



SUPPLEMENTAL INFORMATION SUBMITTED

Submitted on: 5-12-07

Taken By: _____

SUPPLEMENTAL INFORMATION HAS BEEN RECEIVED BY THIS OFFICE IN REGARDS TO THE FOLLOWING:

BP# _____

PA# CG-7312

SP# _____

SI# _____

Barrar

OTHER: June 20th

May 12, 2007

Board of County Commissioners
Lane County
125 East Eighth Ave.
Eugene, OR 97401

Re: PA 06-7312

We are submitting our comments in opposition to PA 06-7312, a Measure 37 claim for Map 18-01-00, tax lot 1800 (hereafter described as Subject Property). We believe this is an invalid Measure 37 claim and should be denied by Lane County, based on the information provided herein. The value reduction analysis prepared as part of the application is not valid or acceptable, and we agree with the County Administrator's recommendation to deny this claim under these circumstances.

Summary

To have a valid claim against Lane County the applicant must show that all of the following Lane Code (LC) 2.740(1) criteria are met. This has not been done.

(a) The County has either adopted or enforced a land use regulation that restricts the use of private real property or any interest therein;

We agree that this criterion has been met. Applicable land use regulations which apply to the Subject Property include but are not limited to the Lane County Rural Comprehensive Plan (RCP), the F-1 Nonimpacted Forest Lands Zone (LC 16.210), and access management requirements of the Lane Code including LC 15.137(5).

(b) The restriction on use has the effect of reducing the fair market value of the property or any interest therein, upon which the restriction is imposed;

This criterion has not been met. The site cannot be developed with dwellings as it cannot be provided with electric power or other utility services. The Subject Property has a higher value in its present status as F-1 zoned timberland than it would have if it were divided into smaller undevelopable parcels that are exempt from RCP policies or zoning. The value reduction analysis prepared as part of the application did not account for the lack of utility service, and is unacceptable for this reason.

(c) The challenged land use regulation was adopted, enforced or applied after the current owner of the property (the applicant) became the owner; and

We agree that this criterion has been met.

(d) The challenged regulation is not an exempt regulation as defined in LC 2.710.

This criterion has not been met. LC 15.137(5) is an exempt regulation as defined above, since it acts to protect public health and safety.

Background information

The Subject Property is 160 acres in size and is presently zoned F-1 (Exhibit A, Assessor's maps 18-01 and 18-02-12; Exhibit B, Aerial photo). There is one known access easement serving the Subject Property, which is located on the southerly 60 feet of Map 18-02-12, tax lot (TL) 601 to the west, and on Homestead Road to the northwest. We know of no utility lines or easements going to or through the Subject Property.

All four of our homes take access from Homestead Road, a private road of approximately 1450 feet in length with a graveled width of about 15 feet. Homestead Road is the only known access to the Subject Property.

It is stated in the applicant's written statement provided as part of PA 06-7312 that:

Claimants seek waiver of the F-1 zoning to subdivide their 160 acre parcel into 32 5-acre parcels and to place a single-family residence on each lot as an outright permitted use. (Barrar M37 Claim, Criteria analysis, Page 1)

It is assumed that the Claimants will subdivide the site into 5-acre lots which would mean 32 total lots. This does not mean that the Claimants are limited to a total of 32 lots but only that this is a number which is both feasible and for which there is information available from the sale of comparable properties. (Barrar M37 Claim, Reduction in fair market value, Page 1 including Footnote 1)

This would require future successful use of the Lane Code land division process (LC 13 and other applicable Code sections).

No utilities are available to serve the Subject Property. The only known access easement for the Subject Property (Exhibit C, Easement) is "for road purposes only" and does not allow utility use. The nearest utilities to the Subject Property are located on adjacent properties to the west (Map 18-02-12 TL 601 and TL 618). Neither of these property owners has been asked to grant a utility easement to serve the Subject Property, and neither is willing to provide one.

The initial application for land division of any property in Lane County requires easement information (LC 13.100(3)(n) and LC 13.105(3)(o)) and requires utility easements, where necessary, to serve new parcels.

Utility Easements. The dedication of easements for the placement of overhead or underground utilities, including, but not limited to, electric power, communication facilities, sewer lines, water lines and gas lines shall be required where necessary. (LC 13.050(7)(a))

Emerald Public Utility District (EPUD) is the nearest electric power utility to the Subject Property. EPUD requires a utility easement before they will install the type of electric transmission line that would serve the Subject Property. A utility easement will be required if the 32 or more parcels

proposed in this application are to be developed with dwellings. No utility easement is necessary if these parcels remain undeveloped.

If PA 06-7312 is approved, 32 or more undevelopable parcels could be created on the Subject Property through the future successful use of the Lane Code land division process.

Removal of applicable land use regulations reduces fair market value of Subject Property

Division of the Subject Property into 32 or more undevelopable lots reduces its fair market value by making it less suitable for timber management which has been, and will probably continue to be its highest and best use. The Lane County Rural Comprehensive Plan (RCP) recognizes the value of larger parcels for timber production.

Encourage the consolidation of forest land ownership in order to form larger more viable forest resource units. (RCP Goal 4, Policy 14)

RCP policies and the current F-1 zone (LC 16.210(2)) also protect existing and future timber management use of the Subject Property and adjacent timber properties.

Regard nonforest uses within or adjacent to forest lands as being subject to and normal and accepted forest practices in the industry. (RCP Goal 4, Policy 8)

Require that nonforest uses other than a residence on Non-Impacted Forest Lands be compatible with forest uses, practices and operations on adjacent and nearby forest lands (RCP Goal 4, Policy 9)

Permitted uses in the F-1 zone and the above RCP policies will no longer apply to the Subject Property if PA 06-7312 is approved. This could result in:

- One or more property owners of newly created parcels on the Subject Property objecting to normal and accepted forest practices taking place on other adjacent forest properties; and/or
- Siting of incompatible nonforest uses on a portion of the Subject Property that would conflict with adjacent forest practices.

Either of these actions would act to reduce the fair market value of the Subject Property by negatively impacting its timber management use. The Subject Property has a proven value as timberland as shown by the forester's analysis completed as part of Exhibit H in the applicant's submittal. No evidence has been provided to show that another potential use of undeveloped land would have a higher value. The value reduction analysis provided as part of the application is incorrect and unacceptable, as it is based on sale values from other properties that probably have utility service. An acceptable analysis would be based on sale values from properties without electric and other utility service, such as the Subject Property.

Applicable regulations are exempt from Measure 37 requirements

PA 06-7312 does not comply with a portion of the Measure 37 statute and LC 2.710 since it increases the potential for public health and safety problems.

(3) Subsection (1) of this section shall not apply to land use regulations:

(B) Restricting or prohibiting activities for the protection of public health and safety, such as fire and building codes, health and sanitation regulations, solid or hazardous waste regulations, and pollution control regulations. (ORS 197.352(2)(B))

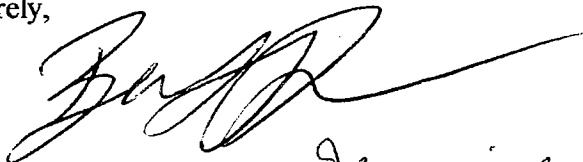
The Subject Property has hazardous road access. In 1984 Lane County adopted land use regulations involving access onto County roads which were intended to protect public health and safety.

Driveway and road approaches on County Roads shall be located where they do not create undue interference or hazard to the free movement of highway and pedestrian traffic. Locations on sharp curves, steep grades, areas of restricted sight distance or at points that interfere with the placement and proper functioning of signs, lighting, guardrail, or other traffic control devices shall not be permitted. (LC 15.137(5))

Homestead Road is the sole access to the Subject Property and intersects Wallace Creek Road, County Road No. 421, to the northwest of the Subject Property (Exhibit D, Photos of intersection). This intersection is located near a sharp curve, has a steep grade, creates an area of restricted sight distance, and does not comply with the above Lane Code requirement as it was constructed prior to adoption of the regulations in 1984. The Homestead Road intersection is approximately 200 feet west from a sharp curve of Wallace Creek Road which creates an area of restricted sight distance in both directions of travel. Homestead Road has a grade of approximately 20 percent at the intersection.

Traffic on Wallace Creek Road through this hazardous intersection may significantly increase. The Board of Commissioners has approved another Measure 37 claim (PA 06-6859 and Order No. 07-3-13-4) to the northeast of the intersection that may allow the residents and guests of 20 or more dwellings to travel through this intersection in the future. Approval of PA 06-7312 would have a negative impact on public health and safety for the present and future users of Homestead and Wallace Creek Roads.

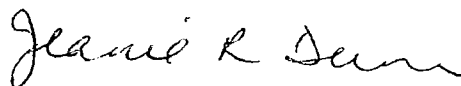
Sincerely,



Bert Dunn, Jeannie Dunn
86402 Homestead Rd.

Springfield, OR 97478

Map 18-02-12 TL 608, 617, 621



Letter in opposition to PA 06-7312

May 12, 2007

Page 5



Doug Jordan, Jennifer Jordan
86407 Homestead Rd.
Springfield, OR 97478
(mailing address PO Box 2216, Jasper, OR 97438)
Map 18-02-12 TL 618



Ralph Perkins, Stephanie Perkins
37634 Wallace Creek Rd.
Springfield, OR 97478
Map 18-02-12 TL 602, 615, 616



Sarah Brendler, Rob Lilley
86441 Homestead Rd.
Springfield, OR 97478
Map 18-02-12 TL 601

Exhibits

- A Composite of Assessor's Maps 18-01 and 18-02-12
- B Google Earth aerial photo of Subject Property and vicinity
- C Access easement dated August 27, 1980 and recorded at Reception No. 8042630, Reel 1091, Lane County Deeds and Records; easement from Edward L. Ramsay et. al. to Richard B. and Elaine D. Barrar
- D Photographs of Homestead Road/Wallace Creek Road intersection, taken May 11, 2007

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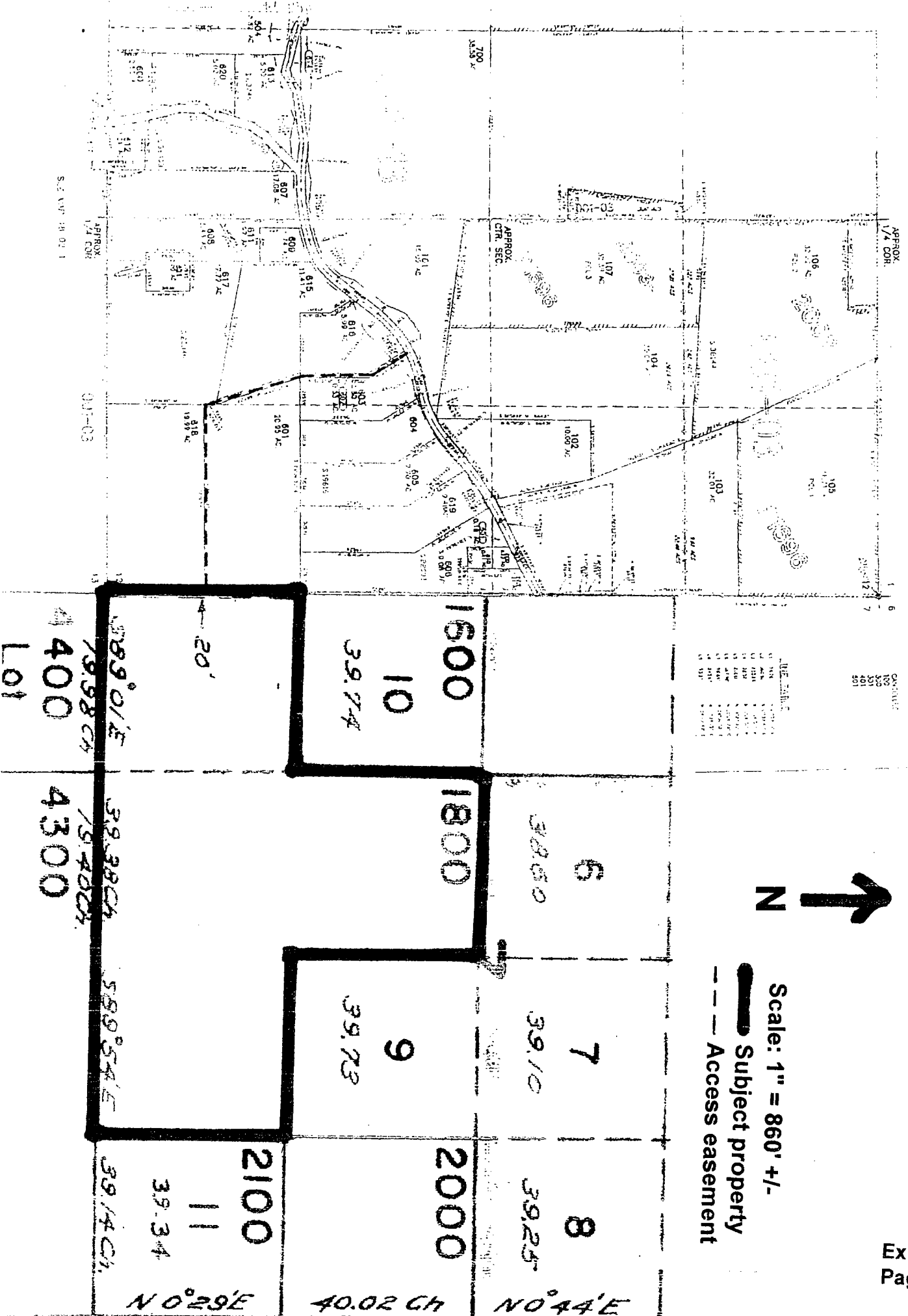
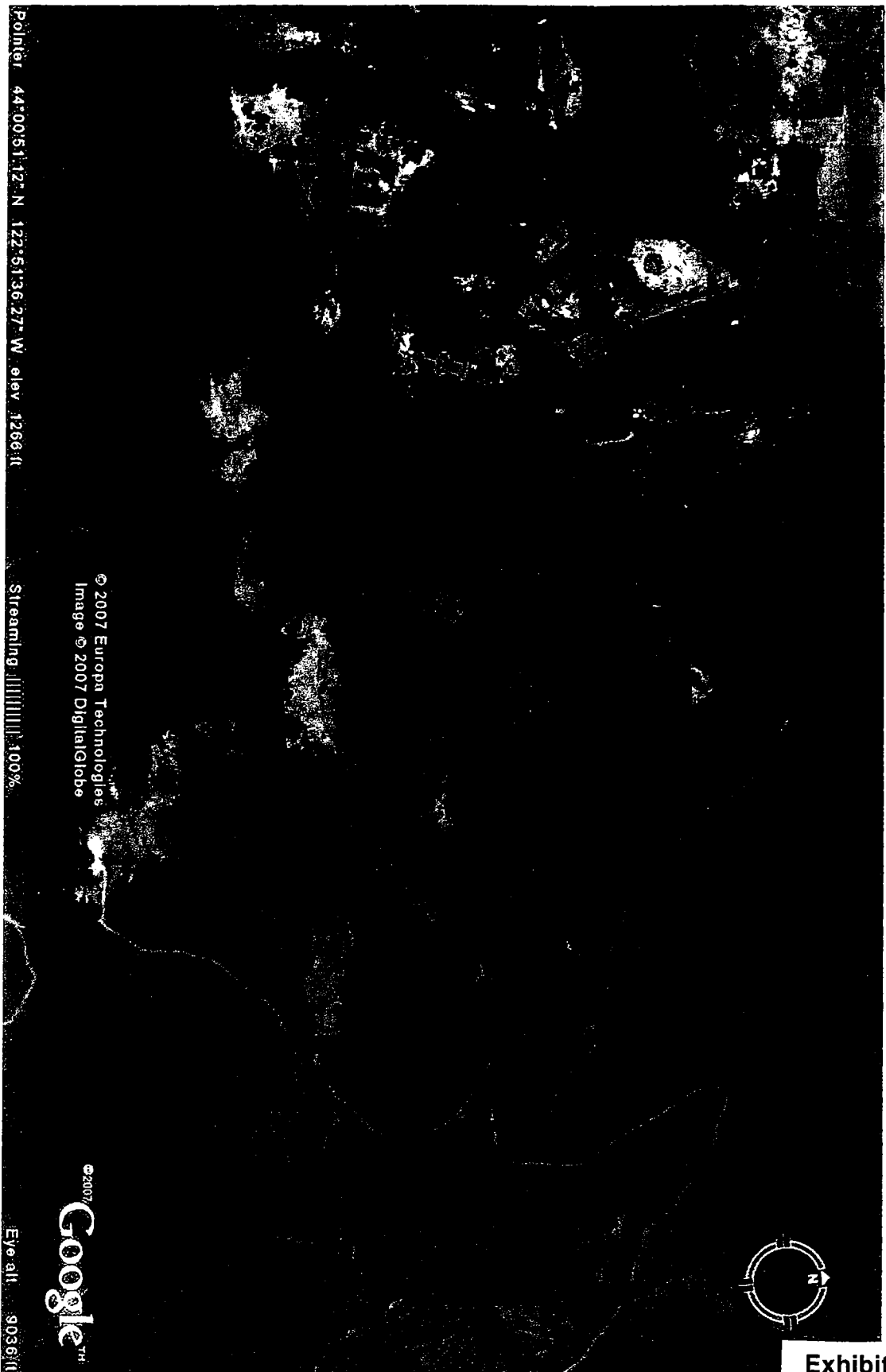


Exhibit A
Page 1 of 1



Scale: 1" = 1000' +/-
Subject property

14
8042630

EASEMENT

IN CONSIDERATION of the sum of ONE DOLLAR (\$1.00) and other valuable consideration, EDWARD L. RAMSAY and CATHY RAMSAY, husband and wife, DONALD R. RAMSAY and SUSAN M. RAMSAY, husband and wife, and OREN K. ALDRICH and HELEN ALDRICH, husband and wife, hereinafter referred to as Grantors, convey to RICHARD B. BARRAR and ELAINE D. BARRAR, husband and wife, their heirs, successors and assigns, hereinafter referred to as the Grantees, a perpetual non-exclusive easement to use a strip of land described as follows:

E 8 - 2000 3909 00014.00

See Exhibit "C" attached hereto and incorporated herein by reference thereto.

The terms of this easement are as follows:

(1) Grantees, their agents, independent contractors and invitees, shall use the easement strip for road purposes only for access to the property hereinafter described and in conjunction with such use may construct, reconstruct, maintain and repair a road thereon.

(2) Grantors reserve the right to use, construct, reconstruct, and maintain the road herein described for the purposes of access for its agents, independent contractors, invitees, and such other persons as may be authorized by Grantors to enter the said easement. The use by Grantors as

80-12630

herein designated shall be for access to the property owned by Grantors hereinafter described.

(3) The parties hereto agree that each shall pay a portion of the maintenance expenses that is proportionate to their use of the road. In the event that damage occurs to the road from natural causes or extraordinary expenses are necessary, the said repair costs shall be divided according to the anticipated future use of the roadway by the parties to this Agreement.

(4) This easement is granted subject to all prior easements or encumbrances of record.

(5) If a road with higher specifications is required by either Grantors or Grantees or their assigns for future development, the parties desiring the improvement shall assume the full cost of the construction.

(6) The property of Grantors to which this easement is appurtenant is as follows:

See Exhibit "A" attached hereto and by this reference incorporated herein as though fully set forth herein.

(7) The property of Grantees to which the easement is appurtenant is as follows:

See Exhibit "B" attached hereto and by this reference incorporated herein as though fully set forth herein.

IN WITNESS WHEREOF, the parties hereto have executed this easement on the 27 day of August, 1980.

8042630

GRANTORS:

Edward L. Ramsay

Warren L. Ramsay

Donald R. Ramsay

Oren K. Aldrich

Cathy Ramsay

Esther A. Ramsay

Susan M. Ramsay

Helen Aldrich

GRANTEES:

X Richard B. Barrar

X Elaine D. Barrar

STATE OF OREGON)

) ss

County of Lane)

On this 4th day of August, 1980, personally appeared before me the above named Edward L. Ramsay and Cathy Ramsay, husband and wife, Warren L. Ramsay and Esther A. Ramsay, husband and wife, Donald R. Ramsay and Susan M. Ramsay, husband and wife, Oren K. Aldrich and Helen Aldrich, husband and wife, and Richard B. Barrar and Elaine D. Barrar, husband and wife, and acknowledged the foregoing instrument to be their voluntary act and deed.

Before Me:



Dee Ann King
Notary Public for Oregon

My Commission Expires: 4-29-84

8042630

EXHIBIT "C"

Willamette Meridian; thence, S 1°34'13"W 1502.95 feet along the east line of said Section to the TRUE POINT OF BEGINNING; thence, along the centerline as follows: N81°35'41"W 87.65 feet; thence, N61°05'41"W 151.34 feet; thence, N72°42'54"W 193.27 feet; thence, S54°56'25"W 165.98 feet; thence S74°33'09"W 483.46 feet; thence, N88°05'23"W 191.82 feet; thence, S77°36'10"W 227.65 feet to the ending point on the west line of the access easement shown on Major Partition M384-76 and filed in Lane County, Oregon.

Also an easement for ingress and egress over the following described tract: Beginning at the iron pin set in that survey filed in the office of the Lane County Surveyor under file No. 19858 to mark the south one-quarter corner of Section 12, Township 18 South Range 2 West of the Willamette Meridian; thence, S88°32'20"E 1303.92 feet along the south line of said Section to a point marked by an iron pin; thence, N 1°31'21"E 656.90 feet to a point marked by an iron pin; thence, N17°12'12"W 375.78 feet to the TRUE POINT OF BEGINNING on the northerly line of an existing 60.0 foot easement; thence, N17°12'12"W 324.94 feet to a point (referenced on the ground by an iron pin bearing N 1°33'27"E 4.96 feet); thence, N 1°33'27"E 471.86 feet to a point marked by an iron pin; thence, N31°01'22"W 291.64 feet to an iron pin set on the souther right of way line of Wallace Creek Road; thence, along said right of way line and along the arc of a curve to the right having a radius of 788.51 feet to an iron pin bearing N63°59'59"E 30.11 feet from the last described point; thence, S31°01'22"E 297.78 feet to a point marked by an iron pin; thence, S 1°33'27"W 475.67 feet to a point marked by an iron pin; thence, S17°12'12"E 322.52 feet to a point on the northerly line of said existing easement; thence, S77°36'10"W 30.11 feet to the true point of beginning in Lane County, Oregon.

PLUS: Beginning at the iron pin set in that survey filed in the office of the Lane County Surveyor under file No. 19858 to mark the south one-quarter corner of Section 12, Township 18 South, Range 2 West of the Willamette Meridian; thence,

S88°32'20"E 1303.92 feet along the south line of said Section to a point marked by an iron pin; thence,
 N 1°31'21"E 656.90 feet to an iron pin marking the TRUE POINT OF BEGINNING; thence,
 N17°12'12"W 375.78 feet to a point on the northerly line of a previously existing easement 60.00 feet in width; thence,
 N77°36'10"E 30.11 feet along said northerly line to a point; thence,
 S17°12'12"E 308.34 feet to a point; thence,
 S88°32'20"E 1296.97 feet to a point on the east line of said Section 12; thence,
 S 1°34'13"W 60.00 feet along said east line to a point marked by an iron pin which bears S 1°34'13"W 655.16 feet from the northeast corner of the southeast one-quarter of the southeast one-quarter of said Section; thence,
 N88°32'20"W 1276.59 feet to a point marked by an iron pin; thence,
 S17°12'12"E 11.72 feet to a point marked by an iron pin; thence,
 N88°32'20"W 31.67 feet to the true point of beginning in Lane County, Oregon.

8042630

State of Oregon,
County of Lane--ss.

I, D.M. Penfold, Director of the Department of General Services, in and for the said County, do hereby certify that the within instrument was received for record at

27 JUL 80 16: 35

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1091R

Lane County OFFICIAL Records.

D.M. Penfold, Director of the Department of General Services.

By D. M. Penfold
Deputy
C30-33

Photos of Homestead Road/Wallace Creek Road intersection
Taken May 11, 2007



Facing east on Wallace Creek Road, Homestead Road to right



Driver's eye view of blind curve from truck parked in picture above



SUPPLEMENTAL INFORMATION SUBMITTED

Submitted on: 6-5-07

Taken By: SGS

SUPPLEMENTAL INFORMATION HAS BEEN RECEIVED BY THIS OFFICE IN REGARDS TO THE FOLLOWING:

BP# _____

PA# 067312

Barbar

SP# _____

SI# _____

(M)

OTHER: _____

Michael E. Farthing
Attorney at Law

Smeede Hotel Building
767 Willamette Street, Suite 203
Eugene, Oregon 97401
Office (541) 485-1141 – Fax (541) 485-1174
email - mefarthing@yahoo.com

June 5, 2007

HAND DELIVERED

Lane County Board of Commissioners
% Kent Howe, Planning Director
Lane County Land Management Division
Lane County Courthouse/PSB
125 E. 8th Ave.
Eugene, OR 97401

Re: **Measure 37 Claim PA 06-7312**
Richard D. Barrar and Elaine D. Barrar
Trustees of the Barrar Revocable Trust, Claimants
Map No. 18-01-00, Tax Lot 1800 ("Subject Property")

Dear Mr. Howe:

This office represents the Barrars with regard to the above-referenced Measure 37 Claim. This claim was previously before the Board of Commissioners on May 15 and at that time, Staff recommended approval. However, considerable testimony was received from neighbors of adjoining properties and it was requested that the record be left open until June 5 to address the testimony received.

First, it is necessary to emphasize that, as Staff noted, the Barrars do have a valid claim under Measure 37. They first acquired an interest in the Subject Property on September 30, 1971 when no zoning regulations were in place. Since then, the property has been rezoned to F-1 and Claimants' property is subject to a minimum parcel size of 80 acres and dwellings are prohibited. The oral and written testimony submitted by Rob Lilley on behalf of his neighbors stated concerns about the development process (e.g. access and utilities) and should be taken into consideration as part of the Board's consideration of the Measure 37 claim request. Mr. Lilley argued that because the Subject Property has no utility access, a subdivision of 30 or more lots could not be approved. Mr. Lilley has no basis in law or fact for his conclusion.

It is our position that the Subject Property can be served with utilities, if not by overhead or underground electrical utilities, then by propane, solar energy, generators or other sources that are "off the grid." The evaluation submitted is therefore sufficient to determine the loss in value.

Lane County Board of Commissioners
% Kent Howe, Planning Director
June 5, 2007
Page 2

The value reduction analysis submitted by the Claimant is based on the assumptions that if a waiver is granted, the property owner can create at least 30 five-acre lots and place a dwelling on each lot. The neighbors, through Mr. Lilly, argue that electrical service cannot be extended to the property because the recorded easement is "for road purposes only." While this is accurate on its face, there is nothing in the easement that limits use of the road to a particular type of access, e.g. vehicles. It is common for roads to be used as a location for underground utilities. It is our position at this point in the process that the easement can be used for the extension of underground utilities to serve the site. If the neighbors disagree or oppose that use, they are free to take legal actions to block such use. The point is, however, that providing utilities to the site will be addressed by the Claimants during the development process.

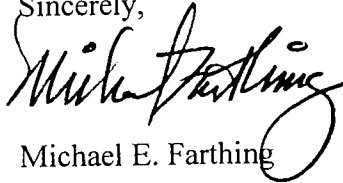
Moreover, the Claimants are not required by the Lane Code Chapter 13 to demonstrate that the lots or parcels that are being created will be served by any particular power source. As a practical matter, there are several different ways that individual houses can be served by a power source. Electrical service is the most common but is, by no means, the only source of power.

The Lane County Building Department readily accepts proposals for alternative energy sources when people apply for a residential building permit. The Applicant must comply with Chapter 3 of the Oregon Residential Code, which specifies that the home must be capable of maintaining heat, etc. It does not specify how the heat source is to be powered. Attached is an article that describes alternative energy in Lane County that was published in Green & Solar Homes Oregon and a recent article published in the Register Guard that discusses the growing number of homeowners who efficiently live "off the grid" in a subdivision in Central Oregon. In conversations with various real estate professionals, I was told that it is not uncommon for individuals in Lane County to choose alternative energy sources for any number of reasons.

The enclosed materials demonstrate that the Subject Property can be served with alternative sources of power that can serve individual home sites. In a discussion about the impact of the value of the lots Mr. Jim Belknap, a local land use consultant and real estate broker, indicated that service by alternative power sources would restrict the number of potential purchasers and might reduce the value of the lots by \$25,000-\$50,000. However, this would have a negligible impact in the overall reduction in value because of the current F-1 zoning does not allow any dwelling to be constructed. The current calculation analysis estimates a net value of \$125,000 per lot. Even if a \$50,000 per lot reduction is applied due to alternative energy sources being required, the net value of the development would still be \$2.4 million (32 lots x \$75,000 per lot) which would be the net reduction in value. According to Mr. Belknap, this is a very conservative estimate and that the lots would likely be worth \$150,000 or more in today's market.

Lane County Board of Commissioners
% Kent Howe, Planning Director
June 5, 2007
Page 3

We look forward to the June 20 hearing to discuss these issues in more detail.

Sincerely,

Michael E. Farthing

MEF/kt

Enclosures

cc: Dick and Elaine Barrar (w/ encl)

Environmental enlightenment

By Joseph Frazier

The Associated Press

Published: Tuesday, May 22, 2007

LAKE BILLY CHINOOK - Before power lines, homesteaders had no choice. They lit their lanterns, stoked their fires and packed away winter ice against sizzling summers.

Owners of about 250 homes in the Three Rivers community near this central Oregon lake are far from homesteading or camping out. But they are among a growing number of Americans who shun power lines, choosing to live "off the grid," without commercial power.

Everyone in Three Rivers gets most of their power from dark solar panels on their rooftops or on nearby freestanding structures positioned to more efficiently capture the sun. Some supplement it with energy generated by windmills.

Solar power easily handles their computers, lights, large-screen televisions, microwave ovens, refrigerator-freezers and more.

"Ninety percent of the people here, if (outside) power were offered to them, they'd turn it down," said Gary Sweet, a semiretired insurance agent who moved to the high desert community in Central Oregon a couple of years ago.

Off-the-grid living is edging into the American mainstream. It isn't there yet, but about 180,000 homes, mostly in the West, operate on it.

National demand is soaring and the off-the-grid movement is yet to be felt in a significant way by the power industry, said Jim Owen of the Edison Energy Institute in Washington, D.C. In the short term at least, he said, "I can't imagine any appreciable impact on the system."

Nonetheless, the number of people going off the grid increases by about a third each year, said Richard Perez, who publishes Home Power magazine, dedicated to the topic, and Lori Ryker, who has written two books on the subject.

Much of the growth is in California. Off-the-grid living is also growing in Texas, New Jersey and Wisconsin.

"It pretty much tracks where the best rebates are" for the cost of the equipment, said Connie Said of Home Power. She said 80 percent of the magazine's subscriptions are in California.

It's occurring mostly in the West because of people moving into areas that are beyond the reach of commercial power, because of ample sun and environmental conscientiousness, and possibly because of Westerners' traditional independent streak.

Residents in the upscale Three Rivers community could easily afford the \$300,000 the power company said it would cost to extend its lines three miles or so to their property 10 years ago.

But they've decided to stay off the grid. ``With power lines come streetlights, and there go your stars at night," Sweet said. ``And there are no power outages here."

Off-the-grid residents have a guaranteed power supply at a time when the emphasis on ``clean" energy is on the rise. Solar energy uses no resources to speak of, emits no pollution and is immune to price hikes.

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Marv & Darlene Beckman's Solar Dream Home on the Lake

By Steve Musser, Energy Service Company

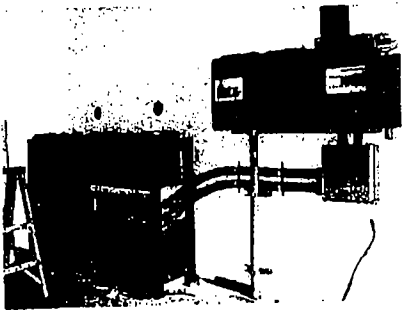
One sunny Sunday morning over coffee Marv and Darlene Beckman got into a conversation about waterfront property and out of the blue the question came up, "I wonder what's happening with Booth Island?" Booth Island is a 45-acre natural beauty situated near the western shores of Siltcoos Lake just south of Florence, Oregon and a short distance from the Oregon Dunes. Darlene, a realtor and Marv a general contractor, had seen the 35-acre parcel of the island property listed for sale off and on for several years but so far there were had been no takers. They raced over to their computer to check the Multiple Listing Service and were delighted to find the price had just dropped to a point where they could seize an opportunity to make one of their dreams come true. They looked at each other and exclaimed, "We'll take it!" "We always wanted a

waterfront home." Darlene remarked, "What better way than being on an island surrounded by lakefront!" They began negotiations and in a few months the island was theirs, well, most of it anyway. There were a few rustic vacation cabins dotting the northwest shore of the island, but no permanent residents and no electricity. They would need to come up with a way to power their new home.

They initially contacted the local electric utility to explore the idea of bringing grid power lines to the island. They were told the cost of bringing the lines to one end of the island was \$50,000 and running lines to the other end of the island would be about another \$50,000. Pricey. And there were also environmental concerns. "We realized that by building on the island we were going to impact the nature of it and wanted to minimize that effect. We started thinking

there must be an alternative way to power our home...and cheaper!" they laughed. The Beckmans recalled a friend, Bill Fleenor, who had installed an alternative energy system to power his home near Mapleton several years ago. After talking with him and visiting his home they decided to look into installing a solar based system for their new home. Associates referred them to the Energy Service Company in Eugene.

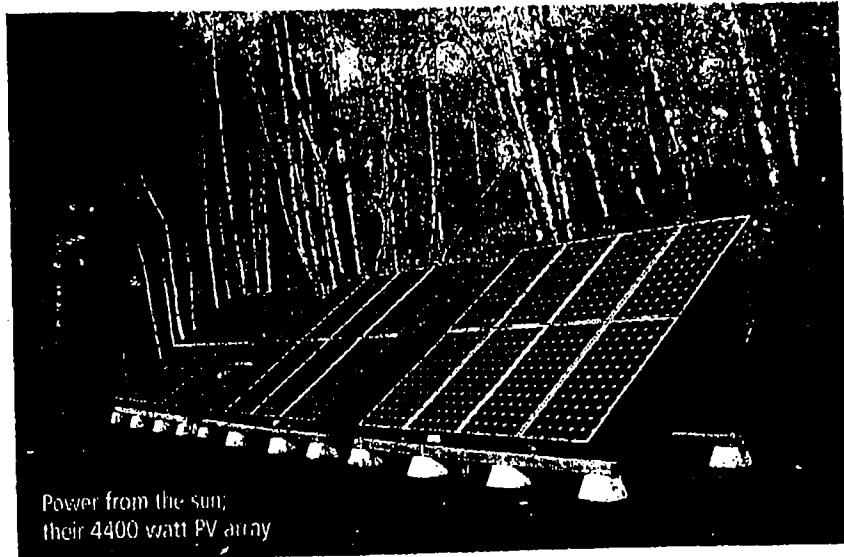
Marv explained, "We initially met with Tom Scott of Energy Service Company who began to work with us on the passive solar design for the home. He brought in Steve Musser to develop the energy plan." Working with Steve, the Beckmans came up with a comprehensive list of electric devices they were planning to utilize for their home along with the power requirements and estimated time of use for each one on an average daily basis. Recommendations were



Beckman Electric's "R-Powr" Power Center and battery bank

made to them as to what loads were viable and which were excessive (i.e., using energy efficient lighting, refrigeration and water pumping, no electric heating, etc.). After several passes through the process, an electric load assessment was arrived at and the system design process began.

Darlene added, "From the get-go our plan was to first build our home and adjacent guest cottage, then develop a few other cottages on the property for vacation rentals. Naturally, the cottages would require power as well." It was then that a concept presented itself. Their business, Beckman Construction, would



Power from the sun;
their 4400 watt PV array

purchase the solar PV system installation and they would be the electric power provider to the new residential structures that would be built on the island. "Steve checked into it and found that we could service up to twenty residential customers and not fall under the jurisdiction and regulations of being a public utility." By taking this approach to the project Beckman Construction was then able to

qualify for the 35% Oregon State Business Energy Tax Credits and 10% Federal Investment Tax Credits. This offset over \$15,000, or about 25% of the overall cost of the energy project.

A stand-alone off grid 4.4 kilowatt (kW) solar electric (PV) system was installed that provides nearly all the power they need year round. The system incorporates a 1600 amp-hour, 24-volt battery



Enjoying a beautiful view
of Siletz Lake while the floor
captures solar heat

bank and 7000 watts of Outback inverter capacity to power their system. A 10-kW Onan diesel generator was added to the system as a back up to the PV. Darlene commented, "It's a very technical and complicated looking setup. When we first saw all this equipment we wondered if we had made the right decision. Once it fired up and everything ran so smooth and automatic we were very impressed." Marv added "We're true believers now. Since the system came on line in March the solar has pretty much been all we've needed. We've only run the generator to temporarily power some large dehumidifiers and power tools for the construction."

The Beckmans have recently completed construction of two 900 square foot rental cottages on the south end of the island. The dense forest of the island provides plenty of privacy and the views are spectacular. The cottages are very comfortably equipped and are now also powered by the Beckmans' PV/Generator system. The PV arrays provide most of the power and the generator is programmed to automatically fire up if the battery voltage drops to a low set point. When the generator is running, the power center allows it to handle all the

electric loads while the inverters automatically become battery chargers, assuring the batteries maintain a healthy charge.

Energy Service Company also installed a closed-loop anti-freeze solar water heating system to preheat their domestic hot water. A standard 40-gallon propane water heater serves as a backup but is rarely needed. For the solar water heating installation the Beckmans qualified for a \$1500 Residential Energy Tax Credit. To provide the water supply, a Grundfos SQFlex submersible pump draws from the lake through a filter and into a 1500 gallon holding tank. A pressure pump gives them 50 psi at their home and another pump sends water out from the tank to the two cottages.

Passive solar heating was designed into the home, allowing for a \$1500 residential tax credit. Upon Tom Scott's recommendations they installed double-paned clear windows on the south side of the home, letting the solar energy pour in onto their concrete block floor. The block floor thermal mass ratio of one cubic foot per square foot of glass very effectively retains the solar heat gained. Curtains drawn at night provide R-4 of

insulation value. The balance of windows on the home are low-E argon, limiting the heat loss/gain to a minimum.

The Beckmans have realized their dream home on the lake. They now live independent of any power grid, never paying an electric utility bill and were able to do so for a cost of less than half what it would have been to be on the grid. (Note: For more detailed information about the Beckmans' energy system please contact Steve Musser of Energy Service Company at (541) 302-6808).

The Beckman home on Booth Island will be a part of the National Tour of Solar Homes on October 2, 2004 from 10:00 a.m. to 3:00 p.m. They will be shuttling visitors from the Westlake Boat Ramp to Booth Island and back via their boat. To accommodate this, reservations must be made ahead of time. To make arrangements to tour their site (and enjoy the beauty of Siltcoos Lake) call Marv and Darlene at (541) 999-2306.

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by Darlene Longley

When Darlene Longley decided to build a new home in Chiloquin she not only wanted a home big enough for her two daughters and her husband Steve, but she wanted a home that could survive the harsh and snowy winters encountered in the south central Oregon area while maintaining manageable utility bills.

This desire led her to begin studying solar power and efficient home design. The 3,269 square foot Linwood custom built cedar home was sited on the four compass points to make maximum use of winter solar gain and is flooded with warm sunshine from the 22 large, south facing windows even on sunny, but sub-zero days. The large roof overhangs above these windows block all but insignificant amounts of sunshine on a summer day. On June 21st, the summer solstice, there is only 1 1/4 inches of direct sunlight in the house. And on December 21st, the winter solstice, there is direct sunlight for 48 feet, warming the entire house.

In addition to passive solar design they have a utility tied photovoltaic system that on most days turns their electric meter backwards and lowers their utility bill. Using a system of twenty-four 100 watt Seimens photovoltaic panels and a 2,500 watt Trace ST2500 grid-tie inverter, the system supplies most of the electric power they need. The Trace inverter converts the 48 volts of DC power from the panels to 240 volts of AC power that is synchronized and then "sold back" to the utility grid.

The home also uses a Rhcem 94.2% efficiency propane furnace, a six burner propane stove, two double propane ovens, an Aprilair fresh air exchanger and Enviracaire elite electronic air cleaner. The Aprilaire fresh air exchanger provides a constant, controlled supply of fresh air to her home throughout the year. In the summertime, taking in the 65 degree F. cool basement air and circulating it throughout the forced air heating duct system, eliminated the need for a \$4,000 air conditioner that would have been utilized just a few days in the month of August. In addition, it reduces excess moisture content. This coupled with the foundation stem walls and basement walls built with an Insulated Concrete Form (ICF) product - Polyform (eight inches of steel reinforced concrete contained within one inch of styrofoam on both sides) and backfilled with existing ground to grade, provides a nice cool basement

in the summertime along with cool air for the entire house.

Additionally, with this system, the Longleys utilize 80 square feet of solar hot water collectors connected to her existing 120 gallon electric hot water heater, requiring grid

power to heat water only on rare occasions. In fact, during most of the summer and sometimes during the winter, the family needs to keep one of the solar hot water collectors covered because of the large amount of hot (180+ F) water that is produced. With two teenage daughters and all enjoying a long hot soak in two big Jacuzzi tubs and lots of laundry, the Longleys use a lot of hot water on a regular basis.

The Longleys only pay an electric bill when her power demand exceeds her solar production. Their neighbors have a top of the line triple wide all electric mobile home who's monthly winter electricity bills reach \$580. The Longley's highest bill last winter was \$121.

One afternoon in February in 2002, Darlene's concrete contractor called to ask her how her solar was doing. She replied, "It's 34 degrees F. outside, I've had my furnace turned off since 11:00am, the fan is on high, I have several windows open and it's 80 degrees in here!" Her contractor replied, "I've got the wood stove and the pellet stove going and it's *still* cold in here - sounds like your solar is doing just exactly what you planned for it to do."

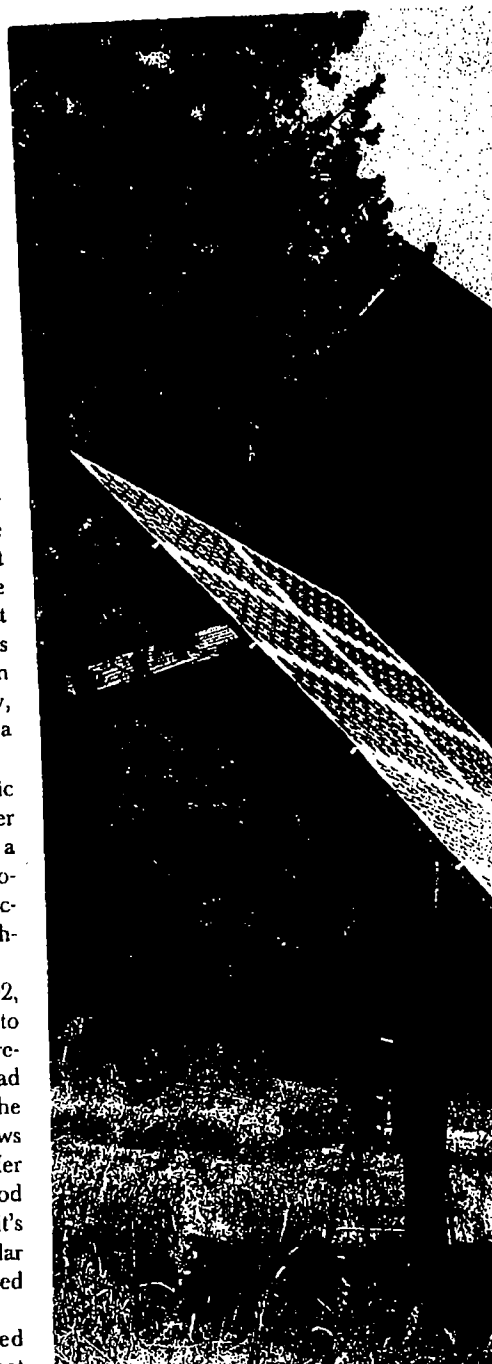
Darlene has been very pleased with her system to date and said that with her tax rebate on both the grid-tied system and solar hot water. Her anticipation of low power bills has been easily realized.

She chose to use solar for its clean and reliable power that's good for the environment but she said that having more money in her budget each month is as good a reason as any.

Since Klamath County is considered the "County of Sunshine," with an average of 320 days of sunshine per year, even it's 10 degree below zero, Darlene is feeling very fortunate in making such a good long term investment.



The Aprilaire Fresh Air Exchanger



Darlene's daughter, Samantha Jean, changing



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