KAMRIN COURT LOT #1 (EASEMENT AREA)

SOIL EVALUATION FOR ON-SITE WASTE DISPOSAL

Map/lot #: 17-12-15 #2801 SP(SI) 04-9115 Applicant: GORHAM Date: 4/27/05 Evaluator: KATRINA

(DENIED)

TP # 1 % Slope Aspect Effective soil depth 12" Topo position TERRACE Shape (C) Sys. (DENIED) type / dist / dpth / size / c. drain

Redox Features

dpth	cf %	txt	mtx color	strct	color	descrip.	elemnt	dpth	roots	pores	bndry	notes:
0-12"		SiCl	10YR 4/4	WSBK					FMR		CSB	SOME REDOX MOTTLES
12-37"		VARIEGATED SiCl									AB	REDOX / RELIC SOIL STRUCT
			10YR 5/2									
37-48"		C	10YR 5/1									
					7.5YR 5/6	CMD						

5YR 4/6

TP # 2 % Slope 10-15%. Aspect SW Effective soil depth 48" Topo position Shape type / dist / dpth / size / c. drain Sys. STD 125/150 375' 24" 30" T.D.

Redox Features

dpth	cf %	txt	mtx color	strct	color	descrip.	elemnt	dpth	roots	pores	bndry	notes:
0-30"		SiCl	10YR 4/4	EABK					FMR			NO REDOX
30-44"		SiCl	10YR 5/2		7.5YR 5/6							
44-70"		CL										1/2 @ 70" TMP.

Vegetation: ALDER, SALMONBERRY, SWORDFERN, BLACKBERRY Groundwater: permanent / (temporary:)

Design flow(gpd): 450 gpd S.C.S. Soil Series(mapped): 82C - MEDA LOAM SERIES

Setbacks: 100' MIN TO CREEKS Commerical / (Residential:)

Type / dist / dpth(min - max) / size(lineal ft/150 gal). / special conditions

Approved ***Initial*** System: STD. SERIAL 125/150 375' DRAINFIELD

Approved ***Repair*** System: SAND FILTER SYSTEM W/ 135' DRAINFIELD -

Comments: ↓ CURTAIN DRAIN REQUIRED

TP

After recording return to:
Wolford Land Surveying LLC
87180 Munsel Lake Road
Florence, Or. 97439

GRANT OF EASEMENT AND MAINTENANCE AGREEMENT

RECITALS:

1. **DARIN GORHAM** is the owner of the following described property. Grantee is Darin Gorham.

Beginning at the brass cap marking the Southeast corner of Section 15, Township 17 South, Range 12 West of the Willamette Meridian, Lane County, Oregon; Thence South 88° 24' West 780.29 feet along the South line of said Section to it's intersection with the Easterly right of way line of Oregon Coast Highway # 101; Thence North 16° 11' West 1232.72 feet along said Easterly line to a point marked by an iron pin; Thence continuing along said line and along the arc of a curve to the left having a radius of 2904.91 feet to an iron pin set thereon marking the **True Point of Beginning** and bearing North 19° 20' 20" West 319.81 feet from the last described point; Thence North 73° 49' East 869.20 feet to a point; Thence North 16° 11' West 400.21 feet to a point; Thence South 73° 49' West 389.54 feet to a point marked by an iron pin; Thence South 16° 02' 15" East 140.31 feet to a point marked by an iron pin; Thence South 72° 28' 49" West 378.14 feet to a point marked by an iron pin; Thence South 72° 08' 07" West 139.47 feet to an iron pin set on the Easterly right of way line of said Oregon Coast Highway # 101; Thence along said line and along the arc of a curve to the right having a radius of 2904.91 feet to the **True Point of Beginning**, which bears South 24° 57' 35" East 249.94 feet from the last described point.

2. The owner intends to subdivide his property into Eight (8) Lots, and Lane County has granted Tentative approval for that subdivision by PA # 03-5891.

3. Lots 1, 2, 3, 4, 5, 6, 7 and 8, Kamrin Court are shown on Exhibit "A", attached hereto and by reference incorporated herein.

DECLARATION OF EASEMENT:

1. **EASEMENT CREATED, OWNER** hereby creates a perpetual, nonexclusive drain field easement 50 feet wide x 100 feet long to serve Lot 1 as shown on the attached Exhibit "A".

2. **EASEMENT DESCRIBED:**

Beginning at a point from which the Brass Cap marking the Southeast corner of Section 15, Township 17 South, Range 12 West of the Willamette Meridian, Lane County, Oregon bears South 25° 47' 08" East 1959.53 feet; Thence South 26° 37' 00" East 100.00 feet; Thence South 63° 23' 00" West 50.00 feet; Thence North 26° 37' 00" West 100.00 feet; Thence South 25° 47' 08" East 50.00 feet to the Point of Beginning.

Division of Chief Deputy Clerk
Lane County Deeds and Records
2005-097164
$41.00
00762677200500971640030034
12/07/2005 10:54:27 AM
RPR-ESMT Cnt=2 Stn=1 CASHIER 06
$5.00 $15.00 $10.00 $11.00

GRANT OF EASEMENT AND MAINTENANCE AGREEMENT (continued)

3. **EASEMENT PROVISION**: The terms of the easement are as follows:

3.1 **PURPOSE.** The easement is for the construction, maintenance, use and repair of an individual water – carried, on – site, sewage disposal system, (hereinafter called "system"), to serve Lot 1 described in Paragraph 3 above.

3.2 **USE OF THE BURDENED PROPERTY**: The owner of Lots 4 described in Paragraph 3 above, shall not use the easement area for any purpose detrimental to the system or contrary to laws and rules of governmental agencies for, related to said system.

3.3 **PRIVATE GRANT**: The easement created by this instrument does not constitute a dedication or grant for public use, unless requested at a later time by a public agency to dedicate the easement as a public road.

3.4 **MAINTENANCE AND REPAIRS**: The owner or occupier of Lot 1 described in Paragraph 3 above, shall at all times hereafter maintain the easement property.

3.5 **TAXES**: The owners of Lot 4 described in Paragraph 3 above, shall pay the real property taxes on the easement.

4. **SUCCESSORS IN INTEREST, RECORDATION**: The provisions of this instrument touch and concern, and relate to the use of Lots 1 and 4 described in Paragraph 3 above, and are intended to be covenants and restrictions running with the land. This document shall therefore be recorded in the Deed Records of Lane County, Oregon.

All provisions of this instrument, including the benefits and burdens, are binding on and inure to their heirs, successors, assign, transferees and personal representatives of all parties who own any of the Lots 1 and 4 described in Paragraph 3 above.

Dated this 7th day of Dec, 2005

DARIN GORHAM

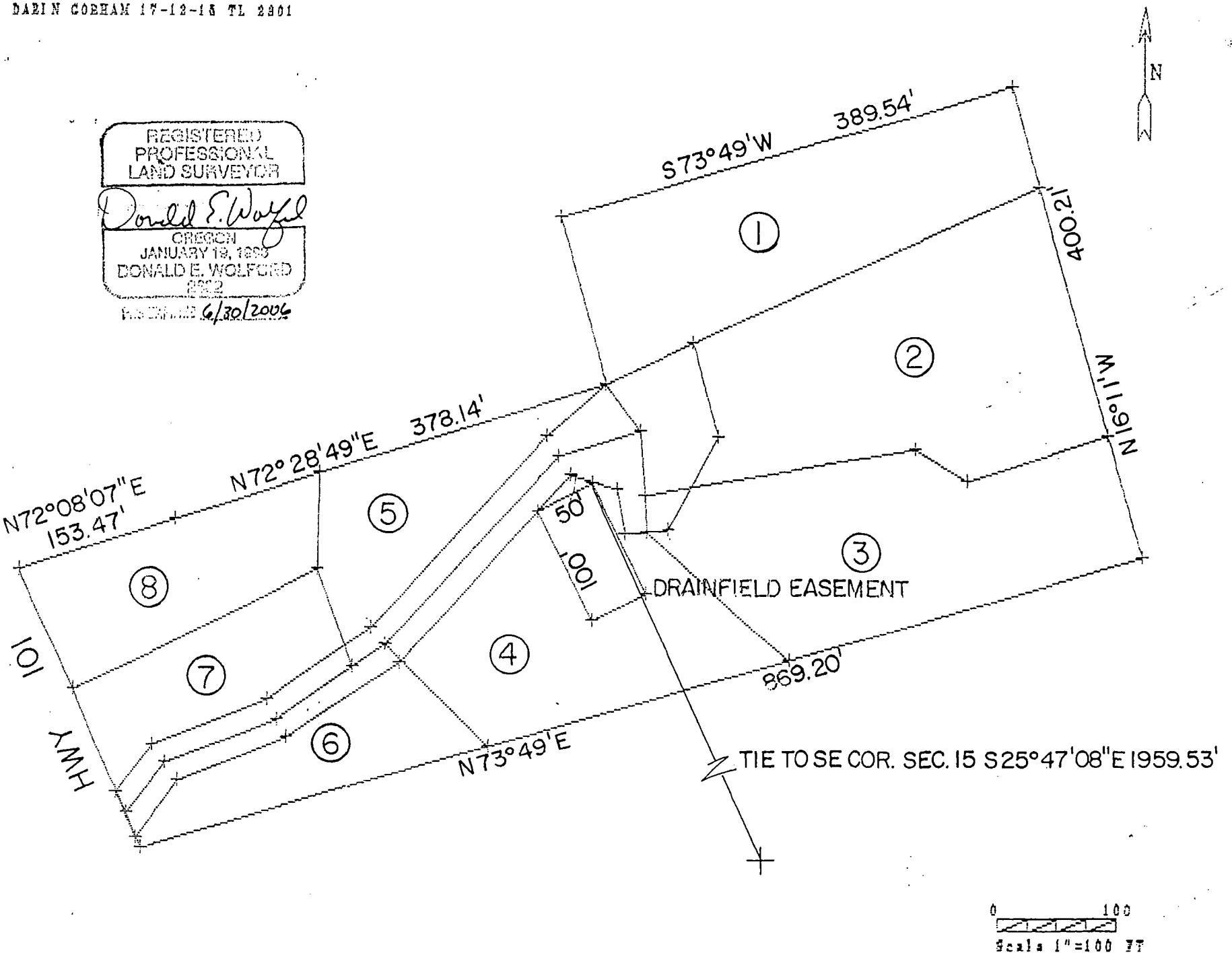
STATE OF OREGON, County of Lane)SS

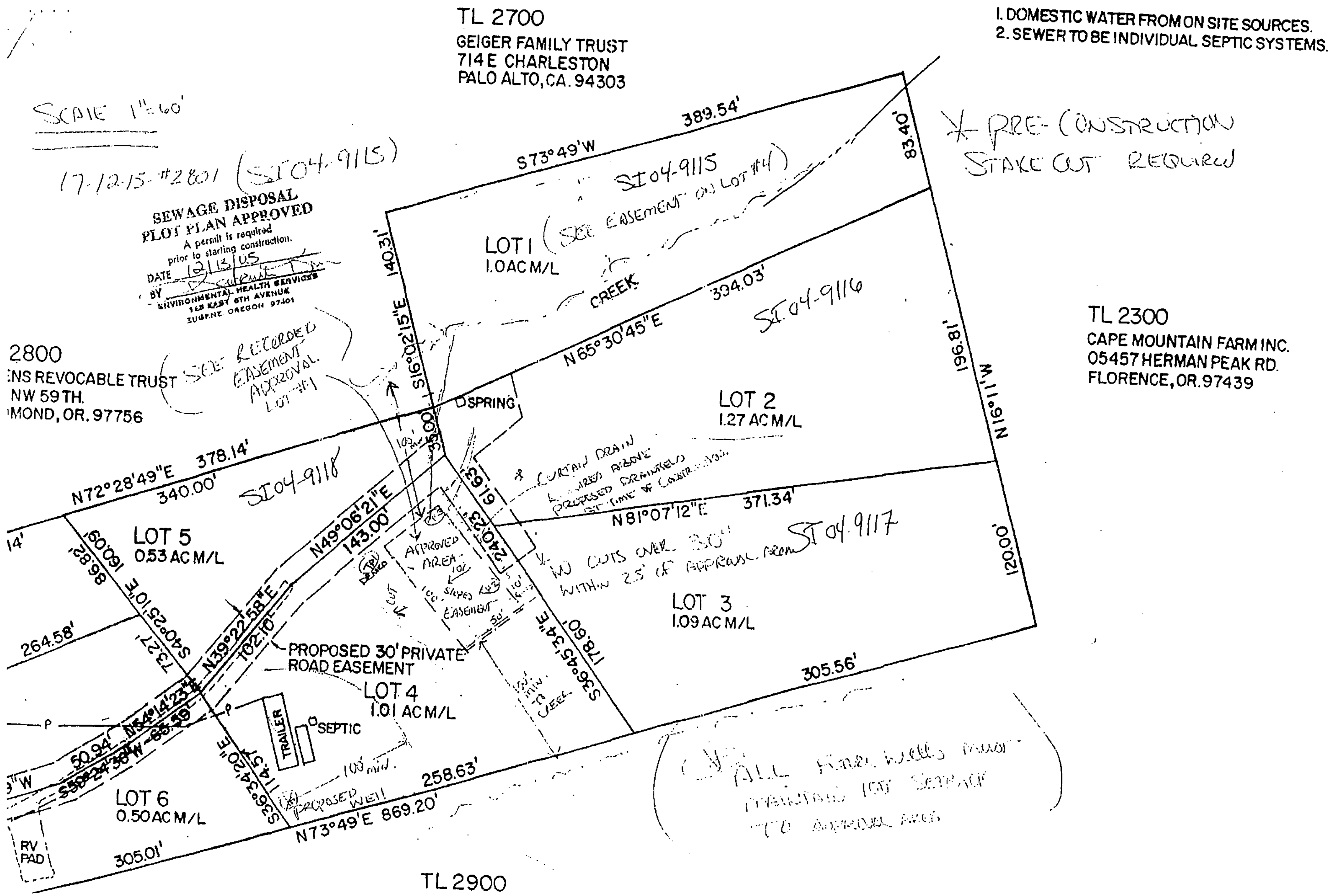
On this 7th day of Dec., 2005, personally appeared before me the within named **Darin Gorham** and acknowledged the foregoing instrument to be a voluntary act and deed.
Witness my hand and seal this day and year last above written

Notary Public for Oregon
My Commission expires 9/24/06

OFFICIAL SEAL
NADJA R REYNOLDS
NOTARY PUBLIC - OREGON
COMMISSION NO. 361552
MY COMMISSION EXPIRES SEPTEMBER 24, 2006

DARIN COREAM 17-12-15 TL 2301





TL 2700
GEIGER FAMILY TRUST
714 E CHARLESTON
PALO ALTO, CA. 94303
1. DOMESTIC WATER FROM ON SITE SOURCES.
2. SEWER TO BE INDIVIDUAL SEPTIC SYSTEMS.
SCALE 1"=60'
17-12-15-#2801 (SI 04-9115)
SEWAGE DISPOSAL
PLOT PLAN APPROVED
A permit is required
prior to starting construction.
DATE 12/13/05
BY
ENVIRONMENTAL HEALTH SERVICES
125 EAST 8TH AVENUE
EUGENE, OREGON 97401
* PRE-CONSTRUCTION
STAKE OUT REQUIRED
TL 2300
CAPE MOUNTAIN FARM INC.
05457 HERMAN PEAK RD.
FLORENCE, OR. 97439
2800
NS REVOCABLE TRUST
NW 59TH.
MOND, OR. 97756
(SEE RECORDED EASEMENT APPROVAL LOT #1)
LOT 1
1.0 AC M/L
(SEE EASEMENT ON LOT #4)
SI 04-9115
CREEK
LOT 2
1.27 AC M/L
SI 04-9116
LOT 3
1.09 AC M/L
SI 04-9117
LOT 4
1.01 AC M/L
LOT 5
0.53 AC M/L
SI 04-9118
LOT 6
0.50 AC M/L
SPRING
S73°49'W
389.54'
83.40'
196.81'
N16°11'W
120.00'
305.56'
N65°30'45"E
394.03'
N81°07'12"E
371.34'
S16°02'15"E
140.31'
35.00
61.63
240.23
S36°45'34"E
178.60'
N72°28'49"E
378.14'
340.00'
N49°06'21"E
143.00'
N39°22'58"E
102.10'
S40°25'10"E
160.09'
86.82'
73.27'
264.58'
N54°14'23"E
50.94'
S36°34'20"E
114.51'
258.63'
N73°49'E 869.20'
305.01'
PROPOSED 30' PRIVATE
ROAD EASEMENT
TRAILER
SEPTIC
PROPOSED WELL
100' MIN.
APPROVED AREA
10' SLOPED EASEMENT
RV PAD
TL 2900

SEWAGE DISPOSAL SITE EVALUATION

S.I. # 04-916

TRS, TL 17/12/15 Portion of Tax Lot 2801 Job Location 6 miles North of Florence, Just North of Bones Nursery

Written Directions 6 miles North of Florence past Baker Beach Rd, Adjacent to Bones Nursery

Subdivision: Kamrin Court

Lot 2 Block

WATER SUPPLY None yet Wells to be drilled After Sanitation approvals

APPLICANT'S NAME AND ADDRESS Darin Gorham 92601 Pioch Ln Springfield, OR 97478 Phone (541) 953-5038

OWNERS'S NAME AND ADDRESS Darin Gorham (Same As Above) Phone (541) 935-1131

STRUCTURES NOW ON THE PROPERTY None, Vacant Land PROPOSED USE OF PROPERTY Commercial Residential

I hereby certify that the above statements are true and accurate, and that I have the following legal interest in the property X owner of record; ____ contract purchaser; ____ potential buyer; ____ realtor or agent. I further certify that (if not the owner) I am authorized to act for the owner of record, and that said owner is aware and approves of this action.

TEST HOLES READY Yes Signature Darin Gorham Date 6/3/04

********** OFFICE USE ONLY BELOW THIS LINE **********

THIS REPORT IS NOT A PERMIT FOR SEWAGE SYSTEM INSTALLATION

The area described on the attached plot plan dated 8-20-04 is APPROVED for a STANDARD SERIAL - INITIAL system.

ADDITIONAL COMMENTS: SANDFILTER - REPLACEMENT 375' DRAINFIELD 24-30" TRENCH DEPTH - INITIAL SAND FILTER REPLACEMENT W/ 135' DRAINFIELD

* FUTURE WELLS MUST BE 100' FROM INITIAL & REPLACEMENT

NOTE:
This report approves of a sand filter or pressurized distribution system, detailed construction design plans will be required with the installation permit application.

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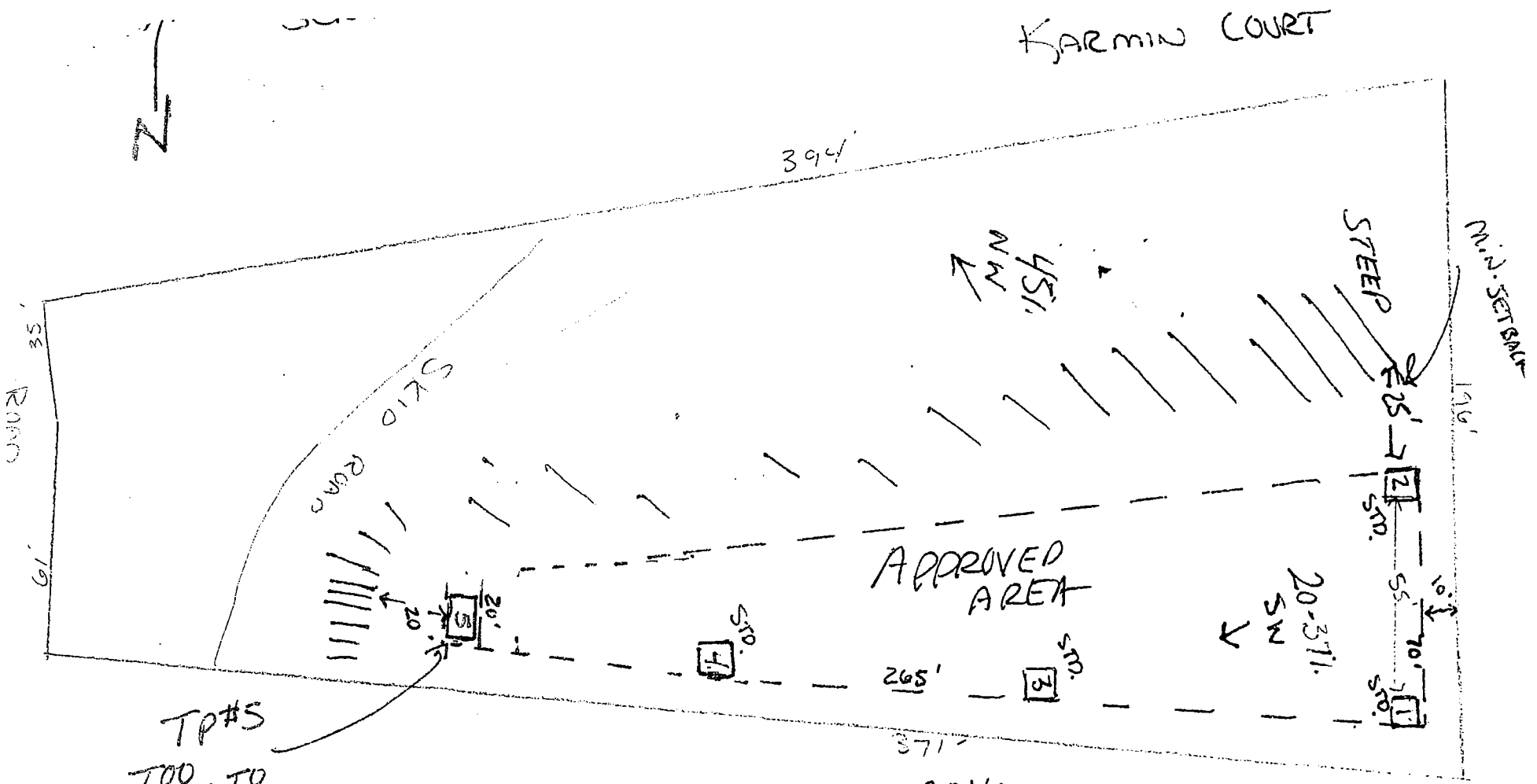
WARNING:
This Site Evaluation is a technical report to determine if a on-site system will function properly. It does not approve the proposed use of the parcel. This Site Evaluation may be converted to a construction permit only if the parcel and use meet land use regulations in effect at the time of application. YOU ARE URGED TO CONTACT YOUR LOCAL PLANNING OFFICE FOR LAND USE REVIEW.

DEQ AUTHORIZED AGENT DATE 8-31-04 8/31/04

LANE COUNTY LAND MANAGEMENT, 125 EAST 8T AVENUE, EUGENE, OREGON 97401 (682-3754)

55-32



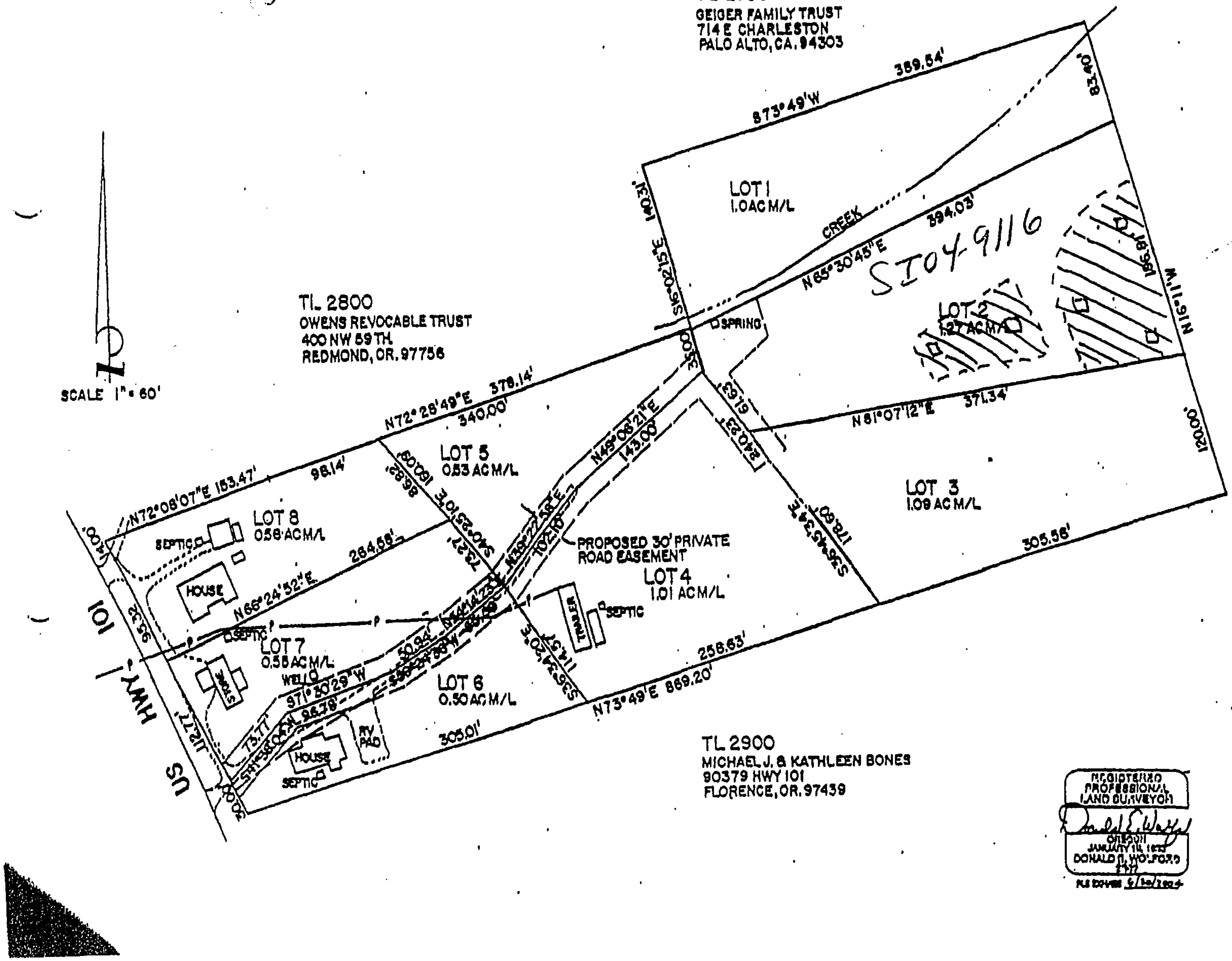
SI04.9116
SEWAGE DISPOSAL
PLOT PLAN APPROVED
A permit is required
prior to starting construction.
DATE 8.20.04
BY
ENVIRONMENTAL HEALTH SERVICES
125 EAST 8TH AVENUE
EUGENE, OREGON 97401

17-12-15 • #2801

...TION 15, T17N, R12W, W.M.
... COUNTY, OREGON

92601 PIOCH LANE
SPRINGFIELD, OR. 97478
(541) 933-1131

NOTE:
1. DOMESTIC WATER FROM ON SITE SOURCES.
2. SEWER TO BE INDIVIDUAL SEPTIC SYSTEMS.



Test Holes
////// Sanitation Area
No Wells at this time
will be drilled After
Sanitation Approvals.

REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON
JANUARY 14, 1972
DONALD R. WOLFORD
1177

WOLFORD LAND SUR...
87190 MUNSEL LAKE...

Map/lot #: 17-12-15 #2801 SR/SI 04-9116 Applicant: GORHAM Date: 8-20-04 Evaluator: Kathleen Kim

TP # 1 % Slope 20-35% Aspect SW Effective soil depth 36" Topo UPLANDS position CONST RANGE Shape IRR. Sys. type / dist / dpth / size / c. drain

Redox Features

dpth	cf %	txt	mtx color	strct	color	descrip.	elemnt	dpth	roots	pores	bndry	notes:
0-10"		SIL	10YR3/1	WKABK					MNR		GSB	
10-36"		SIL	10YR 3/4	WKABK					FNR		AB	
36"+			FRACTURED		BEDROCK							

TP # 2 % Slope 20-35% Aspect SW Effective soil depth 36" Topo UPLANDS position CR Shape IRR. Sys. type / dist / dpth / size / c. drain

Redox Features

dpth	cf %	txt	mtx color	strct	color	descrip.	elemnt	dpth	roots	pores	bndry	notes:
0-24"		SIL	10YR3/1	WKABK				MNR			GSB	
24-36		SIL	10YR3/4	WKABK				MNR			AB	
36"+		FRACTURED BEDROCK										

10' TO TOP OF STEEP BANK & MIN.

Vegetation: DOUGLAS FIR, SWORD FERN

Groundwater: permanent / temporary: NONE

Design flow(gpd): 450 gpd.

S.C.S. Soil Series(mapped): 92G - NESKOWIN - SALANDER SILT LOAM

Setbacks: 25' MIN. TO STEEP BANKS

Commerical / (Residential)

Type / dist / dpth(min - max) / size(lineal ft/150 gal). / special conditions

Approved *Initial* System: STD. SERIAL 125/150 375' DRAINFIELD 24"-30" TRENCH DEPTH

Approved *Repair* System: SAND FILTER 4 135' DRAINFIELD

Comments:

SEE BACK FOR TP 3-5 →

TP#3 EFF. SOIL DEPTH - 48"

0-12" Sil DARK BROWN 10YR3/1 MMR WKABK GSB.

12-48" Sil LIGHT BROWN 10YR5/4 1FFR WKAB —

TP#4 EFF. SOIL DEPTH - 48"

0-12" Sil — SIMILAR TO TP#3

12-48" Sil

TP#5 EFF. SOIL DEPTH - 48"

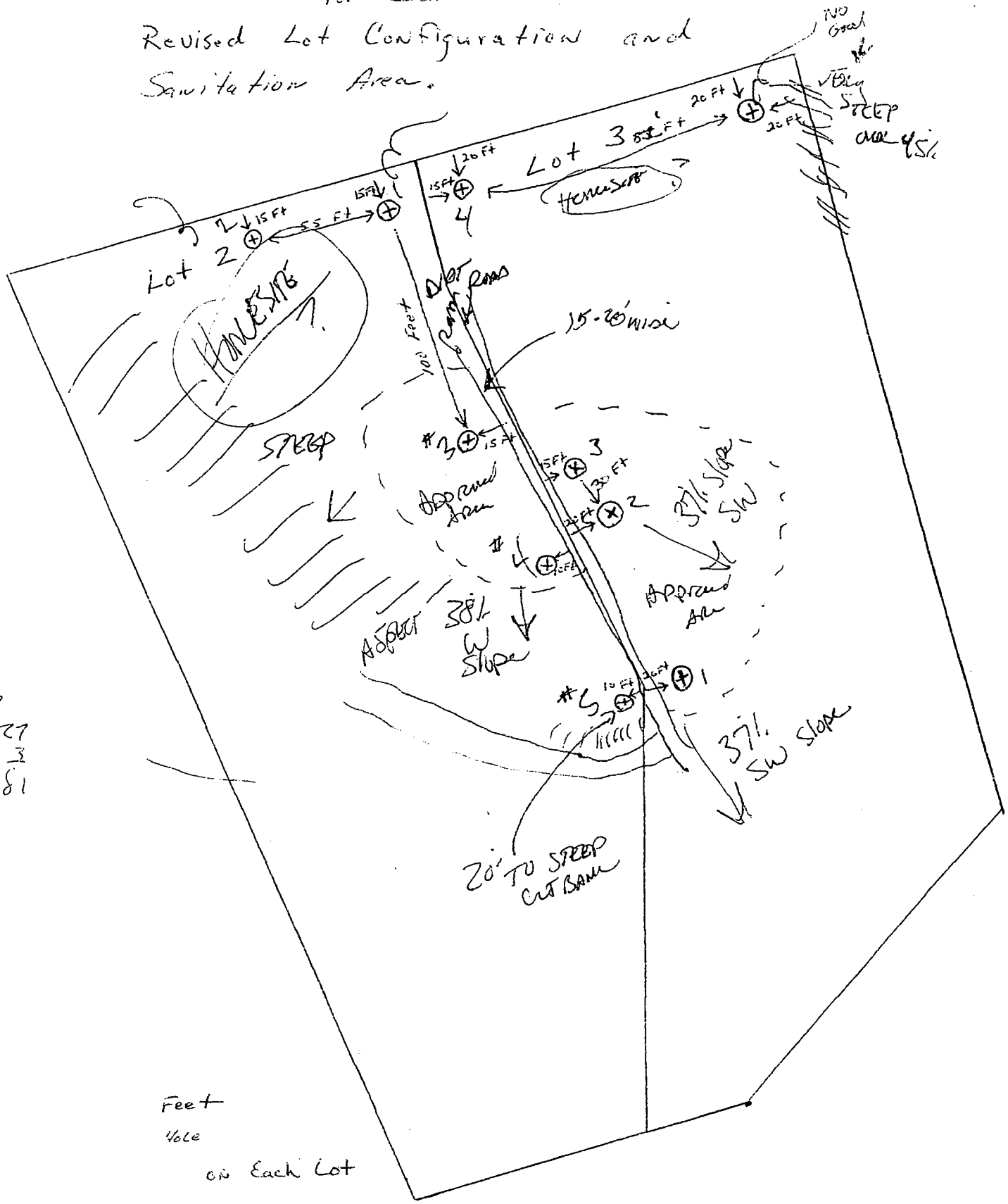
0-14" Sil SIMILAR TO TP#4.

14-48" Sil (TOO CLOSE TO CUT BANK) } NO CORE

Surf View Lane

For Darin Gorham

Revised Lot Configuration and Sanitation Area.

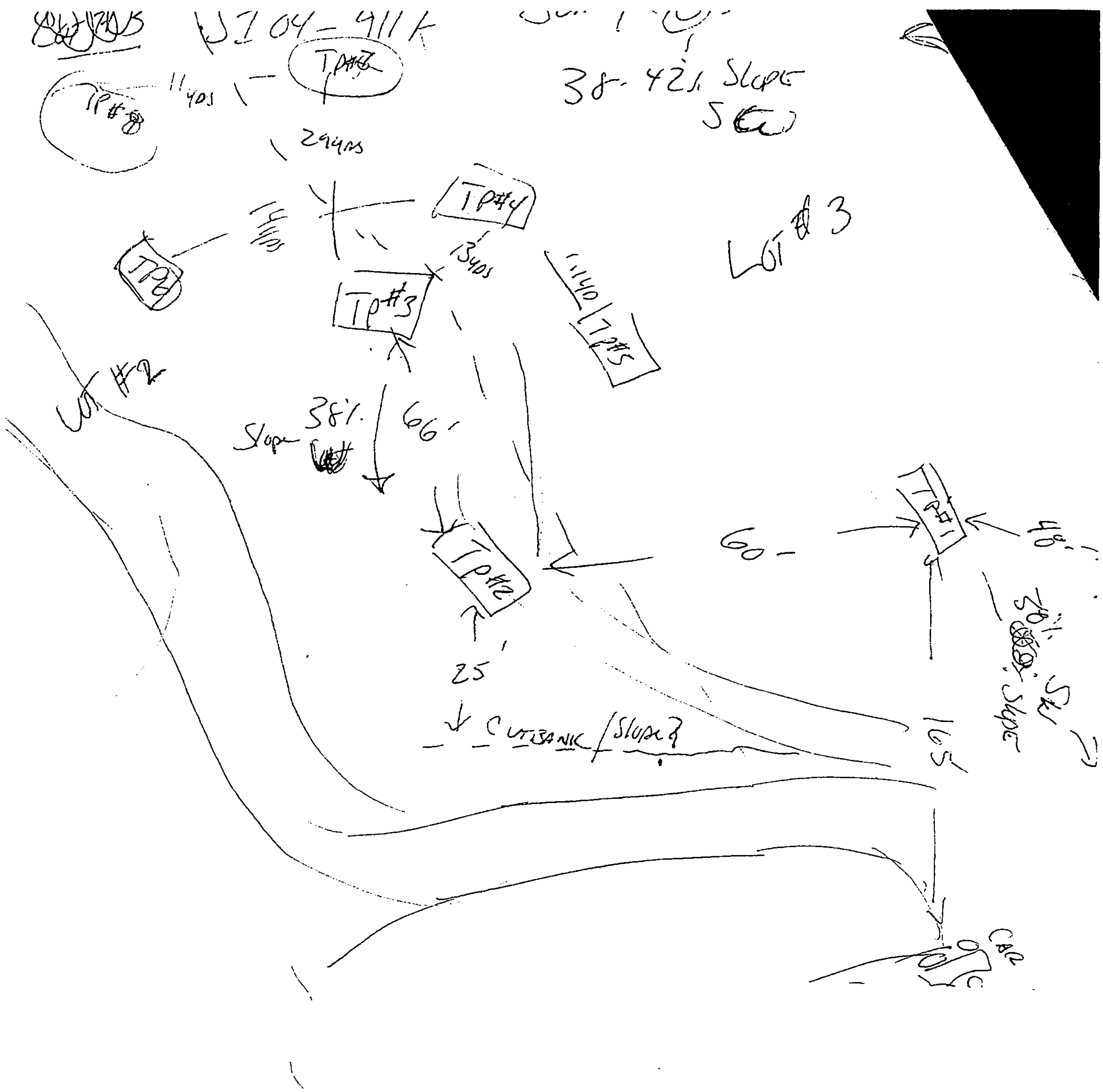


Feet

Hole

on Each Lot

nitation Approval Areas



r-site
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in effect
OUR LO
tion.

SEWAGE DISPOSAL SITE EVALUATION

S.I. # 04-916

RS, TL 17/12/15 Portion of Tax Lot 2801 Job Location 6 miles North of Florence, Just North of Bones Nursery

Written Directions 6 miles North of Florence past Baker Beach Rd, Adjacent to Bones Nursery

Subdivision: Kamrin Court

Lot 2 Block

WATER SUPPLY None yet Wells to be drilled After Sanitation approvals

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OWNERS'S NAME AND ADDRESS Darin Gorham (Same As Above) Phone (541) 935-1131

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I hereby certify that the above statements are true and accurate, and that I have the following legal interest in the property X owner of record; ____ contract purchaser; ____ potential buyer; ____ realtor or agent. I further certify that (if not the owner) I am authorized to act for the owner of record, and that said owner is aware and approves of this action.

TEST HOLES READY Yes

Signature Darin Gorham Date 6/3/04

********** OFFICE USE ONLY BELOW THIS LINE **********

THIS REPORT IS NOT A PERMIT FOR SEWAGE SYSTEM INSTALLATION

The area described on the attached plot plan dated 8-20-04 is APPROVED for a STANDARD SERIAL - INITIAL system.

SANDFILTER - REPLACEMENT

ADDITIONAL COMMENTS: 375' DRAINFIELD 24-30" TRENCH DEPTH - INITIAL

SAND FILTER REPLACEMENT W/ 135' DRAINFIELD

* FUTURE WELLS MUST BE 100' FROM INITIAL & REPLACEMENT

NOTE:
This report approves of a sand filter or pressurized distribution system, detailed construction design plans will be required with the installation permit application.

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WARNING:
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DEQ AUTHORIZED AGENT

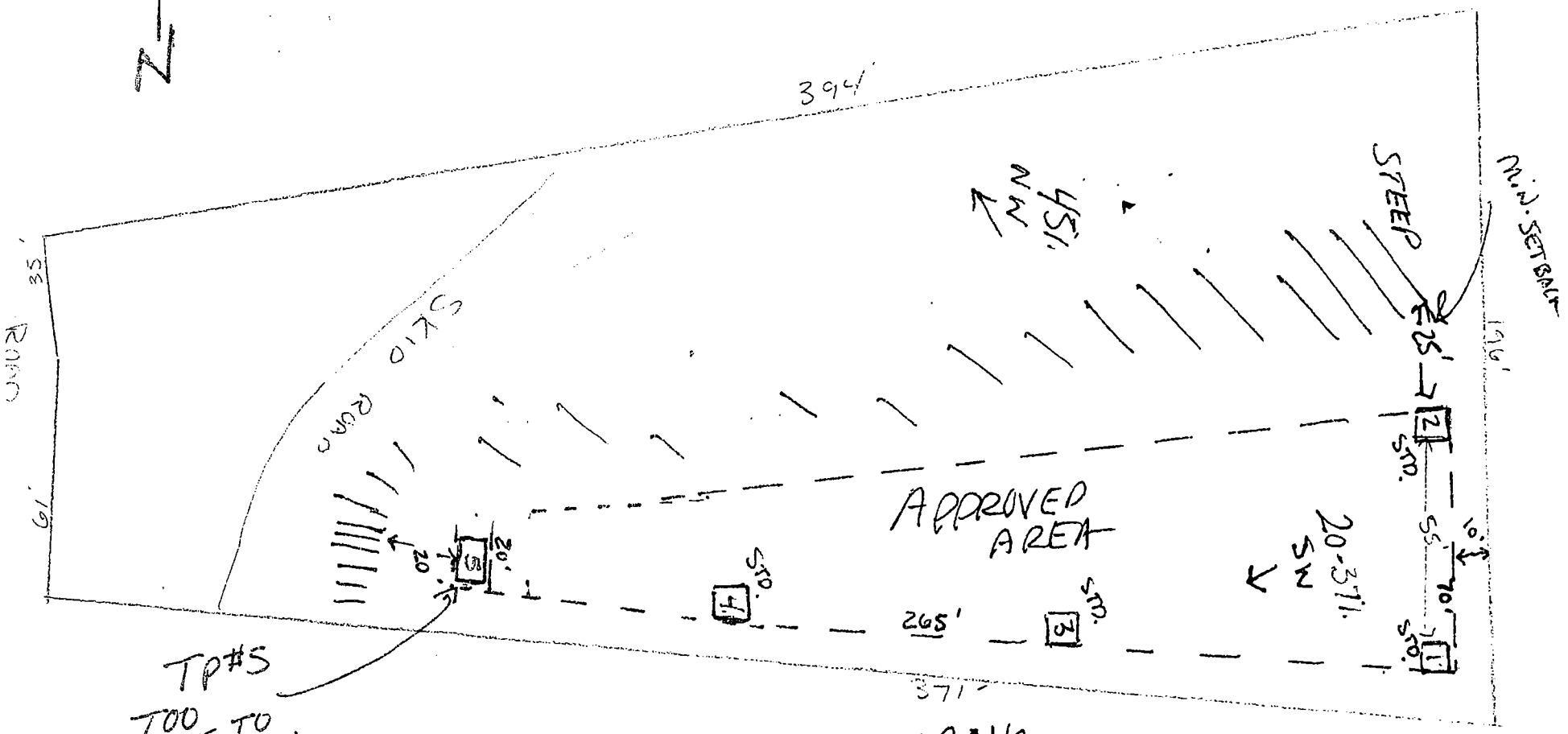
8-31-04 DATE

8/31/04

LANE COUNTY LAND MANAGEMENT, 125 EAST 8T AVENUE, EUGENE, OREGON 97401 (682-3754)

55-32

KARMIN COURT



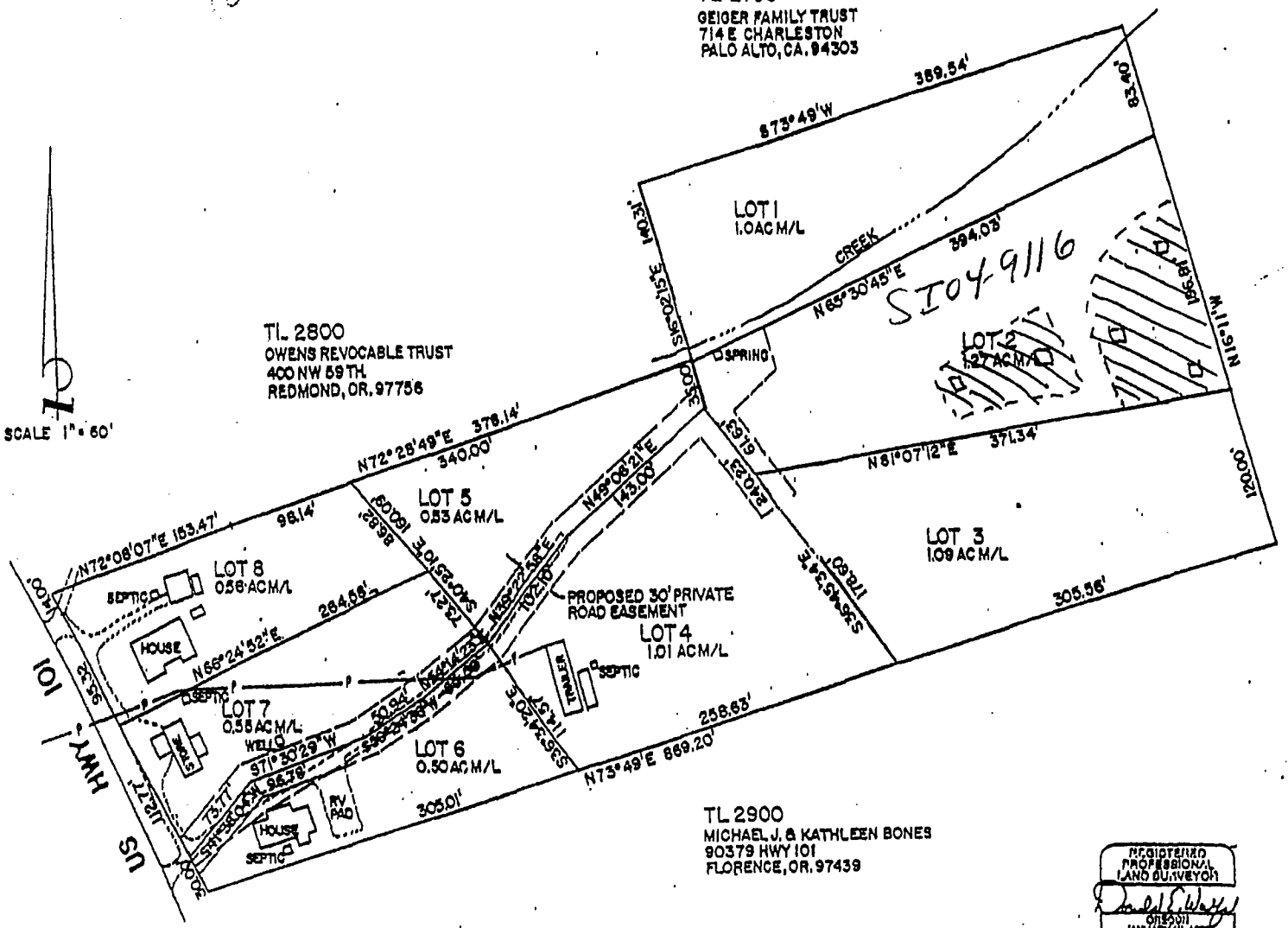
SI04.9116
SEWAGE DISPOSAL
PLOT PLAN APPROVED
A permit is required
prior to starting construction.
DATE 5.20.04
BY
ENVIRONMENTAL HEALTH SERVICES
125 EAST 8TH AVENUE
EUGENE, OREGON 97401

17-12-15 #2801

...ION 15, T17N, R12W, W.M.
...E COUNTY, OREGON

92601 PIOCH LANE
SPRINGFIELD, OR. 97478
(541) 933-1131

NOTE:
1. DOMESTIC WATER FROM ON SITE SOURCES.
2. SEWER TO BE INDIVIDUAL SEPTIC SYSTEMS.



REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON
JANUARY 14, 1977
DONALD L. WOLFORD
2577
RENEWS 6/30/2004

WOLFORD LAND SUR...
97480 MINSEL LAKE

SI04-9116

Test Holes
Sanitation Area
No wells exist this time
will be drilled after
Sanitation Approvals.

Map/lot #: 17.12.15 #2801 SF/SI 04-9116 Applicant: GORHAM Date: 8-20-04 Evaluator: [illegible]

TP # 1 % Slope 20-35% Aspect SW Effective soil depth 36" Topo position UPLANDS COAST RANGE Shape IRR. Sys. type / dist / dpth / size / c. drain

dpth	cf %	txt	mtx color	strct	Redox Features color	descrip.	elemnt	dpth	roots	pores	bndry	notes:
0-10"		Sil	10YR3/1	WK ABK					MNR		GSB	
10-36"		Sil	10YR 3/4	WK ABK					FMR		AB	
36"+			FRACTURED		BEDROCK							

TP # 2 % Slope 20-35% Aspect SW Effective soil depth 36" Topo position UPLANDS CR Shape IRR. Sys. type / dist / dpth / size / c. drain

dpth	cf %	txt	mtx color	strct	Redox Features color	descrip.	elemnt	dpth	roots	pores	bndry	notes:
0-24"		Sil	10YR3/1	WK ABK				MNR			GSB	
24-36		Sil	10YR3/4	WK ABK				MMR			AB	
36"+	—		FRACTURED	BEDROCK								

TP close to steep bank & min.

Vegetation: Douglas Fir, Sword Fern
Groundwater: permanent / temporary: NONE
Design flow(gpd): 450 gpd.
S.C.S. Soil Series(mapped): 92G - NESKOWIN - SALANDER SILT LOAM
Setbacks: 25' MIN. TO STEEP BANKS
Commerical / Residential: (circled: Residential)

Type / dist / dpth(min - max) / size(lineal ft/150 gal). / special conditions

Approved *Initial* System: STD. SERIAL 125/150 375' DRAINFIELD 24"-30" TRENCH DEPTH

Approved *Repair* System: SAND FILTER W/ 135' DRAINFIELD

Comments:

SEE BACK FOR TP 3-5 →

Lane County

12/2/98

TP #3 EFF. SOIL [illegible]

0-12" Sil DARK BRown 10YR3/1 MMR WKaBK GSB.

12-48" Sil LIGHT BRown 10YR5/4 1CFR WKAB —

TP #4 EFF. SOIL DEPTH - 48"

0-12" Sil — SIMILAR TO TP #3

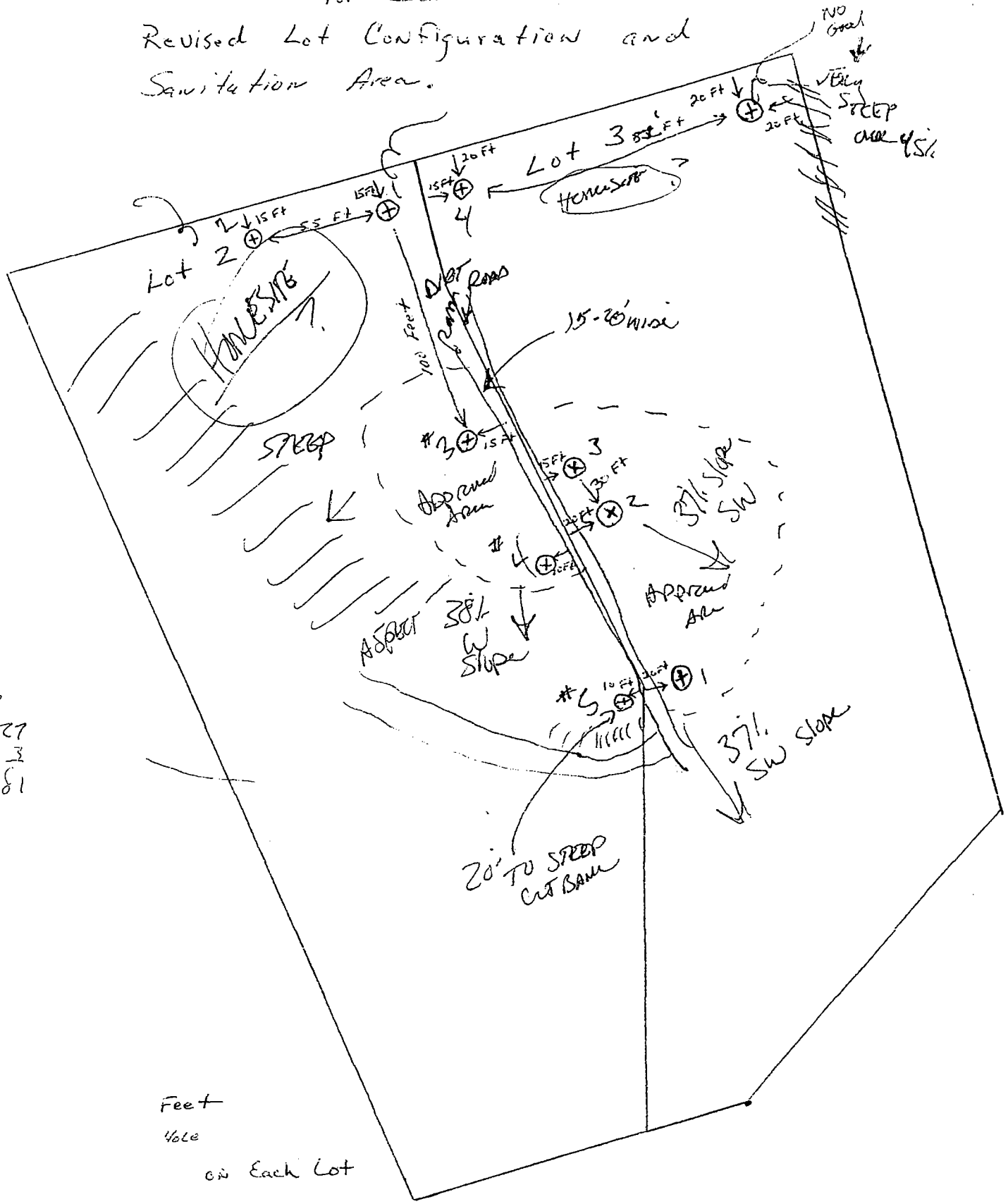
12-48" Sil

TP #5 EFF. SOIL DEPTH - 48"

0-14" Sil SIMILAR TO TP #4.

14-48" Sil (TOO CLOSE TO CUT BANK) } NO GOOD

Surf View Lane
For Darin Gorham
Revised Lot Configuration and
Sanitation Area.



Feet

Hole

on Each Lot

Sanitation Approval Areas

LOT #2

TP #1

0-10 Sil 10YR 3/1 MMR WKAB · GSB

10-36+ ~~FRACTURED SEDROCK~~ Sil 10YR 3/4 WKAB FMR AB

34+ Fractured Bedrock

TP #2 10YR3/1

0-24 Sil MLR WKAB

24+ — FRACTURED BEDROCK

10-100 CLOSE TO STEEP BANK

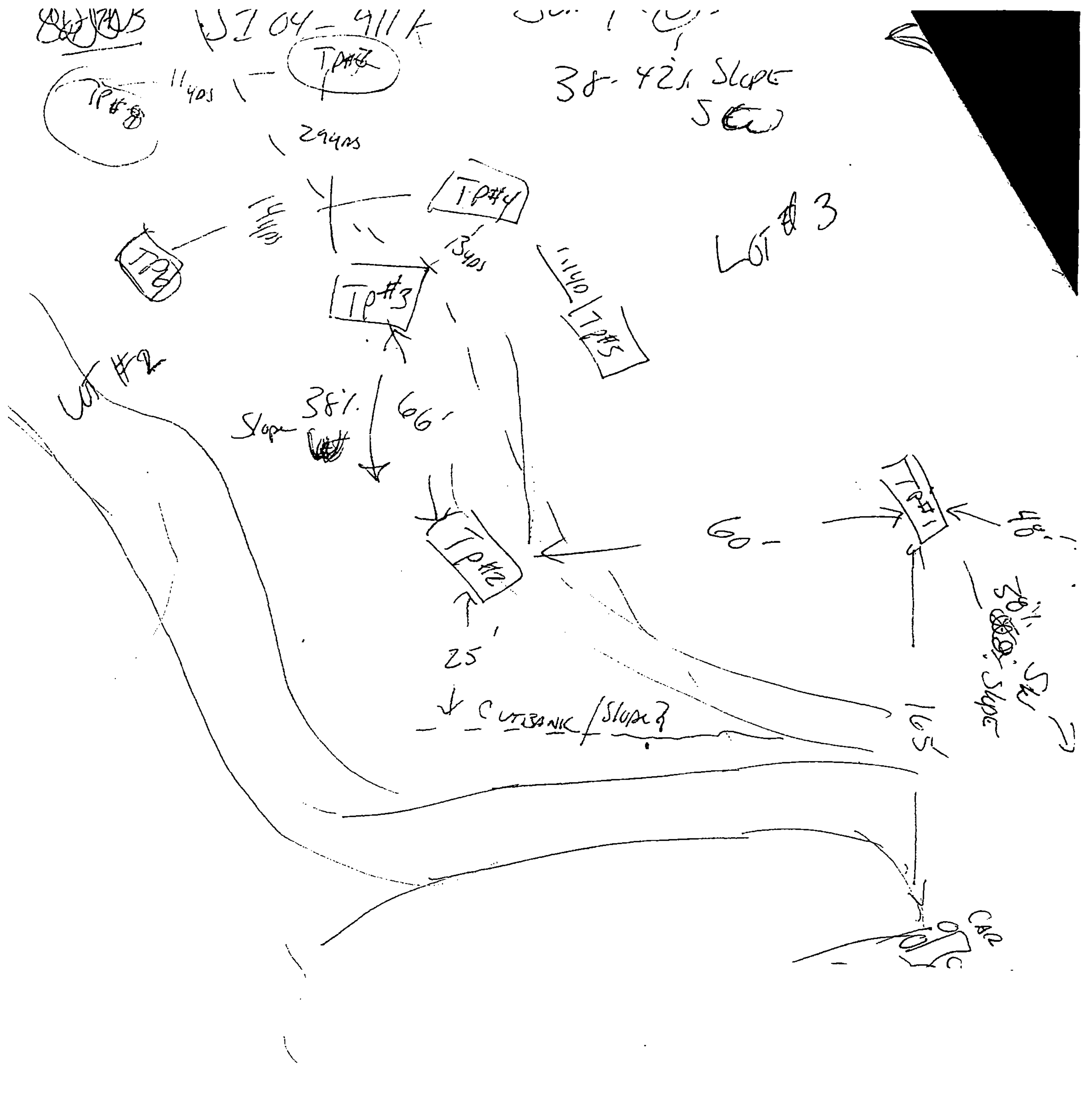
HOMESITE PROBABLY

TP #3 — SIM TO LOT #3 TP #3 14 YARDS AWAY.

TP #4 — SIM TO LOT #3 TP #2 " "

TP #5 — SIM TO ~~LOT #5~~ TP #4

EUGENE, OREGON 97401 (682-3754)


WI 04-411K
TP#8
TP#7
11 yds
29 yds
38-42% Slope
14 yds
TP#4
LOT #3
TP#6
13 yds
TP#3
TP#5
LOT #2
Slope 38%
66'
TP#2
60'
TP#1
48'
25'
CUTBANK / Slope?
165'
CAR

SEWAGE DISPOSAL SITE EVALUATION

S.I. # 04911 L

'RS, TL 17/12/15 Portion of Tax Lot 2801 Job Location 6 miles North of Florence, Just North of Bones Nursery

Written Directions 6 miles North of Florence past Baker Beach Road, Adjacent to Bones Nursery. None yet, wells to be drilled

Subdivision: Kamrin Court

Lot 3 Block

WATER SUPPLY After Sanitation Approvals.

APPLICANT'S NAME AND ADDRESS Darin Gotham 92601 Pioch LN Springfield, OR 97478 Phone (541) 953-5038

OWNERS'S NAME AND ADDRESS Darin Gotham 92601 Pioch LN Springfield, OR 97478 Phone (541) 933-1131

STRUCTURES NOW ON THE PROPERTY None, Vacant Land PROPOSED USE OF PROPERTY Commercial Residential

hereby certify that the above statements are true and accurate, and that I have the following legal interest in the property X owner of record; _____ contract purchaser; _____

otential buyer; _____ realtor or agent. I further certify that (if not the owner) I am authorized to act for the owner of record, and that said owner is aware and approves of this action.

EST HOLES READY Yes Signature Darin Gotham Date 6/3/04

* OFFICE USE ONLY BELOW THIS LINE *

THIS REPORT IS NOT A PERMIT FOR SEWAGE SYSTEM INSTALLATION

he area described on the attached plot plan dated 8-31-04 is APPROVED for a STANDARD SERIAL - INITIAL & REPLACEMENT system.

~~STANDARD SERIAL - REPLACEMENT~~

DDITIONAL COMMENTS: 375' DRAINFIELD 24-30" TRENCH DEPTH

* FUTURE WELLS MUST BE 100' FROM INITIAL + REPLACEMENT

IOTE:

this report approves of a sand filter or pressurized distribution system, detailed construction design plans ill be required with the installation permit application.

THIS IS A PRELIMINARY REPORT WHICH DOES NOT ENSURE THE ISSUANCE OF A FUTURE BUILDING PERMIT. ANY PLANS OR EXPENDITURES MADE IN RELIANCE UPON THIS REPORT ARE AT YOUR OWN RISK. IF SITE IS APPROVED, SEE REVERSE SIDE.

WARNING:
This Site Evaluation is a technical report to determine if a on-site system will function properly. It does not approve the proposed use of the parcel. This Site Evaluation may be converted to a construction permit only if the parcel and use meet land use regulations in effect at the time of application. YOU ARE URGED TO CONTACT YOUR LOCAL PLANNING OFFICE FOR LAND USE REVIEW.

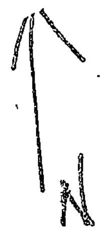
DEQ AUTHORIZED AGENT DATE 8-31-04 8/31/04

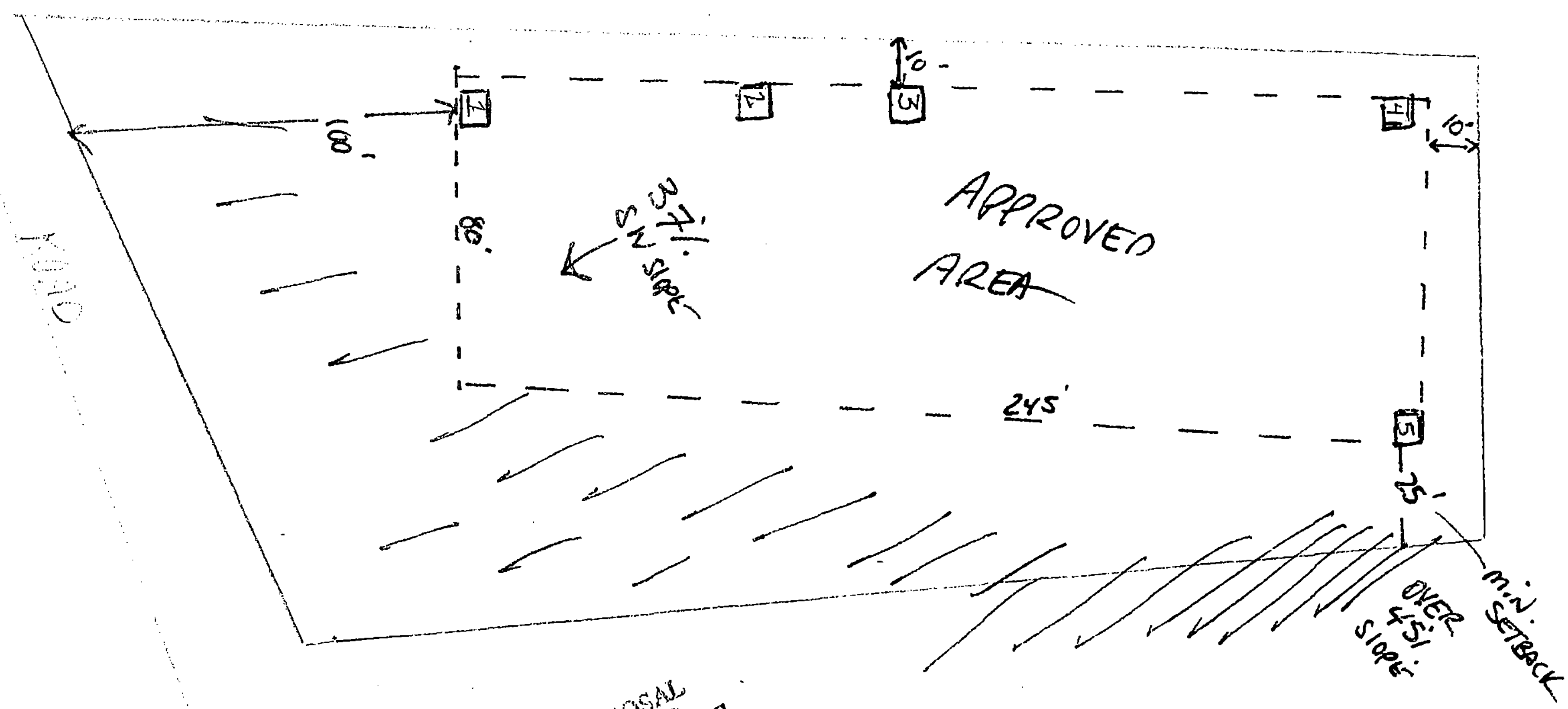
.ANE COUNTY LAND MANAGEMENT, 125 EAST 8T AVENUE, EUGENE, OREGON 97401 (682-3754)

55-32

Lot –
Karmin Court

Scale 1" = 40





SEWAGE DISPOSAL
PLAN APPROVED
permit # SI04-9117
DATE 8-31-04
BY
ENVIRONMENTAL HEALTH SERVICES
125 EAST 8TH AVENUE
EUGENE, OR 97401

17-12-15 #2801

...MINARY SUBDIVISION PLAN

ARIN GORHAM

1/4 SECTION 15, T17N, R12W, W.M.
NE COUNTY, OREGON

OWNER/SUBDIVIDER

DARIN GORHAM
92601 PIOCH LANE
SPRINGFIELD, OR. 97478
(541) 933-1131

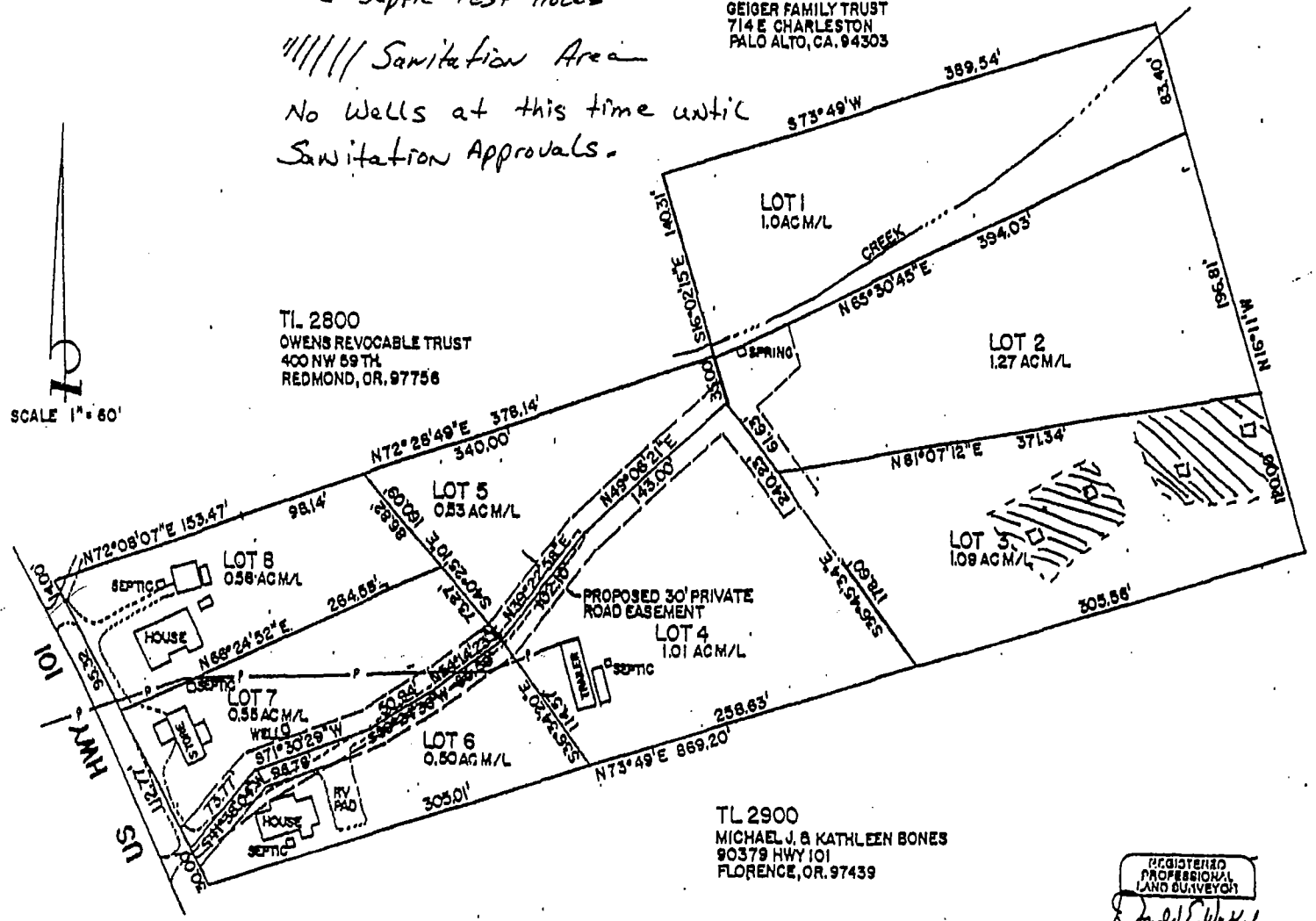
Lot 3, Kamrin Court

□ Septic Test Holes

////// Sanitation Area

No Wells at this time until Sanitation Approvals.

NOTE:
1. DOMESTIC WATER FROM ON SITE SOURCES.
2. SEWER TO BE INDIVIDUAL SEPTIC SYSTEMS.



REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON
JANUARY 14, 1977
DONALD E. WOLFORD
2477
RENEWS 6/30/2004

WOLFORD LAND SUR

SOIL EVALUATION FOR ON-SITE WASTE DISPOSAL LOT #3

Map/lot #: 17-12-15-#2801 SP(SI) 04-9117 Applicant: GORHAM Date: 8-31-04 Evaluator: [illegible]

TP # 1 % Slope 37% Aspect SW Effective soil depth 40" Topo UPLAND position SIDE SLOPE Shape IRR Sys. STD. SER type / dist / dpth / size / c. drain 125/150 24-30" TD.

Redox Features

dpth	cf %	txt	mtx color	strct	color	descrip.	elemnt	dpth	roots	pores	bndry	notes:
0-8"		SIL	10YR3/1	WKABK					FMR/MFR		GSB	
8-40		SIL	10YR3/4	WKABK								
									FMR		GB	
40-48"+		VARIGATED FRACTURED BEDROCK.										

TP # 2 % Slope 37% Aspect SW Effective soil depth 48"+ Topo UPLANDS position L.R. Shape IRR Sys. STD. SERIAL type / dist / dpth / size / c. drain

Redox Features

dpth	cf %	txt	mtx color	strct	color	descrip.	elemnt	dpth	roots	pores	bndry	notes:
0-12		SIL	DARK BROWN						MMR		GSB	
			10YR3/1	WKABK								
12-48"+		SIL	LIGHT BROWN	WKABK					FFR		*	
			10YR3/4									

Vegetation: DOUGLAS FIR, SWORD FERN. Groundwater: permanent / temporary: NONE

Design flow(gpd): 450 gpd S.C.S. Soil Series(mapped): 97G - UNKNOWN - SALANDER SILT LOAM.

Setbacks: 25' MIN. TO STEEP BANK Commerical / Residential:

Type / dist / dpth(min - max) / size(lineal ft/150 gal). / special conditions

Approved *Initial* System: STD. SERIAL 125/150 375' DRAINFIELD 24" - 30" TRENCH DEPTH

Approved *Repair* System: SAME

Comments:

SEE BACK FOR TP 3-5 →

Tp# 3

0-12" Sil Dark Brown 10YR 3/1 — MMR GSB WKABK

12-48"+ Sil Light Brown 10YR 3/4 FFR WKABK

Tp# 4

0-12" Sil (Similar to Tp# 2)

12-40" Sil

40-48"+ — Fractured Bedrock Begins at 40".

Tp# 5

0-12" Sil (Similar to Tp# 4)

12-40" Sil

40-48"+ — Fractured Bedrock noted at 40"

LOT #3

TP#1
0-8" SIL 10YR3/1 MFR FMR WKAB GSB
8-40" SIL 10YR 3/4 WKAB - MFR GSB
40"+ — VARIEGATED FRACTURED SIL MIX.

TP#2
0-12" — SIL DARK BROWN 10YR3/1 MMR WKAB GSB
12-48"+ SIL LIGHT BROWN - 10YR3/4 MFR WKAB —

TP#3 SIM TO TP#2
0-12"
12-48"+

TP#4 SIM TO #2
FRACTURED BEDROCK BEGINS @ 40"

TP#5 ~~NO GOOD TOO CLOSE TO STEEP SLOPE~~
(25' MIN SETBACK MET)
SIM TO TP#4

SEWAGE DISPOSAL SITE EVALUATION

S.I. # 04 9118

TRS, TL 17/12/15 Portion of Tax Lot 2801 Job Location 6 miles North of Florence, Just North of Bones Nursery

Written Directions 6 miles North of Florence past Baker Beach Rd, Adjacent to Bones Nursery.

Subdivision: Kamrin Court

Lot 5 Block

WATER SUPPLY None yet, Wells to be drilled After Sanitation approvals.

APPLICANT'S NAME AND ADDRESS Parin Gotham 92601 Piack LN Springfield, OR 97478 Phone (541) 953-5038

OWNERS'S NAME AND ADDRESS Parin Gotham 92601 Piack LN Springfield, OR 97478 Phone (541) 933-1131

STRUCTURES NOW ON THE PROPERTY None, Vacant Land

PROPOSED USE OF PROPERTY Commercial Residential

I hereby certify that the above statements are true and accurate, and that I have the following legal interest in the property X owner of record; _____ contract purchaser; _____ potential buyer; _____ realtor or agent. I further certify that (if not the owner) I am authorized to act for the owner of record, and that said owner is aware and approves of this action.

TEST HOLES READY Yes

Signature Parin Gotham Date 6/3/04

********** OFFICE USE ONLY BELOW THIS LINE **********

THIS REPORT IS NOT A PERMIT FOR SEWAGE SYSTEM INSTALLATION

The area described on the attached plot plan dated 8-20-04 is APPROVED for a SAND FILTER WITH DRAINFIELD system.

ADDITIONAL COMMENTS: 135' DRAINFIELD INITIAL + REPLACEMENT
18"- 30" MAXIMUM TRENCH DEPTH
* FUTURE WELLS MUST BE 100' FROM INITIAL & REPLACEMENT.

NOTE:
If this report approves of a sand filter or pressurized distribution system, detailed construction design plans will be required with the installation permit application.

THIS IS A PRELIMINARY REPORT WHICH DOES NOT ENSURE THE ISSUANCE OF A FUTURE BUILDING PERMIT. ANY PLANS OR EXPENDITURES MADE IN RELIANCE UPON THIS REPORT ARE AT YOUR OWN RISK. IF SITE IS APPROVED, SEE REVERSE SIDE.

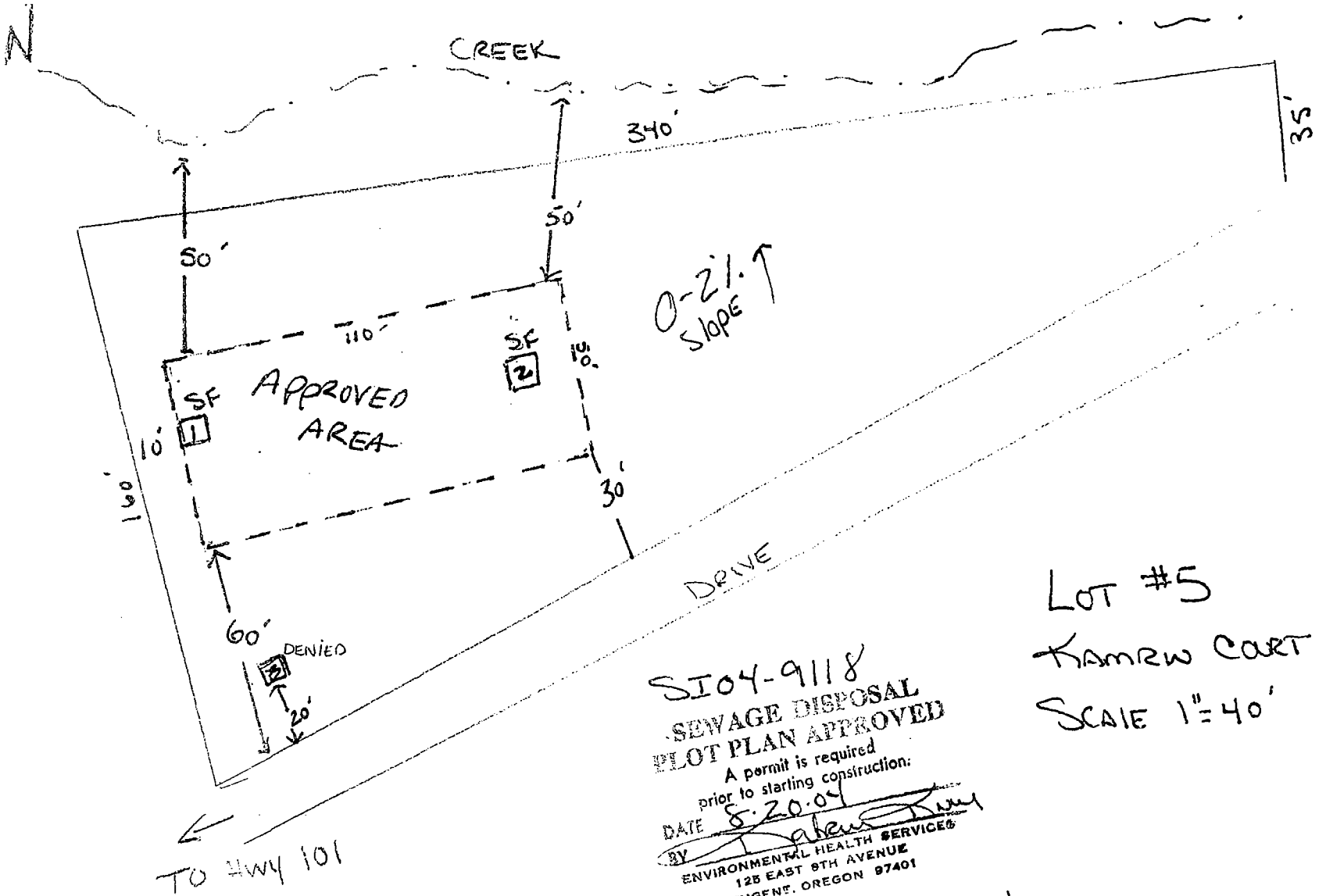
WARNING:
This Site Evaluation is a technical report to determine if a on-site system will function properly. It does not approve the proposed use of the parcel. This Site Evaluation may be converted to a construction permit only if the parcel and use meet land use regulations in effect at the time of application. YOU ARE URGED TO CONTACT YOUR LOCAL PLANNING OFFICE FOR LAND USE REVIEW.

DEQ AUTHORIZED AGENT

8-20-04 DATE 8/31/04

LANE COUNTY LAND MANAGEMENT, 125 EAST 8T AVENUE, EUGENE, OREGON 97401 (682-3754)

C55-32



LOT #5
KAMRW COURT
SCALE 1" = 40'

SI04-9118
SEWAGE DISPOSAL
PLOT PLAN APPROVED
A permit is required
prior to starting construction.
DATE 5.20.04
BY
ENVIRONMENTAL HEALTH SERVICES
125 EAST 8TH AVENUE
EUGENE, OREGON 97401

17-12-15 #2801

..., T17N, R12W, W.M.
...NTY, OREGON

DARIN GORHAM
92601 PIOCH LANE
SPRINGFIELD, OR. 97478
(541) 933-1131

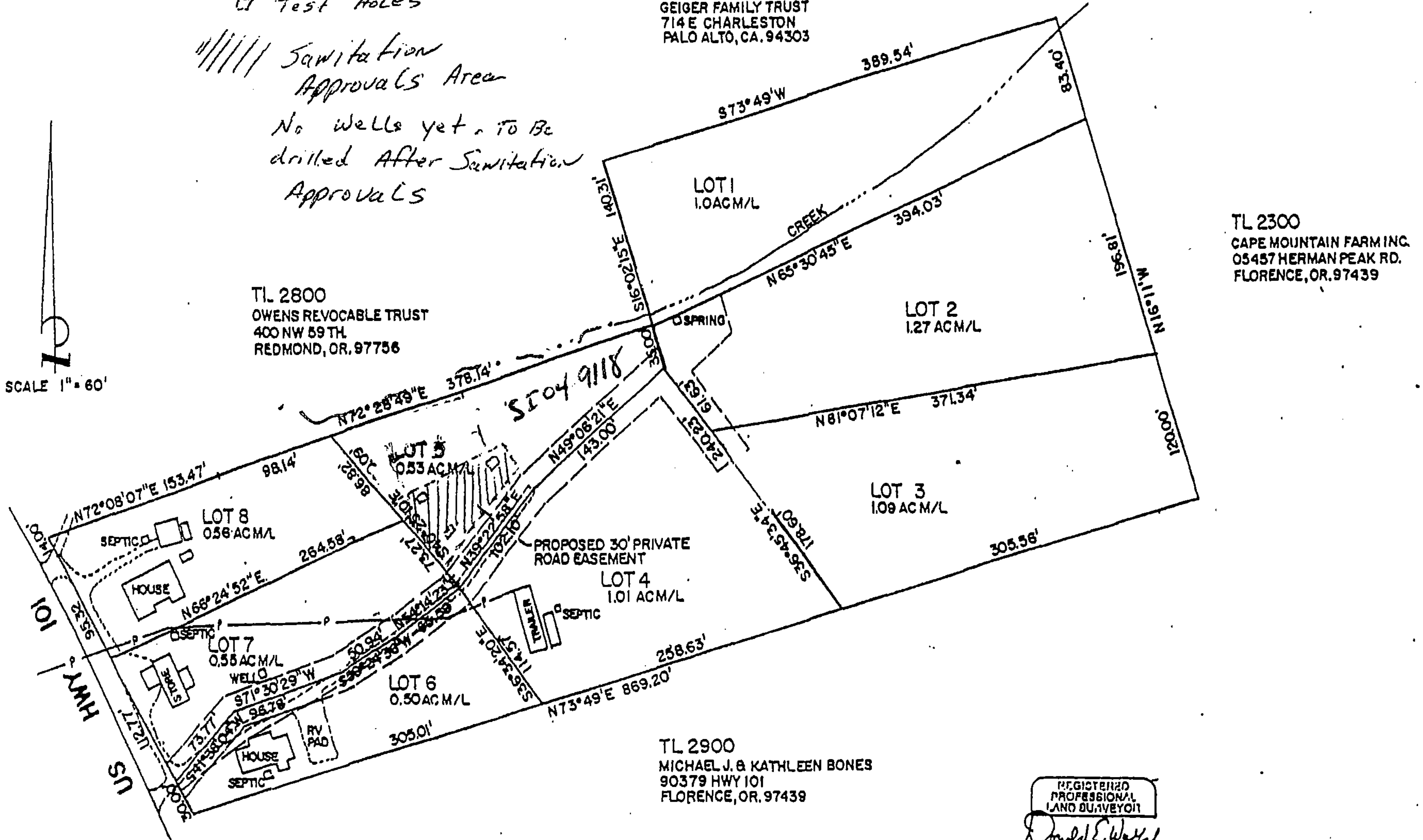
Lot 5, Kamrin Court

☐ Test Holes

////// Sanitation Approvals Area

No Wells yet. To Be drilled After Sanitation Approvals

NOTE:
1. DOMESTIC WATER FROM ON SITE SOURCES.
2. SEWER TO BE INDIVIDUAL SEPTIC SYSTEMS.



REGISTERED PROFESSIONAL LAND SURVEYOR
OREGON
JANUARY 14, 1993
DONALD E. WOLFORD
2477
RS EXPIRES 6/30/2004

WOLFORD LAND SUR...

SOIL EVALUATION FOR ON-SITE WASTE DISPOSAL

LOT #5

Lot #: 17-12-15 #2801 SP/SI 04-911R Applicant: GORHAM Date: 8-20-04 Evaluator: Karen Kay

TP # 1 % Slope 0-2% Aspect N Effective soil depth 48" Topo position Terrace Shape L Sys. type / dist / dpth / size / c. drain

dpth	cf %	txt	mtx color	strct	Redox Features color	descrip.	elemnt	dpth	roots	pores	bndry	notes:
0-9"		L	10YR3/2	MSABK					MCR		CSB	
9-32"		L	10YR3/2	MSABK					MFR		CWB	20% PEBBLES
32-48"		L	10YR4/3	MSABK					FFR		GB	20% PEBBLES
48"+	VARIEGATED		SAPROLITE									FRIABLE - NON STICKY
												40% PEBBLES

TP # 2 % Slope 0-2% Aspect U Effective soil depth 48"+ Topo position Terrace Shape L Sys. type / dist / dpth / size / c. drain

dpth	cf %	txt	mtx color	strct	Redox Features color	descrip.	elemnt	dpth	roots	pores	bndry	notes:
0-15"		L	10YR3/2						MCR			
15-36"		L	10YR3/3						MFR			
36-48"+		L	10YR 4/3						FFR			NO SAPROLITE

Vegetation: SWORD FERN, ALDER, BLACKBERRIES Groundwater: permanent / temporary: NONE

Design flow(gpd): 450 gpd. S.C.S. Soil Series(mapped): 82C MEDA LOAM SERIES

Setbacks: 50' TO CREEK Commerical / Residential:

10' TO PROPERTY LINES

Type / dist / dpth(min - max) / size(lineal ft/150 gal). / special conditions

Approved *Initial* System: SANDFILTER 45/150 30" MAX TRENCH DEPTH

Approved *Repair* System: SAME

Comments: SOIL CONDITIONS APPROVED FOR A STANDARD SYSTEM - SANDFILTER APPROVED GIVEN DUE TO SETBACK TO CREEK.

TP#3 - FRACTURED BEDROCK TO SURFACE - NO GOOD!

EXHIBIT 10

PLAN AMENDMENT & ZONE CHANGE
MAP 17-12-15-00-D001
Tax Lots 3900, 4000, 4100, 4200 & 4300

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

Instructions for completing this report are on the last page of this form.

LOT 1
WELL I.D. # L 71543
START CARD # W141774

(1) LAND OWNER Well Number 71543
Name DARIN GORHAM
Address 92601 PIOCH LANE
City SPRINGFIELD State ORE Zip 97478

(2) TYPE OF WORK
☒ New Well ☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment

(3) DRILL METHOD:
☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger
☐ Other

(4) PROPOSED USE:
☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☐ Livestock ☐ Other

(5) BORE HOLE CONSTRUCTION:
Special Construction approval ☐ Yes ☒ No Depth of Completed Well 107 ft.
Explosives used ☐ Yes ☒ No Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Sacks or pounds
10"	0	22'	BENT.	0	22	10 SACKS
7½"	22'	100'				
5½"	100	107				

How was seal placed: Method ☐A ☐B ☐C ☐D ☐E
☒ Other POURED + TAMPED
Backfill placed from ft. to ft. Material
Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6"	+1.5	98.5	250	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:					☐	☐	☐	☐
					☐	☐	☐	☐

Drive Shoe used ☒ Inside ☐ Outside ☐ None
Final location of shoe(s) 98.5 (5½")

(7) PERFORATIONS/SCREENS:
☐ Perforations Method 106 perfs
☐ Screens Type Material

From	To	Slot size	Number	Diameter	Tele/pipe size	Casing	Liner
						☐	☐
						☐	☐
						☐	☐
						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour
☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
100GPM+	106'	107'	1 hr.

Temperature of water 52° Depth Artesian Flow Found
Was a water analysis done? ☐ Yes By whom
Did any strata contain water not suitable for intended use? ☐ Too little
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other
Depth of strata:

(9) LOCATION OF WELL by legal description:
County LANE Latitude Longitude
Township 17-S N or S Range 12-W E or W. WM.
Section 15 NE 1/4 SE 1/4 KAMRIA COURT
Tax Lot 2801 Lot 1 Block Subdivision
Street Address of Well (or nearest address) EAST OF 90419 Hwy 101 FLORENCE, ORE

(10) STATIC WATER LEVEL:
1' ft. below land surface. Date 3/16/06
Artesian pressure lb. per square inch Date

(11) WATER BEARING ZONES:
Depth at which water was first found 77'

From	To	Estimated Flow Rate	SWL
77	107	100GPM+	1'

(12) WELL LOG:
Ground Elevation

Material	From	To	SWL
SANDY BROWN CLAY	0		
WITH BOULDERS		14'	
CS Gray Blue Broken	14'	76'	
BROKEN BASALT W/BOULDERS	76'	107'	1'
(WEATHERED-CAVING)			

Date started 3/16/06 Completed 3/16/06

(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.
WWC Number
Signed Date

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.
WWC Number 1748
Signed Glen deWitt Date

ORIGINAL - WATER RESOURCES DEPARTMENT - FIRST COPY - CONTRACTOR

LOT 3 L 71541

WELL I.D. # L [redacted]

START CARD # [redacted] W 141772

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

Instructions for completing this report are on the last page of this form.

(1) LAND OWNER Well Number L 71541

Name DARIN GORHAM

Address 92601 PIOCH LANE

City SPRINGFIELD State ORE Zip 97478

(2) TYPE OF WORK

☒ New Well ☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment

(3) DRILL METHOD:

☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger

☐ Other

(4) PROPOSED USE:

☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation

☐ Thermal ☐ Injection ☐ Livestock ☐ Other

(5) BORE HOLE CONSTRUCTION:

Special Construction approval ☐ Yes ☒ No Depth of Completed Well 200' ft.

Explosives used ☐ Yes ☒ No Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Sacks or pounds
10"	0	22'	BENT.	0	22'	12 SACKS
7½"	22	139				
5½"	139	700				

How was seal placed: Method ☐ A ☐ B ☐ C ☐ D ☐ E

☒ Other POURED & TAMPED

Backfill placed from ft. to ft. Material

Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6"	+1	139	250	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:	4"	-4	200	250	☐	☒	☐	☐
					☐	☐	☐	☐

Drive Shoe used ☒ Inside ☐ Outside ☐ None

Final location of shoe(s) 139' (5½")

(7) PERFORATIONS/SCREENS:

☒ Perforations Method SKILL SAW

☐ Screens Type Material

From	To	Slot size	Number	Tele/pipe Diameter	Tele/pipe size	Casing	Liner
120'	200	6"	117	4"	4"	☐	☒
						☐	☐
						☐	☐
						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour

☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
40 GPM	135'	199'	1 hr

Temperature of water 52° Depth Artesian Flow Found

Was a water analysis done? ☐ Yes By whom

Did any strata contain water not suitable for intended use? ☐ Too little

☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other

Depth of strata:

(9) LOCATION OF WELL by legal description:

County LANE Latitude Longitude

Township 17-S N or S Range 12-W E or W. WM.

Section 15 NE 1/4 SE 1/4 Co

Tax Lot 2801 Lot 3 Block Subdivision KAMRIN

Street Address of Well (or nearest address) EAST OF 90419 HWY 101 FLORENCE, ORE

(10) STATIC WATER LEVEL:

65' ft. below land surface. Date 3-14-06

Artesian pressure lb. per square inch Date

(11) WATER BEARING ZONES:

Depth at which water was first found 135'

From	To	Estimated Flow Rate	SWL
135	180'	40 GPM	65'

(12) WELL LOG:

Ground Elevation

Material	From	To	SWL
FOREST TOPSOIL	0	2	
SANDY CLAY- BROWN	2	25	
CLAY-THIN W/BROKEN CS.	25	56	
CLAY-DARK BROWN W/SAND	56		
# VOLCANIC ROCK,		75	
VOLCANIC ROCK W/CLAY	75	104	
CS-BROKEN/CLAY-GREEN	104		
BLUE		200'	65'

Date started 3-13-06 Completed 3-14-06

(unbonded) Water Well Constructor Certification:

I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.

WWC Number

Signed Date

(bonded) Water Well Constructor Certification:

I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.

WWC Number 1248

Signed [signature] Date 3-17-06

STATE OF OREGON
WATER SUPPLY WELL REPORT
(as required by ORS 537.765)

LOT 2
WELL I.D. # L 71542
START CARD # W14773

Instructions for completing this report are on the last page of this form.

(1) LAND OWNER Well Number 71542
Name DARIN GORHAM
Address 92601 PIOCH LANE
City SPRINGFIELD State ORE Zip 97478

(2) TYPE OF WORK
☒ New Well ☐ Deepening ☐ Alteration (repair/recondition) ☐ Abandonment

(3) DRILL METHOD:
☒ Rotary Air ☐ Rotary Mud ☐ Cable ☐ Auger
☐ Other

(4) PROPOSED USE:
☒ Domestic ☐ Community ☐ Industrial ☐ Irrigation
☐ Thermal ☐ Injection ☐ Livestock ☐ Other

(5) BORE HOLE CONSTRUCTION:
Special Construction approval ☐ Yes ☒ No Depth of Completed Well 200 ft.
Explosives used ☐ Yes ☒ No Type Amount

HOLE Diameter	From	To	SEAL Material	From	To	Sacks or pounds
10"	0	22	BENT	0	22	10 SACKS
7 1/2"	22	139				
5 1/2"	139	200				

How was seal placed: Method ☐A ☐B ☐C ☐D ☐E
☒ Other POURED & TAMPED
Backfill placed from ft. to ft. Material
Gravel placed from ft. to ft. Size of gravel

(6) CASING/LINER:

	Diameter	From	To	Gauge	Steel	Plastic	Welded	Threaded
Casing:	6"	+1	139	250	☒	☐	☒	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
					☐	☐	☐	☐
Liner:	4"	-4	200	SCH40	☐	☒	☐	☐
					☐	☐	☐	☐

Drive Shoe used ☒ Inside ☐ Outside ☐ None
Final location of shoe(s) 139' (5 1/2")

(7) PERFORATIONS/SCREENS:
☒ Perforations Method SKILL SAW
☐ Screens Type Material

From	To	Slot size	Number	Tele/pipe Diameter	Tele/pipe size	Casing	Liner
140	200	6"	108	1/8"	4"	☐	☒
						☐	☐
						☐	☐
						☐	☐

(8) WELL TESTS: Minimum testing time is 1 hour
☐ Pump ☐ Bailer ☒ Air ☐ Flowing Artesian

Yield gal/min	Drawdown	Drill stem at	Time
40 GPM	139'	199	1 hr.

Temperature of water 52° Depth Artesian Flow Found
Was a water analysis done? ☐ Yes By whom
Did any strata contain water not suitable for intended use? ☐ Too little
☐ Salty ☐ Muddy ☐ Odor ☐ Colored ☐ Other
Depth of strata:

(9) LOCATION OF WELL by legal description:
County LANE Latitude Longitude
Township 17-S N or S Range 12-W E or W. WM.
Section 15 NE 1/4 SE 1/4 RAMRIN
Tax Lot 2801 Lot 2 Block Subdivision COURT
Street Address of Well (or nearest address) EAST OF 90419 Hwy 101 FLORENCE, ORE

(10) STATIC WATER LEVEL:
61 ft. below land surface. Date 3-15-06
Artesian pressure lb. per square inch Date

(11) WATER BEARING ZONES:
Depth at which water was first found 131'

From	To	Estimated Flow Rate	SWL
131	185	40 GPM	61'

(12) WELL LOG:
Ground Elevation

Material	From	To	SWL
TOPSOIL EXCAVATED			
CLAY W/SAND - BROWN	0	33	
CLAY - TAN W/ BROKEN	33		
CLAY STONE		36	
CS - BROKEN - WEATHERED	36	73	
CLAY - DARK BROWN W/	73		
BROKEN C.S.		108	
CS. GRAY/FRACTURED	108	200	61'

Date started 3-14-06 Completed 3-15-06

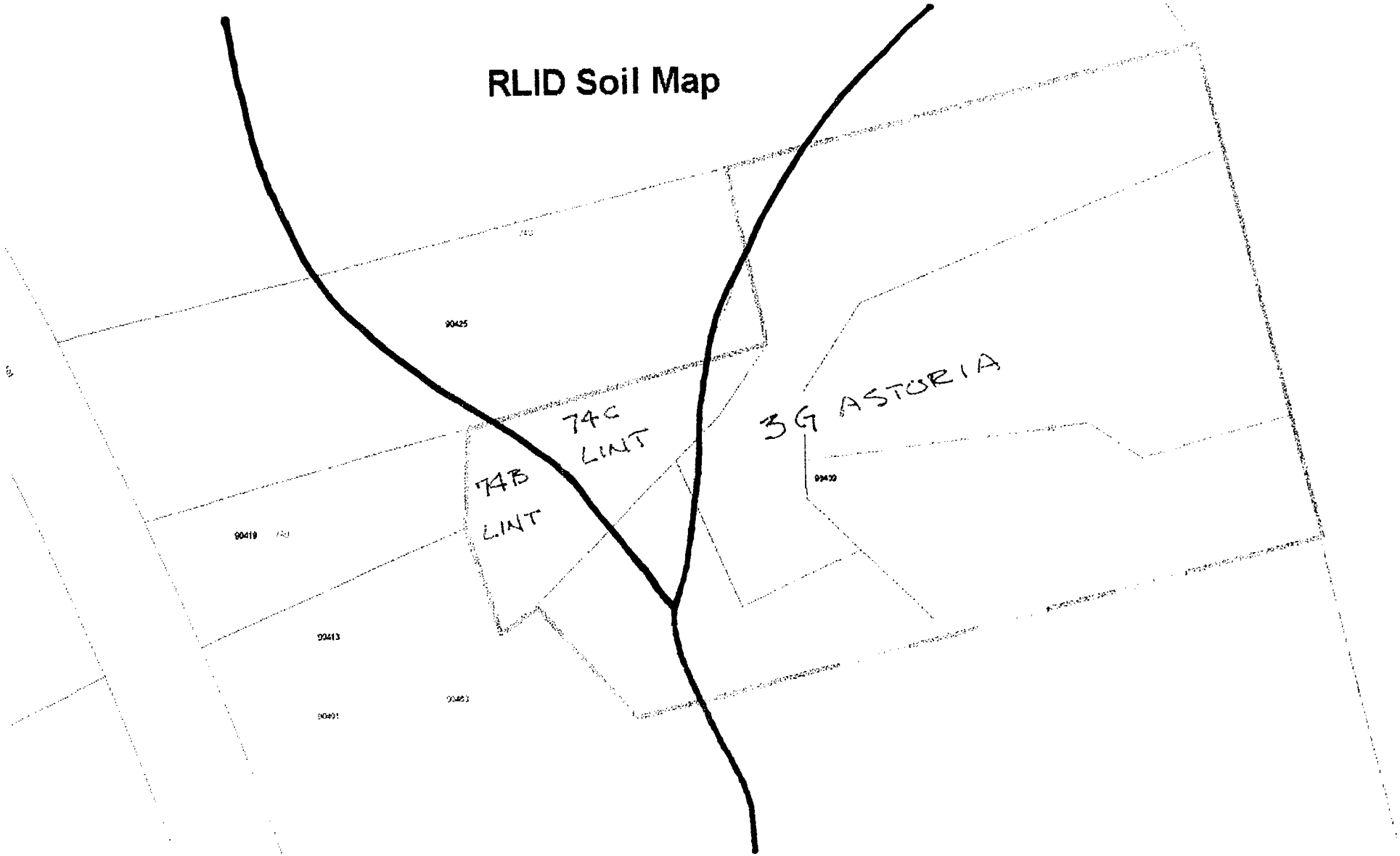
(unbonded) Water Well Constructor Certification:
I certify that the work I performed on the construction, alteration, or abandonment of this well is in compliance with Oregon water supply well construction standards. Materials used and information reported above are true to the best of my knowledge and belief.
WWC Number
Signed Date

(bonded) Water Well Constructor Certification:
I accept responsibility for the construction, alteration, or abandonment work performed on this well during the construction dates reported above. All work performed during this time is in compliance with Oregon water supply well construction standards. This report is true to the best of my knowledge and belief.
Signed Glen Whitt WWC Number 1248 Date 3-17-06

EXHIBIT 11

PLAN AMENDMENT & ZONE CHANGE
MAP 17-12-15-00-D001
Tax Lots 3900, 4000, 4100, 4200 & 4300

RLID Soil Map



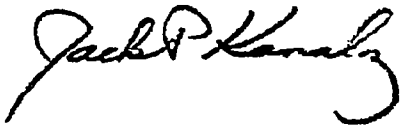
Foreword

This soil survey contains information that can be used in land-planning programs in Lane County Area, Oregon. It contains predictions of soil behavior for selected land uses. The survey also highlights limitations and hazards inherent in the soil, improvements needed to overcome the limitations, and the impact of selected land uses on the environment.

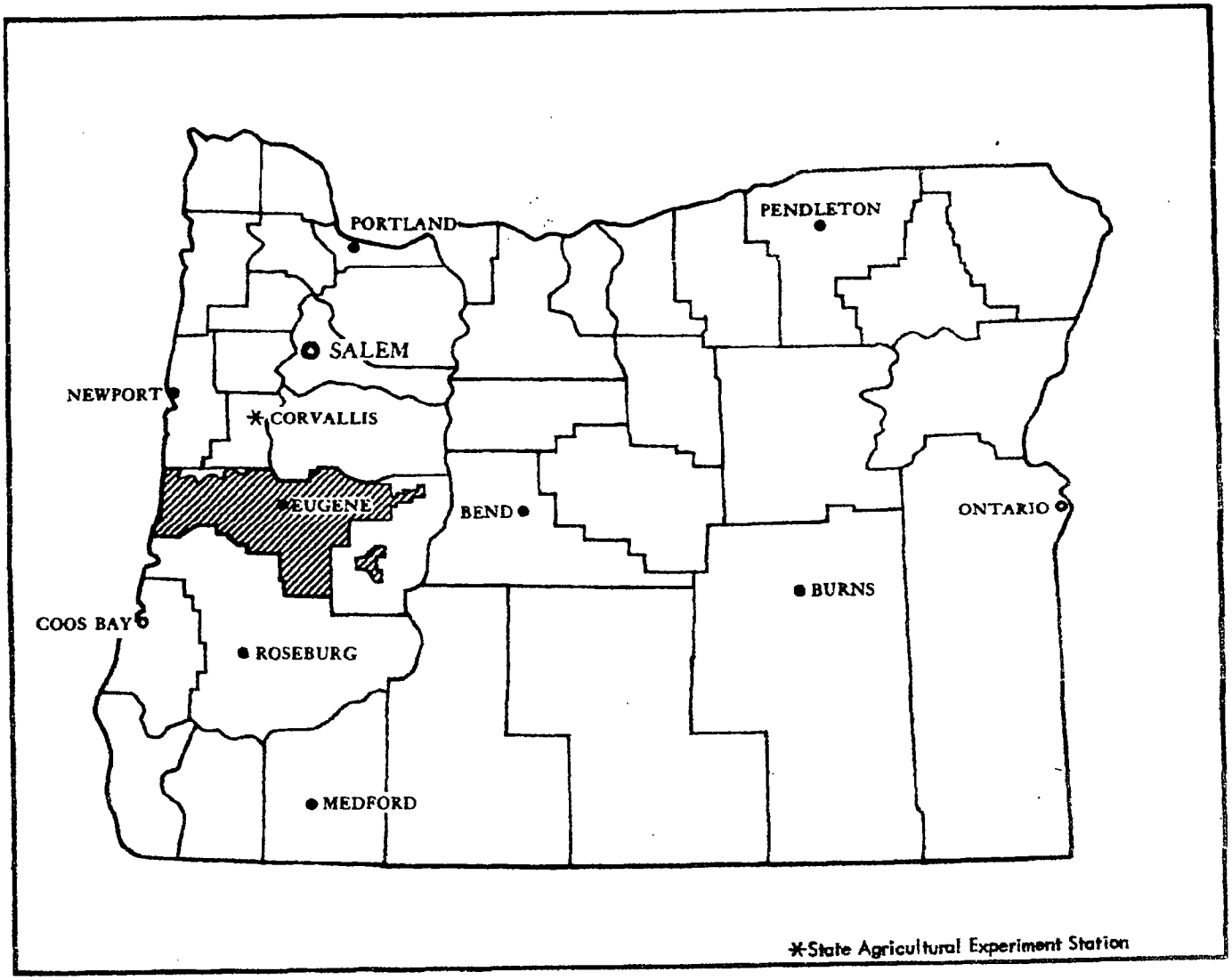
This soil survey is designed for many different users. Farmers, ranchers, foresters, and agronomists can use it to evaluate the potential of the soil and the management needed for maximum food and fiber production. Planners, community officials, engineers, developers, builders, and home buyers can use the survey to plan land use, select sites for construction, and identify special practices needed to insure proper performance. Conservationists, teachers, students, and specialists in recreation, wildlife management, waste disposal, and pollution control can use the survey to help them understand, protect, and enhance the environment.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are shallow to bedrock. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

These and many other soil properties that affect land use are described in this soil survey. Broad areas of soils are shown on the general soil map. The location of each soil is shown on the detailed soil maps. Each soil in the survey area is described. Information on specific uses is given for each soil. Help in using this publication and additional information is available at the local office of the Soil Conservation Service or the Cooperative Extension Service.



Jack P. Kanalz
State Conservationist
Soil Conservation Service



Location of Lane County Area in Oregon.

Soil Survey of
Lane County Area, Oregon

By William R. Patching, Soil Conservation Service

Fieldwork by William R. Patching, Philip R. Smith,
Craig Garland, Richard C. Herriman, Jay Boynton,
Gary Shafer, and Aimee Walker, Soil Conservation Service

United States Department of Agriculture,
Soil Conservation Service In cooperation
with United States Department of the
Interior, Bureau of Land Management;
Oregon Agricultural Experiment Station; and
Lane County

LANE COUNTY AREA is in the west-central part of Oregon. Eugene, the county seat of Lane County, has a population of about 92,000. The total extent of the survey area is 1,776,545 acres, or about 2,776 square miles. Of this, about 280,000 acres is managed by the Bureau of Land Management and 250,000 by the Forest Service.

The survey area is in three major land resource areas-Northern Pacific Coast Range and Valleys, Willamette Valley, and Western Slope Cascade Mountains. The Willamette River and several tributaries have their confluence near the city of Eugene. The Willamette River flows in a northwesterly direction through the Willamette Valley. The Long Tom River flows along the western side of the valley.

The eastern and southern parts of the survey area consist of rolling and steep mountains that are dissected by tributaries of the Willamette River. The western part of the area consists of sharply dissected mountains of the Coast Range. It is drained by tributaries of the Siuslaw and Long Tom Rivers. Several freshwater lakes are in the valleys of the Coast Range and near the coast. Sand dunes have developed along much of the coastal area.

Elevation ranges from sea level along the coast to 3,700 feet in the Coast Range and from 290 feet near the Willamette River on the northern boundary to more than 5,000 feet on the ridges and peaks in the western part of the Cascade Range.

An older survey, "Soil Survey of Eugene Area, Oregon," was published in 1925 (15). This earlier survey covers a part of the present survey. The present survey, however, updates the earlier survey and provides additional information and larger maps that show the soils in greater detail.

Descriptions, names, and delineations of soils in this soil survey do not fully agree with those on soil maps for adjacent survey areas. Differences are the result of better knowledge of soils, modifications in series concepts, intensity of mapping, or the extent of soils within the survey.

General Nature of the Survey Area

This section briefly discusses the history and development; natural resources; physiography, relief, and drainage; farming; woodland; and climate of the survey area.

to the flood plains are well drained and have undulating bar-and-channel relief; however, the terrace surface becomes more nearly level and is characterized by depressional areas toward the Long Tom River to the west, and the soils in this area are more poorly drained. Amazon and Flat Creeks are low-gradient streams that have dissected the valley terrace between the Willamette and Long Tom Rivers. Remnants of older, Pleistocene outwash terraces are extensive in the southwestern part of the Willamette Valley, near Veneta and Elmira, and in the southeastern and southern parts, near Pleasant Hill and Cottage Grove.

The foothills of the Cascade Range have peaks more than 5,000 feet high. The eastern edge of Lane County includes the Three Sisters Mountains, with elevations of 10,354, 10,059, and 10,094 feet. The Cascade Range formed from volcanic material, including very hard basaltic rock and soft pyroclastic material. Volcanic ash and pumice cover the higher areas. The differences in the hardness of these materials have influenced the rates of dissection; thus, these areas are characterized by gently sloping high plateaus as well as very steep canyon walls. Some areas in the Cascades have been subject to severe slumping and are characterized by steep headwalls and rolling slump blocks. All parts of the Cascade Range in this survey area are drained by tributaries of the Willamette River. The upper tributary valleys are narrow and have terraces of recent origin. The streams are characterized by waterfalls and numerous rapids until they reach the nearly level Willamette Valley.

The U.S. Army Corps of Engineers has built flood control dams on the Coast Fork and Middle Fork of the Willamette River, Fall Creek, Blue River, Row River, Hills Creek, and South Fork of the McKenzie River. These structures have controlled flooding in the lower valleys, especially the Willamette Valley. Many areas that were active flood plains a few years ago are now nearly free of flooding.

Farming

Farming within the survey area is limited to the valley areas and lower foothills. The flood plains are used for cash crops, such as snap beans, sweet corn, mint, strawberries, red beets, carrots, and other similar crops. The soils on terraces are used for many of the same crops as are the soils on flood plains, and they are also used for grass seed production. Grass seed has become the main crop on the poorly drained soils in the northern part of the county. Dairy cattle, beef cattle, and sheep are raised on valley terraces, high terraces, and foothills and in stringer valleys. Fruit and nut orchards are mainly on well drained terraces and uplands. Wheat, oats, barley, hay, and pasture are grown on most of the soils in the agricultural areas. Christmas tree farming is expanding on most of the better drained soils in the valleys and on the foothills.

Irrigation water for farm crops commonly is pumped from wells or from nearby streams. There is interest in establishing irrigation companies and providing more water for irrigation from major streams and reservoirs.

Woodland

Approximately 85 percent of the survey area is woodland. Douglas-fir is the most abundant woodland species. Other species that are of importance commercially are western hemlock, Sitka spruce, western redcedar, incense-cedar, red alder, ponderosa pine, grand fir, and noble fir. Occasional stands of Oregon white oak, bigleaf maple, red alder, and golden chinkapin are harvested for specialty purposes such as furniture. Wood products dominate the industrial development in Lane County and are the greatest source of income within the county. Log consumption by all mills in the county was 1,776 million board feet in 1976. This was the largest for any county in the state, and it amounted to 19 percent of the state's total. (9)

Most of the woodland in Lane County is under the management of the Forest Service, the Bureau of Land Management, or large private companies. The Oregon State Department of Forestry regulates many of the woodland practices used within the county. Small woodland owners may receive help and guidance in managing their woodland from specialists in the Soil Conservation Service, the Cooperative Extension Service, and the Oregon State Department of Forestry.

Climate

Prepared by the National Climatic Center, Asheville, North Carolina.

The climate of Lane County is greatly tempered by winds from the Pacific Ocean. Summers are fairly warm, but hot days are rare. Winters are cool, but snow and freezing temperatures are not common except at the higher elevations. During summer, rainfall is extremely light, so crops growing actively during this period need irrigation. Often several weeks pass without precipitation. During the rest of the year, rains are frequent, especially late in fall and in winter.

Table 1 gives data on temperature and precipitation for the survey area as recorded at Canary, Detroit, and Eugene, Oregon, for the period 1951-77. Table 2 shows probable dates of the last freeze in spring and the first freeze in fall. Table 3 provides data on length of the growing season.

In winter, the average temperatures at Canary, Detroit, and Eugene are 45, 37, and 42 degrees F, respectively. The average daily minimum temperature is 38 degrees at Canary, 29 at Detroit, and 35 at Eugene. The lowest temperature, which occurred at Eugene on December 8, 1972, is -12 degrees. In summer, the average

temperature is 60 degrees at Canary and 64 degrees at Detroit and Eugene. The average daily maximum temperature is about 76. The highest recorded temperature, which occurred at Detroit on June 17, 1961, is 107 degrees.

Growing degree days, shown in table 1, are equivalent to "heat units." During the month, growing degree days accumulate by the amount that the average temperature each day exceeds a base temperature (40 degrees F). The normal monthly accumulation is used to schedule single or successive plantings of a crop between the last freeze in spring and the first freeze in fall.

The total annual precipitation is 81 inches at Canary and Detroit and 46 inches at Eugene. Of this, about 20 percent usually falls in April through September, which includes the growing season for most crops. The heaviest 1-day rainfall during the period of record was 5.37 inches at Detroit on January 28, 1965. Thunderstorms occur on about 5 days each year, and most occur in summer.

The average seasonal snowfall is 4 inches at Canary, 77 inches at Detroit, and 9 inches at Eugene. The greatest snow depth at any one time during the period of record was 22 inches at Canary, 61 inches at Detroit, and 34 inches at Eugene. On an average, Canary has 1 day, Detroit has 23 days, and Eugene has 2 days with at least 1 inch of snow on the ground, but the number of such days varies greatly from year to year.

The average relative humidity in midafternoon is about 60 percent. Humidity is higher at night, and the average at dawn is about 90 percent. The percentage of possible sunshine is 60 percent in summer and 25 percent in winter. The prevailing wind is from the west-northwest. Average windspeed is highest, 8 miles per hour, in winter.

In most winters, one or two storms over the whole area bring strong and sometimes damaging winds, and in some years the accompanying heavy rains cause serious flooding. Every few years, in winter or summer, a large invasion of a continental airmass from the east causes abnormal temperatures. In winter several consecutive days are well below freezing; in summer a week or longer is sweltering.

How This Survey Was Made

This survey was made to provide information about the soils and miscellaneous areas in the survey area. The information includes a description of the soils and miscellaneous areas and their location and a discussion of their suitability, limitations, and management for specified uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They dug many holes to study the soil profile, which is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biologic activity.

The soils and miscellaneous areas in the survey area are in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind or segment of the landscape. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landscape, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with considerable accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

This survey area includes Beaches, Dune land, Pits, Riverwash, and Rock outcrop, which have little or no natural soil. For consistency and clarity, these miscellaneous areas have been described in a manner similar to that of map units that include soils. The areas may be part of a complex, such as the Rock outcrop-Kilchis complex, 30 to 90 percent slopes. Use of these miscellaneous areas for agriculture, as urban land, or as woodland is very limited. Some of the more feasible modifications or uses of these areas have been mentioned. Dune land is unstable drifting sand, but beachgrass has been planted in some areas near roads and buildings to reduce drifting. If other conditions are favorable, areas so stabilized become suitable building sites in a few years.

To show the detail significant to farm planning and to the application of agricultural science to farms, the soils in the survey area have been mapped at a scale of 4 inches to the mile. At this scale, a map unit includes small areas of other soils that must be included because of the limitations imposed by this scale and by the number of points that can be examined in the field.

The soil boundary lines delineated on the aerial photographs encompass the soil identified by the map symbol plus a small proportion of other soils-as much as about 15 percent of contrasting soils (no more than 10 percent of one kind of soil) that cannot be excluded in practical soil cartography. Similar soils that have essentially the same use and management can occupy as much as 45 percent of a delineation as long as no more than 20 percent is one kind of soil. The publication scale of 3.168 inches per mile further restricts the minimum size of any delineation; therefore, even in intensively used and carefully mapped areas, roughly circular included areas as much as 2 acres in size and long, narrow included areas as much as 4 acres in size are present in some delineations because they are smaller than the minimum size recommended at the publication scale.

The total percentage given for included areas refers only to contrasting inclusions that have significant differences in use or management.

Individual soils on the landscape commonly merge gradually onto one another as their characteristics gradually change. To construct an accurate map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted color, texture, size, and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While the soil survey was in progress, samples of some of the soils in the area were collected for laboratory analyses and for engineering tests. Soil scientists interpreted the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils were field tested through observation of the soils in different uses and under different levels of management. Some interpretations were modified to fit local conditions, and some new interpretations were developed to meet local needs. Data were assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management were assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can state with a fairly high degree of probability that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

General Soil Map Units

The general soil map at the back of this publication shows broad areas that have a distinctive pattern of soils, relief, and drainage. Each map unit on the general soil map is a unique natural landscape. Typically, a map unit consists of one or more major soils or miscellaneous areas and some minor soils or miscellaneous areas. It is named for the major soils or miscellaneous areas. The soils or miscellaneous areas making up one unit can occur in other units but in a different pattern.

The general soil map can be used to compare the suitability of large areas for general land uses. Areas of suitable soils or miscellaneous areas can be identified on the map. Likewise, areas that are not suitable can be identified.

Because of its small scale, the map is not suitable for planning the management of a farm or field or for selecting a site for a road or building or other structure. The soils in any one map unit differ from place to place in slope, depth, drainage, and other characteristics that affect management.

The general map units in this survey have been grouped into general kinds of landscape for broad interpretive purposes. Each of the broad groups and the map units in each group are described in the following pages.

Map Unit Descriptions

Dominantly nearly level, excessively drained to very poorly drained soils on flood plains

This group consists of seven map units. These units are on flood plains along the major streams throughout the survey area.

1. Chehalis-Cloquato

Deep, well drained, nearly level silty clay loam and silt loam that formed in recent alluvial deposits

This map unit is on broad bottom lands immediately adjacent to the Willamette and McKenzie Rivers. It is subject to occasional flooding in winter. Nearly all of this unit has been cleared and is cropped; where it has not been cleared, however, the vegetation is Douglas-fir, black cottonwood, bigleaf maple, Oregon white oak, Oregon ash, trailing blackberry, western swordfern, and forbs and grasses. Elevation is 290 to 1,000 feet. The average annual precipitation is 40 to 60 inches, the average annual air temperature is 52 to 54 degrees F, and the average frost-free season is 165 to 210 days.

This unit makes up about 1 percent of the survey area. It is about 65 percent Chehalis and similar soils and 20 percent Cloquato and similar soils. The remaining 15 percent is soils of minor extent.

Chehalis soils are in the areas of the flood plain furthest from the rivers. These soils are deep and well drained. The surface layer and subsoil are dark brown silty clay loam, and the substratum is brown silt loam.

Cloquato soils are in areas of the flood plain between Chehalis and the Newberg and Camas areas. These soils are deep and well drained. The surface layer is very dark grayish brown silt loam, and the substratum is dark brown silt loam over multicolored sand.

Of minor extent in this unit are somewhat excessively drained Newberg soils and excessively drained Camas soils, which occupy positions immediately adjacent to present and recently abandoned river channels. Moderately well drained McBee soils and poorly drained Wapato soils occupy old meander channels away from the active stream channels.

This unit is used mainly for orchard crops, small grain, hay, pasture, and vegetable crops. It is the most intensively cultivated unit in the survey area. Scattered small acreage homesites are in this unit. Soil compaction is a concern on the Chehalis soils when they are disturbed while moist. Some sources of gravel are in this unit.

2. Newberg-Cloquato-Camas

Deep, well drained to excessively drained, nearly level fine sandy loam, silt loam, and gravelly sandy loam that formed in recent alluvial deposits

This map unit is on recent flood plains along the Willamette River and its tributaries. It has an undulating topography characteristic of most flood plains. Vegetation is black cottonwood, willow, bigleaf maple, Oregon white oak, Douglas-fir, trailing blackberry, western brackenfern, and forbs and grasses. Elevation is 290 to 1,000 feet. The average annual precipitation is 40 to 60 inches, the average annual air temperature is 52 to 54 degrees F, and the average frost-free season is 165 to 210 days.

This unit makes up about 3 percent of the survey area. It is about 40 percent Newberg and similar soils, 20

is sometimes practical in dry years. Among the trees that are suitable for planting are Douglas-fir, western hemlock, and western redcedar.

If this unit is used for recreational development, the main limitations are slope and prolonged rainy periods. Drainage should be provided for paths and trails. Cuts and fills should be seeded or mulched.

If this unit is used for homesite development, the main limitations are slope and low soil strength. Buildings and roads should be designed to offset the limited ability of the soil in this unit to support a load. Erosion is a hazard in the steeper areas. Only the part of the site that is used for construction should be disturbed. Roads for year-round use need heavy base rock.

Slope is a concern in installing septic tank absorption fields. Absorption lines should be installed on the contour.

This map unit is in capability subclass VIe.

3E-Astoria Variant silt loam, 3 to 30 percent slopes. This deep, well drained soil is on uplands in the Coast Range. It formed in colluvium and residuum derived dominantly from igneous and sedimentary rock and in mixed old alluvium and volcanic ash in most areas. Areas are elongated or irregular in shape and are 5 to 50 acres in size. The vegetation in areas not cultivated is mainly Douglas-fir, western hemlock, western redcedar, salal, salmonberry, and western swordfern. Elevation is 400 to 2,200 feet. The average annual precipitation is 80 to 110 inches, the average annual air temperature is 48 to 52 degrees F, and the average frost-free period is 150 to 220 days.

Typically, the surface is covered with a mat of leaves, twigs, and needles about 3 inches thick. The surface layer is dark brown silt loam about 27 inches thick. The subsoil is dark brown and dark yellowish brown silt loam and silty clay loam about 40 inches thick.

Included in this unit are small areas of Astoria, Bohannon, Formader, Hembre, Klickitat, Preacher, and Salander soils. Included areas make up about 15 percent of the total acreage.

Permeability of this Astoria Variant soil is moderate. Available water capacity is about 10 to 14 inches. Water supplying capacity is 20 to 24 inches. Effective rooting depth is 60 inches or more. Runoff is slow to medium, and the hazard of water erosion is slight to moderate.

Most areas of this unit are used for timber production, wildlife habitat, and watershed. A few areas are used for pasture and as homesites.

If this unit is used for hay and pasture, the main limitations are slope, seasonal wetness, and cool, moist summers that inhibit proper curing of hay crops. Seedbed preparation should be on the contour or across the slope where practical. Grazing when the soil is wet results in compaction of the surface layer, poor tilth, and excessive runoff. Use of lime and mixed fertilizer promotes good growth of forage plants. Proper grazing practices, weed control, and fertilizer are needed to ensure maximum quality of forage.

This unit is suited to the production of Douglas-fir. On the basis of a 100-year site curve, the mean site index for Douglas-fir is 170. The potential production per acre is 10,860 cubic feet from an even-aged, fully stocked stand of trees 60 years old or 102,800 board feet (International rule, one-eighth-inch kerf) from an even-aged, fully stocked stand of trees 80 years old.

Minimizing the risk of erosion is essential in harvesting timber. Roads and landings can be protected from erosion by constructing water bars and by seeding cuts and fills. Surface methods of harvesting timber generally are suitable, but the soil may be compacted if heavy equipment is used while the soil is moist. Ripping skid trails and landing areas after logging helps to break up the compacted layer and improves seedling survival and growth.

Reforestation should be carefully managed to reduce competition from undesirable understory plants. Competing vegetation can be controlled by property preparing the site and by spraying, cutting, or girdling to eliminate unwanted weeds, brush, or trees. Hand planting of nursery stock is usually necessary to establish or improve a stand. Among the trees that are suitable for planting are Douglas-fir, western hemlock, and western redcedar.

If this unit is used for recreational development, the main limitations are slope and the hazard of erosion. Areas used for recreation can be protected from soil erosion by maintaining plant cover and seeding or mulching cuts and fills. Paths and trails should extend across the slope.

If this unit is used for homesite development, the main limitations are slope and low soil strength. Buildings and roads should be designed to offset the limited ability of the soil in this unit to support a load. Access roads should be designed to control surface runoff and help stabilize cut slopes. Preserving the existing plant cover during construction helps to control erosion.

Slope is a concern in installing septic tank absorption fields on this unit. Absorption lines should be installed on the contour.

This map unit is in capability subclass VIe.

3G-Astoria Variant silt loam, 30 to 60 percent slopes. This deep, well drained soil is on uplands in the Coast Range. It formed in colluvium and residuum derived from igneous and sedimentary rock and in mixed old alluvium and volcanic ash in some areas. Areas are irregular in shape and are 5 to 50 acres in size. The native vegetation is mainly Douglas-fir, western hemlock, western redcedar, salal, salmonberry, and western swordfern. Elevation is 400 to 2,200 feet. The average annual precipitation is 80 to 110 inches, the average annual air temperature is 48 to 52 degrees F, and the average frost-free period is 150 to 220 days.

Typically, the surface is covered with a mat of leaves, twigs, and needles about 3 inches thick. The surface layer is dark brown silt loam 27 inches thick. The subsoil is dark brown and dark yellowish brown silt loam and silty clay loam about 40 inches thick.

Included in this unit are small areas of Astoria, Bohannon, Formader, Hembre, Klickitat, and Preacher soils. Included areas make up about 15 percent of the total acreage.

Permeability of this Astoria Variant soil is moderate. Available water capacity is about 10 to 14 inches. Water supplying capacity is 20 to 24 inches. Effective rooting depth is 60 inches or more. Runoff is medium, and the hazard of water erosion is moderate.

This unit is used for timber production and wildlife habitat and as watershed.

This unit is suited to the production of Douglas-fir. On the basis of a 100-year site curve, the mean site index for Douglas-fir is 170. The potential production per acre is 10,860 cubic feet from an even-aged, fully stocked stand of trees 60 years old or 102,800 board feet (International rule, one-eighth-inch kerf) from an even-aged, fully stocked stand of trees 80 years old.

Minimizing the risk of erosion is essential in harvesting timber. Roads and landings can be protected from erosion by constructing water bars and by seeding cuts and fills. Highlead or other cable logging systems are more efficient than most other methods and are less damaging to the soil surface.

Reforestation should be carefully managed to reduce competition from undesirable understory plants. Competing vegetation can be controlled by properly preparing the site and by spraying, cutting, or girdling to eliminate unwanted weeds, brush, or trees. Hand planting of nursery stock is usually necessary to establish or improve a stand. Among the trees that are suitable for planting are Douglas-fir, western hemlock, and western redcedar.

This unit is poorly suited to recreational development. It is limited mainly by slope and the hazard of erosion. Slope limits the use of areas of this unit mainly to a few paths and trails, which should extend across the slope. Maintaining plant cover helps to control soil erosion.

This unit is poorly suited to homesite development. The main limitations are slope, low soil strength, and the hazard of erosion.

This map unit is in capability subclass VIe.

4G-Atring-Rock outcrop complex, 30 to 60 percent slopes. This map unit is dominantly on south-facing side slopes of uplands in the Coast Range. Areas commonly are elongated in shape and are 5 to 50 acres in size. The native vegetation is mainly Douglas-fir, Pacific madrone, bigleaf maple, poison-oak, salal, creambush oceanspray, and western brackenfern. Elevation is 500 to 1,200 feet. The average annual precipitation is 40 to 60 inches, the average annual air temperature is 50 to 53 degrees F, and the average frost-free period is 165 to 210 days.

This unit is 50 percent Atring gravelly loam and 25 percent Rock outcrop. The components of this unit are so intricately intermingled that it was not practical to map them separately at the scale used.

Included in this unit are small areas of Bellpine, Chehulpum, Hullt, Willakenzie, and Witzel soils. Included areas make up about 25 percent of the total acreage. The percentage varies from one area to another.

The Atring soil is moderately deep and well drained. It formed in colluvium derived from sandstone and siltstone. Typically, the surface layer is very dark grayish brown and dark yellowish brown gravelly loam about 15 inches thick. The subsoil is dark brown very gravelly loam about 17 inches thick. Fractured, weathered sandstone is at a depth of 32 inches. Depth to bedrock ranges from 20 to 40 inches.

Permeability of the Atring soil is moderately rapid. Available water capacity is about 2 to 5 inches. Water supplying capacity is 12 to 16 inches. Effective rooting depth is 20 to 40 inches. Runoff is rapid, and the hazard of water erosion is high.

Rock outcrop consists of exposures of sandstone. In some areas it occurs as short, nearly vertical escarpments.

This unit is used for wildlife habitat and timber production and as watershed.

The present vegetation in most areas is mainly clumpy stands of Douglas-fir, Pacific madrone, hazelnut, poison-oak, salal, and western swordfern. The production of forage is limited by droughtiness in summer and by poor accessibility because of the steepness of slope, the areas of Rock outcrop, and the remoteness of areas of the unit.

The Atring soil is suited to the production of Douglas-fir for poles or saw logs. On the basis of a 100-year site curve, the mean site index for Douglas-fir is 120. The potential production per acre is 6,900 cubic feet from an even-aged, fully stocked stand of trees 60 years old or 63,900 board feet (International rule, one-eighth-inch kert) from an even-aged, fully stocked stand of trees 90 years old. Because of the areas of Rock outcrop the potential yield for the unit as a whole is limited by at least 25 percent.

The main concerns in producing and harvesting timber are steepness of slope, the hazard of erosion, slumping of roadfills and cutbanks, and reestablishing the stands of timber on the droughty, south-facing side slopes. Stones on the surface can interfere with felling, yarding, and other operations involving the use of equipment. The soil in this unit is subject to slumping, especially where road cuts are made in the steeper areas. Slumping can be minimized by locating roads in the less sloping areas and by using properly designed road drainage systems. Roads and landings can be protected from erosion by constructing water bars and by seeding cuts and fills.

This unit is used mainly for shallow-rooted or water-tolerant crops. It is also used for wildlife habitat and recreation.

This unit is suited to a variety of crops. Tile drainage can be used to lower the water table if a suitable outlet is available. In summer, irrigation is required for maximum production of most crops. Sprinkler irrigation is a suitable method of applying water.

Returning all crop residue to the soil and using a cropping system that includes grasses, legumes, or grass-legume mixtures help to maintain fertility and tilth. Grain and grasses respond to nitrogen; legumes respond to phosphorus, boron, sulfur, and lime; and vegetables and berries respond to nitrogen, phosphorus, and potassium. Proper stocking rates, pasture rotation, and restricted grazing during wet periods help to keep the pasture in good condition and to protect the soil from erosion and compaction.

If this unit is used for homesite development, the main limitation is wetness. Buildings and roads can be designed to offset the effects of shrinking and swelling. Landscaping plants that tolerate a seasonal high water table and droughtiness should be selected if drainage and irrigation are not provided.

This map unit is in capability subclass IIIw.

74B-Lint silt loam, 0 to 7 percent slopes. This deep, well drained soil is on marine terraces and on ridgetops in areas of dissected terraces. It formed in mixed alluvium and volcanic ash. Areas are elongated or irregular in shape and are 3 to 160 acres in size. The vegetation in areas not cultivated is mainly Douglas-fir, Sitka spruce, red alder, western hemlock, vine maple, salal, evergreen huckleberry, and other shrubs. Elevation is 30 to 600 feet. The average annual precipitation is 60 to 75 inches, the average annual air temperature is 50 to 52 degrees F, and the average frost-free period is 180 to 220 days.

Typically, the surface is covered with a mat of needles and roots about 2 inches thick. The surface layer is dark brown silt loam about 16 inches thick. The subsoil is dark brown to yellowish brown silt loam and silty clay loam about 43 inches thick. The substratum to a depth of 69 inches is yellowish brown, mottled silty clay loam.

Included in this unit are small areas of Bullards, Fendall, Ferrelo, Preacher, and Slickrock soils. Also included, in depressional areas along drainageways, is a soil that is similar to this Lint soil but is moderately well drained to poorly drained. Included areas make up about 15 percent of the total acreage.

Permeability of this Lint soil is moderate. Available water capacity is about 12 to 14 inches. Water supplying capacity is 20 to 26 inches. Effective rooting depth is 40 to 60 inches or more. Runoff is slow, and the hazard of water erosion is slight.

This unit is used for timber production, homesites, pasture, recreation, and wildlife habitat. Vegetable gardens produce well in most years, but few vegetables are produced for commercial use. The unit is used for the production of Christmas trees in a few areas.

This unit is suited to cool-season crops. In summer, irrigation may be required for maximum production of late-season crops. Sprinkler irrigation can be used, but water needs to be applied slowly to minimize runoff. Crop residue left on or near the surface helps to maintain tilth and control erosion. Vegetable gardens produce good yields if lime and fertilizer are used. Cool-season vegetables and berries should be selected for commercial production. Grasses respond to nitrogen; legumes respond to phosphorus, boron, sulfur, and lime; and vegetables and berries respond to nitrogen, phosphorus, and potassium.

If this unit is used for pasture, use of proper stocking rates, pasture rotation, and restricted grazing during wet periods helps to keep the pasture in good condition and to protect the soil from erosion and compaction.

This unit is suited to the production of Douglas-fir. On the basis of a 100-year site curve, the mean site index for Douglas-fir is 160. The potential production per acre is 10,200 cubic feet from an even-aged, fully stocked stand of trees 60 years old or 95,200 board feet (International rule, one-eighth-inch kerf) from an even-aged, fully stocked stand of trees 80 years old. Tree growth is severely retarded in areas adjacent to the coast that are directly exposed to onshore winds.

Surface methods of harvesting timber generally are suitable, but the soil may be compacted if it is moist when heavy equipment is used. Ripping skid trails and landing areas after logging helps to break up the compacted layer and improves seedling survival and growth. Reforestation should be carefully managed to reduce competition from undesirable plants. Reforestation can be accomplished by planting Douglas-fir, Sitka spruce, and western hemlock seedlings. Roads and landings can be protected from erosion by constructing water bars and by seeding cuts and fills. Logging roads need heavy base rock because of the low strength of the soil.

This unit is suited to recreational development. It has few limitations. It can be used for camp and picnic areas, playgrounds, and paths and trails. Plant cover can be maintained by controlling traffic. Areas suitable for small ponds are common along drainageways.

If this unit is used for homesite development, the main limitation is low strength of the soil. If buildings are constructed, properly designing foundations and footings helps to offset the limited ability of the soil to support a load. Roads for year-round use need heavy base rock. The possibility of settlement can be minimized by compacting the building site before construction is begun.

Erosion is a hazard where the soil in this unit is exposed. Only the part of the site that is used for construction should be disturbed. Selection of

climatically adapted plants is important for the establishment of lawns, shrubs, trees, and vegetable gardens.

Septic tank absorption lines on this unit should be installed on the contour.

This map unit is in capability subclass IIIe.

74C-Lint silt loam, 7 to 12 percent slopes. This deep, well drained soil is on dissected marine terraces. It formed in mixed alluvium and volcanic ash. Areas are irregular in shape and are 3 to 100 acres in size. The vegetation in areas not cultivated is mainly Douglas-fir, Sitka spruce, red alder, western hemlock, vine maple, salal, evergreen huckleberry, and other shrubs. Elevation is 30 to 600 feet. The average annual precipitation is 60 to 75 inches, the average annual air temperature is 50 to 52 degrees F, and the average frost-free period is 180 to 220 days.

Typically, the surface is covered with a mat of needles and roots about 2 inches thick. The surface layer is dark brown silt loam about 16 inches thick. The subsoil is dark brown to yellowish brown silt loam and silty clay loam about 43 inches thick. The substratum, to a depth of 69 inches, is yellowish brown, mottled silty clay loam.

Included in this unit are small areas of Bullards, Fendall, Ferrelo, Preacher, and Slickrock soils. Also included, in depressional areas along drainageways, is a soil that is similar to this Lint soil but is somewhat poorly drained. Included areas make up about 15 percent of the total acreage.

Permeability of this Lint soil is moderate. Available water capacity is about 12 to 14 inches. Water supplying capacity is 20 to 26 inches. Effective rooting depth is 60 inches or more. Runoff is medium, and the hazard of water erosion is moderate.

This unit is used for timber production, homesites, pasture, recreation, and wildlife habitat. It is used for the production of Christmas trees in a few areas.

This unit is suited to cool-season crops. In summer, irrigation may be required for maximum production of late-season crops. Sprinkler irrigation can be used, but water needs to be applied slowly to minimize runoff. Crop residue left on or near the surface helps to maintain tilth and control erosion.

Vegetable gardens produce good yields if lime and fertilizer are used. Cool-season vegetables and berries should be selected for commercial production. Grasses respond to nitrogen; legumes respond to phosphorus, boron, sulfur, and lime; and vegetables and berries respond to nitrogen, phosphorus, and potassium.

If this unit is used for pasture, use of proper stocking rates, pasture rotation, and restricted grazing during wet periods helps to keep the pasture in good condition and to protect the soil from erosion and compaction.

This unit is suited to the production of Douglas-fir. On the basis of a 100-year site curve, the mean site index for Douglas-fir is 160. The potential production per acre is 10,200 cubic feet from an even-aged, fully stocked stand of trees 60 years old or 95,200 board feet (International rule, one-eighth-inch kerf) from an even-aged, fully stocked stand of trees 80 years old. Tree growth is severely retarded in areas adjacent to the coast that are directly exposed to onshore winds.

Surface methods of harvesting timber generally are suitable, but the soil may be compacted if it is moist when heavy equipment is used. Ripping skid trails and landing areas after logging helps to break up the compacted layer and improves seedling survival and growth. Reforestation should be carefully managed to reduce competition from undesirable understory plants. Reforestation can be accomplished by planting Douglas-fir, Sitka spruce, and western hemlock seedlings. Roads and landings can be protected from erosion by constructing water bars and by seeding cuts and fills. Logging roads need heavy base rock because of the low strength of the soil.

This unit is suited to recreational development. It is limited mainly by steepness of slope. It can be used for camp and picnic areas and paths and trails. Plant cover can be maintained by controlling traffic.

If this unit is used for homesite development, the main limitations are low strength of the soil and steepness of slope. If buildings are constructed, properly designing foundations and footings helps to offset the limited ability of the soil to support a load. Roads for year-round use need heavy base rock. The possibility of settlement can be minimized by compacting the building site before construction is begun. Erosion is a hazard where the soil in this unit is exposed. Only the part of the site that is used for construction should be disturbed.

Selection of climatically adapted plants is important for the establishment of lawns, shrubs, trees, and vegetable gardens.

Septic tank absorption lines on this unit should be installed on the contour.

This map unit is in capability subclass IIIe.

74D-Lint silt loam, 12 to 20 percent slopes. This deep, well drained soil is on dissected marine terraces. It formed in mixed alluvium and volcanic ash. Areas are irregular in shape and are 3 to 100 acres in size. The native vegetation is mainly Douglas-fir, Sitka spruce, red alder, western hemlock, vine maple, salal, evergreen huckleberry, and other shrubs. Elevation is 30 to 600 feet. The average annual precipitation is 60 to 75 inches, the average annual air temperature is 50 to 52 degrees F, and the average frost-free period is 180 to 220 days.

Typically, the surface is covered with a mat of needles and roots about 2 inches thick. The surface layer is dark brown silt loam about 16 inches thick. The subsoil is dark brown to yellowish brown silt loam and silty clay loam about 43 inches thick. The substratum, to a depth of 69 inches, is yellowish brown, mottled silty clay loam.

EXHIBIT 12

PLAN AMENDMENT & ZONE CHANGE
MAP 17-12-15-00-D001
Tax Lots 3900, 4000, 4100, 4200 & 4300

Division of Chief Deputy Clerk
Lane County Deeds and Records
2006-011253
$41.00
00782103200600112530030039
02/17/2006 03:12:44 PM
RPR-ESMT Cnt=2 Stn=6 CASHIER 07
$5.00 $15.00 $10.00 $11.00

After recording return to:
Wolford Land Surveying LLC
87180 Munsel Lake Road
Florence, Or. 97439

GRANT OF EASEMENT AND MAINTENANCE AGREEMENT

RECITALS:

1. **DARIN GORHAM** is the owner of the following described property.

   KAMRIN COURT, recorded in Recorders Reception No. 2006-008097, Lane County Oregon Official Records.

2. Lots 1, 2, 3, 4, 5, 6, 7 and 8 are shown on Exhibit "A", attached hereto and by reference incorporated herein. They are described as follows:

   LOT 1, 2, 3, 4, 5, 6, 7 AND 8, **KAMRIN COURT**, recorded on Recorders Reception No. 2006-008097 Lane County Oregon Deed Records.

DECLARATION OF EASEMENT:

1. **EASEMENT CREATED, OWNER** hereby creates a perpetual, nonexclusive easement to use a strip of land Thirty (30) feet wide, to serve Lots 2 and 3 as shown on Exhibit "A".

2. **EASEMENT DESCRIBED**:

   Beginning at an angle point on the West line of Lot 3 of **KAMRIN COURT**, as platted and recorded in Recorders Reception Number 2006-008097, Lane County Oregon Official Records, from which the Southwest corner of said Lot 3 bears South 49° 00' 22" East 157.92 feet; Thence South 03° 23' 01" East 19.82 feet; Thence South 26° 37' 00" East 27.85 feet; Thence North 55° 54' 45" East 38.81 feet; Thence North 40° 38' 55" East 121.94 feet; Thence North 50° 55' 55" East 133.67 feet; Thence North 63° 00' 05" East 51.30 feet; Thence North 71° 34' 37" East 28.51 feet; Thence South 47° 10' 44" East 30.76 feet; Thence South 16° 00' 14" East 98.32 feet to the **Point of Termination** on the South line of Lot 2 of said **KAMRIN COURT,** from which the Southeast corner of said Lot 2 bears North 72° 25' 07" East 33.96 feet.

3. **EASEMENT PROVISION**: The terms of the easement are as follows:

   3.1 **PURPOSE.** The easement is for providing access, including ingress and egress, to and from Lots 2 and 3 described in Recitals above, or any portion thereof, and for installation and maintenance of such utilities as may be needed to serve Lots 2 and 3 described in Recitals above.

   3.2 **USE OF THE BURDENED PROPERTY:** The owner of Lots 1, 2, 3 and 4 described in Recitals above, shall have the right to use their property, including the area described in the easement, for any purpose so long as the owner or occupiers do not interfere with the use of the roadway nor access and maintenance agreement as granted by this instrument.

   3.3 **PRIVATE GRANT**: The easement created by this instrument does not constitute a dedication or grant for public use, unless requested at a later time by a public agency to dedicate the easement as a public road.

GRANT OF EASEMENT AND MAINTENANCE AGREEMENT (continued)

3.4 **MAINTENANCE AND REPAIRS**: The owner or occupier of Lots 2 and 3 described in Recitals above, shall at all times hereafter jointly maintain the easement property.

3.5 **TAXES**: The owners of Lots 1, 2, 3 and 4 described in Recitals above, shall pay the real property taxes on that portion of the easement strip lying with each Lot.

3.6 **UTILITIES**: The easement may be used for the installation and maintenance of such utilities as may be needed to serve Lots 2 and 3 described in Recitals above, or any portion thereof.

4. **SUCCESSORS IN INTEREST, RECORDATION**: The provisions of this instrument touch and concern, and relate to the use of Lots 1, 2, 3 and 4 described in Recitals above, and are intended to be covenants and restrictions running with the land. This document shall therefore be recorded in the Deed Records of Lane County, Oregon.

All provisions of this instrument, including the benefits and burdens, are binding on and inure to their heirs, successors, assign, transferees and personal representatives of all parties who own any of the Lots 1, 2 and 3 described in Recitals above.

Dated this 17 day of Feb, 2006

DARIN GORHAM

STATE OF OREGON, County of Lane)SS

On this 17 day of Feb, 2006, personally appeared before me the within named **Darin Gorham** and acknowledged the foregoing instrument to be a voluntary act and deed.
Witness my hand and seal this day and year last above written

Notary ~~Public for Oregon~~
My Commission ~~expires~~