

63216

Control No.

STATE OF OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

PERMIT NO. 01-36

\$ 205.00

Fee

81029BA00300

New Construction

Major Repair

Other

Permit Issued To Dennis & Kim Bjork (Property Owner's Name) 8N (Township) 10W (Range) 29BA (Section) 300 (Tax Lot / Acct. No.) Clatsop (County)

SW Pine Dr. warrenton (Road Location) (City) Connie M. Schrandt (Issued by - Signature) 3-21-01 (Date Issued)

PERMITS ARE NOT TRANSFERABLE

ALL WORK TO CONFORM TO OREGON ADMINISTRATIVE RULES, CHAPTER 340. WORK SHALL BE DONE BY PROPERTY OWNER OR BY LICENSED SEWAGE DISPOSAL SERVICE. (MAKE NO CHANGES IN LOCATION OR SPECIFICATIONS WITHOUT WRITTEN APPROVAL)

SPECIFICATIONS

Alternative-Low pressure distribution system

EXPIRATION DATE March 21, 2002

TYPE OF SYSTEM

Existing Michael's dosing tank (500 gallons) Existing Michael's septic tank

Design Sewage Flow 450 Gallons/Day

Tank Volume 1000 Gallons

Disposal Trenches

Seepage Bed(s) Square Feet

Maximum Depth 30 inches.

Minimum Depth 18 inches.

150 Linear Feet

Equal Loop Serial

Pressurized

Minimum Distance Between Trenches 8' on centers

Total Rock Depth 16 inches.

Below Pipe 12 inches.

Above Pipe 4 inches.

Rake Sidewall

Special Conditions (Follow Attached Plot Plan) Install in accordance with plans & specifications submitted 3-12-01 and 3-21-01. Honor all required setbacks. As-built with all notations on approved plan addressed and certification of final construction by installer required prior to pre-cover inspection request.

PRE-COVER INSPECTION REQUIRED - CONTACT NCBO -- 301-3280

CERTIFICATE OF SATISFACTORY COMPLETION

As-Built Drawing with Reference Locations

Installer Bill Bergerson Const.

Final Insp. Date 4-3-01

Inspected By Connie Schrandt

Issued by Operation of Law

Pre-cover inspection waived pursuant to OAR 340, Division 71

As-built & certification of final construction received 4-4-01.

Pump test - 6' head as per installer.

OK to cover system.

System components installed as per approved as built.

In accordance with Oregon Revised Statute 454.665, this Certificate is issued as evidence of satisfactory completion of an on-site sewage disposal system at the location identified above.

Issuance of this Certificate does not constitute a warranty or guarantee that this on-site disposal system will function indefinitely without failure.

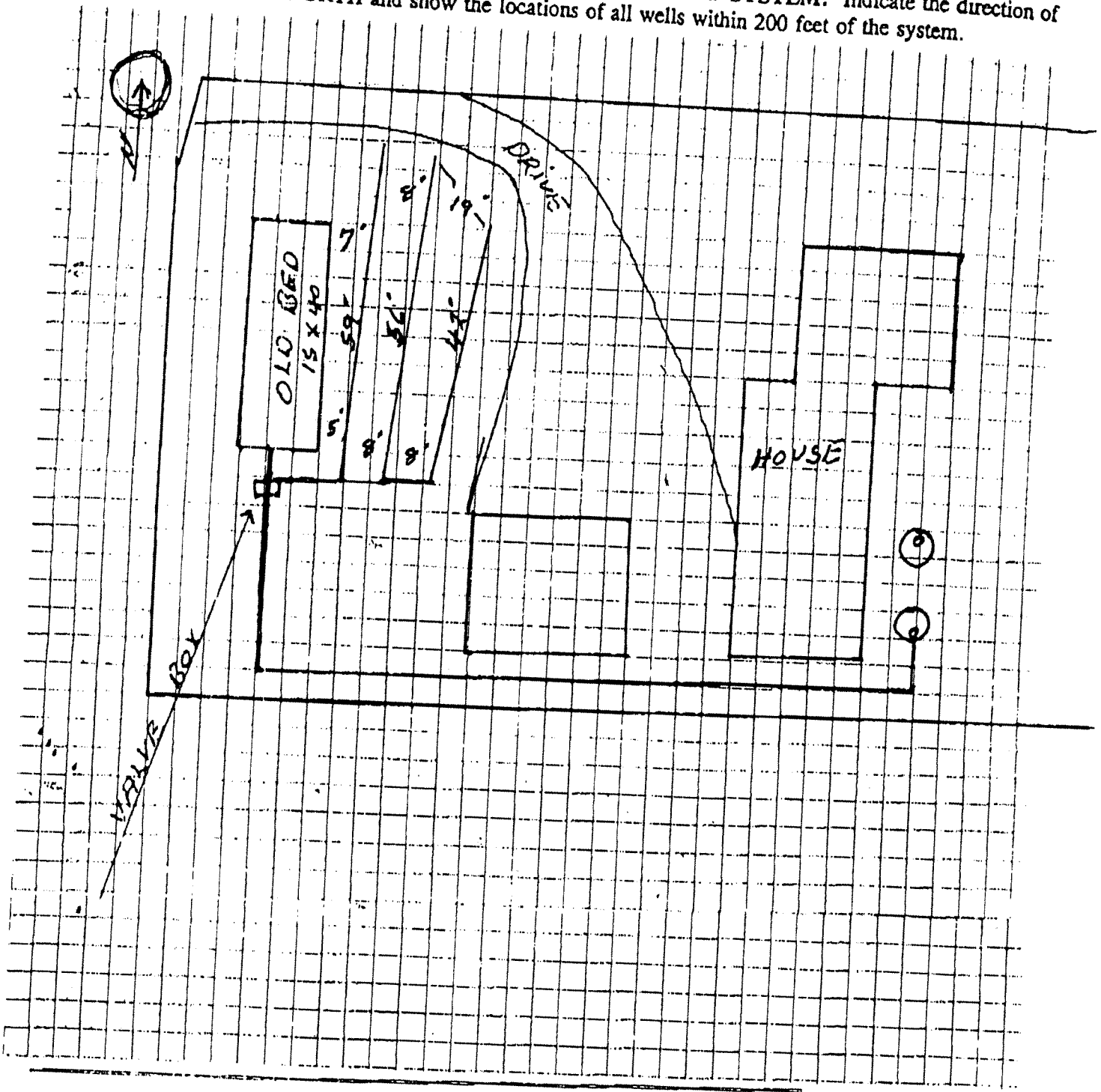
Connie M. Schrandt (Authorized Signature)

Natural Resource Specialist (Title)

4-4-01 (Date)

DEQ, NCBO, WARRENTON (Office)

SECTION 3: AS-BUILT PLAN OF THE CONSTRUCTED SYSTEM. Indicate the direction of NORTH and show the locations of all wells within 200 feet of the system.



SECTION 4: CONSTRUCTION WAS PERFORMED BY:

Property Owner (Permittee)
 Sewage Disposal Service Business: BERGERSON CONST. 35413
(Print Full Business Name) (License Number)

I certify the information provided in this notice is correct, and that the construction of this system was in accordance with the permit and the rules regulating the construction of on-site sewage disposal systems (OAR Chapter 340, Divisions 21 and 73)

Bill Bergerson OWNER 4-4-01
(Print Name) (Date)

Department of Environmental Quality
Northwest Region, Warrenton Office
65 N. Highway 101, Suite G
Warrenton, OR 97146
(503) 861-3280/(503) 861-3259 (FAX)

March 21, 2001

Dennis & Kim Bjork
1236 SW Pine Dr.
Warrenton, OR 97146

Re: Information for Repair Permit
T8N-R10W-S29BA; TL# 300
Clatsop County

Dear Dennis & Kim Bjork:

In response to your application for repair of the existing on-site sewage disposal system submitted on March 12, 2001 to the North Coast Branch Office (NCBO) in Warrenton, a field inspection and record review of the above-described property has been completed.

Records on file at the NCBO include a certificate of satisfactory completion for a repair permit (Permit #99-216) issued in December 1999. The system repair included a 1000-gallon concrete septic tank, a 500-gallon concrete dosing tank and a 600 square foot seepage bed with low pressure distribution designed for a maximum wastewater flow of 450 gallons per day.

A field inspection of the existing septic system, including an evaluation of the test pit provided, was conducted on March 14, 2001. Based on this inspection and record review, including evaluations of soil test pits provided for the 1999 permitted repair, the area indicated on the enclosed plot plan is approved for an alternative low pressure distribution system repair utilizing disposal trenches and designed for a maximum flow of 450 gallons per day.

Requirements for the system repair are as follows:

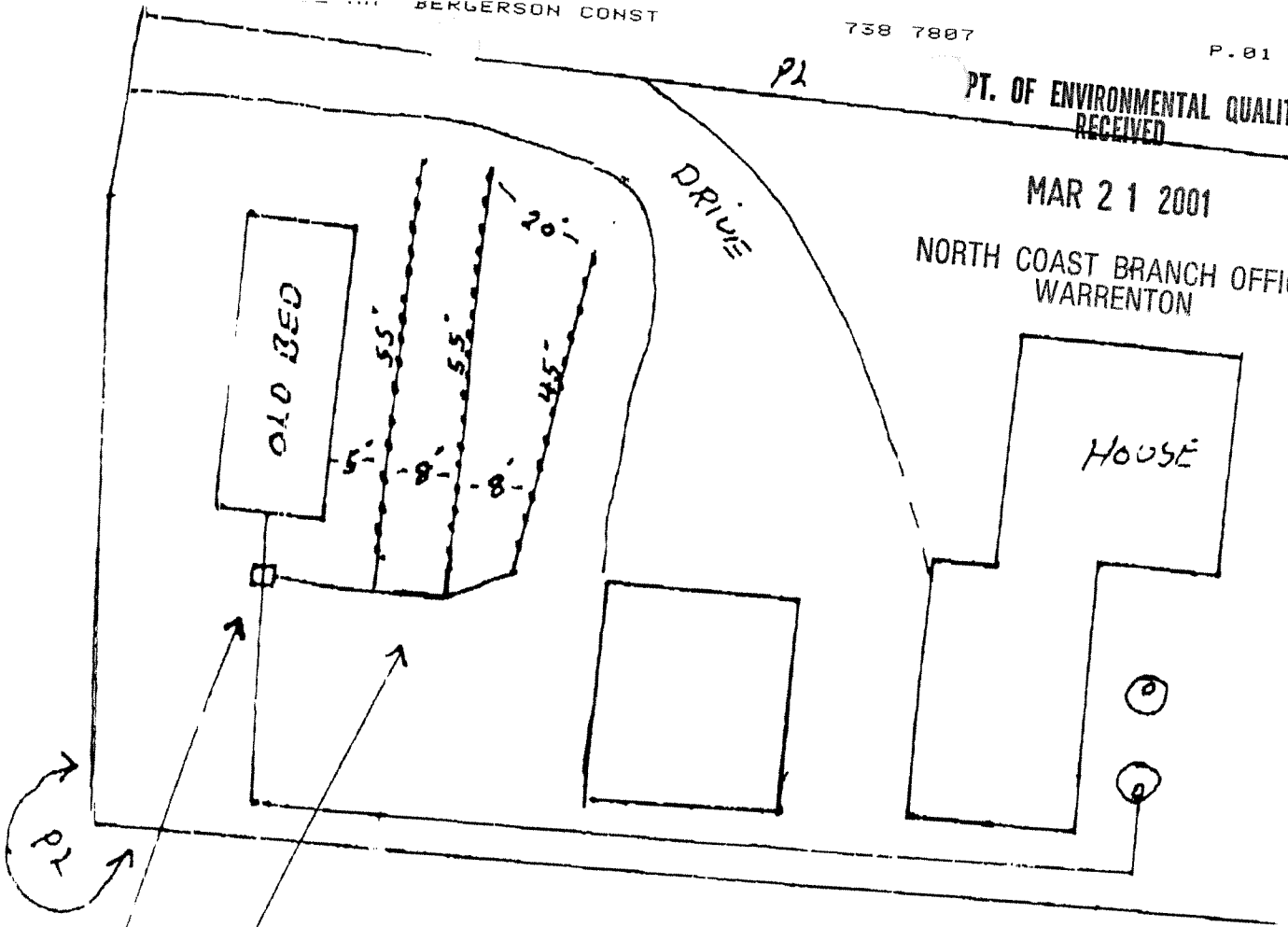
- A minimum of 150 linear feet of disposal trenches;
- Maximum trench depth of 30 inches and minimum trench depth of 18 inches for pressurized distribution;
- Minimum of 12 inches of drain media under and minimum of 4 inches drain media above the distribution piping in the disposal trenches; and
- Filter fabric to meet Oregon Administrative Rules (OAR) 340-073-0041 to cover the drainfield media-top only.



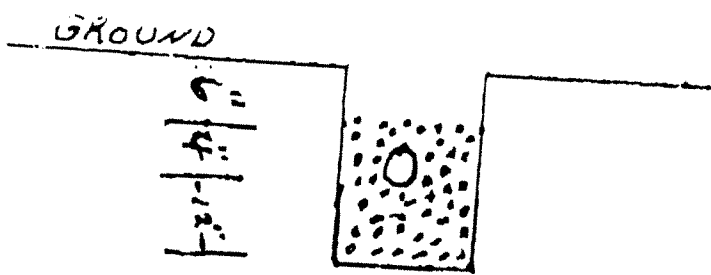
PT. OF ENVIRONMENTAL QUALITY RECEIVED

MAR 21 2001

NORTH COAST BRANCH OFFICE WARRENTON



6.5 ORIFICES @ 30" ϕ
 - WAVE BOX



BSORK
 8^N - 10^W - 2989 - 300

APPROVED

Connie M. Schrandt

Connie M. Schrandt, W.W.S.
 Lic. No. 0207760756

3/21/01

BERGERSON CONSTRUCTION
MATERIALS LIST

DEPT. OF ENVIRONMENTAL QUALITY
RECEIVED

MAR 12 2001

NORTH COAST BRANCH OFFICE
WARRENTON

PIPE AND FITTINGS:

- All 2" Pipe - 200 PSI - PVC 1120
- All 2" Fittings - PVC D2466 SCH 40
- All 4" Pipe - PVC 12454-13 ASTM D-3034
- ABS ASTM F-628-93
- All 4" Fittings - ASTM D3033-3034 - PVC 1120
- Fittings - ABS 02661

ALL 4" PIPE - OUTSIDE D-BOX:

- ASTM F810 11-5-90-2W
- PVC ASTM D2729 T21

TANKS:

- 1000 Gallon Norwesco Poly Tank
- Michael's 500 Gallon Tank
- 1000 Gallon Michaels Combo
- 1000 Gallon Michael's Septic Tank

RISERS:

- Orenco
- Norwesco
- Roto Tech
- Michael's

PUMPS AND PUMP SUPPLIES:

- Hydronic OSP 33 Pump 51739-007
- Grundfos 331 M10
- ~~Hydronic~~ Pump ~~B226~~ ~~LOSHIF~~
- S.J. Electro 101 High Level Alarm Float
- S.J. Electro 15 SSD 120V WP Pump Switch
- Orenco Floats and Alarms
- Orenco Effluent Screen ES 1840

SHEF 50 A1

DISTRIBUTION BOXES:

- Bergerson Concrete D-Box #204
- Tuf-Tite D-Box

FILTER MATERIAL:

- Johnson 1-1/2" to 3/4" Crushed Rock
- Moeller Sand and Gravel - Sand
- Naselle Sand and Gravel - Sand

FILTER MATERIAL PROTECTION:

- 60 lb. Craft Paper
- Filter Fabric - OR TYPAR 3201

OTHER:

- Other
- Other
- Other
- Other
- Other

APPROVED

Connie M. Schrandt

Connie M. Schrandt, W.W.S.

Lic. No. 0207760756

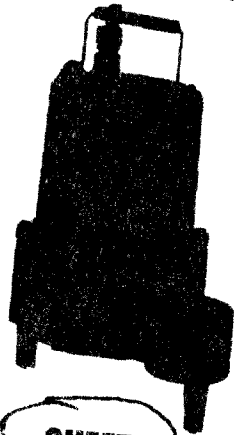
3/21/01

All Product Subject to Stock on Hand.
Contact Sales Department for availability and special orders.

UNITED PIPE & SUPPLY

HYDROMATIC Effluent Pumps

B50RK



SHEF50

MAR 12 2001

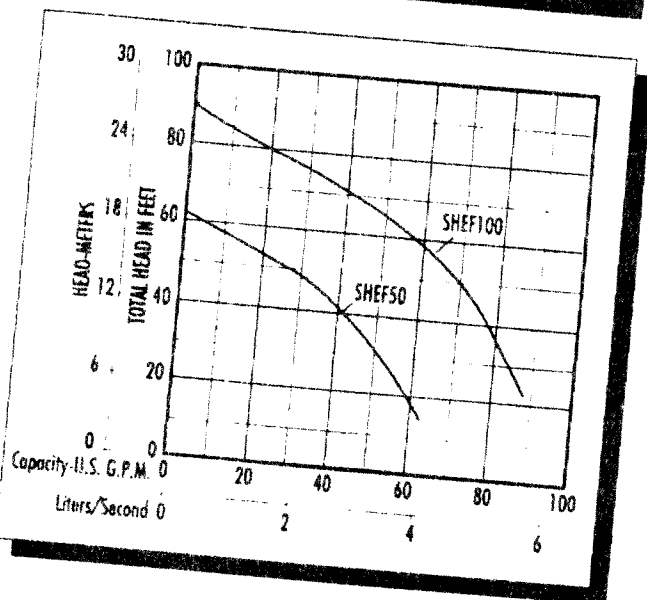
NORTH COAST BRANCH OFFICE
WARRENTON



SHEF100

SHEF50	
Typical Application*	High Head Effluent and Dewatering
Capacities	to 63 GPM (4.0 m ³ /h)
Heads	to 63 ft (19.2m)
Electrical	115V, 1ø, 14.5 FLA, 60Hz; 200V, 1ø, 7.6 FLA, 60Hz 230V, 3ø, 3.1 FLA, 60Hz, 3ø, 1.6 FLA, 60Hz 575V, 3ø, 1.2 FLA, 60Hz
Motor	(single phase) - 1/2HP Split phase w/start capacitor and thermal overload protection, 3450 RPM; (three phase) - 1/2 HP polyphase, 3450 RPM
Minimum Recommended Sump Diameter	Simplex = 24" (609.6mm) Duplex = 30" (762 mm)
Automatic Operation	Wide-angle float switch (1ø only) (manual available)
Material of construction	Class 30 cast iron
Impeller	Thermoplastic non-clog
Discharge Size	2" (50.8mm)
Solids handling	3/4" (19.1mm)
Power cord	1ø - 20', STW, STW-A (30' optional); 3ø - 20', STW-A (30' optional)
Superior Features	<ul style="list-style-type: none"> Carbon/Ceramic type 21 mechanical seal Oil-filled motor w/automatic reset thermal overload for maximum protection Upper & lower ball bearing construction Piggy-back plug available for easy maintenance and replacement Patented inlet design for better solids handling Capacitor start for increased starting torque

SHEF100	
Typical Application*	High Head Effluent and Dewatering
Capacities	to 88 GPM (5.5 m ³ /h)
Heads	to 90 ft (27.4m)
Electrical	200V, 1ø, 12.1 FLA, 60Hz; 230V, 1ø, 13.1 FLA, 60Hz 230V, 3ø, 5.8 FLA, 60Hz; 460V, 3ø, 2.8 FLA, 60Hz 575V, 3ø, 1.9 FLA, 60Hz
Motor	(single phase) - 1HP Split phase w/start capacitor and thermal overload protection, 3450 RPM; (three phase) - 1HP polyphase, 3450 RPM
Minimum Recommended Sump Diameter	Simplex = 24" (609.6mm) Duplex = 30" (762 mm)
Automatic Operation	Wide-angle float switch (1ø only) (manual available)
Material of construction	Class 30 cast iron
Impeller	Thermoplastic non-clog
Discharge Size	2" (50.8mm)
Solids handling	3/4" (19.1mm)
Power cord	1ø - 20', STW, STW-A (30' optional); 3ø - 20', STW-A (30' optional)
Superior Features	<ul style="list-style-type: none"> Carbon/Ceramic type 21 mechanical seal Oil-filled motor w/automatic reset thermal overload for maximum protection Upper & lower ball bearing construction Piggy-back plug available for easy maintenance and replacement Patented inlet design for better solids handling Capacitor start for increased starting torque



Item #	Description
Effluent Pumps	
027211	SHEF50A1-20' 115V HM EFF PUMP
027212	SHEF50A2-20' 230V HM EFF PUMP
027213	SHEF100A2-20' 230V HM EFF PUMP
020591	OSP33M1-10' 115V HM EFF PUMP
032397	OSP33M1-20' 115V HM EFF PUMP
020592	OSP33M2-20' 230V HM EFF PUMP
020620	OSP33A1-10' 115V HM EFF PUMP
020621	OSP33A2-20' 230V HM EFF PUMP

APPROVED

Connie M. Schrandt
Connie M. Schrandt, W.W.S.
Lic. No. 0207760756

3/21/01

To Order, See Page 300

MAR 12 2001

SYSTEM HEAD CALCULATIONS

NORTH COAST BRANCH OFFICE
WARRENTON

1. **STATIC HEAD:** (vertical elevation difference from the pump base to the pressure distribution laterals) 15 feet
2. **SYSTEM ALLOWANCE:** (includes distribution piping losses and a five foot residual head discharge at the distribution laterals) 10* feet
3. **FRICTION HEAD:** (transport pipe friction loss at flow rate)

(a) Calculate Flow rate:

Diameter of orifices..... 1/8 inch

Number of orifices = N = 65

Orifice discharge rate = R = .41 gpm

Total gallons per minute = N X R = 27 gpm

(b) Calculate Friction Head Loss:

Length of transport pipe = P (in feet) 1.8

Friction loss coefficient = L (see reverse side) 1.00

Friction Head = P X L = 26.8 feet

4. **TOTAL DYNAMIC HEAD (TDH):** (sum of static head, system allowance and friction head) _____ feet

5. **HYDRAULIC SPECIFICATIONS:**

PUMP DUTY: 27 gpm @ 26.8 TDH

BRAND: HYDROMATIC

MODEL: SHEF 50 HORSEPOWER: 1/2

CAPACITY: _____ TDH @ _____ GPM, and
_____ GPM @ _____ TDH

Footnote: * in absence of specific head loss calculations, use 10 feet for this factor.

APPROVED

Connie M. Schrandt

Connie M. Schrandt, W.W.S.

Lic. No. 0207760756

3/21/01

Date Rec'd 3-12-01
 Date Completed 3-21-01
 Required Fee \$ 205.00
 Receipt No. 97267
 Control No. 63216

FOR APPLICANT'S USE - (PLEASE PRINT)

DENNIS & KIM BJORK
 (Property Owner's Name)
 Lot Size (Acreage or Dimensions) _____
 (Applicant's Name if Different from Owner) _____
 Legal Description of Property 8^N 10^W 29 BA 300
 (Township) (Range) (Section) (Tax Lot/Acct. No.)
 For Parcels in Platted Subdivisions, Indicate (Subdivision Name) (Lot Number) (Block Number)
CLATSOP (County)

Proposed Facility

- Single Family Residence _____ (Number of Bedrooms)
- Other _____ (Specify)

Water Supply

- Public (Community System)
- Private _____ (Indicate: Well, Spring, Etc.)

Existing Facility

- Single Family Residence 4 (Number of Bedrooms)
- Other _____ (Specify)

APPLICATION FOR:

- Site Evaluation Report
- Permit to Construct On-Site Sewage Disposal System
- Permit to Repair On-Site Sewage Disposal System
- Permit for Alteration of On-Site Sewage Disposal System
- Permit Renewal
- Existing System Report
- Plan Review
- Other (Specify) _____
- Authorization Notice
- Purpose of Authorization Notice
- Connect to an existing system not currently in use
- Replace one mobile home with another or a house
- Replace or rebuild a house
- Addition of one or more bedroom
- Personal hardship
- Temporary housing
- Other (Specify) _____

This application will be returned if it is not filled out completely and accompanied by the appropriate fee and attachments required in the guidance packet. Your site must be prepared according to instructions in the guidance packet before action can be taken on this application. By my signature, I certify that the information I have furnished is correct, and hereby grant the Department of Environmental Quality and its authorized agent permission to enter onto the above described property for the purpose of this application.

Bill Bergerson
 (Signature)

3-9-01
 (Date)

Authorized Representative
 Licensed Installer
 License No. 35413

Owner's Mailing Address _____

Applicant's Mailing Address (if different) _____

BILL BERGERSON

1615 HILLIAR RD

GEARHART OR 97138

Phone _____

Phone 738-7807

Control No.
\$ 275.00
Fee

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY

PERMIT NO. 99-216

New Construction

Major Repair

Other

Permit Issued To Dennis & Kim Bjork
(Property Owner's Name)

8N
(Township)

10W
(Range)

29BA
(Section)

300
(Tax Lot / Acct. No.)

Clatsop
(County)

SW Pine Dr.
(Road Location) Warrenton
(City)

[Signature]
(Issued by - Signature)

12-6-99
(Date Issued)

PERMITS ARE NOT TRANSFERABLE

ALL WORK TO CONFORM TO OREGON ADMINISTRATIVE RULES, CHAPTER 340. WORK SHALL BE DONE BY PROPERTY OWNER OR BY LICENSED SEWAGE DISPOSAL SERVICE. (MAKE NO CHANGES IN LOCATION OR SPECIFICATIONS WITHOUT WRITTEN APPROVAL)

SPECIFICATIONS

EXPIRATION DATE December 6, 2000

Concrete closing
Tank volume 500 gallons

Concrete septic
Tank Volume 1000 Gallons

Maximum Depth 30 inches.

Equal Loop Serial

Total Rock Depth 12 inches.

Disposal Trenches

Minimum Depth 18 inches.

Pressurized

Below Pipe 6 inches.

Design Sewage Flow 450 Gallons/Day

Seepage Bed(s) 600 Square Feet

Linear Feet -

Minimum Distance Between Trenches -
Above Pipe 4 inches. Rake Sidewall

Special Conditions (Follow Attached Plot Plan) Install in accordance with plans & specifications submitted. Properly decommission existing septic tank and submit copy of pumping receipt. Septic tank to be set back a minimum of 10' to any water lines and 5' to any property lines or building foundation. 10' setback from any property lines, water lines or underground utilities/building foundation lines from disposal field.
PRE-COVER INSPECTION REQUIRED - CONTACT NCBO - 861-3280

CERTIFICATE OF SATISFACTORY COMPLETION

As-Built Drawing
with Reference Locations # 35413

Installer Bergerson Conste

Final Insp. Date 1-24-00

Inspected By CMSchwandt

Issued by Operation of Law

Pre-cover inspection waived pursuant to OAR 340, Division 71

Asbuilt received 1-21-00,
Pump changed to SHF 50 M - squist OK
Waterline crossing OK (20' of 3034)
Driveway location changed
OK to cover system

CSC-hold until notification of pump alarm
test positive and receipt of new pump
specifications at NCBO - OK CMS/2/4/00
Alarm test OK as per Bergerson, notified
1/31/00

In accordance with Oregon Revised Statute 454.665, this Certificate is issued as evidence of satisfactory completion of an on-site sewage disposal system at the location identified above.

Issuance of this Certificate does not constitute a warranty or guarantee that this on-site disposal system will function indefinitely without failure.

Cornie Schwandt
(Authorized Signature)

Natural Resource Specialist
(Title)

2-4-00
(Date)

NCBO
(Office)

ED'S
 Septic Tank Cleaning Service
 Licensed & Bonded
 92042 Koppisch Road
 ASTORIA, OREGON 97103-8426
CLYDE McDONALD 458-6521
(800) 382-7380

STATEMENT

DATE 1-20-2000
 NUMBER 738-7807

Bergerson Const.
1516 Hillside Road
Gearhart, Oregon 97138

Re: *Dennis Bjork*
1236 S.W. Pine
Warrenton, Ore

TERMS: A \$20.00 SERVICE CHARGE WILL BE APPLIED TO ALL RETURNED CHECKS.

PLEASE DETACH AND RETURN WITH YOUR REMITTANCE

DATE	CHARGES AND CREDITS	BALANCE
	1000 Galloy Steel Septic Tank	BALANCE FORWARD
1-20-00	Pumped Septic Tank To Replace System	160.00

DEPT. OF ENVIRONMENTAL QUALITY
 RECEIVED

FEB 9 2000

NORTH COAST BRANCH OFFICE
 WARRENTON

2-3-00
Cliff 2456
PAID

ED'S
 Septic Tank Cleaning Service

Thank You

PAY LAST AMOUNT
 IN THIS COLUMN

FINAL INSPECTION REQUEST AND NOTICE

Pursuant to the requirements within ORS 454.665, OAR 340-71-170 and OAR 340-71-175, the system installer and/or the permittee must notify the Department of Environmental Quality (or its authorized Agent) when the construction, alteration or repair of a system for which a permit was issued is completed (except for the backfilling or covering of the installation). The Department (or Agent) has 7 days to perform an inspection of the completed construction after the official notice date, unless the Department (or Agent) elects to waive the inspection and authorizes the system to be backfilled earlier. Receipt and acceptance of this completed form by the Department (or Agent) establishes the official notice date of your request for the pre-cover inspection. Please complete all four sections of the form and return it to the office that issued the permit. Forms that are determined to be incomplete will be returned.

SECTION 1: BASIC INFORMATION.

Property Owner DENNIS BJORCK Permit Number 99-216 County CLATSOP
Township 8N; Range 10W; Section 2909A; Tax Lot 300; Tax Acct. # _____
Job Location 1236 SW. PINE WARRENTON
Date System Construction Completed 1-21-00; Date Submitted to DEQ or Agent _____

SECTION 2: MATERIALS LIST. Identify and list all materials used in the system's construction.

PIPE AND FITTINGS:

- All 2" Pipe - 200 PSI - PVC 1120
- All 2" Fittings - PVC D2466 SCH 40
- All 4" Pipe - PVC 12454-19 ASTM D-3034
- ABS ASTM F-628-93
- All 4" Fittings - ASTM D3039-3034 - PVC 1120
- Fittings - ABS 02661

ALL 4" PIPE - OUTSIDE D-BOX:

- ASTM F810 11-5-90-2W
- PVC ASTM D2729 T21

TANKS:

- 1000 Gallon Norwesco Poly Tank
- 500 Gallon ~~Norwesco~~ Dosing Tank
- 1000 Gallon Michaels Combo

MICHAELS

RISERS:

- Orenco
- Norwesco
- Roto Tech
- Michael's

PUMPS AND PUMP SUPPLIES:

- Hydronic OSP 33 Pump 61739-007
- ~~50000~~ Pump
- High Head Pump P225106HHF
- S.J. Electro 101 High Level Alarm Float
- S.J. Electro 16 SSD 120V WP Pump Switch
- Orenco Floats and Alarms
- Orenco Effluent Screen ES 1840

SHEE SO AL

DISTRIBUTION BOXES:

- Bergerson Concrete D-Box #204
- Tuf-The D-Box

FILTER MATERIAL:

- Johnson 1-1/2" to 3/4" Crushed Rock
- Modlor Sand and Gravel - Sand
- Scappoose Sand and Gravel - Sand

FILTER MATERIAL PROTECTION:

- 90 lb. Craft Paper
- Filter Fabric - OR TYPAR 3201

OTHER:

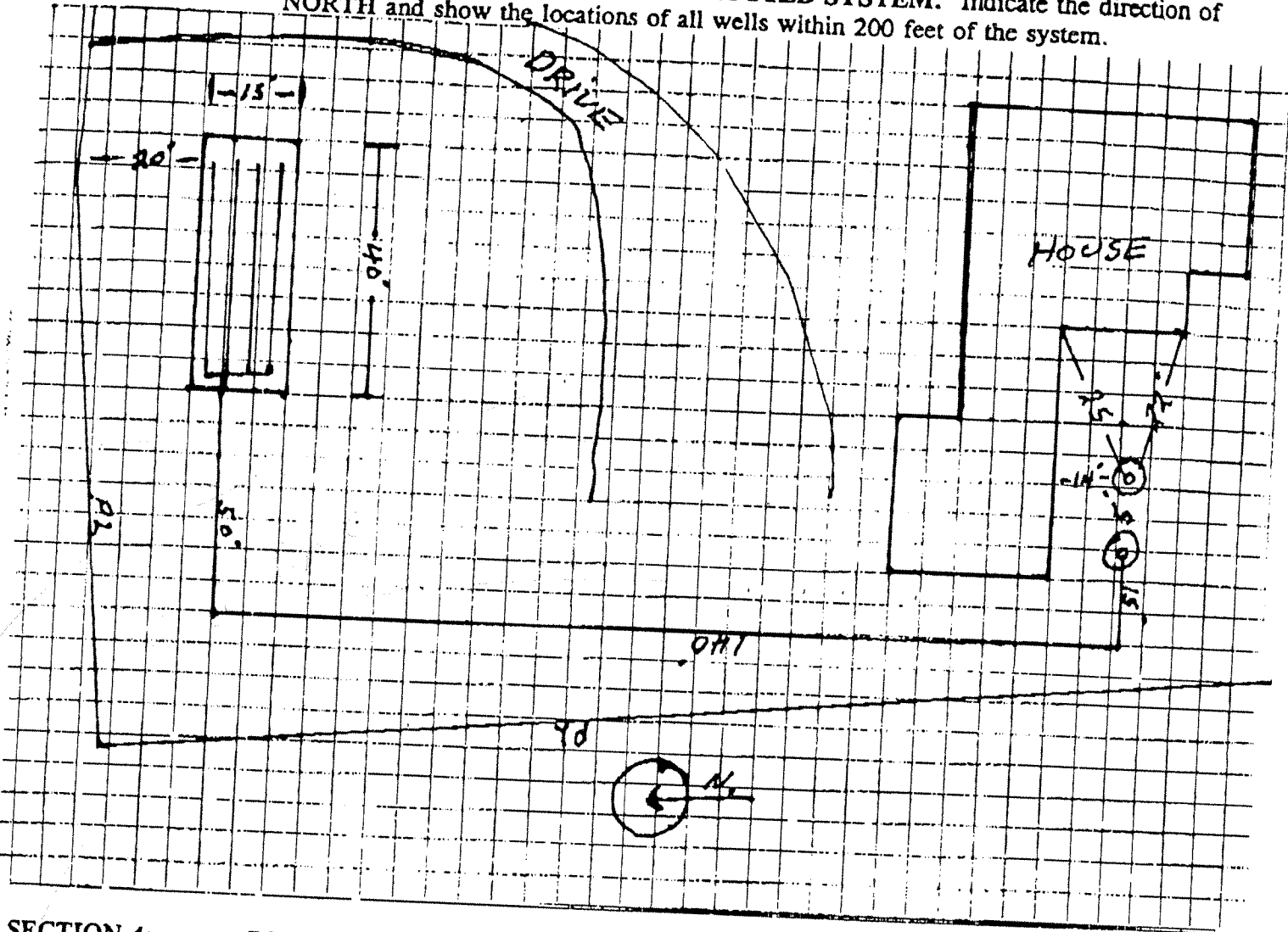
- Other
- Other
- Other
- Other
- Other

DEPT. OF ENVIRONMENTAL QUALITY
RECEIVED

JAN 21 2000

NORTH COAST BRANCH OFFICE
WARRENTON

SECTION 3: AS-BUILT PLAN OF THE CONSTRUCTED SYSTEM. Indicate the direction of NORTH and show the locations of all wells within 200 feet of the system.



SECTION 4: CONSTRUCTION WAS PERFORMED BY:

Property Owner (Permittee)

Sewage Disposal Service Business: BERGERSON CONST. 35413
(Print Full Business Name) (License Number)

I certify the information provided in this notice is correct, and that the construction of this system was in accordance with the permit and the rules regulating the construction of on-site sewage disposal systems (OAR Chapter 340, Divisions 71 and 73).

Bill Bergerson OWNER 1-21-00
(System Installer's Signature) (Title) (Date)

e:\wp5\FINAL 95c

DEPT. OF ENVIRONMENTAL QUALITY
RECEIVED

JAN 21 2000

NORTH COAST BRANCH OFFICE
WARRENTON

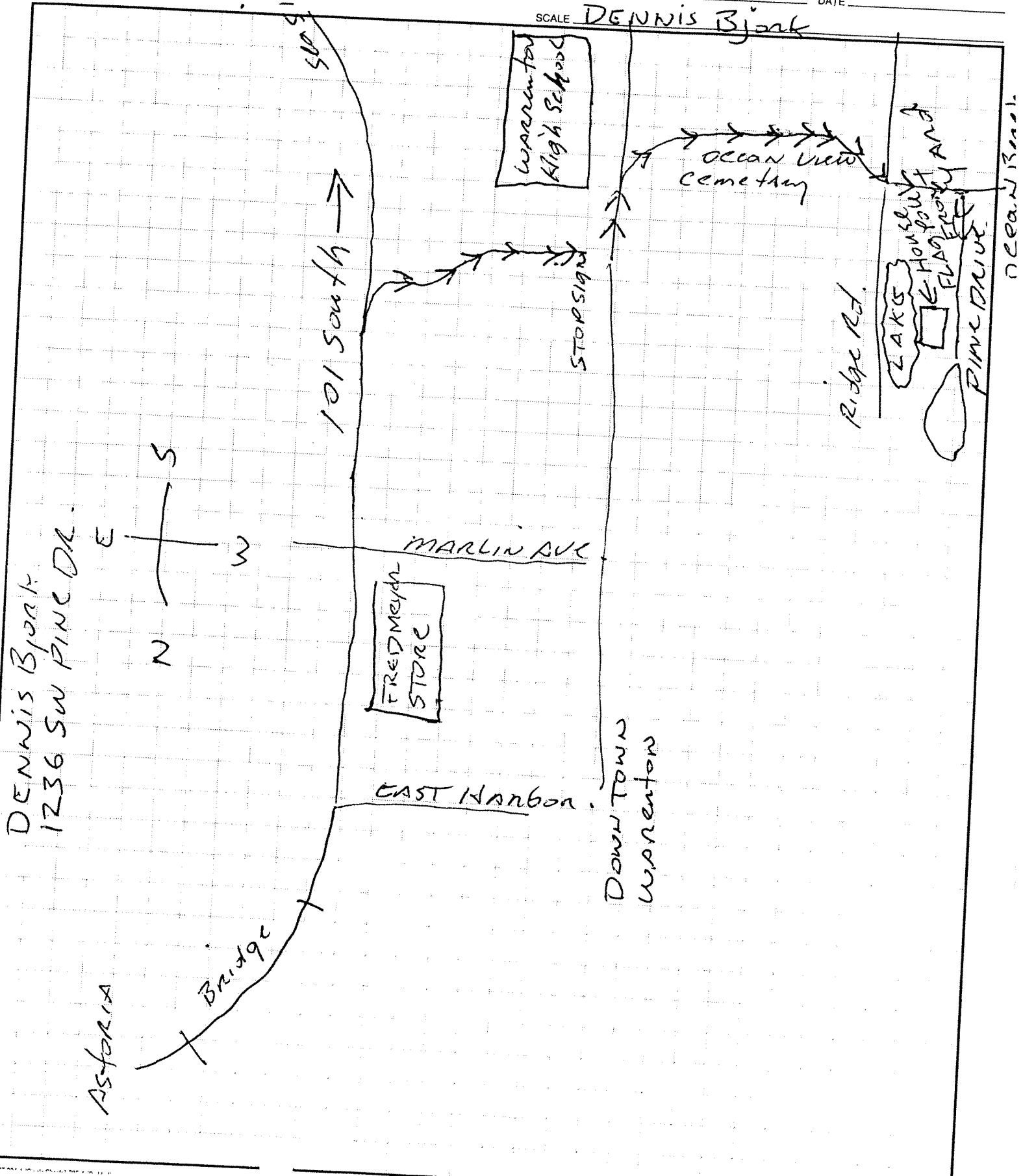


**Bergerson
Construction, Inc.**
- P.O. Box 387
ASTORIA, OREGON 97103
(503) 325-7130

MAP

JOB _____
SHEET NO. _____ OF _____
CALCULATED BY _____ DATE _____
CHECKED BY _____ DATE _____

SCALE DENNIS Bjork

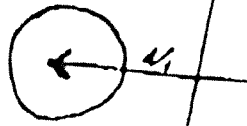


DENNIS Bjork
1236 SW PINE DR.

DOWN TOWN
WARRENTON

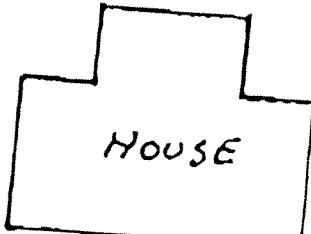
DEC 6 1999

NORTH COAST BRANCH
WARRENTON



Approved
12/6/99
AVCOT
R.S.

1600 gal septic
500 gpm tank
450 GPD
4 Bedroom



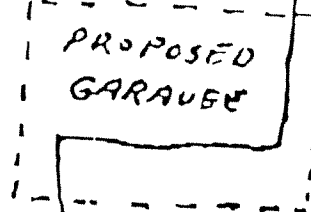
HOUSE



18"-30" Bed depth

Install pump
seepage rules

Have installer
verify squirt height
as part of precover
requirement
Selected pump
SHEF 40
may be
marginal.

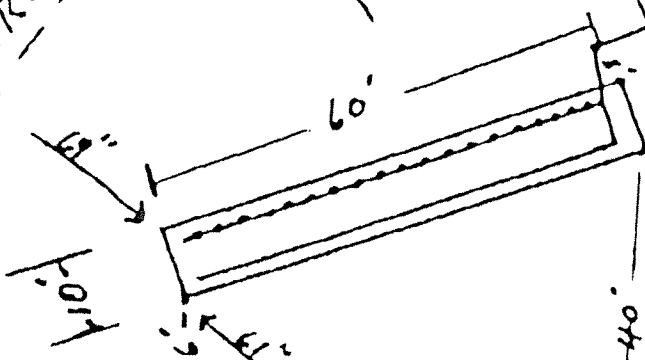


PROPOSED
GARAGE

GROUND LEVEL IS 5" LOWER
AT TEST HOLE THAN AT SEEPAGE TEST

X TEST HOLE

PROPOSED DRIVE



DRIVE NOT
TO BE
DRIVEN ON

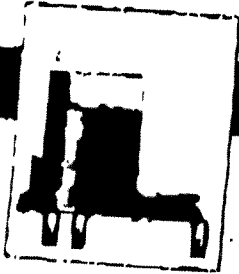
BSORK
8-10-290A-300

Bjork Major Repair

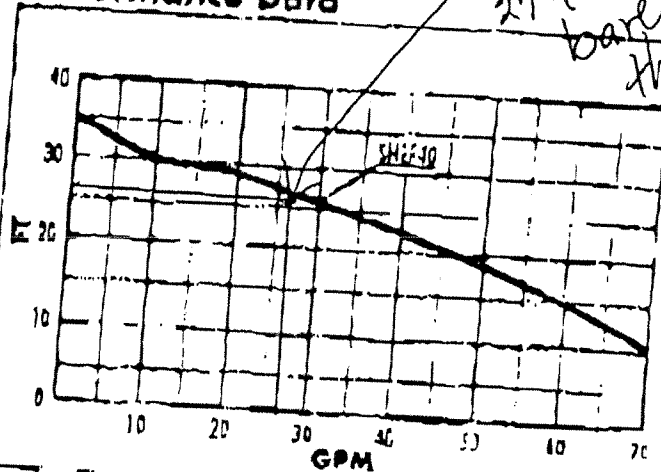
NOV 29 1999

Engineering Details - SHEF40

BN 10W Sec 29 BA 7L 300



Performance Data



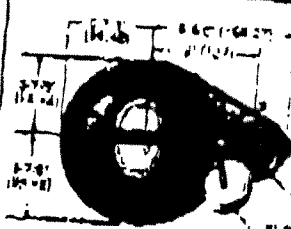
AVCOX
12/2/99

Pump Characteristics

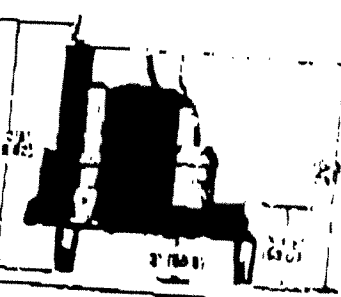
Pump/Model Unit	Submersible	
Normal Model	SH1740M1	SH1740M2
Automatic Model	SH1740A1	SH1740A2
Assemblies	4/10	
Ch Load Amps	12	6.9
Motor Type	Shaded Pole (3 Phase)	
H.P.M.	1550	
Flange	10	
Voltage	115	230
Speed	60	
Temperature	120° Max. fluid temp.	
IMBA Rating	A	
Insulation	Class A	
Shafting Size	1 1/2" NPT	
Shaft Material	3/4"	
Weight	58 lbs	
Power Cord	10/3, 50'W, 20' 116 (20' optional)	

Total Head (Feet)	10	14	17	21	25	29	33	35
(m)	3.0	4.3	5.2	6.1	7.6	8.5	8.8	10.7
GPM (L/S GPM)	70	40	50	40	30	20	10	0
(liters/sec)	4.2	3.8	3.2	2.3	1.6	1.3	0.5	0

Dimensional Data



- All dimensions in inches. (Metric for international use).
- Common dimensions may vary ± 0.005 inches.
- Not for construction purposes unless certified.
- Dimensions and weights are approximate.
- We reserve the right to make revisions to our product and their specifications without notice.



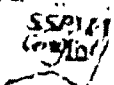
Materials of Construction

Wells	Stainless Steel
Lubricating Oil	Diploleite Oil
Motor Housing	Cast Iron
Case Cover	Cast Iron
Shell	Steel
Mechanical Seal	Wet Rotor Carbon/Ceramic Seal Body: Stainless Steel Spring: Stainless Steel Bellows: Buna-N
Impeller	Engineered Thermoplastic
Upper Bearing	High Speed Steel
Lower Bearing	High Speed Steel
Bottom Plate	Polymer Coated Steel
Leakage Seal	Mineral Based
Case	Engineered Thermoplastic

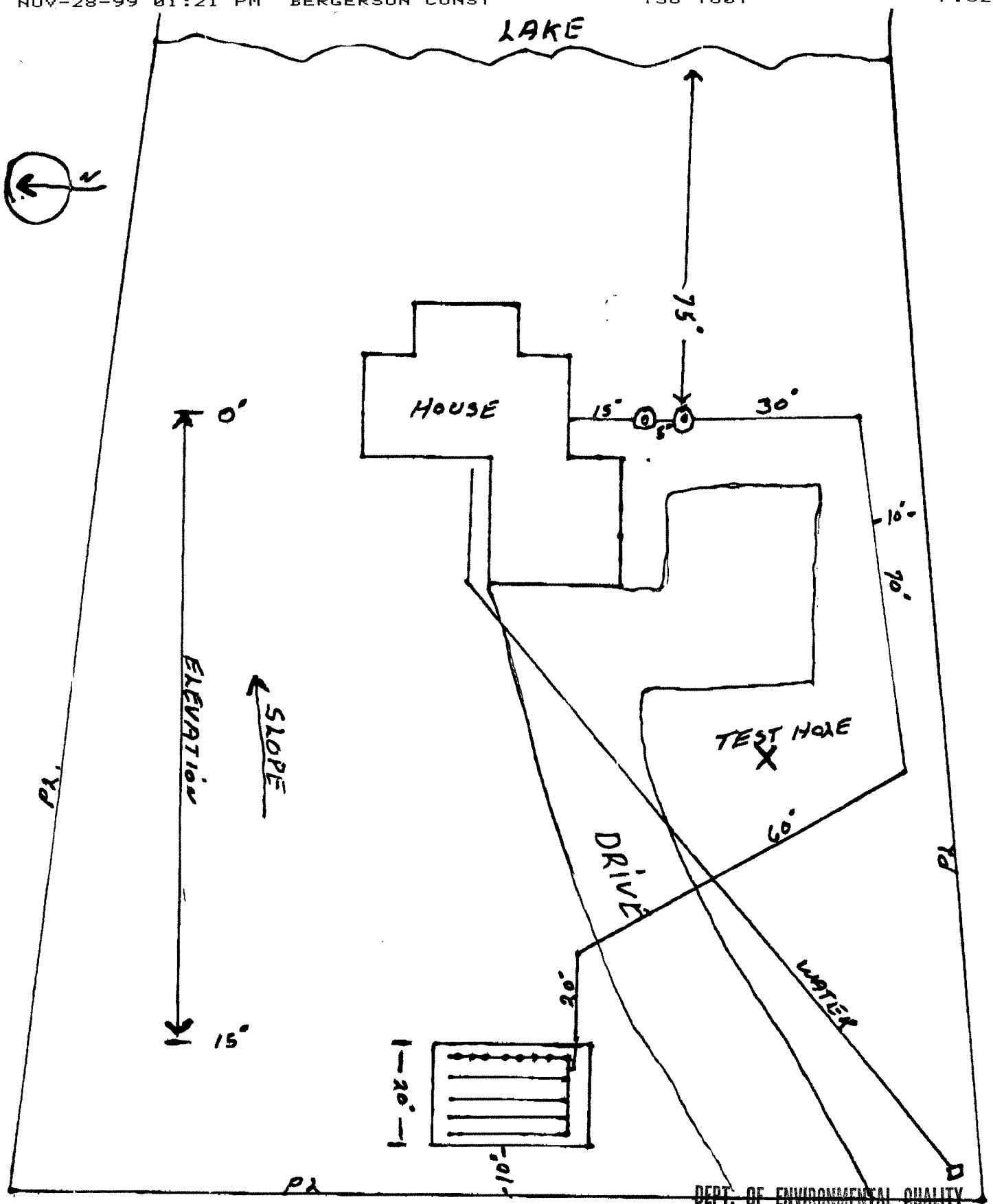
HYDROMATIC

GENAIR PUMP GROUP

1100 W. 10th Street, Unit 4-625, Tallahassee, FL 32304
 905 4th Street, Tallahassee, FL 32304
 SALES OFFICES IN ALL MAJOR CITIES AND COUNTRIES
 For a complete listing of our products and services, please contact us at 905-441-1111



Bjork
810-298A-300



DEPT. OF ENVIRONMENTAL QUALITY
RECEIVED

BJORK
810-298A-300

30'

NOV 29 1999

NORTH COAST BRANCH OFFICE
WARRENTON

BERGERSON CONSTRUCTION MATERIALS LIST

PIPE AND FITTINGS:

- All 2" Pipe - 200 PSI - PVC 1120
- All 2" Fittings - PVC D2466 SCH 40
- All 4" Pipe - PVC 12454-13 ASTM D-3034
- ABS ASTM F-628-93
- All 4" Fittings - ASTM D3033-3034 - PVC 1120
- Fittings - ABS 02661

ALL 4" PIPE - OUTSIDE D-BOX:

- ASTM F810 11-5-90-2W
- PVC ASTM D2729 T21

TANKS:

- 1000 Gallon Norwesco Poly Tank
- ~~500 Gallon Norwesco Poly Tank~~ MICHAELS
- 1000 Gallon Michaels ~~Concrete~~

RISERS:

- Orenco
- Norwesco
- Roto Tech
- Michael's

PUMPS AND PUMP SUPPLIES:

- Hydronic ~~500-3~~ Pump ~~500-3~~ SHEF 40
- Boss 300 Pump
- High Head Pump P225105HHF
- S.J. Electro 101 High Level Alarm Float
- S.J. Electro 15 SSD 120V WP Pump Switch
- Orenco Floats and Alarms
- Orenco Effluent Screen ES 1840

DISTRIBUTION BOXES:

- Bergerson Concrete D-Box #204
- Tuf-Tite D-Box

FILTER MATERIAL:

- Johnson 1-1/2" to 3/4" Crushed Rock
- Moeller Sand and Gravel - Sand
- Scappoose Sand and Gravel - Sand

FILTER MATERIAL PROTECTION:

- 60 lb. Craft Paper
- Filter Fabric - OR TYPAR 3201

OTHER:

- Other
- Other
- Other
- Other
- Other

DEPT. OF ENVIRONMENTAL QUALITY
RECEIVED

NOV 29 1999

NORTH COAST BRANCH OFFICE
WARRENTON

BJONK

810-29BA-300

SYSTEM HEAD CALCULATIONS

1. **STATIC HEAD:** (vertical elevation difference from the pump base to the pressure distribution laterals) 15' feet
2. **SYSTEM ALLOWANCE:** (includes distribution piping losses and a five foot residual head discharge at the distribution laterals) 10* feet
3. **FRICITION HEAD:** (transport pipe friction loss at flow rate)

(a) Calculate Flow rate:

Diameter of orifices..... 1/8 inch

Number of orifices = N = 65

Orifice discharge rate = R = .41 gpm

Total gallons per minute = N X R = 27 gpm

(b) Calculate Friction Head Loss:

Length of transport pipe = P (in feet) 1.8

Friction loss coefficient = L (see reverse side) 1.00

Friction Head = P X L = 1.8 feet

4. **TOTAL DYNAMIC HEAD (TDH):** (sum of static head, system allowance and friction head) 26.8 feet

5. **HYDRAULIC SPECIFICATIONS:**

PUMP DUTY: 27 gpm @ 26.8 TDH

BRAND: HYDROMATIC

MODEL: SHEF 40 HORSEPOWER: 4/10

CAPACITY: _____ TDH @ _____ GPM, and

_____ GPM @ _____ TDH

Footnote: * in absence of specific head loss calculations, use 10 feet for this factor.

DEPT. OF ENVIRONMENTAL QUALITY
RECEIVED

NOV 29 1999

NORTH COAST BRANCH OFFICE
WARRENTON

BJORIK

810-293A-300

STATE OF OREGON
 DEPARTMENT OF ENVIRONMENTAL QUALITY
 NORTH COAST OFFICE
 65 N. Highway 101, Suite G
 Warrenton, OR 97146
 (503) 861-3280

OFFICE USE ONLY
 Date Rec'd 10-18-99
 Date Completed 12-6-99
 Required Fee \$ 275.00
 Receipt No. 91021
 Control No. 59384
 V/L BULLT 1988

FOR APPLICANT'S USE - (PLEASE PRINT)

Approx 1.2 AC 1.13 PER ASSESSORS
 Lot Size (Acreage or Dimensions)

DENNIS BJORK
 Kim (Property Owner's Name)
 Legal Description of Property 8W 10W 293BA 200 300 CLATSOP
 (Township) (Range) (Section) (Tax Lot/Acct. No.) (County)
 For Parcels in Platted Subdivisions, Indicate (Subdivision Name) (Lot Number) (Block Number)

Proposed Facility

Single Family Residence _____
 (Number of Bedrooms)
 Other _____
 (Specify)

Water Supply

Public (Community System)
 Private _____
 (Indicate: Well, Spring, Etc.)

Existing Facility

Single Family Residence 3
 (Number of Bedrooms)
 Other _____
 (Specify)

APPLICATION FOR:

- | | |
|---|---|
| <input type="checkbox"/> Site Evaluation Report | <input type="checkbox"/> Authorization Notice |
| <input type="checkbox"/> Permit to Construct On-Site Sewage Disposal System | <input type="checkbox"/> Purpose of Authorization Notice |
| <input checked="" type="checkbox"/> Permit to Repair On-Site Sewage Disposal System | <input type="checkbox"/> Connect to an existing system not currently in use |
| <input type="checkbox"/> Permit for Alteration of On-Site Sewage Disposal System | <input type="checkbox"/> Replace one mobile home with another or a house |
| <input type="checkbox"/> Permit Renewal | <input type="checkbox"/> Replace or rebuild a house |
| <input type="checkbox"/> Existing System Report | <input type="checkbox"/> Addition of one or more bedroom |
| <input type="checkbox"/> Plan Review | <input type="checkbox"/> Personal hardship |
| <input type="checkbox"/> Other (Specify) _____ | <input type="checkbox"/> Temporary housing |
| | <input type="checkbox"/> Other (Specify) _____ |

This application will be returned if it is not filled out completely and accompanied by the appropriate fee and attachments required in the guidance packet. Your site must be prepared according to instructions in the guidance packet before action can be taken on this application. By my signature, I certify that the information I have furnished is correct, and hereby grant the Department of Environmental Quality and its authorized agent permission to enter onto the above described property for the purpose of this application.

[Signature]
 (Signature)

10-17-99
 (Date)

Authorized Representative
 Licensed Installer
 License No. _____

Owner's Mailing Address
1236 SW PINE DR.
WARRENTON, OR 97146

Applicant's Mailing Address (if different)

WORK Phone 503/325-7130
325-0174 FAX

Phone _____ IW\WC8\WC8690 (7-19-91)

LAND USE COMPATABILITY STATEMENT
FOR ON-SITE SEWAGE DISPOSAL SYSTEMS

APPLICANT'S NAME Dennis A. Bjork		MAILING ADDRESS 1236 SW Pine Dr 1 Warrenton OR 97146		PHONE work 503/325-7130
P L O C A L I T Y	TOWNSHIP 8N	RANGE 10W	SECTION 29AB	TAX LOT OR ACCT NO. 200
	SUBDIVISION/PROJECT	LOT	BLOCK	COUNTY CLATSOP
	<input type="checkbox"/> PROPERTY IS A LOT OF RECORD CREATED BEFORE AUGUST 1, 1981			
	PROPOSED LAND USE RESIDENTIAL			

STATEMENT OF COMPATIBILITY FROM APPROPRIATE LAND USE AUTHORITY
(An equivalent statement may be provided in lieu of this form)

PROPERTY'S ZONING DESIGNINATION

THE ABOVE PROPOSAL HAS BEEN REVIEWED AND FOUND TO BE:

- | | | |
|--|----|---|
| <input checked="" type="checkbox"/> COMPATIBLE WITH THE LCDC ACKNOWLEDGED COMPREHENSIVE PLAN | OR | <input type="checkbox"/> CONSISTENT WITH THE STATEWIDE PLANNING GOALS |
| <input type="checkbox"/> NOT COMPATIBLE WITH THE LCDC ACKNOWLEDGED COMPREHENSIVE PLAN | | <input type="checkbox"/> NOT CONSISTENT WITH THE STATEWIDE PLANNING GOALS |

REASON FOR FINDING OF COMPATIBILITY/INCOMPATIBILITY

PROPERTY IS LOCATED: (check one)

- | | | |
|---|--|--|
| <input checked="" type="checkbox"/> INSIDE CITY | <input type="checkbox"/> INSIDE URBAN GROWTH BOUNDARY
OUTSIDE CITY LIMITS | <input type="checkbox"/> OUTSIDE URBAN GROWTH BOUNDARY |
|---|--|--|

LAND USE AUTHORITY

SIGNED Gilbert Morrison	TITLE City Manager	DATE 10-18-99
-----------------------------------	------------------------------	-------------------------

CITY/COUNTY CONCURRENCE IF INSIDE URBAN GROWTH BOUNDARY

SIGNED	TITLE	DATE
--------	-------	------

SHALL BE DONE BY PROPERTY OWNER OR BY LICENSED SEWAGE DISPOSAL SERVICE.
 (MAKE NO CHANGES IN LOCATION OR SPECIFICATIONS WITHOUT WRITTEN APPROVAL)

SPECIFICATIONS

EXPIRATION DATE March 23, 1989

TYPE OF SYSTEM Standard

Design of Sewage Flow 450 Gal's/Day

nk Volume 1000 Gallons

Disposal Trenches XX

Seepage Bed(s)

Square Feet

imum Depth 24 inches.

Minimum Depth 18 inches.

150 Linear Feet

ual XX Loop Serial

Pressurized

Minimum Distance Between Trenches

10 feet.

al hook Depth 12 inches.

Below Pipe 6 inches.

Above Pipe 2 inches.

Rake Sidewall

ecial Conditions (Follow Attached Plot Plan) Maintain 100 foot set-back from lake for disposal trenches.

E-COVER INSPECTION REQUIRED — CONTACT Astoria DEO - 325-8660.

CERTIFICATE OF SATISFACTORY COMPLETION

LAKES

Built Drawing
 1 Reference Locations

all Bill Bengerson

① Bill Bengerson will be installer.

② STEEL TANK TO BE REPLACED

③ ALL NEW PUMPED SYSTEM.

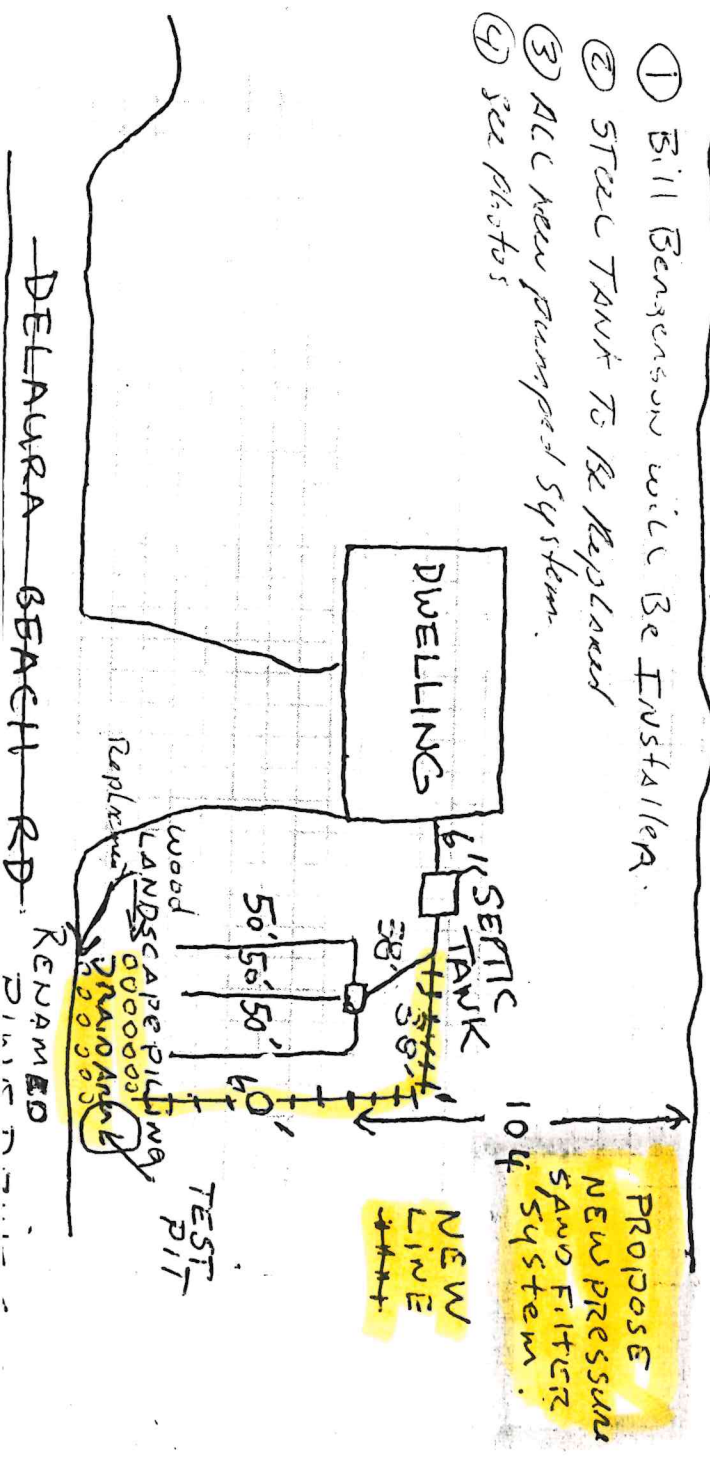
④ see photos

al Insp. Date 4-13-88

Inspected By _____

Issued by Operation of Law

Pre-cover inspection waived pursuant to OAR 340, Division 71



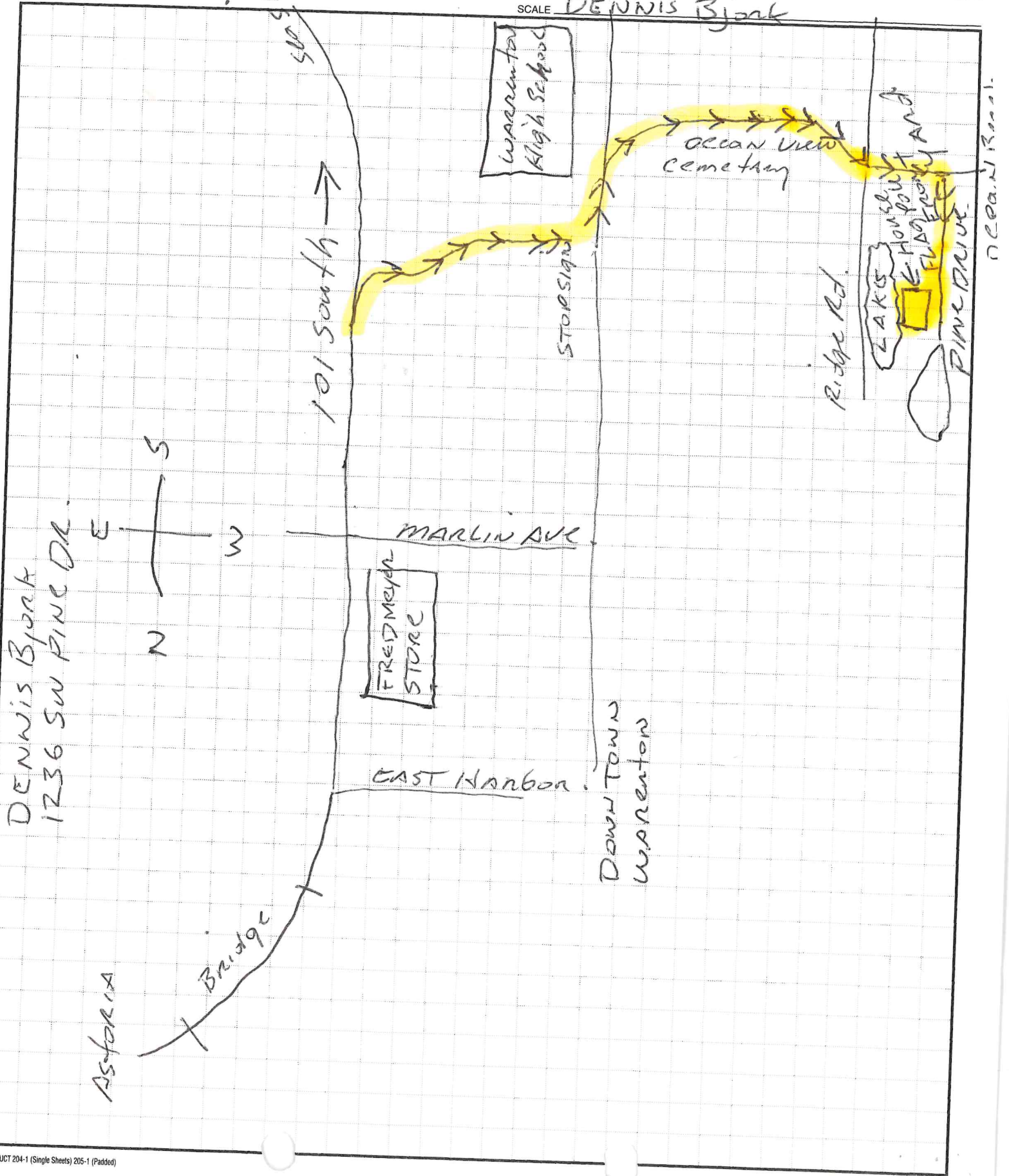


**Bergerson
Construction, Inc.**
- P.O. Box 387
ASTORIA, OREGON 97103
(503) 325-7130

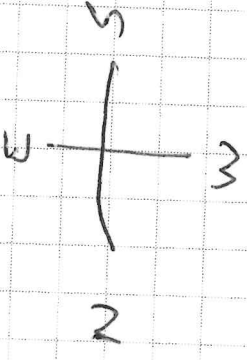
MAP

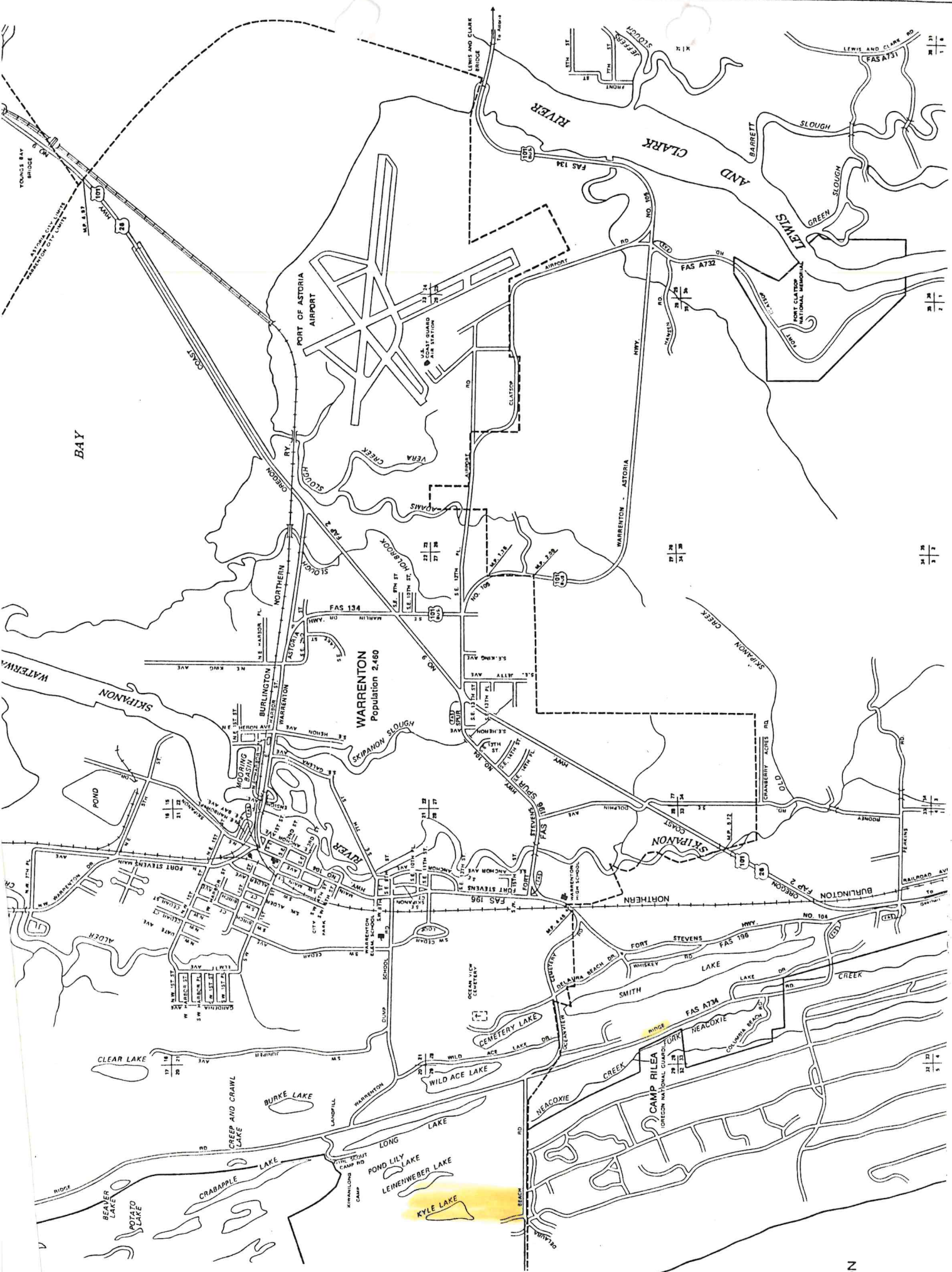
JOB _____ OF _____
SHEET NO. _____ OF _____
CALCULATED BY _____ DATE _____
CHECKED BY _____ DATE _____

SCALE *DENNIS Bjork*



DENNIS Bjork
1236 SW PINE DR.





1341C
Control No.
\$ 125.00
Fee

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY

PERMIT NO. 88-24

New Construction

Repair

Other

Permit Issued To Dennis Bjork
(Property Owner's Name)

8N
(Township)

10W
(Range)

29AB
(Section)

200
(Tax Lot / Acct. No.)

Clatsop
(County)

Delaura Ave.
(Road Location)

Warrenton
(City)

Charles H. Gray
(Issued by - Signature)

03-23-88
(Date Issued)

PERMITS ARE NOT TRANSFERABLE

ALL WORK TO CONFORM TO OREGON ADMINISTRATIVE RULES, CHAPTER 340. WORK SHALL BE DONE BY PROPERTY OWNER OR BY LICENSED SEWAGE DISPOSAL SERVICE. (MAKE NO CHANGES IN LOCATION OR SPECIFICATIONS WITHOUT WRITTEN APPROVAL)

SPECIFICATIONS

EXPIRATION DATE March 23, 1989

TYPE OF SYSTEM Standard

Design of Sewage Flow 450 Gal's/Day

Tank Volume 1000 Gallons

Disposal Trenches

Seepage Bed(s) _____ Square Feet

Maximum Depth 24 inches.

Minimum Depth 18 inches.

150 Linear Feet

Equal Loop Serial

Pressurized Minimum Distance Between Trenches 10 feet.

Total Rock Depth 12 inches.

Below Pipe 6 inches. Above Pipe 2 inches. Rake Sidewall

Special Conditions (Follow Attached Plot Plan) Maintain 100 foot set-back from lake for disposal trenches.

PRE-COVER INSPECTION REQUIRED — CONTACT Astoria DEQ - 325-8660.

CERTIFICATE OF SATISFACTORY COMPLETION

As-Built Drawing
with Reference Locations

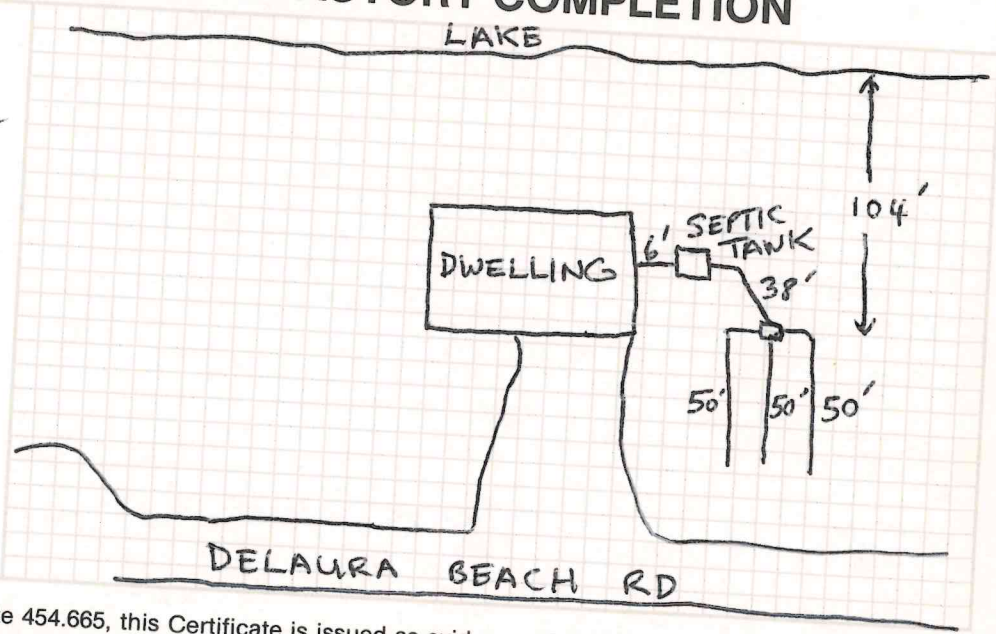
Installer Bill Bergeson

Final Insp. Date 4-13-88

Inspected By _____

Issued by Operation of Law

Pre-cover inspection waived pursuant to OAR 340, Division 71



In accordance with Oregon Revised Statute 454.665, this Certificate is issued as evidence of satisfactory completion of an on-site sewage disposal system at the location identified above.

The issuance of this Certificate does not constitute a warranty or guarantee that this on-site disposal system will function indefinitely without failure.

Charles H. Gray
(Authorized Signature)

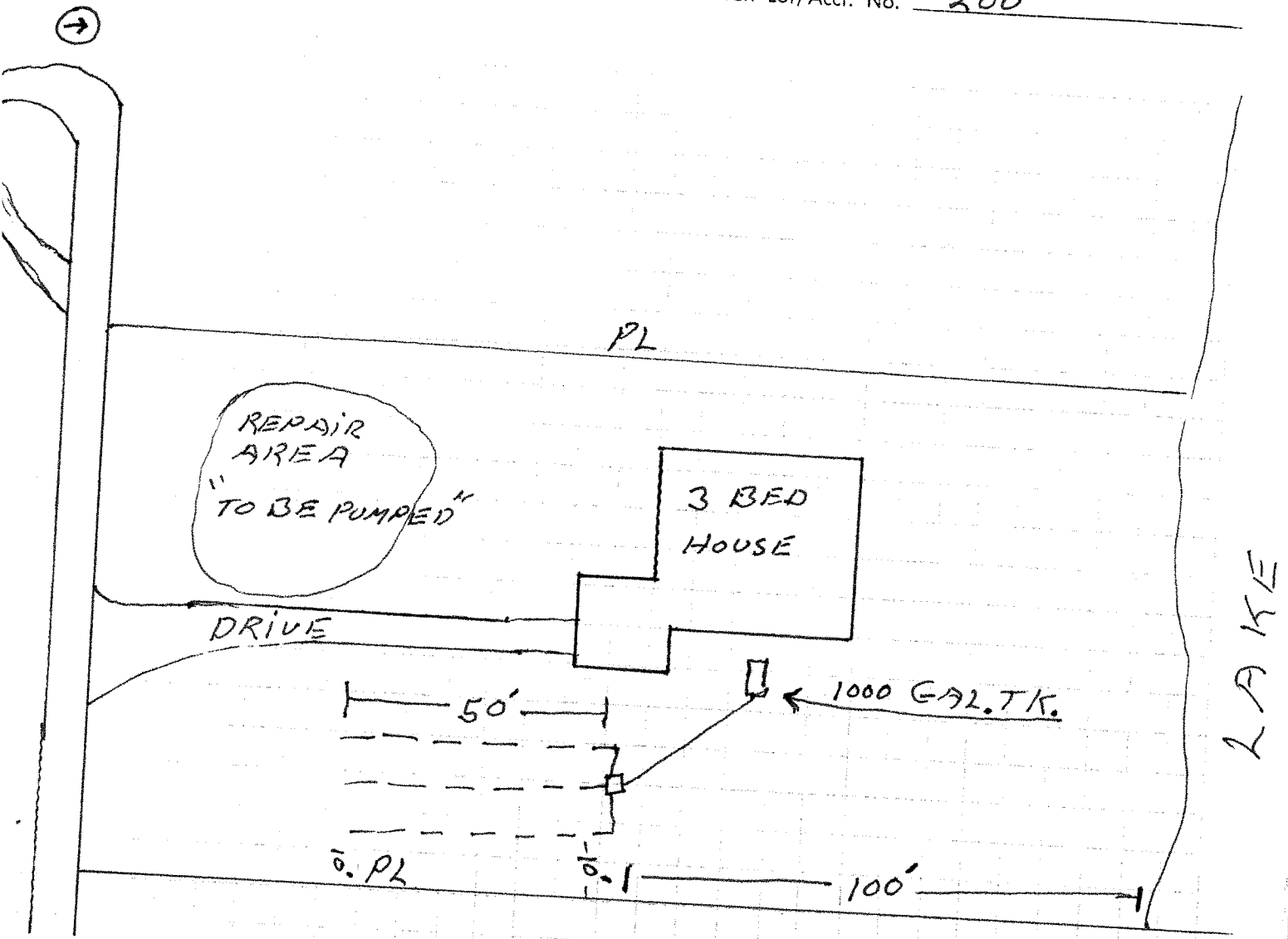
Regional Supervisor
(Title)

4-13-88
(Date)

Astoria
(Office)

STATE OF OREGON
 DEPARTMENT OF ENVIRONMENTAL QUALITY
 PROPOSED SUBSURFACE SEWAGE DISPOSAL SYSTEM
PLOT PLAN

Property Owner DENNIS BJORK Date 2-23-88
 Location: T. 8 R. 10 Sec. 29 Tax Lot/Acct. No. 200



REMARKS: _____

FOR DEQ USE ONLY

Approved _____
 Disapproved _____
 By: _____
 (SANITARIAN SIGNATURE)

FOR OFFICE USE ONLY

Date Test Holes Ready

STATE OF OREGON
Department of Environmental Quality

FOR OFFICE USE ONLY

Date Rec'd 3-8-88
Date Completed 4-25-88
Required Fee 125.00
Receipt No. 37386
Control No. 19472

APPLICATION FOR:

- Site Evaluation Report
Permit to Construct On-Site Sewage Disposal System
Permit to Repair On-Site Sewage Disposal System
Permit for Alteration of On-Site Sewage Disposal System
Permit Renewal
Authorization Notice
Other (Specify)

(Required fee and land use compatibility statement must accompany application)

FOR OFFICE USE ONLY:

PLOT PLAN REQUIRED
VICINITY OR TAX LOT MAP REQUIRED
TEST HOLES REQUIRED
LAND USE COMPATIBILITY STATEMENT
ADDITIONAL ITEM(S) REQUIRED

ATTACHED ... YES NO
ATTACHED ... YES NO
ATTACHED ... YES NO

FOR APPLICANT'S USE - (Please Print)

Property Owner's Name DENNIS BJORK

Township 8 Range 10

Section 29AB

Tax Lot/Acct. No. 200

County CLATSOP

Subdivision Name

Lot No.

Block No.

Lot Size

Public Water Supply WARRENTON

Private Water Supply, Specify Type

Single Family Residence 3 (Number of Bedrooms)

Other (Specify)

Directions to Property: GO ON RIDGE RD. TO DELAURA BEACH RD. WEST ON DELAURA BEACH RD. TO END OF PAVEMENT. TURN RIGHT GO TO THE END. "ON RIGHT"

I certify that the information I have furnished is correct, and hereby grant the Department of Environmental Quality and its authorized agent permission to enter onto the above described property for the purpose of this application.

Signature of Applicant: Bill Bergerson

Date: 3/2/88

- Owner
Authorized Representative
S.D.S. License No.

Applicant's Mailing Address

Dennis Bjork
505 SE Plum Dr
Milwaukie, OR 97222
325-7229

Applicant's Mailing Address (if different)

BILL BERGERSON
RT 1 Box 595
SEASIDE CR. 97138
Phone 738-7807

STATE OF OREGON
DEPARTMENT OF ENVIRONMENTAL QUALITY

EVALUATION REPORT FOR METHODS
OF ON-SITE SEWAGE DISPOSAL
FOR A SUBDIVISION

(Technical Report — Not a Permit)

SUBDIVISION NAME: Lienenweber Lake Estates

DESCRIPTION OF PARCEL: 29 8N 10W 1103, 1200 Clatsop
Section Township Range Tax Lot(s) County

Section Township Range Tax Lot(s) County

(Lot by lot summary)

	TYPE OF SYSTEM		TYPE OF SYSTEM
Lot 6 -	Alternative, low pressure <i>Standard, equal, serial</i>		Lot 18 - Standard, equal, serial
Lot 7 -	Standard, equal, serial	<i>gms</i>	Lot 19 - Standard, equal, serial
Lot 8 -	Standard, equal, serial		Lot 20 - Standard, equal, serial
Lot 9 -	Standard, equal, serial		Lot 21 - Standard, equal, serial
Lot 10 -	Standard, equal, serial		Lot 22 - Standard, equal, serial
Lot 11 -	Standard, equal, serial		Lot 23 - Standard, equal, serial
Lot 12 -	Standard, equal, serial		
Lot 13 -	Standard, equal, serial		
Lot 14 -	Standard, equal, serial		
Lot 15 -	Standard, equal, serial		
Lot 16 -	Standard, equal, serial		
Lot 17 -	Standard, equal, serial		

This report is valid for each approved lot until an on-site sewage system is installed on that lot, pursuant to a construction permit issued by the Department of Environmental Quality, or until earlier cancellation, pursuant to Commission rules, with written notice thereof by the Department of Environmental Quality to the owners according to Department records or the county tax records. Subject to the foregoing, this report runs with the land and will automatically benefit subsequent owners. Any alteration of the natural conditions in the areas approved for on-site systems or replacement areas may void the approval. Further, each approval is given on the basis that each lot described above will not be further partitioned or subdivided, and that conditions on each lot or adjacent properties have not been altered in any manner that would prohibit issuance of a construction permit in accordance with ORS 454.605 through 454.755 and administrative rules of the Environmental Quality Commission. Any such subdivision, partitioning, or alteration may void this report.

John Odisio
Signature

Environmental Analyst
Title

July 31, 1986 Astoria
Date Office

WARNING:

1. Authorized local agent approval is required before each construction permit can be issued.
2. This document is a technical report for on-site sewage disposal only. It may be used to obtain construction permits only if the individual lots are compatible with applicable LCDC-Acknowledged local comprehensive LAND USE plans and implementing measures or the Statewide Planning Goals. The Statements of Compatibility may be made on the attached form or an equivalent form.

SITE EVALUATION FIELD WORKSHEET

Tax Reference 8N, 10W, 29, 1103 & 1200, Lot 13 Evaluator Paeth / Odisio
 Applicant Loren Gramson Date 5/21/86 Parcel Size 1.13 ac

Soil Matrix Color and Mottling (Notation), % Coarse Fragments, Roots, Structure, Layer Limiting Effective Soil Depth, etc.

	Depth	Texture	
Pit 1	0-10"	Lm Sand	10 YR 3/2
	10-51"	Sand	10 YR 6/3
	51-56"	Lm Sand	10 YR 2/1
	56-60"	Sand	10 YR 3/3
Pit 2	60-78"	Sand	10 YR 5/2
Pit 3			
Pit 4			

Landscape Notes Old sand dune
 Slope _____ Aspect _____
 Other Site Notes _____ Groundwater Type No permanent or temporary evident

SYSTEM SPECIFICATIONS

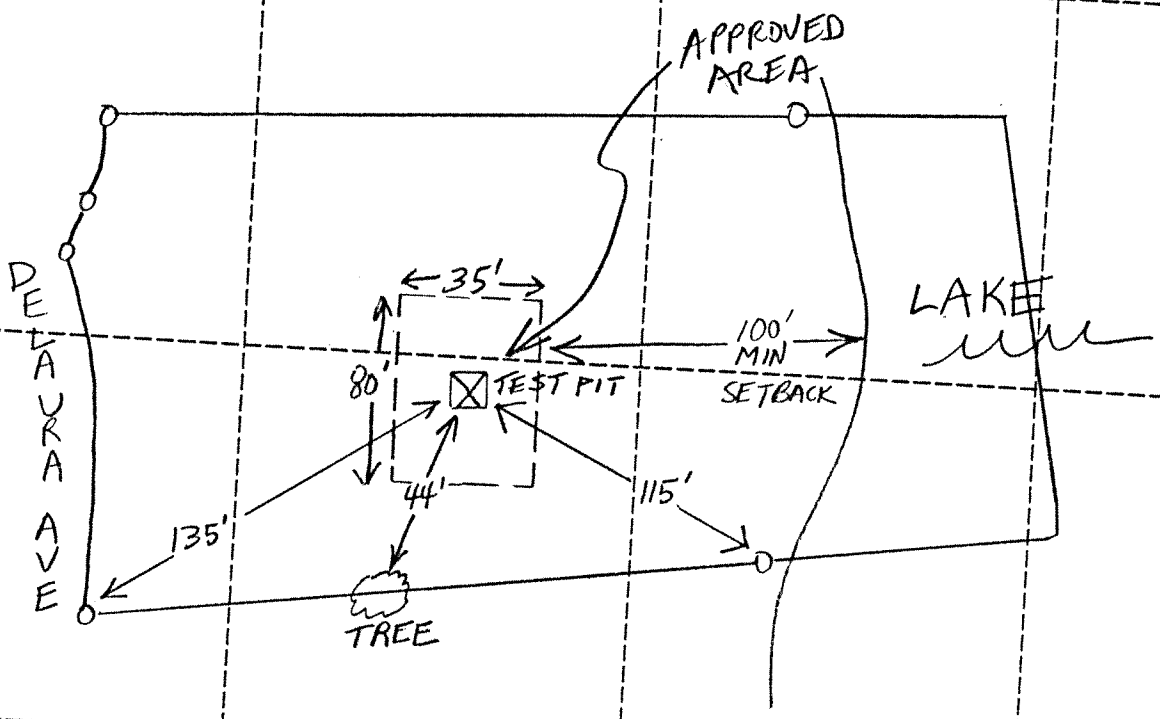
Type System: _____
 Initial Standard equal
 Placement Standard equal
 Design Flow 450 gpd Disposal Field Size 150 Linear Feet
 System Sizing 50' /150 g. Max. Depth Absorption Facility (in) 36
 System Sizing 50' /150 g. Max. Depth Absorption Facility (in) 36
 Special Conditions _____

Tax Reference Lot 13

Applicant _____

Evaluator _____

Date: _____



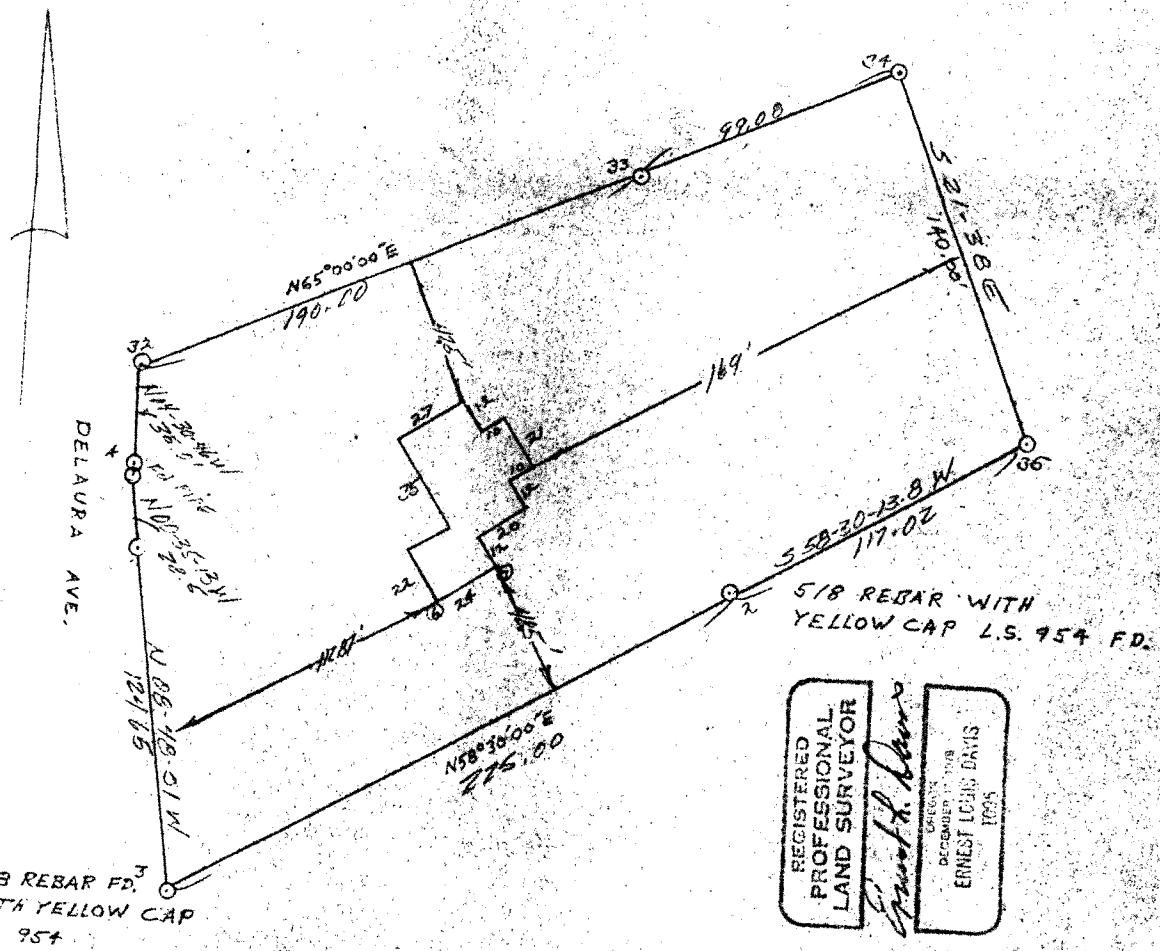
lot survey

ALTA SURVEY OF LIENENWEBER LAKE
 ESTATES NO. 2 LOT 13 WARRENTON, OREGON
 IN SEC. 29, T. 8N, R. 10W, W.M.

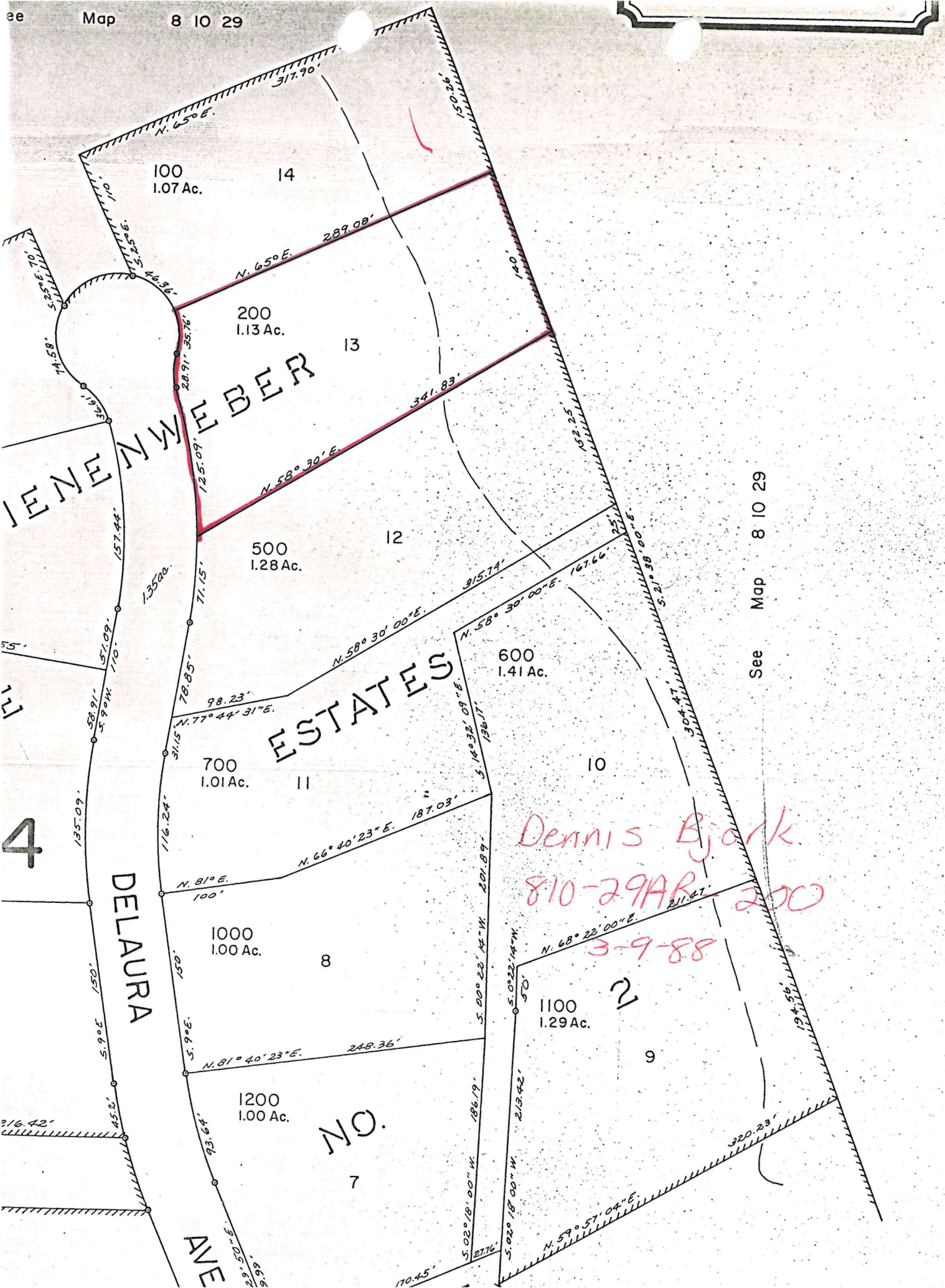
BY COLUMBIA SURVEYING & MAPPING 864 GRAND AVE ASTORIA
 MAY 12, 1988 503-325-0880 SCALE 1"=50'

I CERTIFY THAT I SURVEYED THE HEREIN DESCRIBED REAL PROPERTY,
 AND THAT I FIND THE IMPROVEMENTS SITUATED THEREON TO BE ON
 THE PREMISES AS HEREIN DESCRIBED. THEY DO NOT ENCRONCH
 OR OVERLAP ON THE PROPERTY LYING ADJACENT THERETO.
 THIS SURVEY IS MADE AT THE REQUEST AND FOR THE EXCLUSIVE
 USE OF THE 1ST INTERSTATE BANK

Ernest Louis Davis
 ERNEST LOUIS DAVIS LS 1095



REGISTERED PROFESSIONAL LAND SURVEYOR
Ernest Louis Davis
 ERNEST LOUIS DAVIS
 L.S. 1095



See Map 8 10 29

Dennis Bjork
810-29AR-200
3-9-88

PARCEL 2

PLAT

NO.

200
1.07 Ac. 14

300
1.13 Ac. 13

400
1.28 Ac. 12

500
1.01 Ac. 11

700
1.41 Ac. 10

600
1.00 Ac. 8

800
1.29 Ac. 2

900
1.00 Ac. 7

LAKE

-04

PINE DRIVE

LIENENWEBER

ESTATES

(DELAURA

NO.

14TH PL. CT)

See Map 8 10 29

