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**FINAL ENVIRONMENTAL ASSESSMENT AND
FINDING OF
NO SIGNIFICANT IMPACT**

**(POHAKEA WATER SYSTEM IMPROVEMENT
PROJECT)**

Tax Map Key Nos.:
(3) 4-3-11: 11, 12, 22 & 31
(3) 4-3-12: 13, 16 & 22
(3) 4-3-13: 6 & 12
Pohakea Homesteads, Hamakua, Hawaii

MARCH, 2001

APPROVING AGENCY:
COUNTY OF HAWAII, DEPARTMENT OF WATER SUPPLY

345 KEKUANAOA STREET, SUITE 20
HILO, HAWAII 96720

PREPARED BY:
BRIAN T. NISHIMURA, PLANNING CONSULTANT

101 AUPUNI STREET
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EXHIBIT 2 - GENERAL PLAN OF THE PROJECT
EXHIBIT 3 - SUBDIVISION MAPS

1 INTRODUCTION

1.1 Purpose

The Department of Water Supply (DWS), County of Hawaii, is proposing water system improvements in the Pohakea Homesteads which is situated mauka of the community of Paauilo, Hamakua District, Island of Hawaii. (See Exhibit 1 Location Map) The proposed improvements will include the construction of two new pump stations, construction of two new concrete water tanks (100,000 gallons each) and appurtenances, construction of approximately 3,500 lineal feet of paved roadway for access and utility purposes, and installation of approximately 3,400 lineal feet of new 6 inch water lines. Two existing water tanks and one pump station will be abandoned and demolished. The purpose of this Environmental Assessment is to comply with the requirements of Chapter 343, Hawaii Revised Statutes (HRS) which are triggered by the use of County land and funds for the proposed project.

1.2 Identification of the Proposing Agency

Mr. Milton Pavao is the Manager of the Department of Water Supply for the County of Hawaii. The mailing address for the Department of Water Supply is 25 Aupuni Street, Hilo, Hawaii 96720-4252.

1.3 Identification of the Approving Agency

In accordance with Chapter 343, HRS, the Mayor, or an authorized representative of the County of Hawaii is the appropriate accepting authority of the Environmental Assessment.

1.4 Technical Description

The County of Hawaii, Department of Water Supply (DWS) is proposing water system improvements to upgrade the service and facilities for their Pohakea water system. (See Exhibit 2 – General Plan of the Project) The proposed improvements will include the construction of two new pump stations, construction of two new concrete water tanks (100,000 gallons each) and appurtenances, construction of approximately 3,500 lineal feet of paved roadway for access and utility purposes, and installation of approximately 3,400 lineal feet of new 6 inch water lines. Two existing water tanks and one pump station will be abandoned and demolished.

The proposed project will also involve the creation of three new parcels and several easements, which are described as follows: (See Exhibit 3 – Subdivision Maps)

Lot B-2, tank site - TMK: (3) 4-3-11: por. of 12, 16,770.7 square feet
Lot 38 A-2, tank and pump station site - TMK: (3) 4-3-11: por. of 11, 18,000 square feet
Lot 17-B-2-A-2, pump station site - TMK: (3) 4-3-12: por. of 22, 4,015 square feet

Easement, 20 foot wide for road and utility purposes - TMK: (3) 4-3-11: por. of 12, 1.141 acres
Easement R-1, 20 foot wide for road and utility purposes - TMK: (3) 4-3-11: por. of 22, 14,522 square feet
Easement R-2, 20 foot wide for road and utility purposes - TMK: (3) 4-3-11: por. of 11, 5,245 square feet
Easement W-1, 15 foot wide for waterline purposes - TMK: (3) 4-3-11: por. of 31, 3,120 square feet
Easement W-2, 15 foot wide for waterline purposes - TMK: (3) 4-3-11: Por. of 11, 9,155 square feet
Easement W-3, 15 foot wide for waterline purposes - TMK: (3) 4-3-11: Por. of 11, 26,543 square feet
Easement W-4, 15 foot wide for waterline purposes - TMK: (3) 4-3-13: Por. of 06, 16,258 square feet
Easement W-5, 15 foot wide for waterline purposes - TMK: (3) 4-3-13: Por. of 12, 359 square feet
Easement W-6, 15 foot wide for waterline purposes - TMK: (3) 4-3-12: Por. of 13, 8,489 square feet
Easement W-7, 15 foot wide for waterline purposes - TMK: (3) 4-3-12: Por. of 16, 354 square feet

All of the waterline easements (W-1 through W-7), are readjustments of an existing 15-foot wide waterline easement to reflect new ground data. The old waterline easements are being canceled. There is an existing 4-inch waterline within the waterline easements, which will essentially remain in place. There are only two short sections of the existing 4-inch line, which will be abandoned in place and replaced by a new 6-inch line. The new 6 inch replacement sections will connect the new pump station (at proposed Lot 17-B-2-A-2) and the new water tank (at proposed Lot 38 A-2) to the existing 4 inch line.

Easements R-1 and R-2 for road and utility purposes will provide access to the new 100,000-gallon water tank and pump station to be constructed on Lot 38 A-2. The other proposed easement for road and utility purposes will provide access to Lot B-2, the site of the second 100,000 gallon water tank. These easements will be improved with an access road that is 10-feet wide with 2-inch thick A.C. pavement, 6-inch thick basecourse and 12-inch thick sub-base course. Easement R-1 and R-2 will also include overhead electrical and telephone lines strung over 5 poles. The road and utility easement providing access to Lot B-2 will include overhead electrical and telephone lines strung over 10 poles as well as a 6-inch waterline and a fire hydrant.

The two new 100,000-gallon concrete water tanks will be approximately 17-feet high with a radius of 18-feet 6-inches. Other improvements at the tank sites include a paved driveway, 10-feet wide around the perimeter of the tank and a 6-foot high chain link fence around the perimeter of the tank site. The tank site on Lot 38 A-2 will also include a meter pole with service equipment and transmitter, a booster pump station with a motor controls center. The tank site on Lot B-2 will include a meter pole with service equipment and transmitter, a modified shallow drywell with a depth of 7-feet 6-inches.

Lot 17-B-2-A-2 will be improved with a new pump station, a 16-foot wide paved driveway approximately 45-feet long, and a new chain link fence around the perimeter of the property.

The proposed project will take approximately nine months to construct at a cost of approximately \$1,000,000.

1.5 Project Background

1.5.1 Need for the Project

The proposed improvements are intended to improve the service and reliability of the existing Pohakea water system. Two aging and undersized redwood water tanks will be replaced with two new 100,000-gallon concrete water tanks.

1.5.2 Land Use Designations

The proposed project involves nine separate parcels of land with land use designations as listed below:

- County Zoning Code: Agricultural forty acres (A-5a)
- County General Plan
- Land Use Designation: Agricultural , Intensive or Extensive
- State Land Use Designation: Agricultural
- Special Management Area: NA – project area not within SMA

The Project is consistent with all of the land use designations and regulations of the State and County of Hawaii.

1.5.3 Listing of Permits and Approvals

State of Hawaii Department of Health	Underground Injection Control (UIC) Permit
County of Hawaii Department of Public Works	Grading Permit Permit for work within County right-of-way Approval-Project Construction Plans
Department of Water Supply	Approval-Project Construction Plans

1.6 Agency and Public Consultation

The following public and private organizations were consulted during the preparation of this environmental assessment:

United States Fish and Wildlife Services, Division of Ecological Services
State of Hawaii, Department of Land and Natural Resources, Historic
Preservation Division and Division of Forestry and Wildlife
State of Hawaii, Department of Health
State of Hawaii, Department of Transportation
County of Hawaii, Planning Department
County of Hawaii, Department of Public Works
County of Hawaii, Police Department

2 ENVIRONMENTAL SETTING

2.1 Physical Environment

2.1.1 Geology and Hazards

Environmental Setting

The project area is located on the lower northeastern slopes of Mauna Kea and consists of the Hamakua volcanic series (Sterns and Macdonald, 1946). The Hamakua volcanic series consists mainly of basaltic lava flows.

The volcanic hazard as assessed by the United States Geological Survey for the project area is "8" on a scale of ascending risk 9 to 1 (Heliker 1990). Zone "8" includes the lower slopes of Mauna Kea, most of which has not been affected by lava flows for the past 10,000 years.

The entire island of Hawaii is in earthquake zone 4 of the Uniform Building Code, which establishes structural design standards for earthquake resistance for certain types of buildings. This zone is prone to major damages from potential earthquake activity.

Impacts

The proposed project will not expose the County's water system to any additional hazard risk that does not already exist. The volcanic hazard risk is relatively low and the same as any other alternative site that could be utilized for the same purpose.

2.1.2 Soils

Environmental Setting

The soils of the project area consist of the Honokaa Series, which consists of well drained silty clay loams that formed in volcanic ash. The Honokaa silty clay loam, low elevation, 0 to 10 percent slopes (HsC) and the Honokaa silty clay loam, low elevation, 10 to 20 percent slopes (HsD) are the predominant soils, as classified by the U.S. Department of Agriculture Soil Conservation Service (SCS) Soil Survey (U. S. Soil Conservation Service 1973). In a representative profile the surface layer is dark-brown silty clay loam about 6 inches thick. The subsoil is dark brown and very dark grayish brown silty clay loam about 59 inches thick. Permeability is rapid, runoff is slow, and the erosion hazard is slight.

Impacts and Mitigation Measures

All grading operations will be performed in conformance with the applicable provisions of Hawaii Administrative Rules, Title 11, Chapter 55, Water Pollution Control and Chapter 54, Water Quality Standards. In addition, the erosion and sedimentation control standards and guidelines of the Department of Public Works will be complied with. As such, the potential for soil erosion is negligible.

2.1.3 Climate

Environmental Setting

Hawaii's climate is generally characterized as mild with uniform temperatures, moderate humidity, and two identifiable seasons. The "summer" season, between May and October is generally warmer and drier. The "winter" season, between October and April is cooler and wetter. The project area is situated along the "windward" side of the Island of Hawaii, which is exposed to northeasterly trade winds that causes relatively high rainfall (approximately 75 inches annually in the project area). The average monthly minimum temperature along the Hamakua Coast ranges from the mid 60's to 70 degrees Fahrenheit while the average monthly maximum temperature ranges from the mid 70's to the mid 80's. (University of Hawaii Press, 1983)

Impacts

The climatic conditions of the project area will not have a significant impact on the proposed project.

2.1.4 Hydrology and Drainage

Environmental Setting

The project area is within the Paauilo aquifer system, which has a sustainable yield of approximately 60 million gallons per day. Daily water withdrawals from the Paauilo aquifer system are minimal at this time.

According to the Flood Insurance Rate Map (FIRM) prepared by the Federal Emergency Management Agency dated September 18, 1988, the project area is situated within Flood Zone "X" (areas determined to be outside the 500 year flood plain).

Impacts and Mitigation Measures

The proposed improvements will be required to adhere to State, County and Federal standards designed to avoid runoff and mitigate drainage concerns.

2.1.5 Water Quality

Environmental Setting

The project area is not situated in proximity to any gulches or bodies of water. Although dry most of the time, there are minor drainage channels crossing the pasture which may carry storm runoff during periods of high rainfall.

Impacts and Mitigation Measures

The proposed project is not expected to have any direct impact on any streams or marine waters.

2.1.6 Flora and Fauna

Environmental Setting

Although situated on seven separate parcels, the entire project area is utilized as pasture for livestock. The pasture is primarily kikuyu grass with stands of eucalyptus, ohia and guava bushes scattered throughout the area. Given the long-standing use of the project area for pasture use, it is highly unlikely that any listed, candidate or proposed endangered plant species are present in the project area.

The staff of the U.S. Fish and Wildlife Service indicated that the proposed project will not affect any endangered species or critical habitats.

Impacts

The proposed project will not have any significant impact on any protected or native species since the project area has been previously disturbed and does not serve as a habitat for any endangered plant or animal species.

2.1.7 Air Quality

Environmental Setting

Air pollution in the Hamakua district is generally minimal with occasional impacts caused by volcanic emissions from the ongoing Kilauea eruption. Other sources of air pollutants to a limited degree include vehicle emissions and dust from agricultural activities from adjacent property and vehicles utilizing the surrounding roadways.

Impacts and Mitigation Measures

Short term impacts will result from the proposed construction activity including dust and exhaust from machinery involved in the installation of the new water system improvements. Given the relative short construction time period and the sparse development of surrounding properties, the potential impacts of these construction activities should be minimal. The contractor will be instructed to utilize best management practices to minimize all impacts and comply with State Department of Health regulations.

2.1.8 Noise

Environmental Setting

Existing noise levels are predominantly influenced by traffic on the surrounding roadways. The rural-agricultural setting of the project area does not contain any other significant noise generator.

Impacts and Mitigation Measures

Temporary noise impacts will occur from construction activities associated with the proposed improvements and are unavoidable. Mitigation measures can be taken, however, to minimize noise impacts including the use of mufflers and implementing construction curfew periods. State Department of Health regulations must be adhered to during construction.

2.1.9 Scenic Resources

Environmental Setting

The Hamakua district is blessed with open space and scenic vistas in a rural-agricultural setting. The project area does not contain any site example of natural beauty included in the County General Plan.

Impacts

The open space and scenic vistas of the Hamakua district and the project area in particular will not be adversely affected by the proposed waterline system improvements.

2.2 Social, Cultural and Economic Setting

2.2.1 Socio-Economic Characteristics

Setting

The Hamakua district has experienced low population growth rate in comparison to the other districts on the island. Between 1980 and 1990 the district population increased by 8% while the County of Hawaii expanded by 31% over the same time period. Most of the district population growth occurred in and around the town of Honokaa (Census Tract 219), the primary economic and social center in the district. The resident population of the entire Hamakua district was 5,545 in 1990 with 3,681 residing in Census Tract 219.

The Hamakua district lost its primary employment generator when Hamakua Sugar Company shut down in 1994. A total of 700 direct jobs were lost and approximately 20,000 acres of land were removed from production with the closure of the sugar company. Although a substantial portion of the acreage has been planted with eucalyptus trees, the number of jobs that were lost have yet to be replaced. Agricultural activities that continue in the district include ranching, macadamia nuts, and other diversified agricultural crops. In addition to agriculture, the three major destination resort complexes in the neighboring South Kohala district provides a significant number of jobs for the residents of Hamakua.

Impacts

The proposed project will not have a substantial impact on the socio-economic character of the region. The proposed improvements will primarily benefit the twenty-one existing service connections on the system. Additional requests for water service will be evaluated by the Department of Water Supply at the time of the request.

2.2.2 Adjacent Land Uses

Setting

The project area is situated in a sparsely populated section of the Hamakua district mauka of the community of Paauilo. There are scattered single family residences situated in the vicinity, however, these dwellings are situated on relatively large lots zoned for agricultural uses. The project area is typical of the homesteads setting of the Hamakua district which is primarily utilized for pasture.

Impacts and Mitigation Measures

Short term impacts will result from the proposed construction activity including increased noise levels, dust and exhaust from machinery involved in the installation of the pipeline. Other temporary impacts include traffic disruption, the storage/stockpiling of material and equipment during the time of construction. Given the relative short construction period and the sparse development of surrounding properties, the potential impacts of these construction activities should be minimal.

The contractor will be instructed to utilize best management practices to minimize all impacts including the use of mufflers and implementing construction curfew periods. In addition, State Department of Health regulations will be adhered to during construction. Provisions will also be made to handle traffic control as well as the storage of equipment and supplies in compliance with all regulatory requirements.

2.3 Public Facilities and Services

2.3.1 Roads

Setting

Two roadways service the project area. The Hamakua Forest Reserve Road has a pavement width, which varies between 12 to 20 feet within a 30 foot wide road right-of-way. A Homestead Road, with pavement width varying between 12 and 18 feet is situated within a 100 foot wide road right-of-way.

Impacts and Mitigation Measures

The proposed waterline improvement project will have a temporary impact on the subject roadways with traffic disruptions during construction. Provisions will be made to handle traffic control during periods of disruption.

2.3.2 Water System

Setting

The proposed project is part of the County's Pohakea water system, which currently has 21 service connections.

Impacts and Mitigation Measures

The existing tanks and waterlines will remain in service during the construction of the proposed improvements, which will minimize any service disruptions. Once

in place, the new water tanks, pump stations and waterline will improve water pressure and service reliability for the users of the Pohakea water system.

2.3.3 Protective Services

Setting

The closest County fire station and police station are situated in Honokaa, approximately five miles northeast of the project area.

Impacts

The proposed project is not likely to create an additional burden on the existing service providers.

2.4 Archaeology, Historic and Cultural Resources

Setting

Preliminary comments submitted by the Hawaii State Department of Land and Natural Resources, State Historic Preservation Division stated in part, the following:

“In your phone conversation with staff archaeologist Patrick McCoy on May 5, 2000 you indicated that the subject parcels have been used in the past for pasture. Based on this information we believe that it is highly unlikely that significant historic sites would be found in these parcels. We thus believe that the proposed project will have ‘no effect’ on significant historic sites.”

Impacts

The proposed project is anticipated to have “no effect” on significant historic sites.

3 SUMMARY OF POTENTIAL ADVERSE ENVIRONMENTAL IMPACTS AND PROPOSED MITIGATION MEASURES

3.1 Short Term Impacts

Construction Activity:

Impacts: Short term impacts will result from the proposed construction activity including increased noise levels, dust and exhaust from machinery involved in the construction of the water system improvements. Other temporary impacts include traffic disruption, the storage/stockpiling of material and equipment during the time of construction. Given the relative short construction period and the sparse development of surrounding properties, the potential impacts of these construction activities should be minimal.

Mitigation: The contractor will be instructed to utilize best management practices to minimize all impacts including the use of mufflers and implementing construction curfew periods. In addition, State Department of Health regulations will be adhered to during construction. Provisions will also be made to handle traffic control as well as the storage of equipment and supplies in compliance with all regulatory requirements.

4 ALTERNATIVES

4.1 No Action

If the proposed water system improvements are not made, the existing system will continue to provide substandard service to the service area. In addition, ongoing stop-gap measures will be required to keep the system operational as old and substandard components continue to break down.

4.2 Alternative Tank Sites and Waterline Alignments

The Department of Water Supply could utilize alternative tank sites and waterline alignments for the proposed system improvements. However, the proposed tank sites and waterline alignments were selected based on the location of existing system improvements to minimize the extent of new improvements that would be required. Utilizing any alternative tank sites or waterline alignments would likely result in additional time and expense to the project without any significant benefits to be gained.

5 DETERMINATION, FINDINGS AND REASONS FOR SUPPORTING DETERMINATION

5.1 Significance Criteria

According to the Department of Health Rules (11-200-12), an applicant or agency must determine whether an action may have a significant impact on the environment, including all phases of the project, its expected consequences both primary and secondary, its cumulative impact with other projects, and its short and long-term effects. In making the determination, the Rules establish "Significance Criteria" to be used as a basis for identifying whether significant environmental impact on the environment if it meets any one of the following thirteen criteria.

1. Involves an irrevocable commitment to loss or destruction of any natural or cultural resources.

The project area is typical of the homesteads setting of the Hamakua district, which has been primarily utilized for pasture. The long standing livestock grazing on these pastures makes it highly unlikely that any natural or cultural resources remain intact within the project area.

2. Curtails the range of beneficial uses of the environment.

As stated previously, the proposed water system improvements are situated in an area primarily utilized for pasture. These pasture uses will not be curtailed as a result of the proposed improvements.

3. Conflicts with the State's long-term environmental policies or goals and guidelines as expressed in Chapter 344, HRS; and any revisions thereof and amendments thereto, court decisions, or executive orders.

The proposed development is consistent with the Environmental Policies established in Chapter 344, HRS, and the National Environmental Policy Act.

4. Substantially affects the economic or social welfare of the community or state.

The proposed project will have a substantial positive impact on the level of service and reliability of the Pohakea water system. As such the proposed project will have a substantial positive impact on the economic and social welfare of the community.

REFERENCES

Heliker, C. 1990. Volcanic and Seismic Hazards on the Island of Hawaii. Washington: GPO
University of Hawaii Department of Geography. Atlas of Hawaii. University of Hawaii Press, Honolulu. 1983

U.S. Soil Conservation Service. 1973. Soil Survey of the Island of Hawaii, State of Hawaii. Washington: U.S.D.A.

University of Hawaii, Department of Geography. Atlas of Hawaii. University of Hawaii Press, Honolulu. 1983.

Stearns, H.T. and Macdonald G.A. 1946. Geology and Ground-Water Resources of the Island of Hawaii. Bulletin 9 Hawaii Division of Hydrography. Advertiser Publishing Co., Ltd. Honolulu.

**APPENDIX A - REPRODUCTION OF COMMENTS AND RESPONSES MADE
DURING THE PRE-ASSESSMENT CONSULTATION PERIOD**

State of Hawaii, Department of Land and Natural Resources, Division of Forestry and
Wildlife, May 1,, 2000.

Response: Letter dated July 7, 2000, from Brian T. Nishimura to Michael G. Buck,
Administrator, Department of Land and Natural Resources, Division of Forestry
and Wildlife.

State of Hawaii, Department of Land and Natural Resources, Historic Preservation
Division, May 9, 2000.

State of Hawaii, Department of Transportation, May 11, 2000.

County of Hawaii, Planning Department, June 14, 2000.

County of Hawaii, Department of Public Works, Engineering Division June 2, 2000.

County of Hawaii, Police Department, May 18, 2000.

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



STATE OF HAWAII
DEPARTMENT OF LAND AND NATURAL RESOURCES
DIVISION OF FORESTRY AND WILDLIFE
1151 PUNCHBOWL STREET
HONOLULU, HAWAII 96813

May 1, 2000

TIMOTHY E. JOHNS
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FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND MANAGEMENT
STATE PARKS
WATER AND LAND DEVELOPMENT
WATER RESOURCE MANAGEMENT

Mr. Brian T. Nishimura
Planning Consultant
101 Aupuni Street, Suite 217
Hilo, Hawaii 96720

Dear Mr. Nishimura:

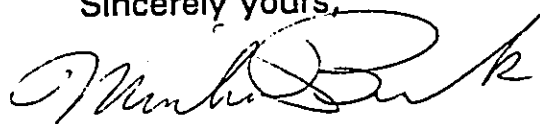
Subject: Request for Comments: Pre-Environmental Assessment
Consultation Paauilo Water System Improvements, Hamakua
District, Island of Hawaii.

We have reviewed your cover letter to us dated April 28, 2000 for the subject project description and need additional information to review the project as submitted. The proposed project as stated by your cover letter involves the acquisition of real property and land exchange for tank sites and two pump station sites as well as acquisition of roadway and utility easements. The proposed improvements include construction of two new pump stations, construction of two new concrete water tanks (100,000 gallon and 50,000 gallon) and appurtenances, construction of approximately 2,500 lineal feet of new 6 inch water lines. The proposed project as described will definitely impact the surrounding area. Please provide the scope of each: 1) construction and area of the two pump station sites, 2) construction and area of the two concrete water tanks, 3) and their appurtenances, and 4) construction and area of 3,500 lineal feet of 6-inch water line. We would like to see the vegetation description and State land-use zoning to do an adequate review of this project.

Mr. Brian T. Nishimura
May 1, 2000
Page 2

The Department of Land and Natural Resources, Division of Forestry and Wildlife request that the information be provided to do a realistic review of your pre-environmental assessment consultation with the Division. Thank you for the opportunity to comment on your preliminary project proposal.

Sincerely yours,

A handwritten signature in black ink, appearing to read "Michael G. Buck". The signature is fluid and cursive, with a large initial "M" and a long, sweeping underline.

Michael G. Buck
Administrator

Copy: DOFAW, Hawaii Branch

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Phone: (808) 935-7692
Fax: 808) 935-6126
E-Mail: btnishi@interpac.net

July 7, 2000

Mr. Michael G. Buck, Administrator
State of Hawaii
Department of Land and Natural Resources
Division of Forestry and Wildlife
1151 Punchbowl Street
Honolulu, HI. 96813

Subject: Letter dated May 1, 2000
Paauilo Water System Improvements
Hamakua District, Island of Hawaii

This is to respond to your request for additional information regarding the Paauilo Water System Improvement project discussed in your comment letter dated May 1, 2000. The proposed project is situated in the Pohakea Homesteads, mauka of the community of Paauilo, Hamakua District, Island of Hawaii.

The scope of the proposed project has been revised slightly since my previous request for comments were sent to you. The proposed improvements will now include the construction of two new pump stations, construction of two new concrete water tanks (100,000 gallons each) and appurtenances, construction of approximately 3,500 lineal feet of paved roadway for access and utility purposes, and installation of approximately 3,400 lineal feet of new 6 inch water lines. Two existing water tanks will be abandoned and demolished.

The project area is within the State Land Use Agricultural District and zoned Agricultural five acres (A-5a) by the County. The County General Plan Land Use Pattern Allocation Guide (LUPAG) map designation is also Agriculture - Intensive and Extensive. Although situated on separate parcels, the entire project area is utilized as pasture for cattle grazing. The pasture is primarily kikuyu grass with stands of eucalyptus, ohia and guava bushes scattered throughout the area. The scope of improvements for each of the construction sites is provided below:

1. Lot B-2, tank site - TMK: (3) 4-3-11: por. of 12, 16,770.7 square feet
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11. Easement W-5, 15 foot wide for waterline purposes - TMK: (3) 4-3-13: Por. of 12, 359 square feet
12. Easement W-6, 15 foot wide for waterline purposes - TMK: (3) 4-3-12: Por. of 13, 8,489 square feet
13. Easement W-7, 15 foot wide for waterline purposes - TMK: (3) 4-3-12: Por. of 16, 354 square feet

All of the waterline easements (W-1 through W-7), are readjustments of an existing 15 foot wide waterline easement to reflect new ground data. The old waterline easements are being cancelled. There is an existing 4 inch waterline within the waterline easements which will essentially remain in place. There are only two short sections of the existing 4 inch line which will be abandoned in place and replaced by a new 6 inch line. The new 6 inch replacement sections will connect the new pump station (at proposed Lot 17-B-2-A-2) and the new water tank (at proposed Lot 38 A-2) to the existing 4 inch line.

Easements R-1 and R-2 for road and utility purposes will provide access to the new 100,000 gallon water tank and pump station to be constructed on Lot 38 A-2. The other proposed easement for road and utility purposes will provide access to Lot B-2, the site of the second 100,000 gallon water tank. These easements will be improved with an access road that is 10-feet wide with 2-inch thick A.C. pavement, 6-inch thick basecourse and 12-inch thick sub-base course. Easement R-1 and R-2 will also include overhead electrical and telephone lines strung over 5 poles. The road and utility easement providing access to Lot B-2 will include overhead electrical and telephone lines strung over 10 poles as well as a 6-inch waterline and a fire hydrant.

The new 6-inch waterline sections will have a trench depth of approximately 36-inches with a minimum of 6-inches of cushion above and below the pipe.

The two new 100,000 gallon concrete water tanks will be approximately 17-feet high with a radius of 18-feet 6-inches. Other improvements at the tank sites include a 10-foot wide paved driveway from the roadway easement extending around the perimeter of the tank and a 6-foot high chain link fence around the perimeter of the tank site. The tank site on Lot 38 A-2 will also include a meter pole with service equipment and transmitter, a booster pump station with motor controls center. The concrete pad for the pump station will be approximately 9-feet wide and 15-feet long. The tank site on Lot B-2 will include a meter pole with service equipment and transmitter as well as a modified shallow drywell with a depth of 7-feet 6-inches.

Lot 17-B-2-A-2 will be improved with a new pump station, a 16-foot wide pave driveway approximately 45-feet long, and a new chain link fence around the perimeter of the property. The concrete pad for the pump station will be approximately 9-feet wide and 15-feet long.

The proposed subdivision maps and easement maps have been enclosed to assist in your review of the proposed project.

Should you have any questions or require additional information regarding this matter, please do not hesitate to contact me at 935-7692. Thank you very much for your assistance.

Sincerely,

A handwritten signature in cursive script, appearing to read "Brian T. Nishimura".

Brian T. Nishimura, Planning Consultant

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



STATE OF HAWAII

DEPARTMENT OF LAND AND NATURAL RESOURCES

HISTORIC PRESERVATION DIVISION
Kakuhewa Building, Room 555
801 Kamohala Boulevard
Kapolei, Hawaii 96707

TIMOTHY E. JOHNS, CHAIRPERSON
BOARD OF LAND AND NATURAL RESOURCES

DEPUTIES
JANET E. KAWALO

AQUATIC RESOURCES
BOATING AND OCEAN RECREATION
CONSERVATION AND RESOURCES
ENFORCEMENT
CONVEYANCES
FORESTRY AND WILDLIFE
HISTORIC PRESERVATION
LAND
STATE PARKS
WATER RESOURCE MANAGEMENT

May 9, 2000

Mr. Brian T. Nishimura, Planning Consultant
101 Aupuni Street, Suite 217
Hilo, Hawaii 96720

LOG NO: 25412 ✓
DOC NO: 0005PM04

Dear Mr. Nishimura:

**SUBJECT: Pre-Environmental Assessment Consultation for Proposed County of Hawaii
Department of Water Supply Water System Improvements
Paaui, Hamakua, Hawaii Island
TMK: 4-3-11:11, 12, 22; 4-3-12:21-22**

Thank you for your letter of April 28, 2000 and the opportunity to comment on the proposed project, which is located in the Pohakea Homesteads above Paaui.

The proposed project will include the construction of two new pump stations, two new water tanks, approximately 3,500 lineal feet of paved roadway for access, installation of approximately 2,500 lineal feet of new 6 inch water lines, and the demolition and removal of two existing water tanks.

In your phone conversation with staff archaeologist Patrick McCoy on May 5, 2000 you indicated that the subject parcels have been used in the past for pasture. Based on this information we believe that it is highly unlikely that significant historic sites would be found in these parcels. We thus believe that the proposed project will have "no effect" on significant historic sites.

If you have any questions please contact Patrick McCoy (692-8029).

Aloha,

A handwritten signature in black ink, appearing to read "Don Hibbard".

DON HIBBARD, Administrator
State Historic Preservation Division

PM:dnm

BENJAMIN J. CAYETANO
GOVERNOR



STATE OF HAWAII
DEPARTMENT OF TRANSPORTATION
869 PUNCHBOWL STREET
HONOLULU, HAWAII 96813-5097

May 11, 2000



KAZU HAYASHIDA
DIRECTOR

DEPUTY DIRECTORS
BRIAN K. MINAAI
GLENN M. OKIMOTO

IN REPLY REFER TO:
STP 8.9546

Mr. Brian T. Nishimura
Planning Consultant
101 Aupuni Street, Suite 217
Hilo, Hawaii 96720

Dear Mr. Nishimura:

Subject: Pohakea Homesteads Water System Improvements
Pre-Environmental Assessment Consultation

Thank you for your transmittal requesting our review of the proposed project.

The proposed improvements will not impact our State transportation facilities.

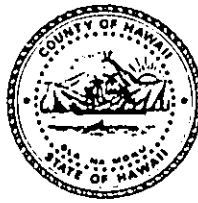
We appreciate the opportunity to provide comments.

Very truly yours,

A handwritten signature in cursive script, appearing to read "Kazu Hayashida".

KAZU HAYASHIDA
Director of Transportation

Stephen K. Yamashiro
Mayor



Virginia Goldstein
Director

Russell Kokubun
Deputy Director

County of Hawaii

PLANNING DEPARTMENT

25 Aupuni Street, Room 109 • Hilo, Hawaii 96720-4252
(808) 961-8288 • Fax (808) 961-8742

June 14, 2000

Mr. Brian Nishimura
Planning Consultant
101 Aupuni Street, Suite 217
Hilo, HI 96720

Dear Mr. Nishimura:

**Your Request for Pre-Environmental Assessment (EA) Consultation:
Hawaii County Department of Water Supply (DWS)
Water System Improvements
TMK: 4-3-11: 11, 12, 22, 31, Pohakea Homesteads, Hamakua
TMK: 4-3-12: 13, 16, 21, 22, Paauiilo Homesteads, Hamakua
TMK: 4-3-13: 06**

Thank you for requesting our participation to review and submit comments for the pending draft EA on the proposed public water improvement project. According to the State Department of Health's Environmental Impact Statement (EIS) Rules, Hawaii Administrative Rule 11-200-9, advice and input shall be sought from the County agency responsible for implementing the Hawaii County General Plan. Generally, our comments pertain to the project's consistency with the state or county land use law that apply to the various parcels of this proposal.

Project Map Information. On May 10, 2000, my staff obtained a Project Map of the Pohakea Water System Improvements from the Department of Water Supply. Listed below are two items of information shown on the map relevant to this project: the TMK (tax map key) numbers of all the parcels within the scope of this project and the proposed improvements or uses that will be made on each parcel.

Mr. Brian Nishimura
Planning Consultant
Page 2
June 14, 2000

Proposed Uses or Improvements

TMK: 4-3-11: 11 - easements and new Pohakea tank site
TMK: 4-3-11: 12 - new Mahuna tank site and easement
TMK: 4-3-11: 22 & 31 - easement

TMK: 4-3-12: 13, 16 - easement
TMK: 4-3-12: 21, 22 - new pump station

TMK: 4-3-13: 06 - easement

Land Use Zonings & Designations. These parcels are all subject to the same land use laws.

County Zoning Code: - Agriculture (A-5acs.)

Special Management Area (SMA): - NA – this project is not in the SMA;
therefore, SMA review is not required.

Shoreline Parcel: - NA – this project is not on the shoreline.

County General Plan (GP)
Land Use Designation: - Agricultural, Intensive or Extensive.
None of the plats of the project location is a
site example of natural beauty.

State Land Use (SLU): -Agricultural

Hawaii County Zoning Code Requirements: Permitted Use. The proposed water system improvements are a *permitted use within any district* consistent with County Zoning Code. Uses permitted within any district include water transmission lines and substations of public and governmental agencies as well as public uses, structures and buildings. Although under the County's public use standards a project is subject to the Zoning Code's plan approval criteria these procedures do not apply to the County agricultural district, according to secs. 25-2-71(a) & (c)(2).

SLU Agricultural District. The proposed improvements are permitted uses consistent with Haw. Rev. Stat. sec. 205-4.5(a)(7) & (10). Permitted uses include public, private, and quasi - public utility lines, transformer stations, major water storage tanks and appurtenant small buildings, e.g., booster pumping stations, and accessory uses. Certain uses, however, are specifically excluded by this state law and are not permitted in the State Agricultural district.

Mr. Brian Nishimura
Planning Consultant
Page 3
June 14, 2000

Consistent with Hawaii County General Plan (GP). The various parcels of the project site have a GP designation of either intensive or extensive agriculture, according to the Land Use Pattern Allocation Guide (LUPAG). An intensive designation is for sugar, orchard, diversified agriculture and floriculture. An extensive designation is for pasturage and range lands.

Because the proposed improvements are to the County's public water system, the GP's elements on Land Use, Public Utilities Goals & Policies, and Water Policies also apply to the project's consistency with the County GP.

GP Land Use Standards. According to the GP land use standards, designated land uses are shown on the LUPAG Map. These designated land uses express the GP land use policy and

" ... are long-range guides to general location and will be subject to: a) existing zoning; b) State Land Use District; and c) zone guide map and interpretation. In addition, where " ... land [is] required for community and governmental services and programs ... [these uses] may be accommodated within the allocated acreage. The allocated acreage is the designated land uses shown on the LUPAG.

Subject to Existing Zoning. In the above discussion, this proposal was determined consistent with the County agricultural zoning because it is a use permitted in any zone district. The proposed water improvements are consistent with the GP land use standards where land is required for governmental services. These improvements can be accommodated within the LUPAG map's allocated acreage because the land is required for the *governmental service* to deliver public water.

GP Public Utility Goals & Policies. The improvement project is consistent with the goal to ensure that adequate, efficient and dependable public utility services is available to users; in addition, the improvements are also consistent with the goal to maximize efficiency and economy in providing utility services. Finally, this improvement project is consistent with the public utilities policy that encourages the improvement of existing utility services to meet the needs of users.

Stated below are the GP design criteria in the public utilities goals and policies that apply to county projects.

- The GP public utilities goal requires public facilities to be designed to fit into their surroundings or concealed from public view. In addition, the GP's public utilities policy requires utility facilities to be designed to minimize conflict with the natural environment and natural resources.

Mr. Brian Nishimura
Planning Consultant
Page 4
June 14, 2000

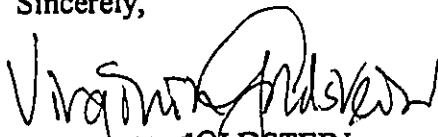
- The GP's public utilities policy requires facility design to complement adjacent land uses (in this case county and state agricultural land uses). It shall also be operated so as to minimize pollution or disturbance.

GP Water Policies. The location of the proposed improvements in an existing subdivision, the Pohakea Homesteads, is consistent with three GP water policies. The improvements are consistent with promoting the County's desired land use development patterns and it is consistent with the policy to install water system improvements in the existing subdivision, an area of established need and characteristics. Improvements to the water system are also consistent with the policy to improve and replace inadequate systems.

- GP water policy also requires all water systems to be designed and built to DWS standards. The GP water standards mandate that water systems shall meet requirements of the DWS and the County Subdivision Control Code.

Thank you for the opportunity to participate in the pre-consultation and to offer comments for the draft EA. Any follow-up to these comments may be made with staff planner, Earl Lucero. Ph: 961-8288.

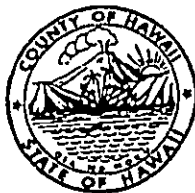
Sincerely,


VIRGINIA GOLDSTEIN
Planning Director

EML:dk
P:\wp60\earl\letters\bnishi2.doc

cc: Mr. Bob Yanabu, Chief Engineer
SMA Section

Stephen K. Yamashiro
Mayor



Jiro A. Sumada
Deputy Chief Engineer

County of Hawaii
DEPARTMENT OF PUBLIC WORKS
25 Aupuni Street, Room 202 · Hilo, Hawaii 96720-4252
(808) 961-8321 · Fax (808) 961-8630

June 2, 2000

Brian T. Nishimura, Planning Consultant
101 Aupuni Street, Suite 217
Hilo, Hawaii 96720

SUBJECT: PRE-ENVIRONMENTAL ASSESSMENT CONSULTATION
Department of Water Supply Water System Improvements
Request for Preliminary Comments
Location: Paauilo, Hamakua, Hawaii

We have reviewed the subject request forwarded by your letter dated April 28, 2000 and have the following comments.


1. All new building construction shall conform to current code requirements.
2. All development generated runoff shall be disposed of on-site and shall not be directed toward any adjacent properties.

The applicant shall be informed that if they include drywells in the subject development, an Underground Injection Control (UIC) permit may be required from the Department of Health, State of Hawaii.

3. Any earthwork activity, including grading and grubbing, shall conform to Chapter 10 - Erosion and Sedimentation Control, of the Hawaii County Code.
4. A permit shall be obtained from the Department of Public Works, as required under Chapter 22, Article 3, Section 22-44 of the Hawaii County Code, for any work within the County right-of-way.

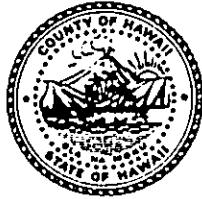
Site specific construction plans should be submitted to this department for review and comment.

Should you have any questions, please contact Mr. Kelly Gomes of our Engineering Division at 961-8327.


for GALEN M. KUBA, Division Chief
Engineering Division

KG

Stephen K. Yamashiro
Mayor



Wayne G. Carvalho
Police Chief

James S. Correa
Deputy Police Chief

County of Hawaii
POLICE DEPARTMENT

349 Kapiolani Street • Hilo, Hawaii 96720-3998
(808) 935-3311 • Fax (808) 961-2702

May 18, 2000

Mr. Brian T. Nishimura
Planning Consultant
101 Aupuni Street, Suite 217
Hilo, HI 96720

Dear Mr. Nishimura:

**SUBJECT : REQUEST FOR COMMENTS
PRE-ENVIRONMENTAL ASSESSMENT CONSULTATION FOR DEPARTMENT
OF WATER SUPPLY**

This acknowledges your letter of April 28, 2000, requesting our comments on the proposed project.

Staff has reviewed your request and does not foresee any adverse effect should the new water system and related improvements be granted.

Thank you for the opportunity to comment.

Sincerely,

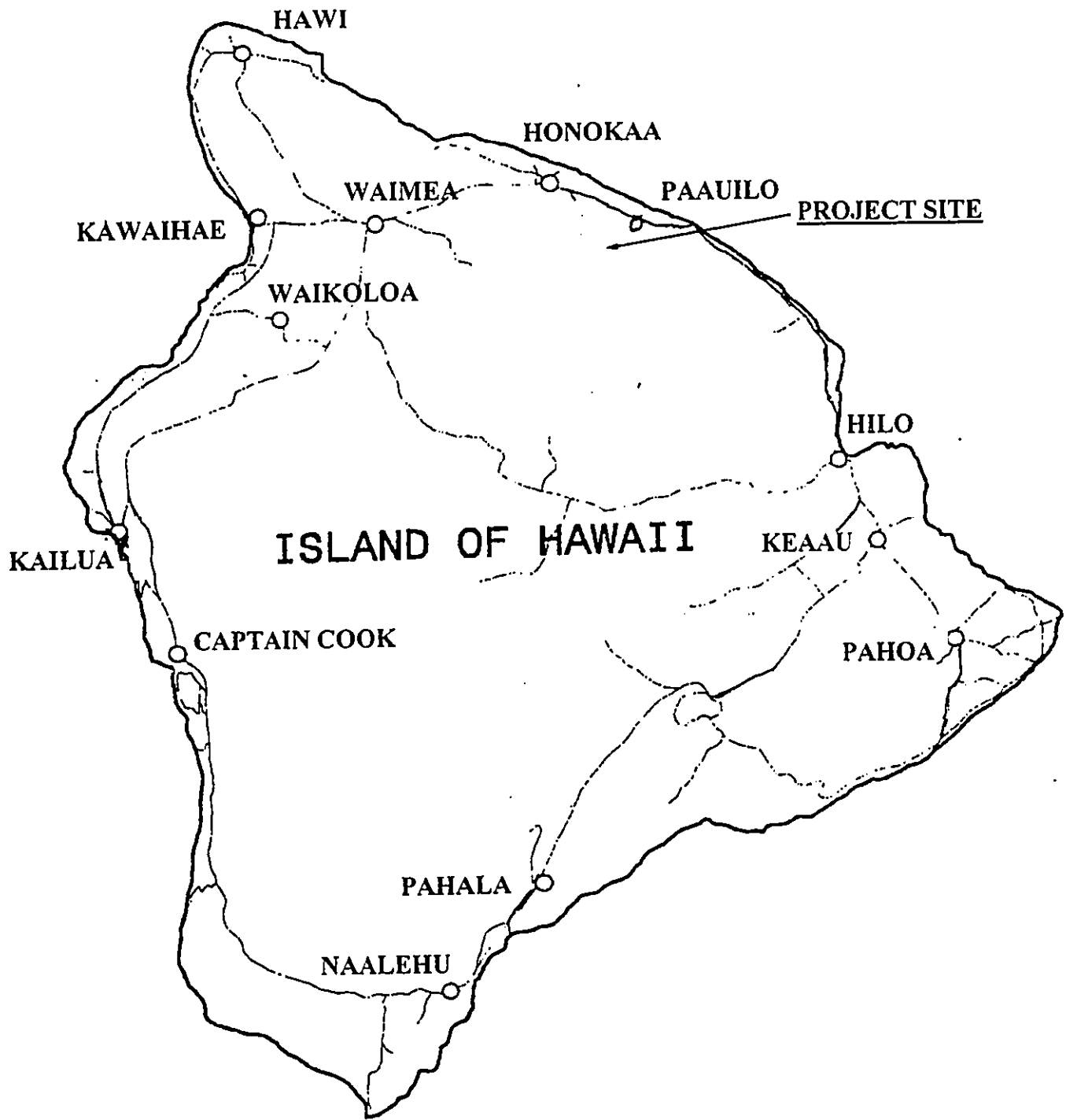
WAYNE G. CARVALHO
POLICE CHIEF

A handwritten signature in black ink, appearing to read "Thomas J. Hickcox".

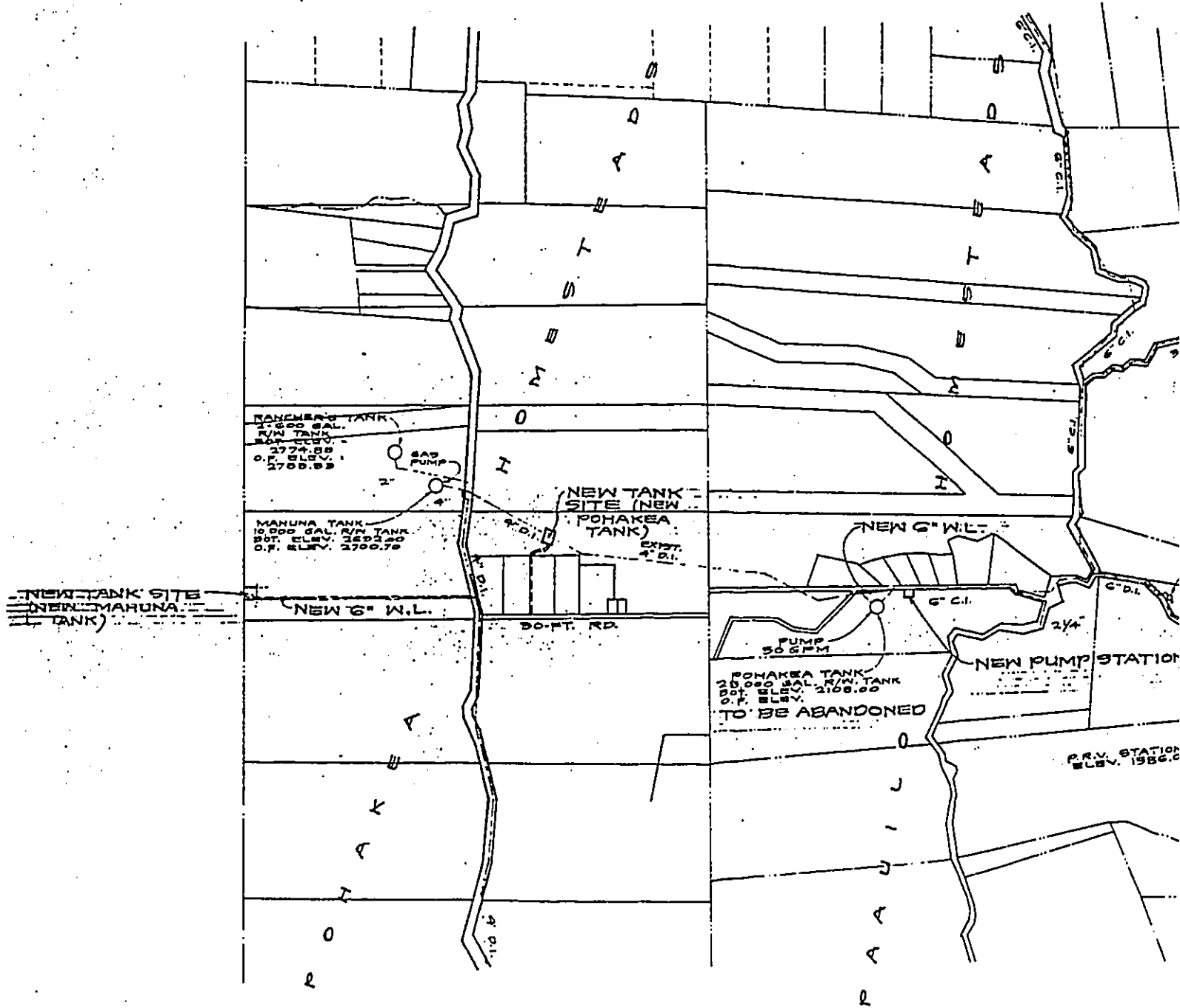
THOMAS J. HICKCOX
ASSISTANT POLICE CHIEF
FIELD OPERATIONS BUREAU

EWR:lk

EXHIBIT 1 - LOCATION MAP



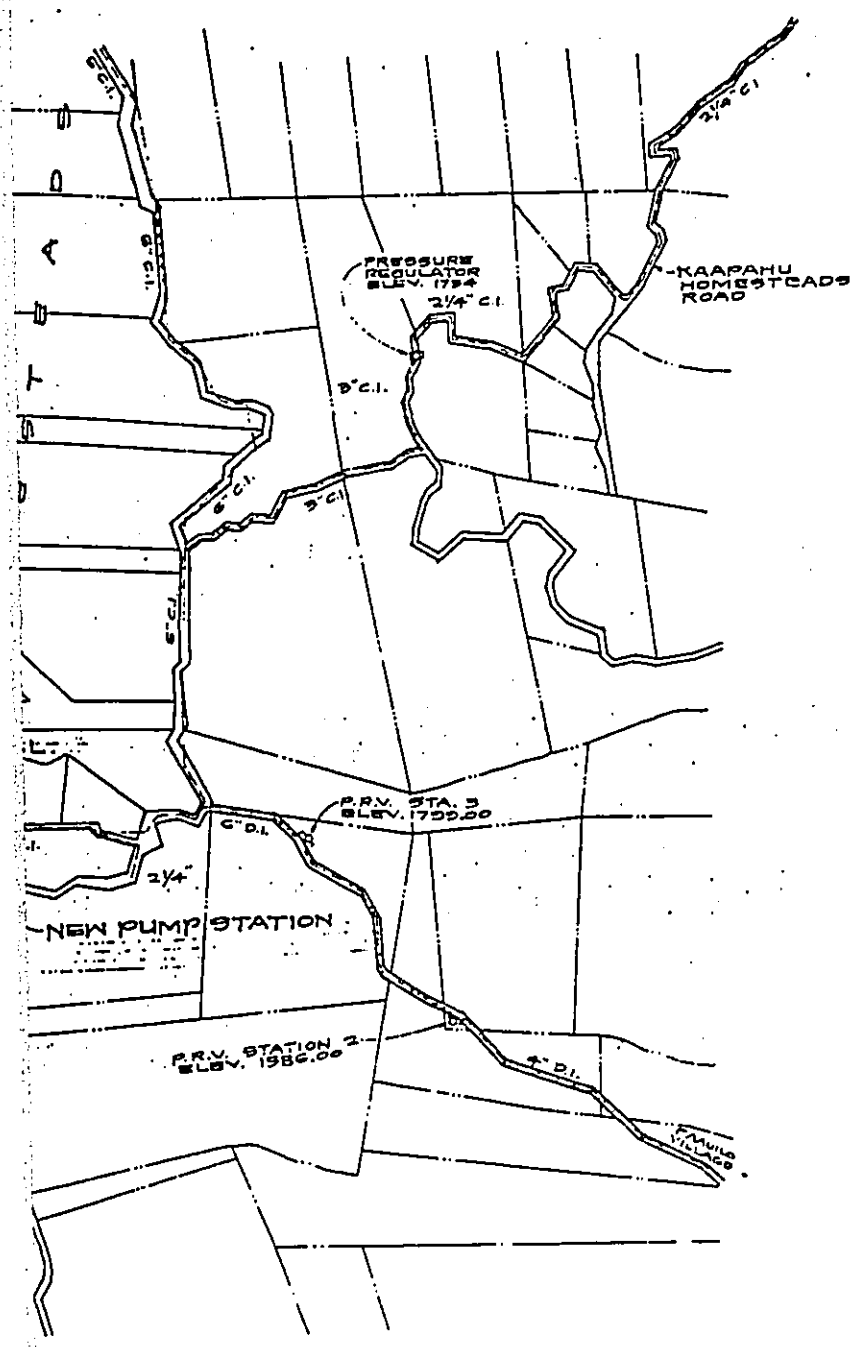
**EXHIBIT 2 - GENERAL PLAN OF
THE PROJECT**



GENERAL PLAN
SCALE: 1 IN. = 100 FT.

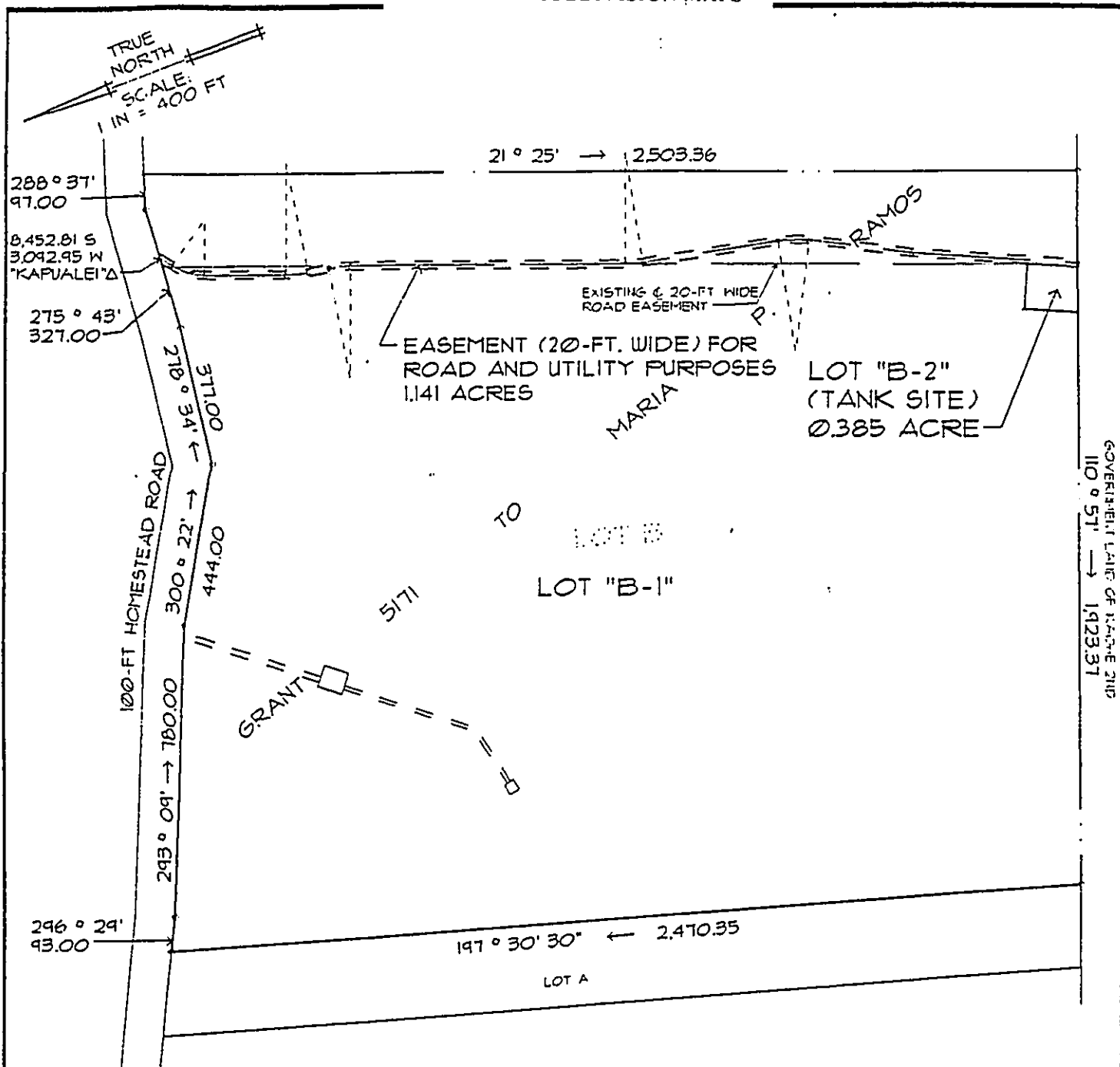
REDUCED DRAWING
NOT TO SCALE

TRUE NORTH
SCALE:
1 IN. = 100 FT.



REDUCED DRAWING
NOT TO SCALE

EXHIBIT 3 - SUBDIVISION MAPS



GOVERNMENT LAND OF HAWAII 2ND 110° 51' → 1923.31

SUBDIVISION MAP

LAND SITUATED AT POHAKEA, HAMAKUA, ISLAND OF HAWAII, HAWAII, BEING A PORTION OF GRANT 5171 TO MARIA P. RAMOS, BEING ALSO A PORTION OF LOT "B".

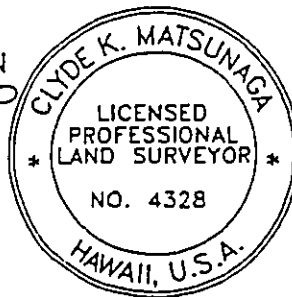
SUBDIVISION OF LOT "B" INTO LOTS "B-1" AND "B-2" (TANK SITE) AND DESIGNATION OF AN EASEMENT (20-FT. WIDE) FOR ROAD AND UTILITY PURPOSES.

OWNER:
MYRON MAHUNA REVOCABLE LIVING TRUST,
P.O. BOX 111
PAAULI, HAWAII 96776

TAX MAP KEY: 3RD DIV. 4-3-II:12



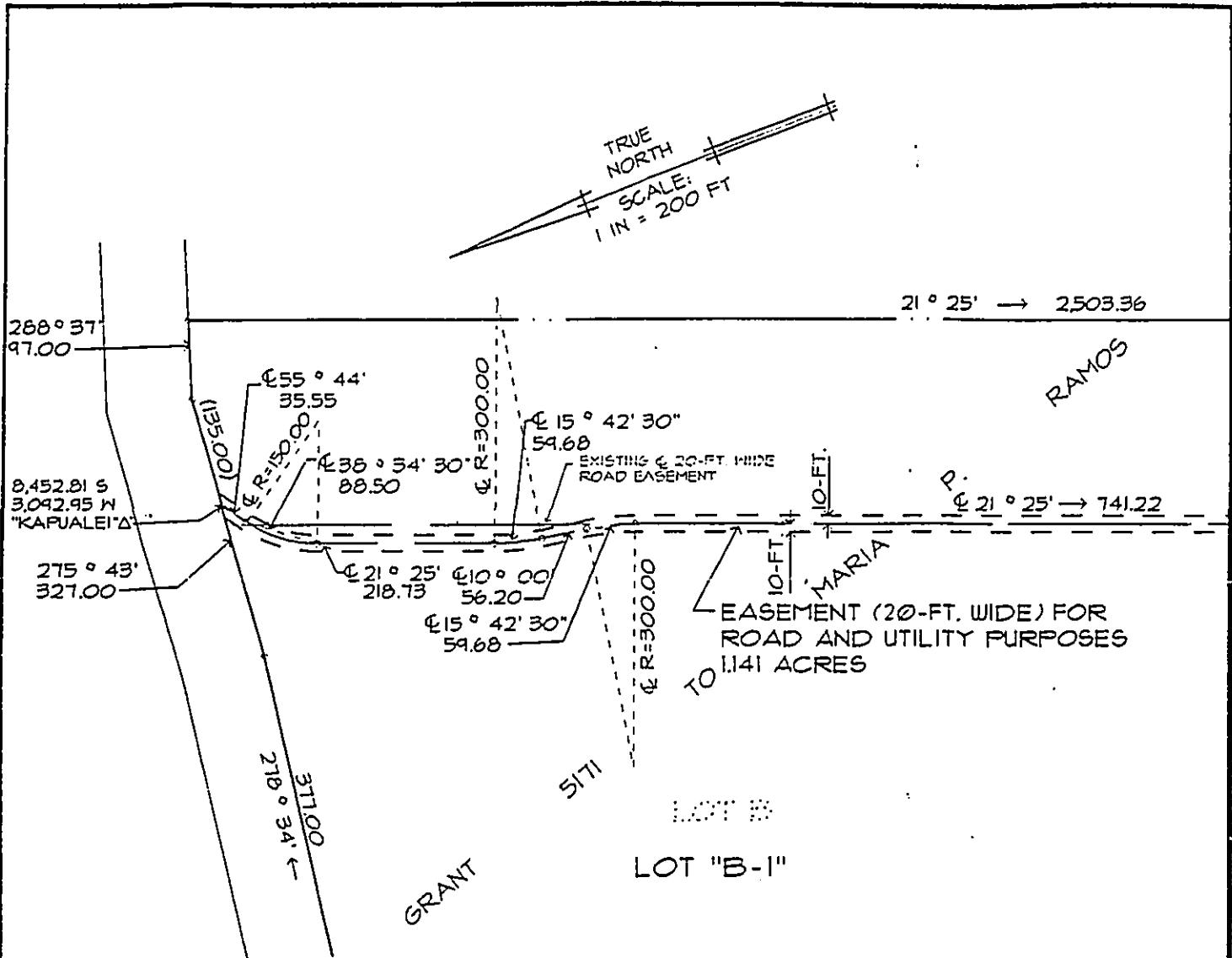
PREPARED BY:
IMATA AND ASSOCIATES, INC.
171 KAPIOLANI STREET
HILO, HAWAII 96720



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Clyde K. Matsunaga
CLYDE K. MATSUNAGA
LICENSED PROFESSIONAL SURVEYOR
CERTIFICATE NUMBER 4328

FEBRUARY 16, 2000



SUBDIVISION MAP

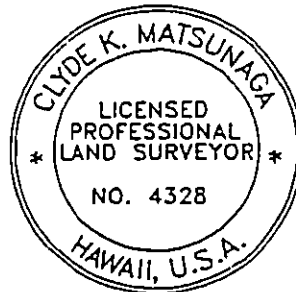
LAND SITUATED AT POHAKEA, HAMAKUA, ISLAND OF HAWAII, HAWAII, BEING A PORTION OF GRANT 5171 TO MARIA P. RAMOS. BEING ALSO A PORTION OF LOT "B".

SUBDIVISION OF LOT "B" INTO LOTS "B-1" AND "B-2" (TANK SITE) AND DESIGNATION OF AN EASEMENT (20-FT. WIDE) FOR ROAD AND UTILITY PURPOSES.



PREPARED BY:
IMATA AND ASSOCIATES, INC.
171 KAPIOLANI STREET
HILO, HAWAII 96720

OWNER:
MYRON MAHUNA REVOCABLE LIVING TRUST,
P.O. BOX 111
PAAUILO, HAWAII 96776

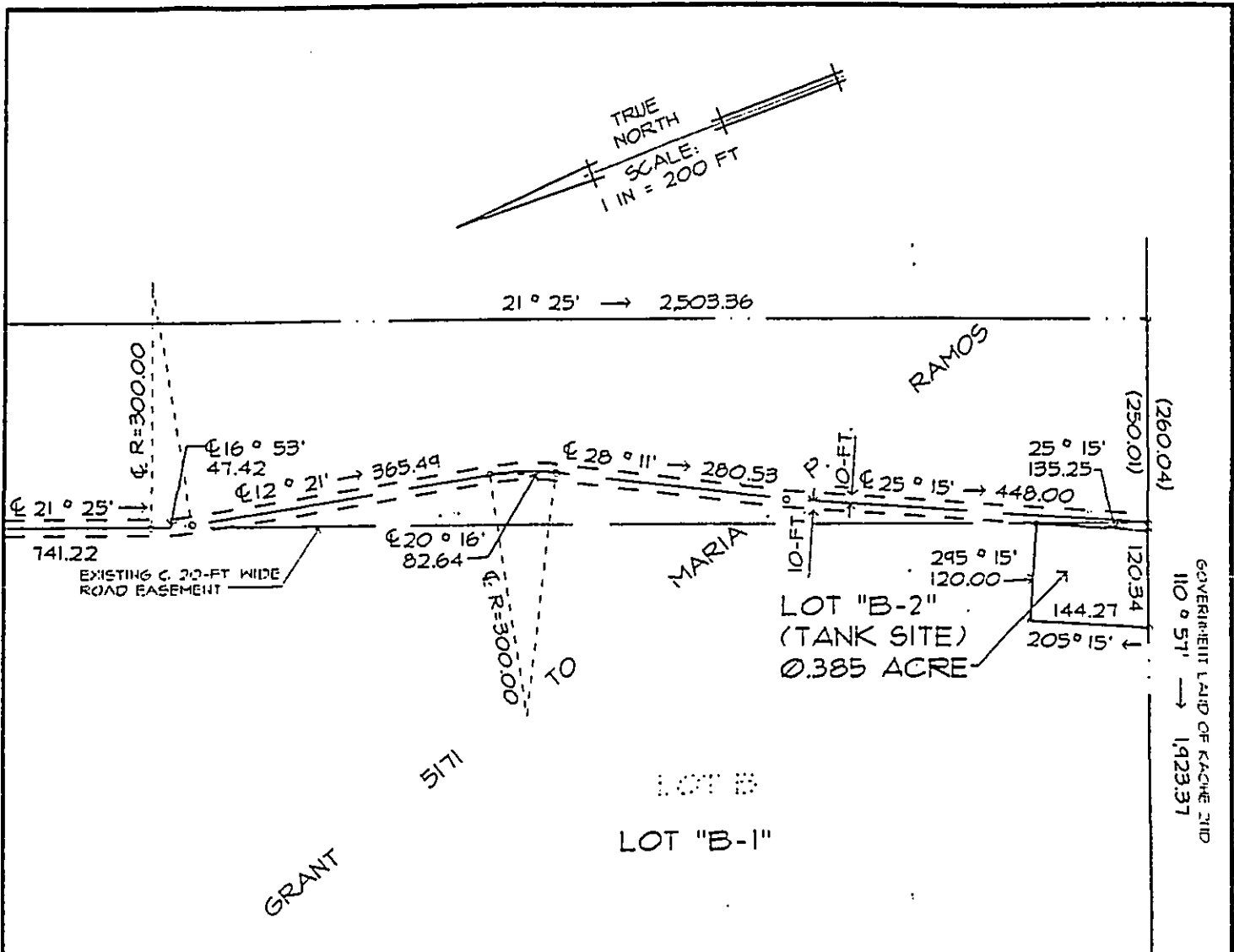


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Clyde K. Matsunaga
CLYDE K. MATSUNAGA
LICENSED PROFESSIONAL SURVEYOR
CERTIFICATE NUMBER 4328

TAX MAP KEY: 3RD DIV. 4-3-11:12

FEBRUARY 16, 2000



SUBDIVISION MAP

LAND SITUATED AT FOHAKEA, HAMAKUA, ISLAND OF HAWAII, HAWAII, BEING A PORTION OF GRANT 5171 TO MARIA P. RAMOS. BEING ALSO A PORTION OF LOT "B".

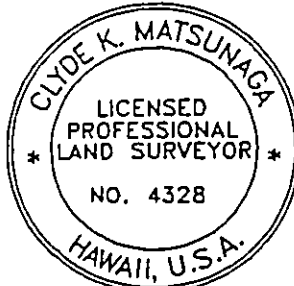
SUBDIVISION OF LOT "B" INTO LOTS "B-1" AND "B-2" (TANK SITE) AND DESIGNATION OF AN EASEMENT (20-FT. WIDE) FOR ROAD AND UTILITY PURPOSES.

OWNER:
MYRON MAHUNA REVOCABLE LIVING TRUST,
P.O. BOX III
FAAVILO, HAWAII 96776

TAX MAP KEY: 3RD DIV. 4-3-11:12



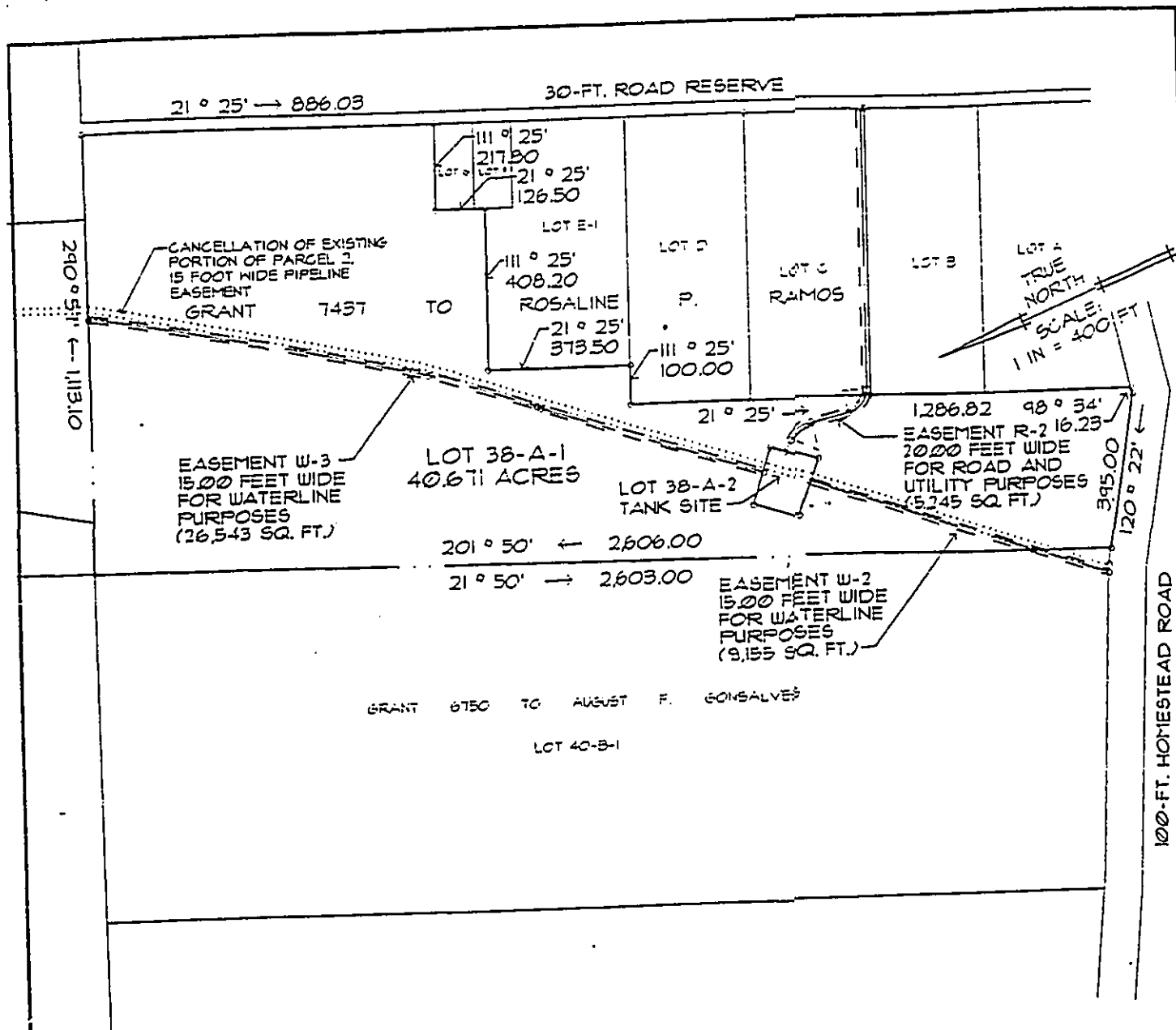
PREPARED BY:
IMATA AND ASSOCIATES, INC.
171 KAPIOLANI STREET
HILO, HAWAII 96720



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Clyde K. Matsunaga
CLYDE K. MATSUNAGA
LICENSED PROFESSIONAL SURVEYOR
CERTIFICATE NUMBER 4328

FEBRUARY 16, 2000



SUBDIVISION MAP

LAND SITUATED AT POHAKEA, HAMAKUA, ISLAND OF HAWAII, HAWAII.

BEING A PORTION OF GRANT 7437 TO ROSALINE P. RAMOS. BEING ALSO LOT 38-A.

SUBDIVISION OF LOT 38-A INTO LOTS 38-A-1 AND 38-A-2 (TANK SITE).

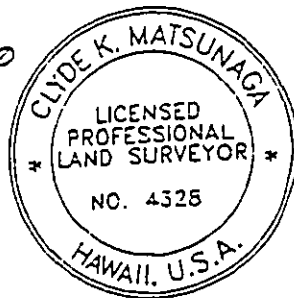
CANCELLATION OF EXISTING PORTION OF PARCEL 2, 15 FOOT WIDE PIPELINE EASEMENT

DESIGNATION OF EASEMENT R-2, 20.00 FEET WIDE FOR ROAD AND UTILITY PURPOSES, EASEMENT W-2, 15.00 FEET WIDE FOR WATERLINE PURPOSES AND EASEMENT W-3, 15.00 FEET WIDE FOR WATERLINE PURPOSES.

OWNER:
W. S. RAMOS FAMILY LTD., ET. AL.
P.O. BOX 103
PAAUILO, HAWAII 96776



PREPARED BY:
IMATA AND ASSOCIATES, INC.
171 KAPIOLANI STREET
HILO, HAWAII 96720



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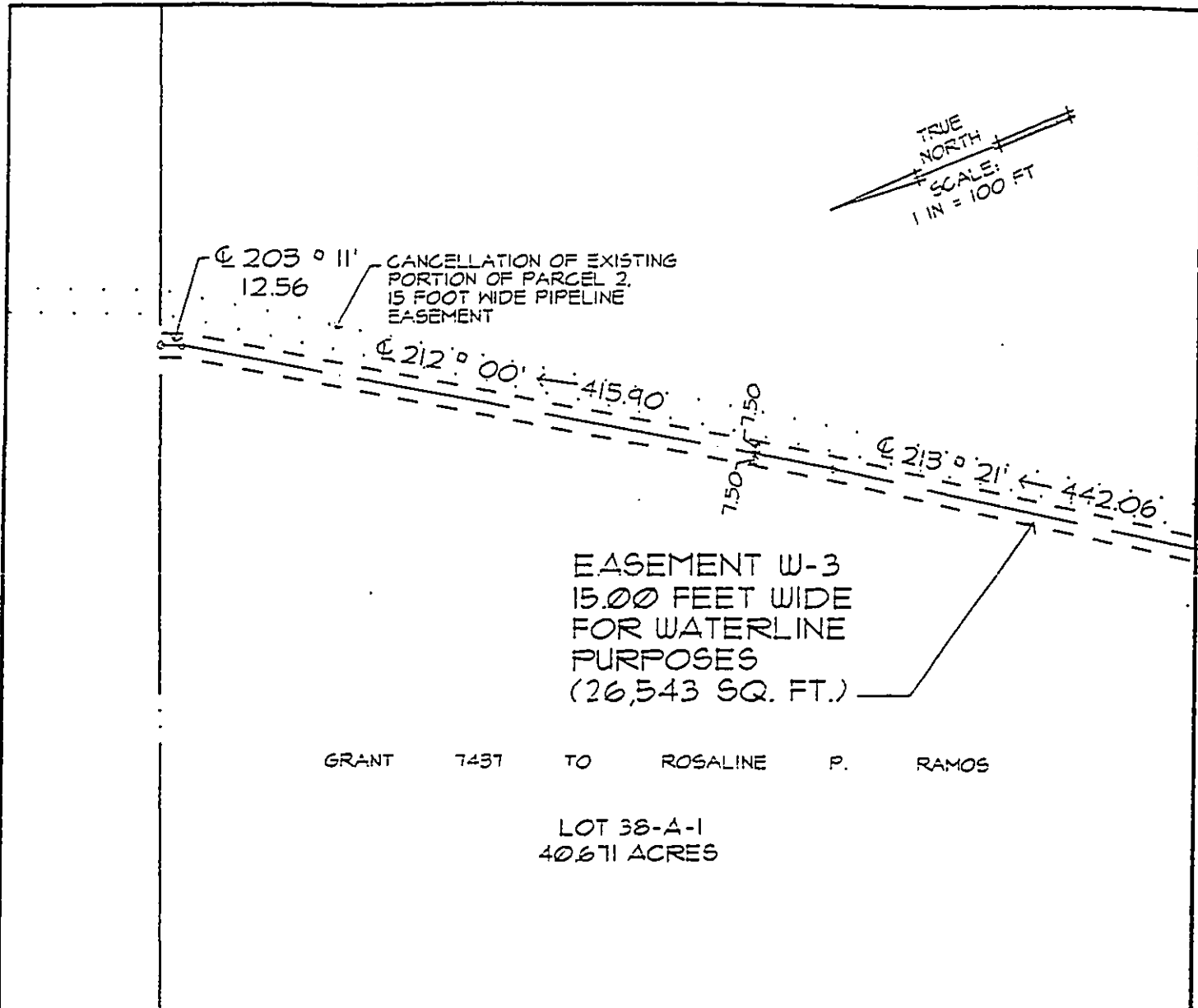
Clyde K. Matsunaga
CLYDE K. MATSUNAGA
LICENSED PROFESSIONAL SURVEYOR
CERTIFICATE NUMBER 4328

FEBRUARY 16, 2000

TAX MAP KEY: 3RD DIV. 4-3-11:11.

JOB NUMBER: 91-89

PAGE 1 OF 5



SUBDIVISION MAP

LAND SITUATED AT FOHAKEA, HAMAKUA, ISLAND OF HAWAII, HAWAII.

BEING A PORTION OF GRANT 7437 TO ROSALINE P. RAMOS. BEING ALSO LOT 38-A.

SUBDIVISION OF LOT 38-A INTO LOTS 38-A-1 AND 38-A-2 (TANK SITE).

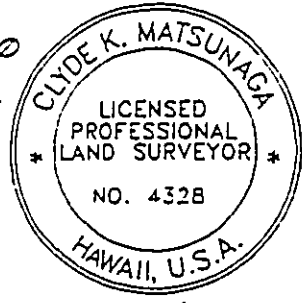
CANCELLATION OF EXISTING PORTION OF PARCEL 2, 15 FOOT WIDE PIPELINE EASEMENT

DESIGNATION OF EASEMENT R-2, 20.00 FEET WIDE FOR ROAD AND UTILITY PURPOSES, EASEMENT W-2, 15.00 FEET WIDE FOR WATERLINE PURPOSES AND EASEMENT W-3, 15.00 FEET WIDE FOR WATERLINE PURPOSES.

OWNER:
W. S. RAMOS FAMILY LTD., ET. AL.
P.O. BOX 103
PAAUILO, HAWAII 96776



PREPARED BY:
IMATA AND ASSOCIATES, INC.
171 KAPIOLANI STREET
HILO, HAWAII 96720



THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Clyde K. Matsunaga
CLYDE K. MATSUNAGA
LICENSED PROFESSIONAL SURVEYOR
CERTIFICATE NUMBER 4328

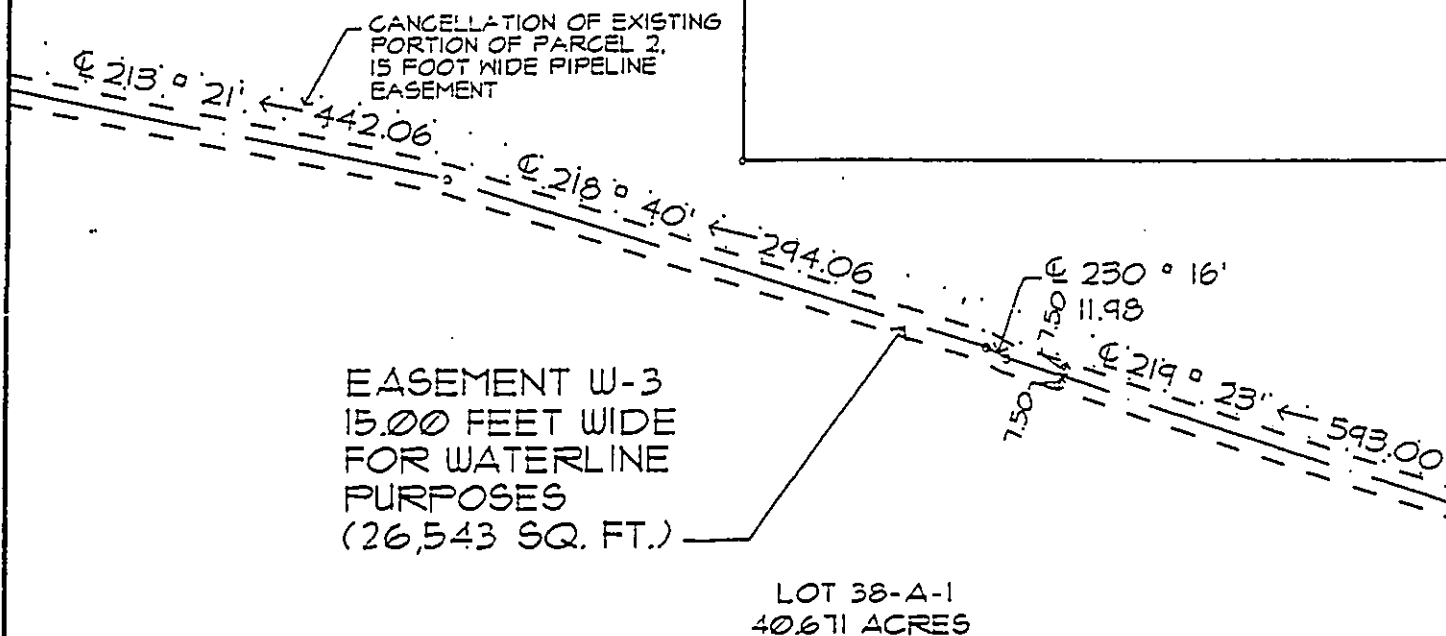
TAX MAP KEY: 3RD DIV. 4-3-11:11

FEBRUARY 16, 2000

TRUE NORTH
SCALE:
1 IN = 100 FT

GRANT 7457 TO ROSALINE P. RAMOS

LOT E-



SUBDIVISION MAP

LAND SITUATED AT POHAKEA, HAMAKUA, ISLAND OF HAWAII, HAWAII.

BEING A PORTION OF GRANT 7437 TO ROSALINE P. RAMOS. BEING ALSO LOT 38-A.

SUBDIVISION OF LOT 38-A INTO LOTS 38-A-1 AND 38-A-2 (TANK SITE).

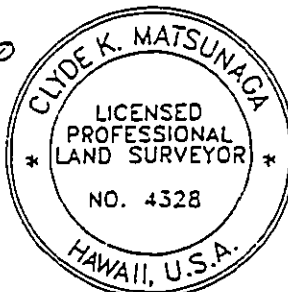
CANCELLATION OF EXISTING PORTION OF PARCEL 2, 15 FOOT WIDE PIPELINE EASEMENT

DESIGNATION OF EASEMENT R-2, 20.00 FEET WIDE FOR ROAD AND UTILITY PURPOSES, EASEMENT W-2, 15.00 FEET WIDE FOR WATERLINE PURPOSES AND EASEMENT W-3, 15.00 FEET WIDE FOR WATERLINE PURPOSES.

OWNER:
W. S. RAMOS FAMILY LTD., ET. AL.
P.O. BOX 103
PAAUILO, HAWAII 96716



PREPARED BY:
IMATA AND ASSOCIATES, INC.
171 KAPIOLANI STREET
HILO, HAWAII 96720



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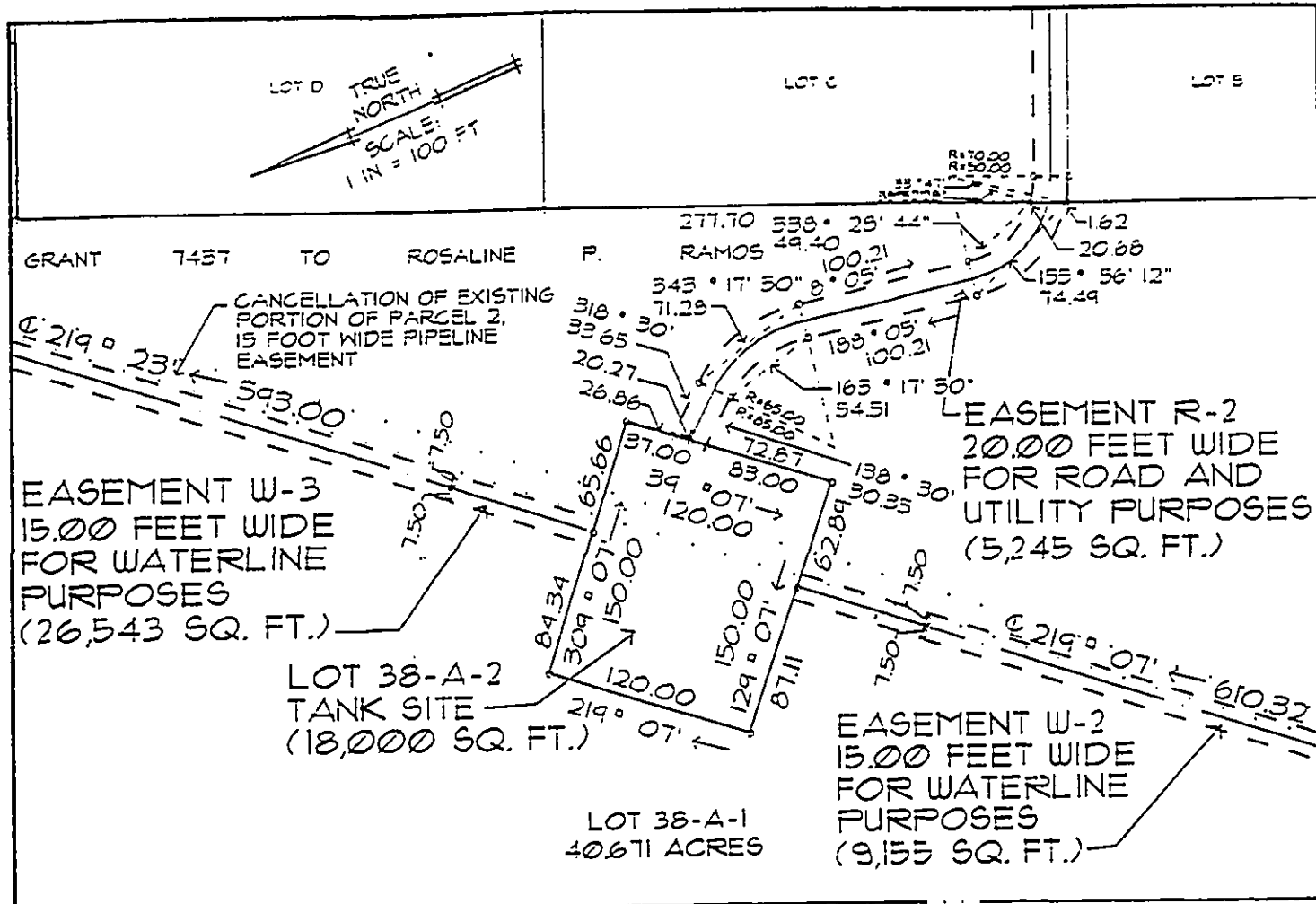
Clyde K. Matsunaga
CLYDE K. MATSUNAGA
LICENSED PROFESSIONAL SURVEYOR
CERTIFICATE NUMBER 4328

TAX MAP KEY: 3RD DIV. 4-3-11:11

FEBRUARY 16, 2000

JOB NUMBER: 91-69

SHEET 3 OF 5



GRANT 6750 TO AUGUST F. CONSALVES
 LOT 40-B-1

SUBDIVISION MAP

LAND SITUATED AT POHAKEA, HAMAKUA, ISLAND OF HAWAII, HAWAII.

BEING A PORTION OF GRANT 7437 TO ROSALINE P. RAMOS. BEING ALSO LOT 38-A.

SUBDIVISION OF LOT 38-A INTO LOTS 38-A-1 AND 38-A-2 (TANK SITE).

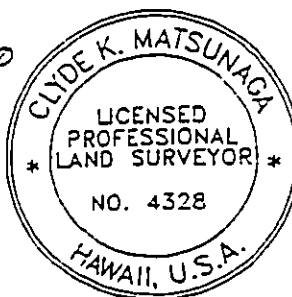
CANCELLATION OF EXISTING PORTION OF PARCEL 2, 15 FOOT WIDE PIPELINE EASEMENT

DESIGNATION OF EASEMENT R-2, 20.00 FEET WIDE FOR ROAD AND UTILITY PURPOSES, EASEMENT W-2, 15.00 FEET WIDE FOR WATERLINE PURPOSES AND EASEMENT W-3, 15.00 FEET WIDE FOR WATERLINE PURPOSES.

OWNER:
 M. S. RAMOS FAMILY LTD., ET. AL.
 P.O. BOX 103
 PAAULO, HAWAII 96776



PREPARED BY:
 IMATA AND ASSOCIATES, INC.
 171 KAPIOLANI STREET
 HILO, HAWAII 96720

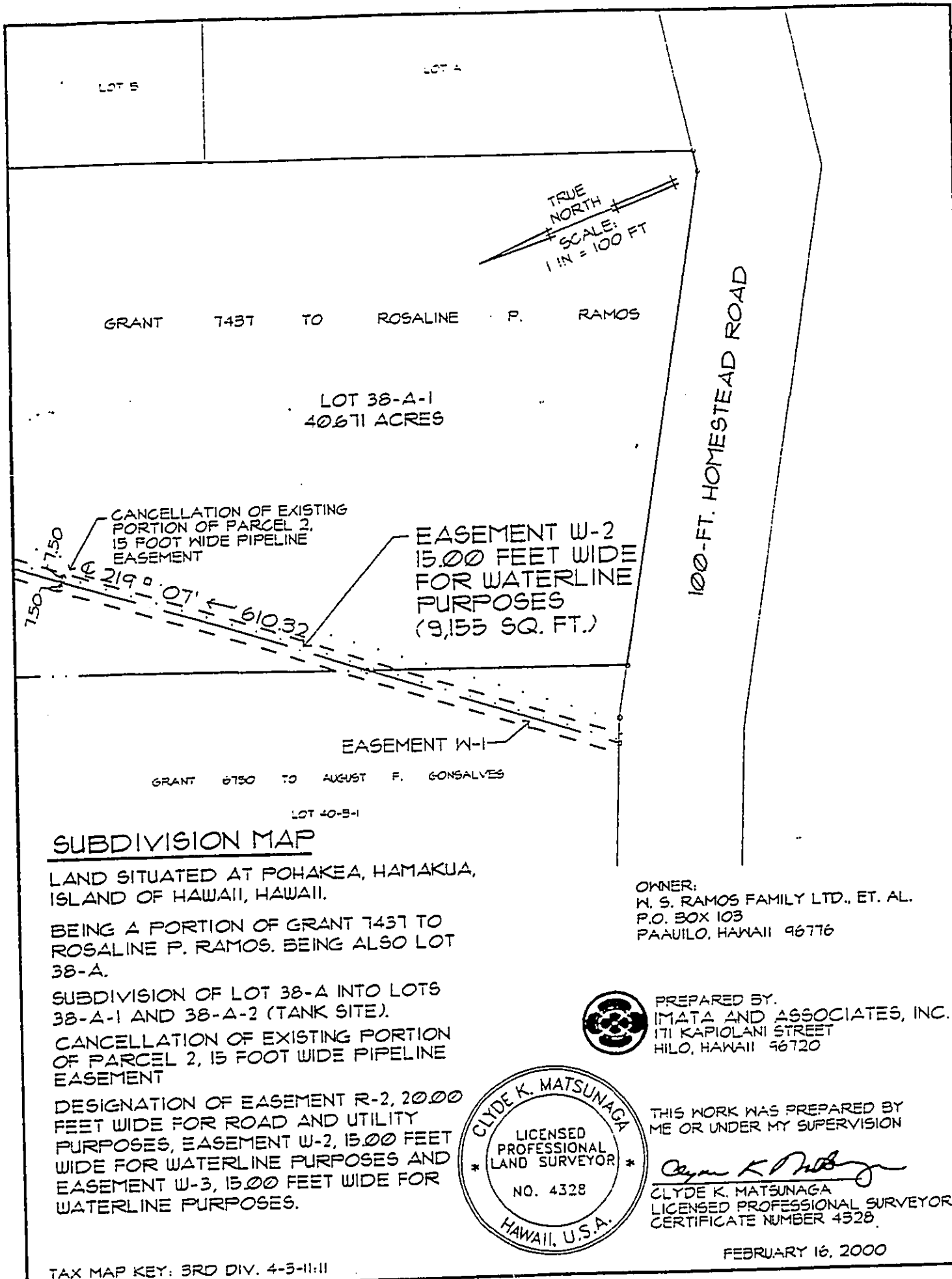


THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Clyde K. Matsunaga
 CLYDE K. MATSUNAGA
 LICENSED PROFESSIONAL SURVEYOR
 CERTIFICATE NUMBER 4328

TAX MAP KEY: 3RD DIV. 4-3-11:11

FEBRUARY 16, 2000



SUBDIVISION MAP

LAND SITUATED AT POHAKEA, HAMAKUA, ISLAND OF HAWAII, HAWAII.

BEING A PORTION OF GRANT 7437 TO ROSALINE P. RAMOS. BEING ALSO LOT 38-A.

SUBDIVISION OF LOT 38-A INTO LOTS 38-A-1 AND 38-A-2 (TANK SITE).

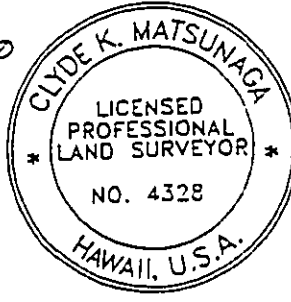
CANCELLATION OF EXISTING PORTION OF PARCEL 2, 15 FOOT WIDE PIPELINE EASEMENT

DESIGNATION OF EASEMENT R-2, 20.00 FEET WIDE FOR ROAD AND UTILITY PURPOSES, EASEMENT W-2, 15.00 FEET WIDE FOR WATERLINE PURPOSES AND EASEMENT W-3, 15.00 FEET WIDE FOR WATERLINE PURPOSES.

OWNER:
W. S. RAMOS FAMILY LTD., ET. AL.
P.O. BOX 103
PAAUILO, HAWAII 96776



PREPARED BY:
IMATA AND ASSOCIATES, INC.
171 KAPIOLANI STREET
HILO, HAWAII 96720



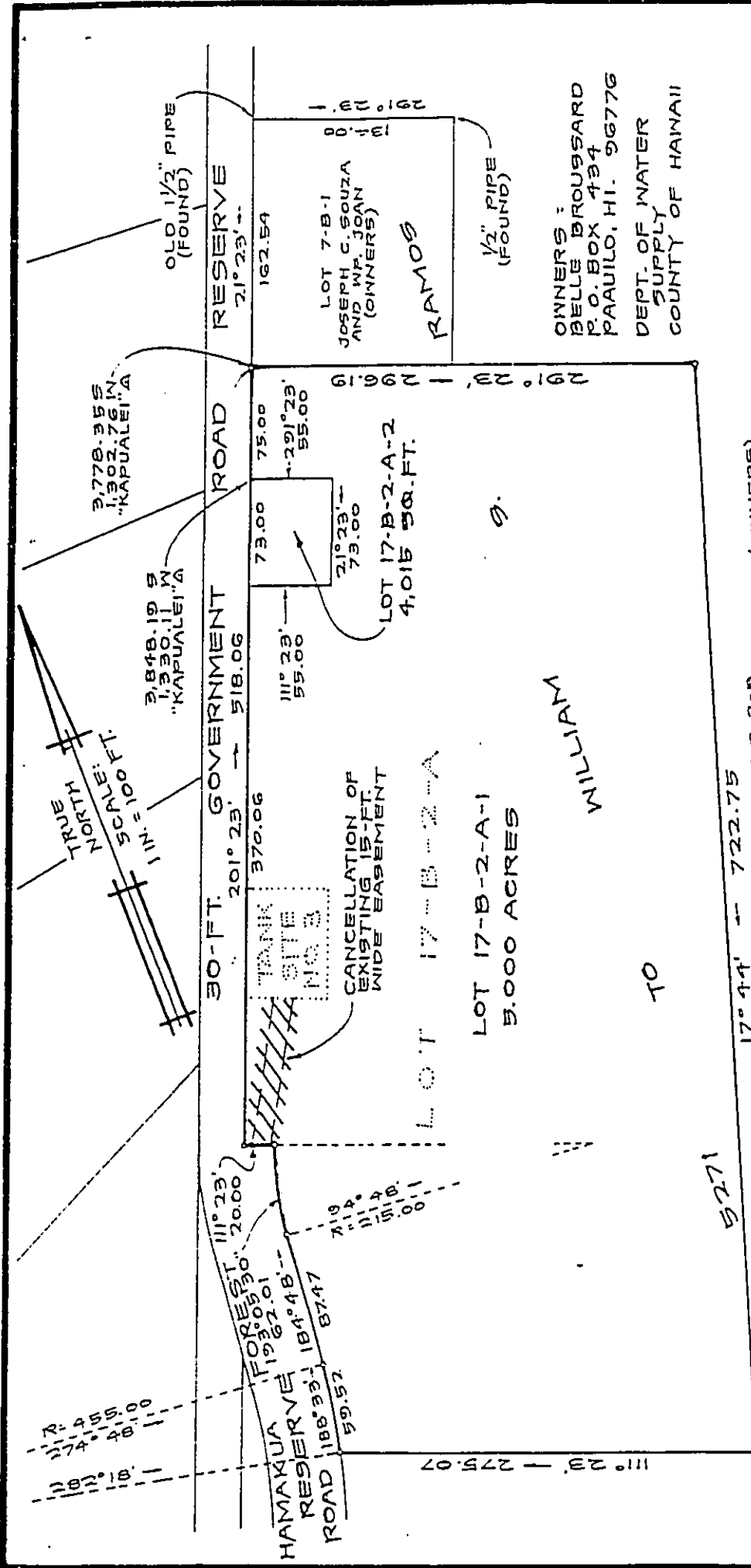
THIS WORK WAS PREPARED BY ME OR UNDER MY SUPERVISION

Clyde K. Matsunaga
CLYDE K. MATSUNAGA
LICENSED PROFESSIONAL SURVEYOR
CERTIFICATE NUMBER 4328

FEBRUARY 16, 2000

TAX MAP KEY: SRD DIV. 4-5-11:11

SHEET 5 OF 5

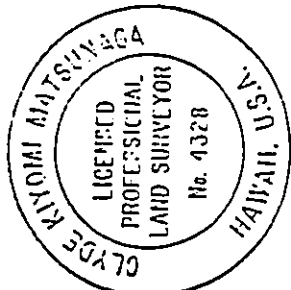


CONSOLIDATION AND RESUBDIVISION MAP

LAND SITUATED AT PAAULO HOMESTEADS,
HAMAKUA, ISLAND OF HAWAII, HAWAII.
BEING A PORTION OF GRANT 5271
TO WILLIAM S. RAMOS.
CONSOLIDATION OF LOT 17-B-2-A
AND TANK SITE NO. 3.
AND RESUBDIVISION OF SAID CONSOLIDATION
INTO LOTS 17-B-2-A-1 AND 17-B-2-A-2.

AND CANCELLATION OF A 15.00 FT. WIDE EASEMENT

PREPARED BY:
IMATA AND ASSOCIATES, INC.
171 KAPUOLANI STREET
HONOOLULU, HAWAII 96720



Clyde K. Matsunaga
CLYDE K. MATSUNAGA
LICENSED PROFESSIONAL SURVEYOR
CERTIFICATE NUMBER 4328

TAX MAP KEY : BRD DIV. 4-3-12 : 21 AND 22

APRIL 18, 1995

JOB NO 11-01-60