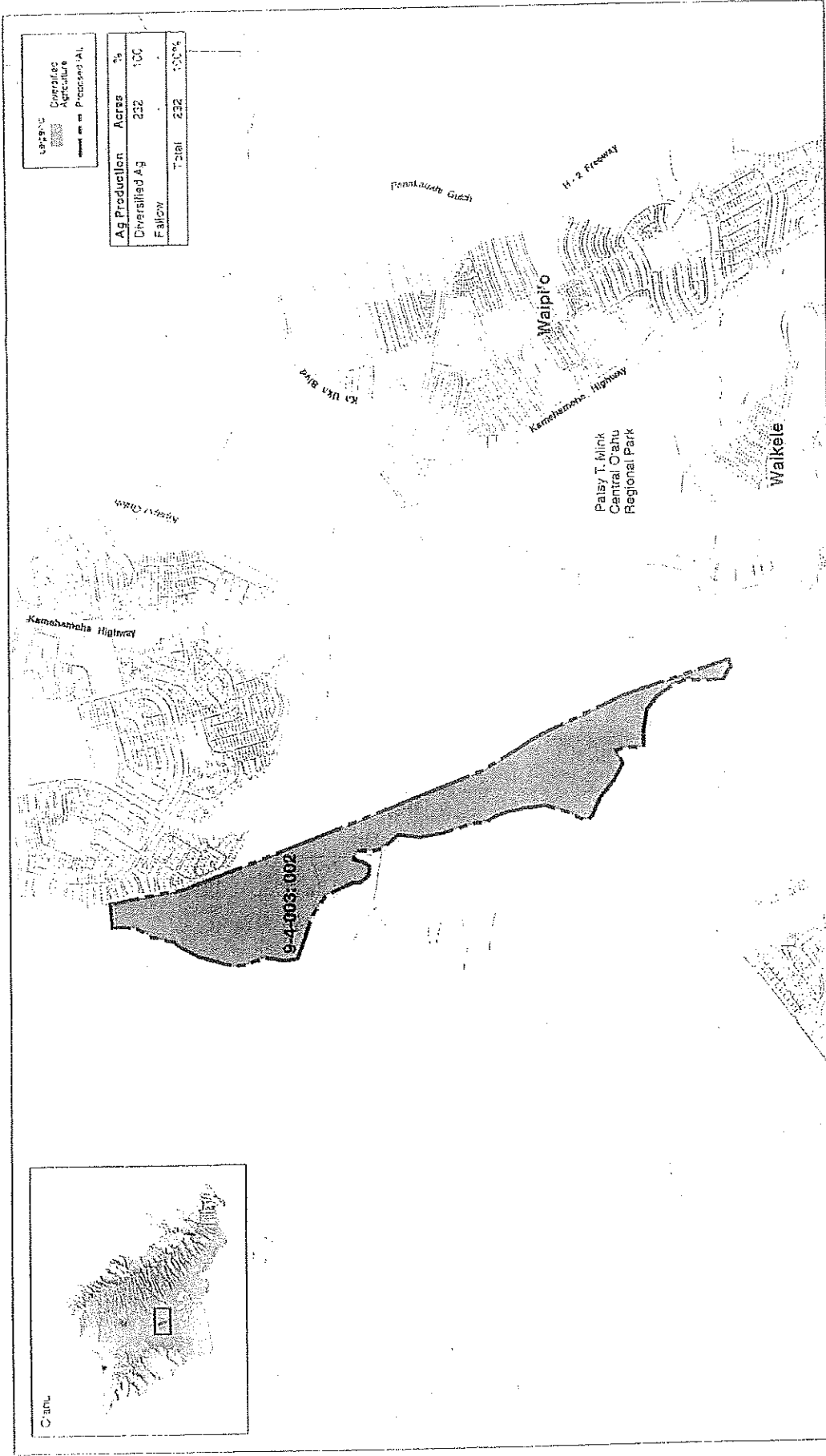


Whitmore / Dole Plantation FIGURE 2B
 AGRICULTURAL PRODUCTION
 Castle & Cooke Homes Hawaii - IAL



Whitemore / Dole Plantation FIGURE 6B
 AGRICULTURAL LANDS OF IMPORTANCE
 TO THE STATE OF HAWAII (AUSH)
 Castle & Cooke Homes Hawai'i - IAL

Sources: State of Hawaii, Department of Agriculture 124, 300 and zoning baseline maps, compiled and
 dated in 1977. Prepared with the assistance of the Soil Conservation Service, U.S. Department
 of Agriculture, and the College of Tropical Agriculture, University of Hawaii.
 City and County of Honolulu, Center for Planning, Research, and Development, 1998.
 United States.



USFS
 Cooperative
 Agriculture
 Research and
 Production Act

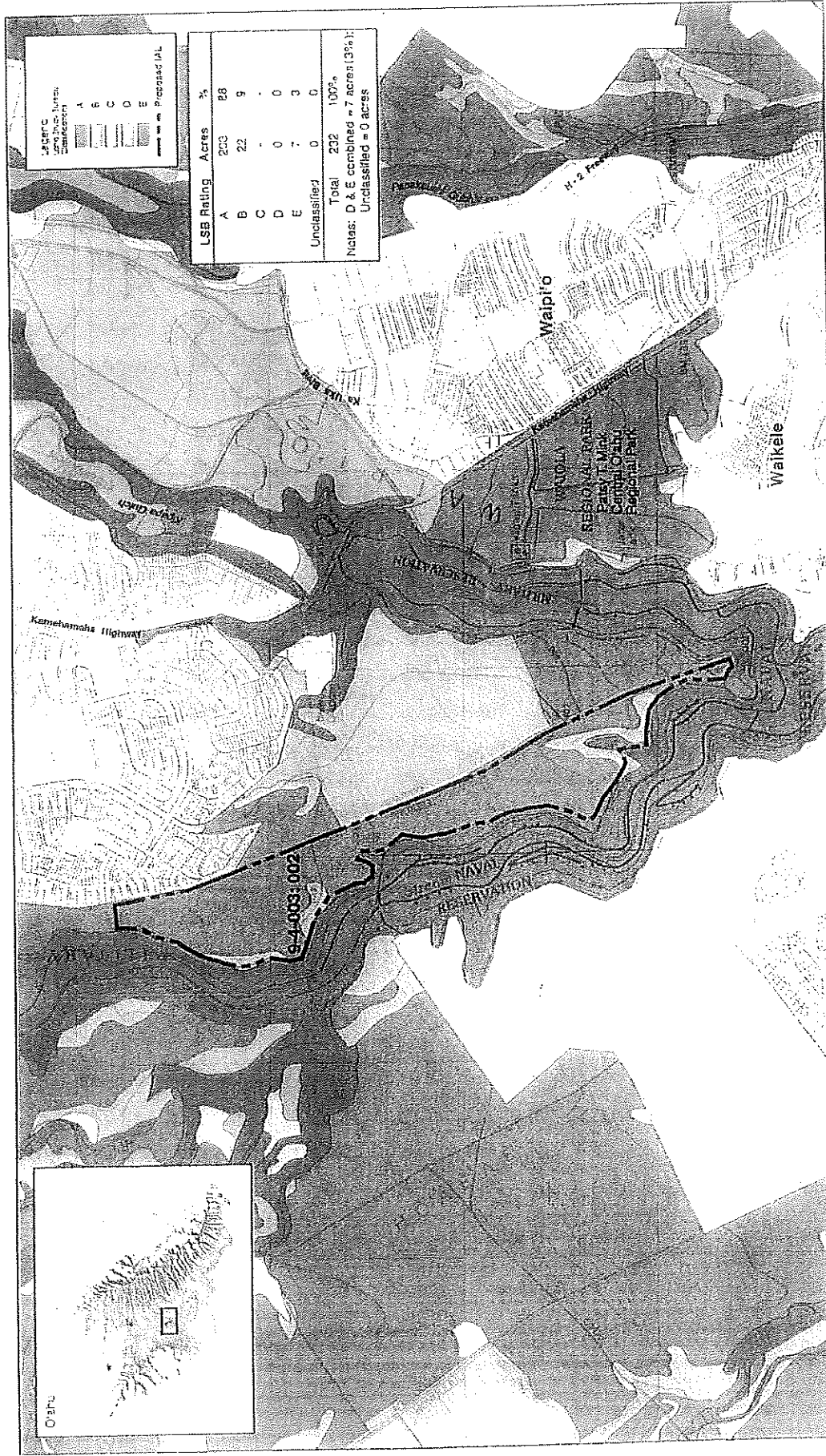
Ag Production	Acres	%
Diversified Ag	232	100
Fallow		
Total	232	100%

Milliani South FIGURE 2C
 AGRICULTURAL PRODUCTION

Castle & Cooke Home Hawaii - IAL

Source: City and County of Honolulu, County Zoning (part) vectors; Cassa and Esau 2010 (agricultural production).

750 1520 Feet
 Department of Planning
 December 2010
 Prepared by
 Castle & Cooke Hawaii, Inc.

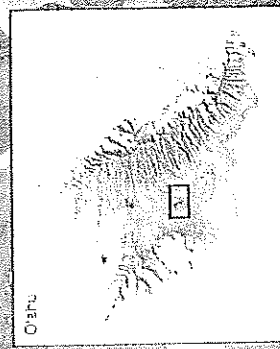


LSB Rating System
Soil Productivity
Soil Classification

A	Very High
B	High
C	Medium
D	Low
E	Very Low
Unclassified	Not Rated

LSB Rating	Acres	%
A	203	28
B	22	9
C	-	-
D	0	0
E	7	3
Unclassified	0	0
Total	232	100%

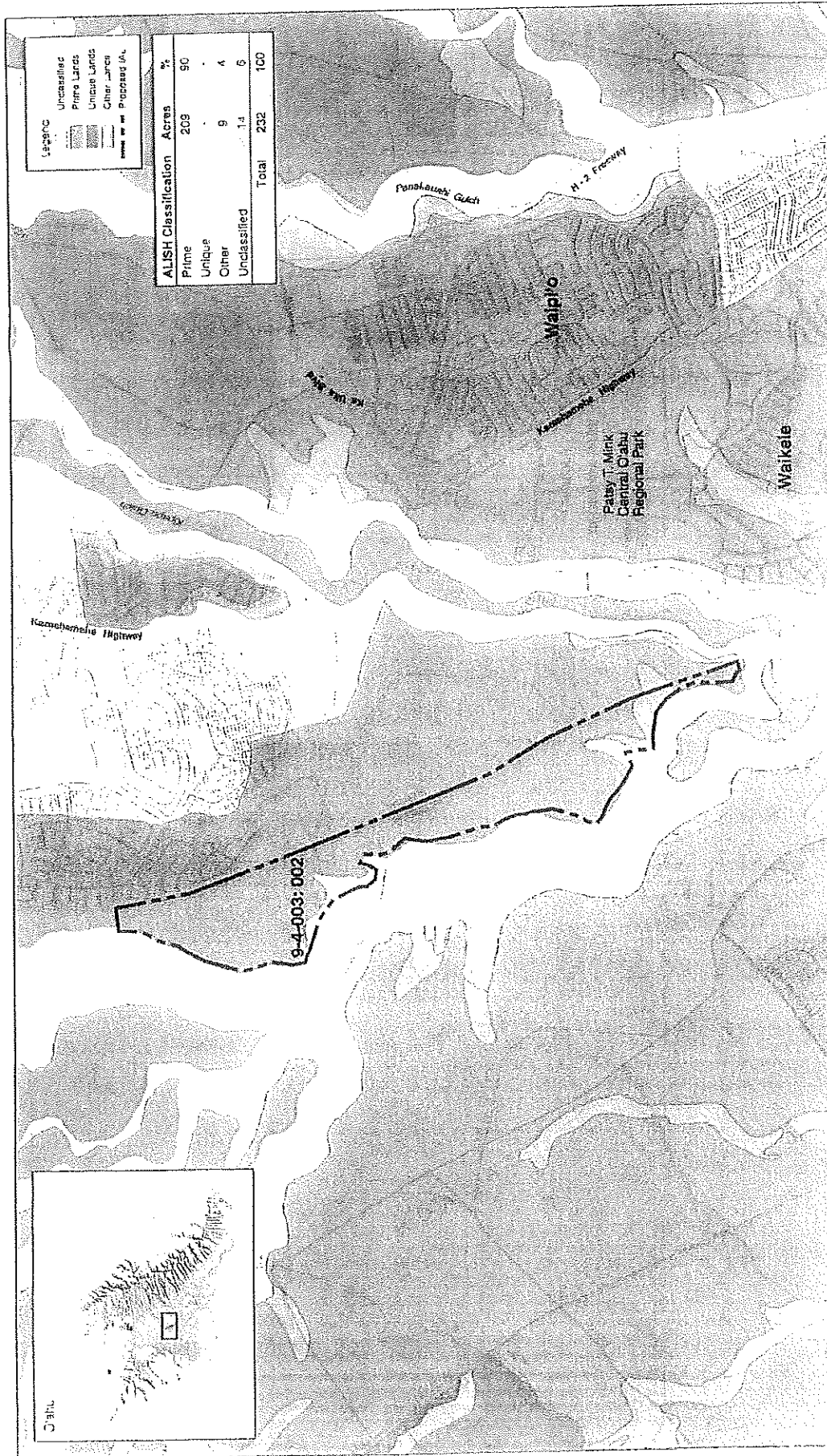
Notes: D & E combined = 7 acres (3%);
Unclassified = 0 acres



Mililani South **FIGURE 3C**
AGRICULTURAL SOILS PRODUCTIVITY RATINGS
(LSB RATINGS)
Castle & Cooke Homes Hawaii • JAL

Source: LARA Study Books, Database and Classification of Oahu, Honolulu, Hawaii, December 1972
and State of Hawaii, Office of Planning, August 2010 (LSB data)
City and County of Honolulu, October 2010 (parcel vectors).

750
1:50 Feet
Date: 10/19/2010
Prepared by: Castle & Cooke
Checked by: JAL



Milliani South **FIGURE 5C**
 AGRICULTURAL LANDS OF IMPORTANCE
 TO THE STATE OF HAWAII (ALISH)
 Castle & Cooke Homes Hawaii - IAL

Sources: State of Hawaii Department of Agriculture; 1:24,000 hand-drawn Justice maps compiled and dated in 1977; Prepared with the assistance of the Soil Conservation Service, U.S. Department of Agriculture, and the College of Tropical Agriculture, University of Hawaii.
 City and County of Honolulu, October 2016 (latest version).

0 750 1500 Feet
 Prepared by
 Castle & Cooke
 Castle & Cooke
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