

INDIVIDUAL WASTEWATER SYSTEM

FOR

Dietmar Rittner

TMK: (2) 4-7-009:069

Date: January 9, 2009

This work has been prepared by me or under my supervision and construction of this project will be under my supervision.

PREPARED BY:

**WAYNE I. ARAKAKI ENGINEER, LLC
P.O. BOX 884
WAILUKU, MAUI, HAWAII 96793**

Wayne I. Arakaki



DESIGN CRITERIA
DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS)
APPLICATION INFORMATION SHEET

Engineer: **Wayne I. Arakaki Engineer, LLC**

Owner: **Dietmar Rittner**

Owner's Mailing Address: **363 Kai Malu Place, Kihei, HI. 96753**

Project Location (street address, subdivision name and general area): **Launiopoko, Lahaina, HI.**

Project TMK: **(2) 4-7-009:069**

Lot size: **3.237 Acres** +/- (approximate area)

Project Flow or Number of Bedrooms: **Five bedrooms.**

Proposed Treatment Unit (manufacturer, model, capacity of septic tank, aerobic unit etc.): **1 - 1250 Gallon (IAPMO Approved) Tank**

Proposed Disposal System: **Deep Absorption Bed/Standard Infiltrators**

Percolation Rate: **10.0** min./in.

Existing IWS on the lot? **No** Type:

Existing potable drinking water well within 1,000 ft of proposed disposal system? **No**

Existing structure on lot: **No** Type:

LCC upgrade?

FOR DEPARTMENT USE ONLY:

Date Received: _____ Project Engineer: _____ File No. _____

Filing Fee (\$100 _____ (\$25 _____) Check Date: _____ Check No. _____

Notes: _____

DESIGN CRITERIA

INDIVIDUAL WASTEWATER SYSTEM FOR:

Deitmar Rittner

TMK: (2) 4-7-009:069
Launiopoko, Hawaii

1. LOCATION: Lahaina, Maui, Hi.

2. PROJECTED FLOW:

NO. OF BEDROOMS: Designed for five bedrooms.

TOTAL DAILY FLOW:

3. SEPTIC TANK:

MINIMUM VOLUME: 1 - 1250 gallon septic tank (IAPMO Approved)

4. DISPOSAL SYSTEM:

PERCOLATION RATE: 10.00 min./in.

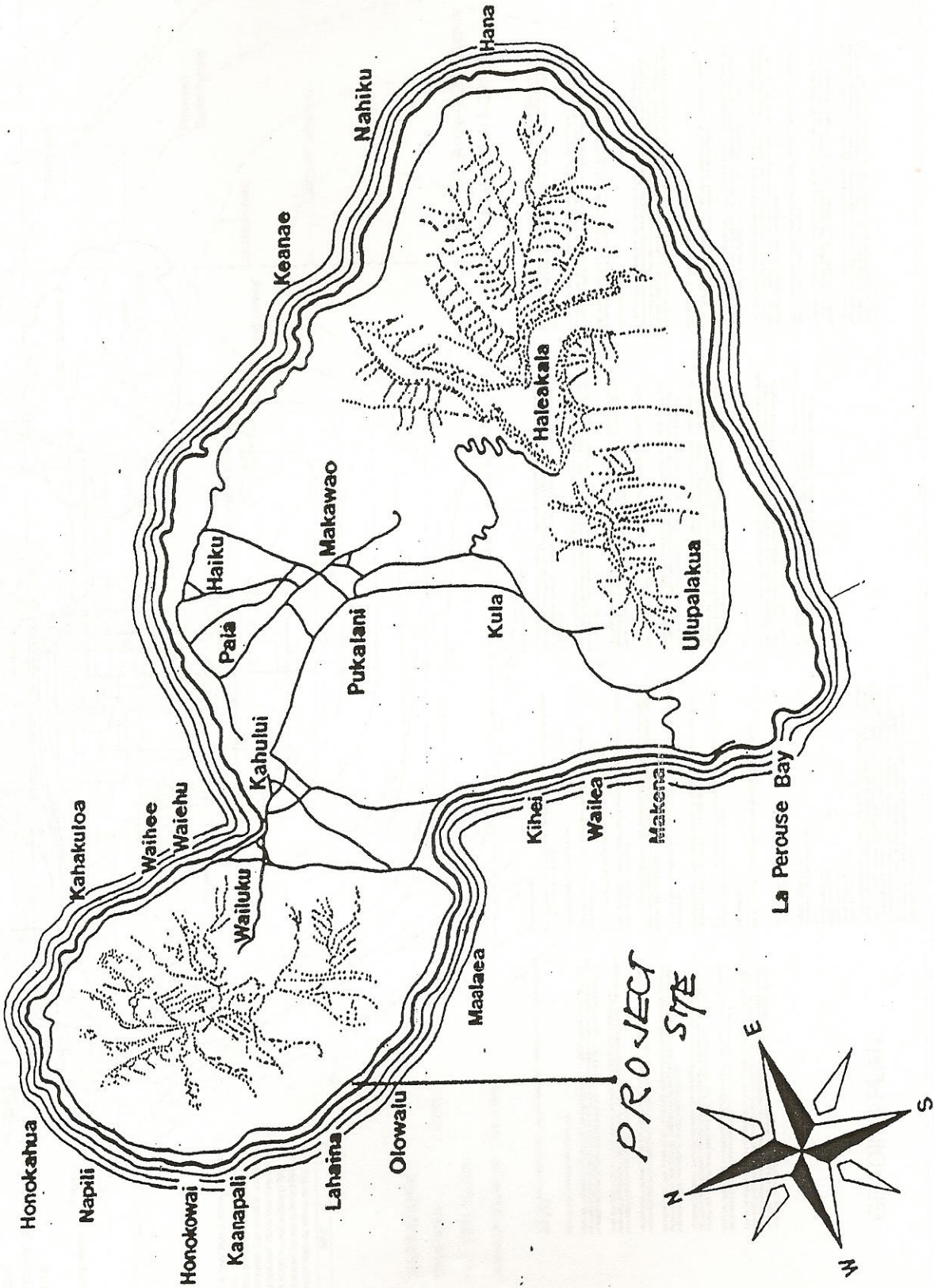
REQUIRED ABSORPTION AREA: $165 \times 5 = 825$ sq. ft.

ABSORPTION SYSTEM:

Deep Absorption Bed. The absorption bed will be 5 feet in depth, 25 feet wide and 33 feet long. There will be five - four inch perforated PVC pipes covered with $\frac{3}{4}$ " gravel and wrapped with a filter fabric cloth. Each pipe will be spaced five feet apart.

Standard Infiltrators - Size 3' x 6.25' x 1' No substitutions without written approval. Total square footage 825 s.f. Filter fabric cloth will be used to cover the infiltrators before backfill is placed. Contractor to provide working drawings to engineer before start of work.

NOTE: Manhole cover & distribution box shall be to grade for future inspection purposes. Monitoring ports shall be installed at the corners of the leaching field.



ISLAND OF MAUI

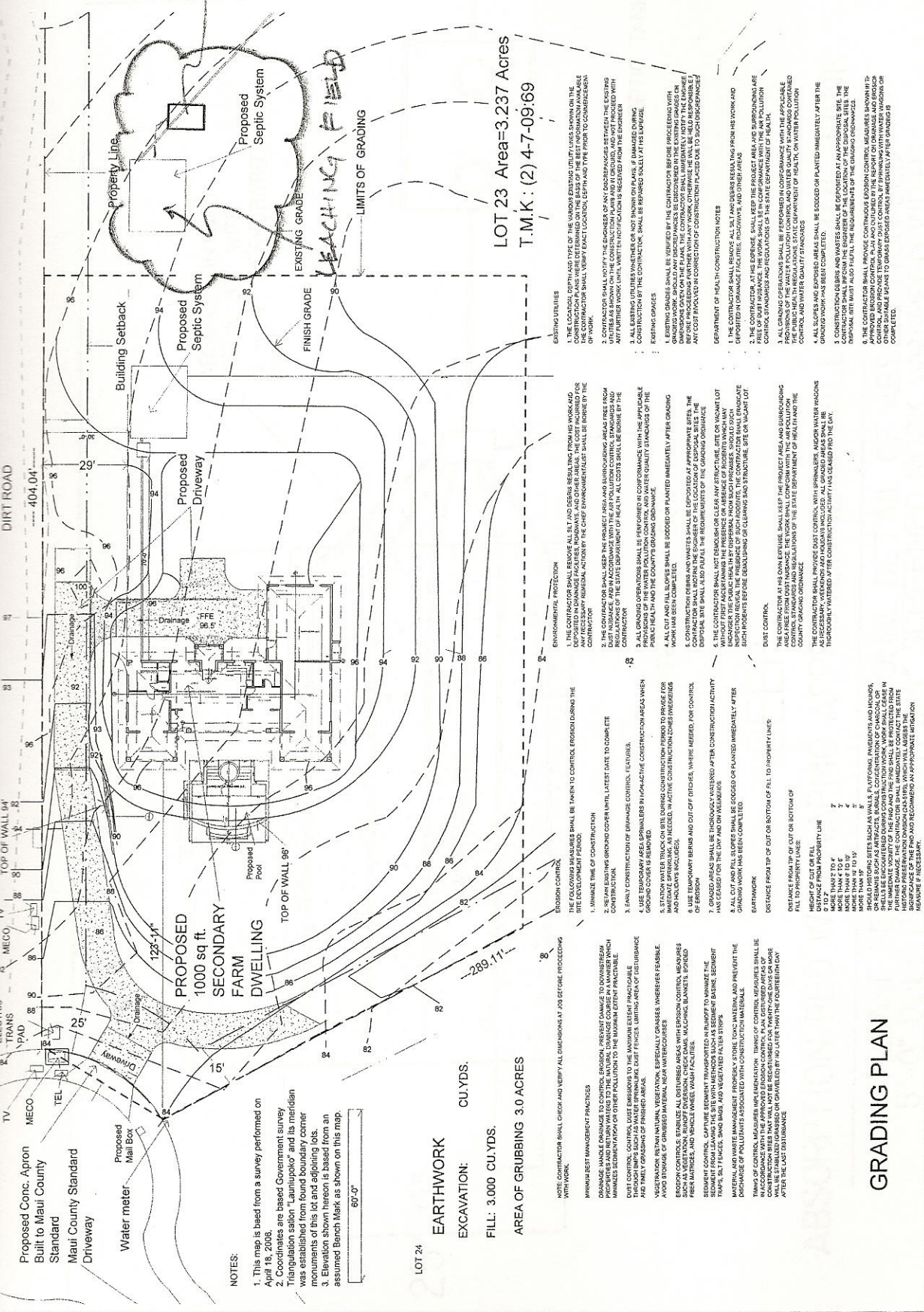
1250 GAL
SEPTIC
TANK

THIS WORK WAS PREPARED
BY ME OR UNDER MY
SUPERVISION. NO CONSTRUCTION
OF THIS PROJECT HAS BEEN
UNDER MY OBSERVATION.

A NEW SECONDARY FARM DWELLING FOR
DIETMAR RITNER - GOVINDA LEOPOLD
11 PUA NIU WAY, LOT 23
MAHANALUANI PH IV, LAHAINA
T.M.K.: 4-7-9:669

DRAWN BY: DR RITNER
DATE: 12/22/09
SCALE: 1" = 32' - 0"
FILE No. 3100
FILE NAME: HHD Lanipoko

REVISIONS	SHEET
	2
	OF:



NOTES:
1. This map is based from a survey performed on 2/19/06.
2. All elevations are based Government survey Triangulation station "Lanipoko" and its meridian was established from found boundary corner monuments of this lot and adjoining lots.
3. Elevation shown hereon is based from an assumed Bench Mark as shown on this map.

PROPOSED 1000 sq ft. SECONDARY FARM DWELLING
TOP OF WALL 96'
TOP OF WALL 94'

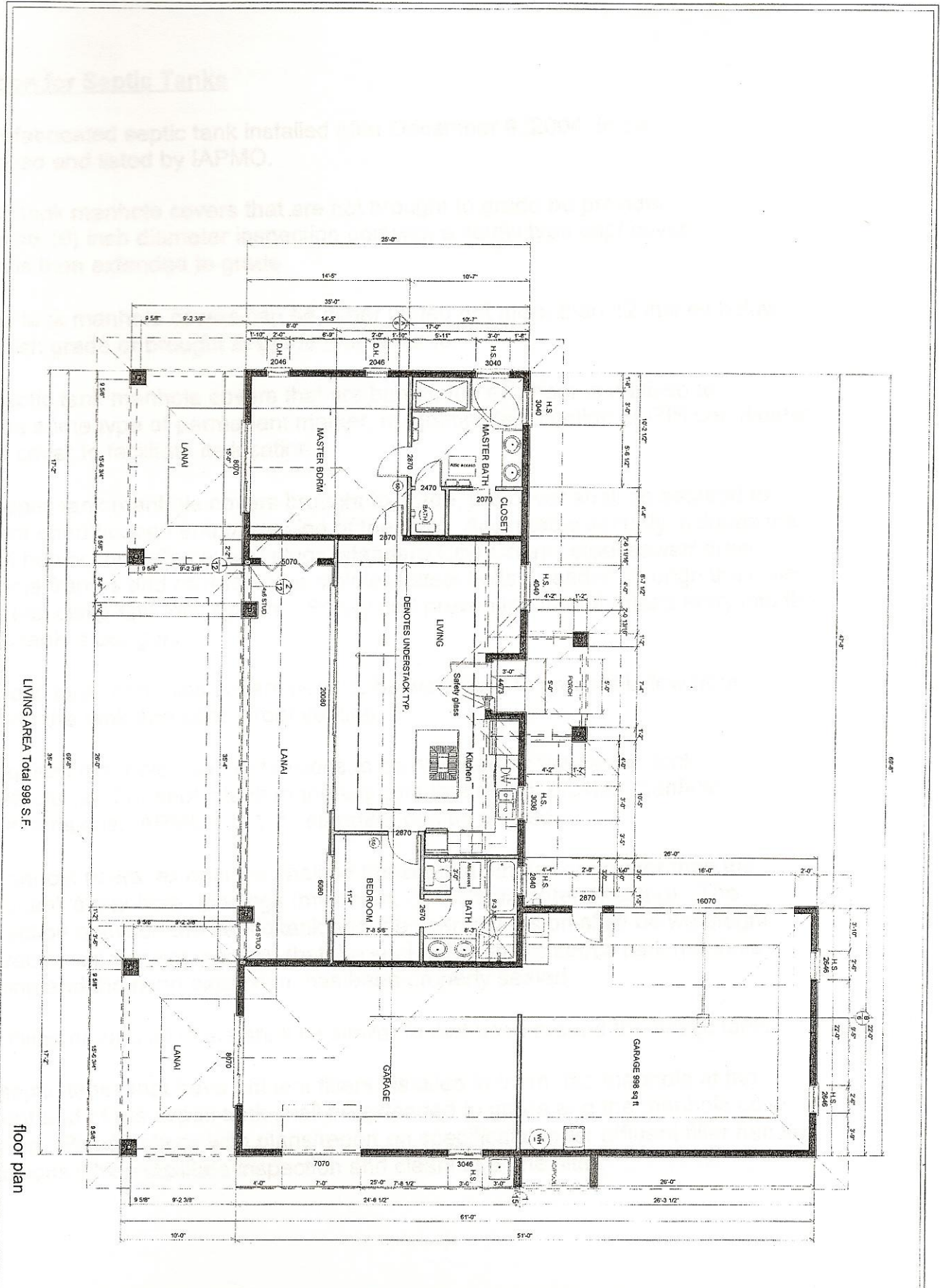
EARTHWORK CU.YDS.
EXCAVATION: CU.YDS.
FILL: 3.000 CU.YDS.
AREA OF GRUBBING 3.0 ACRES

LOT 23 Area=3.237 Acres
T.M.K.: (2) 4-7-09:69

DEPARTMENT OF HEALTH CONSTRUCTION NOTES
1. THE CONTRACTOR SHALL KEEP THE PROJECT AREA AND SURROUNDING AREA FREE FROM DIRT AND DEBRIS RESULTING FROM HIS WORK AND DEPOSITED IN DRAINAGE FACILITIES (ROADWAYS, DRAINAGE DITCHES AND DEPRESSED AREAS) TO BE MAINTAINED BY THE CONTRACTOR.
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GRADING PLAN

Note: Contractor to verify location of septic system with Owner before installation.



LIVING AREA Total 998 S.F.

floor plan

REVISIONS	SHEET
	3
	OF:
DRAWN BY: DR RUIHER	
DATE: 1/22/2008	
SCALE: 1/8" = 1'-0"	
FILE NO.: 3100	
FILE NAME: HHD Leupoldo	

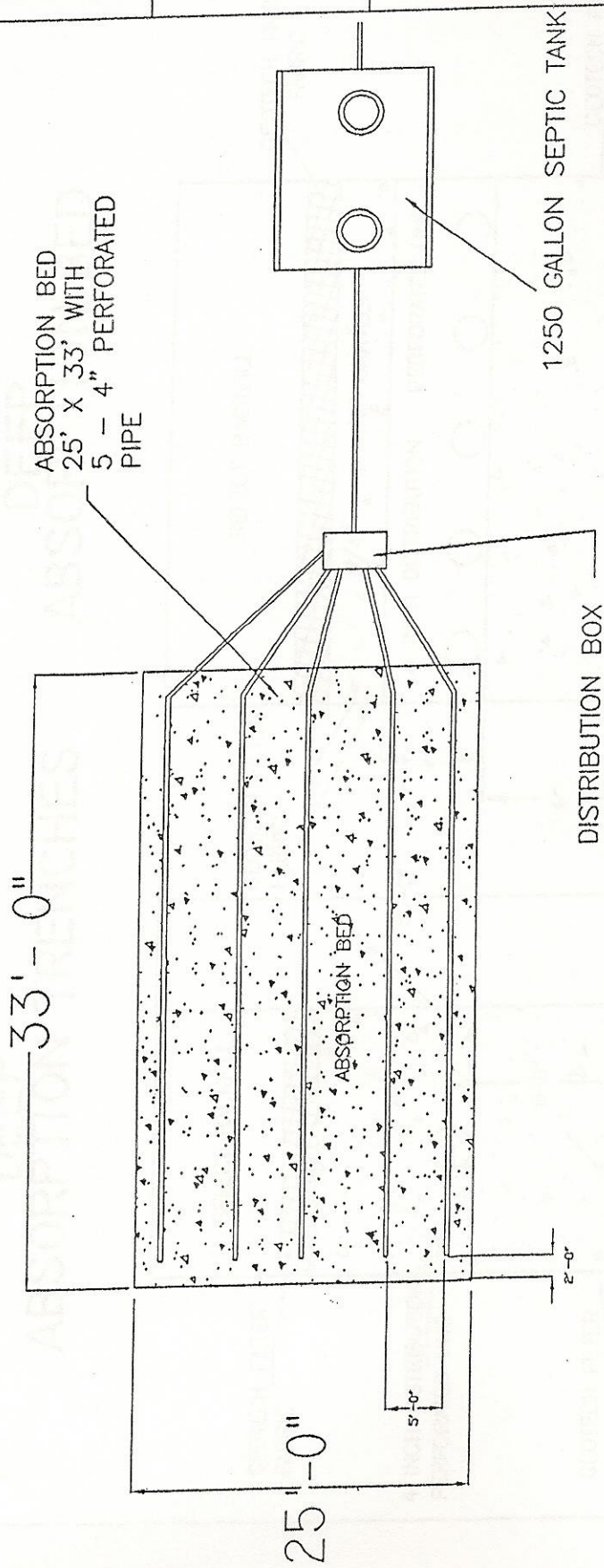
A NEW SECONDARY FARM DWELLING FOR
DIETMAR RITTMER - GOVINDA LEOPOLD
11 PUA NIU WAY, LOT 23
MAHANALUANUI PH IV, LAHAINA
T.M.K.: 4 - 7 - 9-69

THIS WORK WAS PREPARED
BY ME OR UNDER MY
SUPERVISION AND I AM A LICENSED ARCHITECT
OF THIS PROJECT WILL BE
UNDER MY OBSERVATION.

Hawaii Home Design dba
G & D International LLC
Project Management &
Development
303 Kai Malu Pl
Kihel, HI 96753
Phone (808) 875-4419
FAX (808) 442-0972

Certification for Septic Tanks

1. All prefabricated septic tank installed after December 9, 2004 to be approved and listed by IAPMO.
2. Septic tank manhole covers that are not brought to grade be provided with a six (6) inch diameter inspection port with a screw type cap/ cover which is then extended to grade.
3. Septic tank manhole covers can be either buried not more than 12 inches below the finish grade or brought to grade and secured.
4. For septic tank manhole covers that are buried, the engineer is advised to provide some type of permanent marker, magnetic identification or GIS coordinates of the cover to facilitate its location.
5. For septic tank manhole covers brought to grade, the cover shall be secured to prevent unauthorized entry/ opening of the tank. Acceptable security includes the use of heavy concrete covers/ plugs, standard City/ County steel sewer/ drain manhole frames and covers, large stainless steel bolts threaded through the cover or a steel clasp and lock system. Safety and preventing unauthorized entry into the septic tank is our goal.
6. All septic tank manholes covers need to be watertight to prevent inflow from entering the tank and odors from venting.
7. All required manhole riser/ extensions to be provided by the Septic tank manufacturer. For septic tank manufacturers that do not provide manhole riser/extensions, IAPMO PS 1-07 standard can be utilized.
8. All manhole risers/ extensions shall be the same diameter or greater than the septic tank's manhole openings (minimum, 20 inch diameter opening). The connection between the septic tank and the riser/ extension shall be watertight. Contractor will test and confirm that the seal between the septic tank manhole opening and the riser/ extension, has been properly sealed.
9. Backfilling around all risers shall be similar to that used around the septic tank.
10. For septic tanks that have effluent filters installed in them, the manhole at the effluent end of the septic tank shall be extended to grade and the manhole cover secured. Please check with plans/report on specifications for effluent filter handle extensions which facilitate inspection and cleaning of the filter.

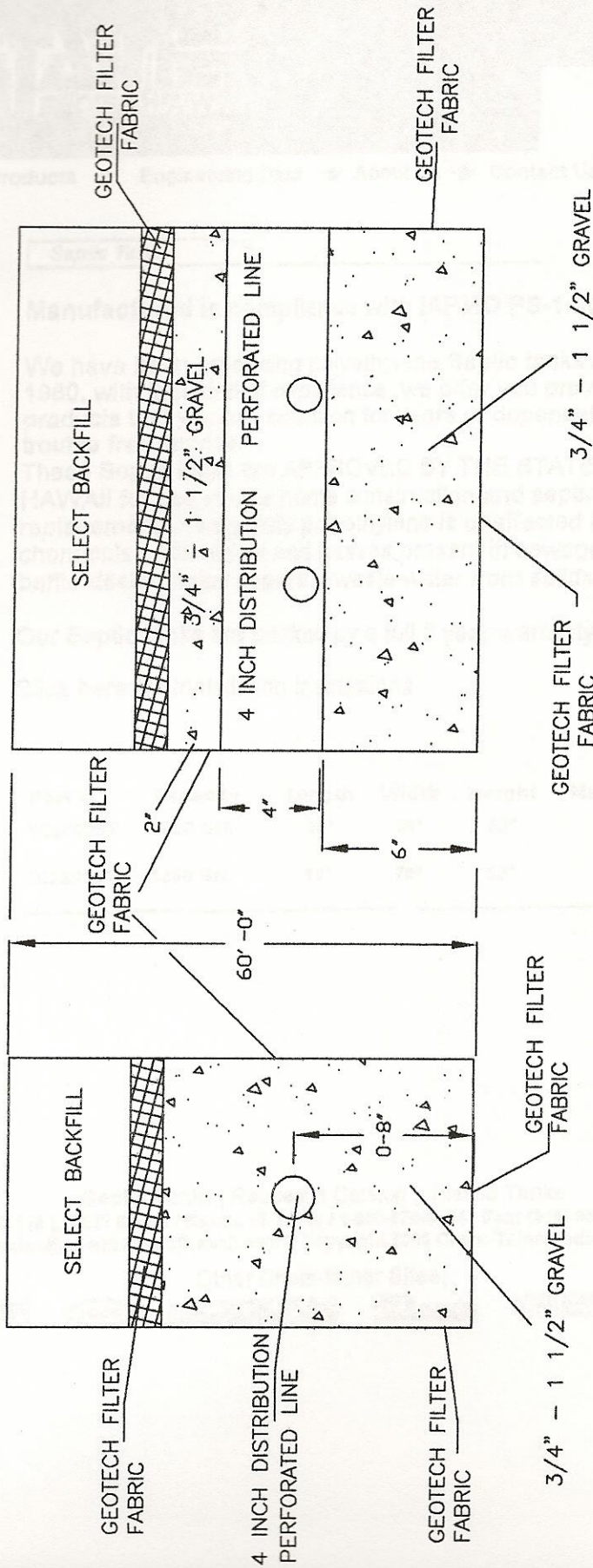


DEEP

ABSORPTION BED WITH IAPMO APPROVED 1250 GALLON SEPTIC TANK

PLEASE SEE CROSS SECTIONAL DETAIL OF ABSORPTION BED
 5'-0" DEEP FILLED WITH 3/4" SCREENED ROCK WRAPPED WITH
 FILTER FABRIC.
 NOT TO SCALE

DEEP ABSORPTION TRENCHES AND BED DETAILS



NOTE: GEOTECH FABRIC TO BE INSTALLED AROUND GRAVEL ROCK WHICH INCLUDE THE TOP, SIDES AND BOTTOM OR LEACHING FIELD.

DEEP ABSORPTION TRENCHES AND BED DETAILS

PLEASE SEE ADDITIONAL DETAIL OF LEACHING FIELD ALSO FOLLOW SETBACK REQUIREMENTS PER NOTE.

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LEACHING FIELD

P.O. BOX 994, MAUI, HAWAII 96793
 PH: 848-5888
 FAX: 848-5866

SCALE	AS SHOWN
DRAWN BY	USA
CHECKED BY	USA
DATE	USA
PROJECT NO.	USA
SHEET NO.	1-1

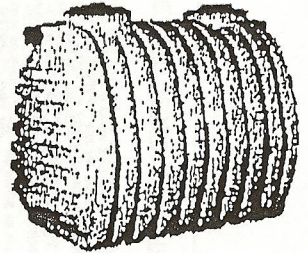


Septic Tanks

Manufactured in compliance with IAPMO PS-1-2004 E1

We have been producing polyethylene Septic tanks since 1980, with that kind of experience, we offer you proven products that you can count on for years of dependable, trouble free service.

These Septic tanks are APPROVED BY THE STATE OF HAWAII for use in new home construction and septic replacement. Heavy duty polyethylene is unaffected by soil chemicals or chemical and gasses present in sewage. The baffle design helps separate waste water from solids.



Our Septic tanks are backed by a full 3 year warranty.

[Click here for Installation Instructions](#)

Plastic Storage Tanks

Plastic Bulk Storage Tanks

Plastic Horizontal Bulk Storage Tanks

Rectangular Plastic Tanks

Open Top
Cylindrical Plastic Tanks

Septic Tanks

Material Handling

Utility Trucks and Liners

Bulk Delivery and Turnabout Trucks

Tilt Trucks

Water Transportation Tanks

Hauling Tanks

Transport Tanks NEW

Containment

Oil-Tainer NEW

Double Wall NEW

Part #	Capacity	Length	Width	Height	Manway	Weight	Price
TC1000ST	1000 Gal.	95"	58"	62"	20"	400 lbs	\$1,856.00 BUY
TC1250ST	1250 Gal.	93"	76"	68"	20"	450 lbs	\$2,135.00 BUY

Septic Tanks | Request a Catalog | Plastic Tanks
 16-118 U'I LI'I Street / Keolu, HI 96749 / 1-800-870-8494 Fax: (808) 868-8488
sales@chemtainerofhawaii.com © Copyright 2005 Chem-Tainer Industries

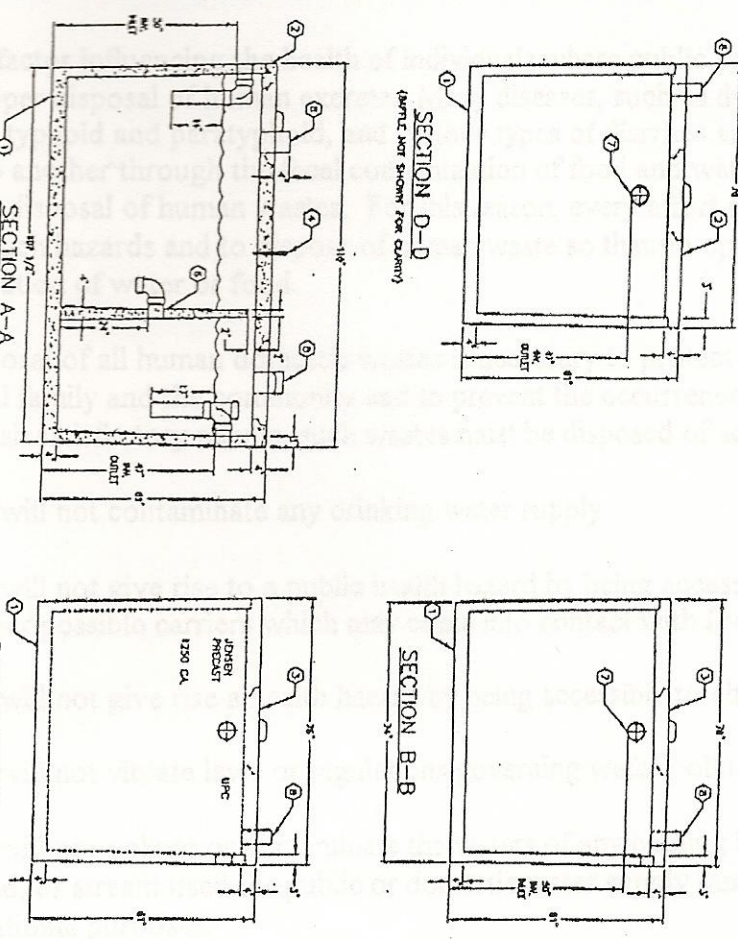
Other Chem-tainer Sites:



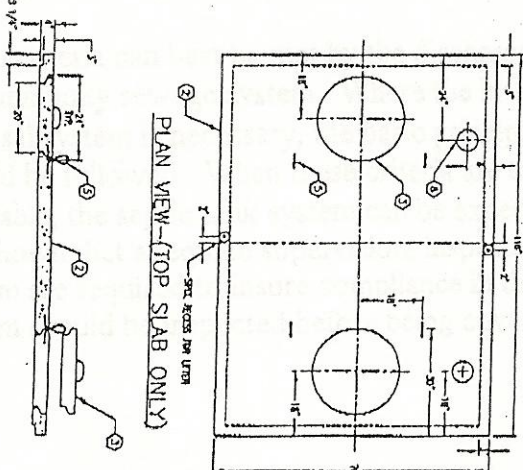
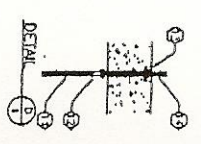
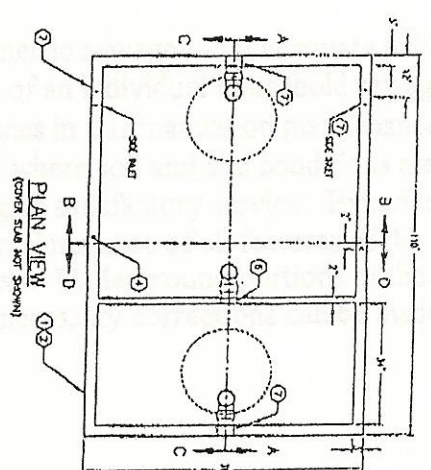
HJS-1250 GALLON LOW PROFILE RESIDENTIAL SEPTIC TANK-HAWAII

NOTES:

- 1. REINFORCED IN ACCORDANCE WITH UPC 909 FOR 1000-PSI CONCRETE. USE 4000 PSI COMPRESSIVE STRENGTH GRADE NO. 4 REBAR FOR ALL REBAR PER CMC NO. 124-12.
- 2. 3'-0" MINIMUM EARTH COVER AND WATER TIGHT TOLERANCE.
- 3. EXTERIOR AND INTERIOR CONCRETE SURFACES TO BE COATED WITH 6. EXTERIOR SURFACE WITH EPDM MEMBRANE AND INTERIOR WITH POLYURETHANE MEMBRANE.
- 4. SETTING SHALL BE PLACED ON A 6" LAYER OF EXISTING GRAVEL AND LOCATED AT LEAST 18" FROM EXTERIOR AND INTERIOR WALLS.
- 5. COVER SLAB TO BE INSTALLED WITH CONCRETE FRESH TO SURFACES.
- 6. UPHOIL CHARGES ARE NOT REQUIRED 9" OR MORE ABOVE FINISHED GRADE.
- 7. PRODUCT TO BE MARKED "JENSEN PRECAST UNIC" AND "1250 G.A." MARKED AS SHOWN ON THIS DRAWING.



Jensen
PRECAST
UNIC
MAY 2003



TOP SLAB SECTION

NO.	DATE	DESCRIPTION
1		

KHJS1250
6-8-04

**DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS) - SITE EVALUATION / PERCOLATION TEST**

Date / Time: January, 2009 Test Performed by: Wayne I. Arakaki

Owner: Dietmar Rittner TMK: (2) 4 - 7 - 009 : 069

Elevation: _____ feet
 Depth to Groundwater Table: greater 50' feet below grade
 Depth to Bedrock (if observed): _____ feet below grade
 Diameter of Hole: 12 inches
 Depth to Hole Bottom: _____ feet below grade

<u>Depth, inches below grade</u>	<u>Soil Profile (color, texture, other)</u>
<u>0 to 5'-0"</u>	<u>wainee stoney silty clay</u>

PERCOLATION READINGS:

Time 12 inches of water to seep away: _____ minutes
 Time 12 inches of water to seep away: _____ minutes

Check one:

Percolation tests in sandy soils, recorded time intervals and water drops at least every 10 minutes for at least 1 hour.

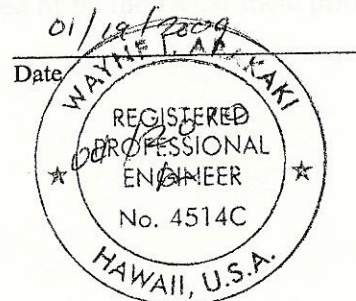
Percolation tests in no-sandy soils, presoaked the test hole for at least 4 hours. Recorded time intervals and water drops at least every 10 minutes for 1 hour of time for the first 6 inches to seep away in greater than 30 minutes record time intervals and water drops at least every 30 minutes for 4 hours or until 2 successive drops do not vary by more than 1/16 inch.

<u>Time Interval</u>	<u>Drop in Inches</u>	<u>Time Interval</u>	<u>Drop in Inches</u>
<u>30</u>	<u>6.3</u>	<u>30</u>	<u>3.9</u>
<u>30</u>	<u>6.0</u>	<u>30</u>	<u>3.3</u>
<u>30</u>	<u>4.7</u>	<u>30</u>	<u>3.0</u>

Percolation Rate (time/final water level drop): 10.0 minutes/inches

As the engineer responsible for gathering and providing site information and percolation test results, I attest to the fact that above site information is accurate and that the site evaluation was conducted in accordance with the provisions of Chapter 11-62, "Wastewater Systems" and the results were acceptable. I also attest that three feet of suitable soil exist between the bottom of the soil absorption system and the groundwater table or any other limiting layer.

Wayne I. Arakaki
 Engineer's Signature/Stamp





DEPARTMENT OF HEALTH - WASTEWATER BRANCH
INDIVIDUAL WASTEWATER SYSTEM (IWS)
OWNER'S CERTIFICATION FORM

Subject: Individual Wastewater System for Dietmar Rittner
Tax Map Key (TMK) Number: (2) 4 - 7 - 9 : 69
Mailing Address: 363 Kai Nalu Pl
Kihai 411 96753

I, Dietmar Rittner, hereby certify that I am the owner (s) of the
(please print name)

subject property and that I have read the following and shall comply with all provisions. Failure to comply with any or all of the provisions can lead to imposition of the penalties and remedies as provided for in Administrative Rule, Title 11, Chapter 62, Section 11-62-72, Penalties and remedies.

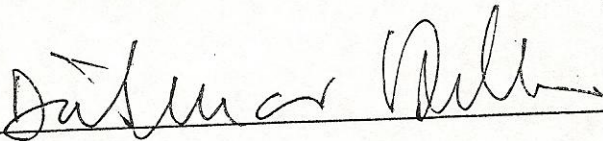
1. I certify that as the owner of the Individual Wastewater System (IWS) serving the subject property, the IWS will be inspected, operated and maintained in accordance with the operation and maintenance manual developed by my IWS design engineer section (section 11-62-31.1(e)(2)).

Furthermore, if an aerobic unit is utilized for wastewater treatment, an active service contract for the proper operation and maintenance shall be maintained at all times (section 11-62-33.1.(b)(3)).

2. I understand and shall comply with the provision of section 11-62-08 (g) which requires that the IWS be constructed by a licensed contractor with a license type of: **A, C-9, C-37, C-37a or C-43.**
3. I understand and shall comply with the provisions of section 11-62-31.(f) which states that the IWS must be inspected and approved of by the Department prior to use.

Furthermore, I shall instruct and require my contractor to leave uncovered for inspection, various parts of the IWS system. These parts include manhole/access openings, distribution boxes, ends of trenches to visually see gravel, pipe and geotextile fabrics used and/or seepage pit openings. I understand that I will be required to re-expose these areas if at the time of inspection they are not visible.

4. I understand and shall comply with the provisions of section 11-62-31.1.(e)(2) which required me to certify upon sale or transfer of the subject property, that the appropriate transfer or sales documents and provisions shall bind the new owners to the operation and maintenance provisions referenced in item 1 above.
5. I understand and shall submit any and all changes made to my IWS plans to the Department (section 11-62-08(b)) for review and approval. Changes to the approved IWS plans that need to be submitted to the Department include but are not limited to the following - changes in location of any component of the wastewater system, changes in the type of products used, changes in the disposal system methods, changes in the dwellings/buildings location or size and changes in the design engineer for the IWS.

Signed:  Dated: 1/5/09