

APN # 5208203011

EL PASO COUNTY DEPARTMENT OF HEALTH AND ENVIRONMENT  
INDIVIDUAL SEWAGE DISPOSAL SYSTEM INSPECTION FORM

Permit # DN 0020587  
Date 11/24/98

APPROVED: YES  NO

ENVIRONMENTALIST J. CHRISTENSEN

Address 13350 DAVIS DR. Owner MICHAEL W. O'NEIL

Legal Description LOTS 1,2,10 BLOCK 28 + LOTS 10,11,12 BLOCK 3  
BRENTWOOD COUNTRY CLUB + CABIN SITES TRACT 1

Residence , # of bedrooms 3; Commercial ; System Installer MURRAY

SEPTIC TANK:  
Commercial ; Noncommercial  L       , W       , WD         
Construction Material CONCRETE, capacity 1500 gallons.

DISPOSAL FIELD:  
Rock Systems:

Trench: depth       , width       , total length       , sq. feet       

Bed: depth       , length       , width       , sq. feet       

Rock type       , depth       , under PVC       , over PVC       

Seepage Pits: # of pits       , total # of rings       , working depth(s)         
size of pit(s) L X W       , lining material       , total sq. feet       

Rockless Systems:

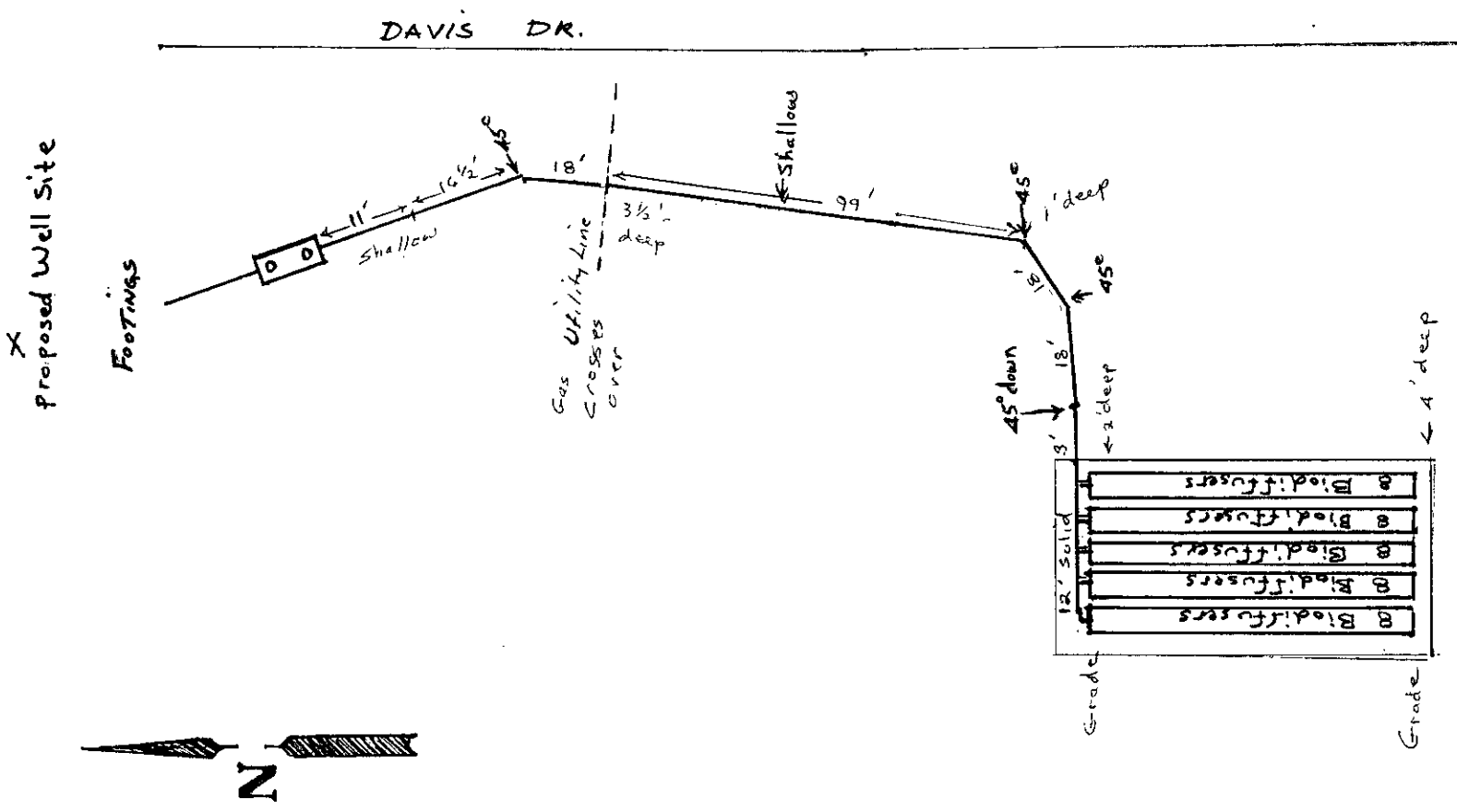
Chamber: Type BIODIFFUSER, number of chambers 40, bed , trench  
sq. ft./section 15.5, reduction allowed 35 %, sq. ft required 945  
total sq. ft. installed 954, depth of installation grade - 4'

Engineer Design  or N, Designing Engineer JAMES ALLISON  
Approval letter provided?  or N Atch 12/01/98

Well 50 feet from tank Y or N 100 feet from leach field Y or N       

Well installed at time of septic system inspection Y or  Public Water         
\*Approval will be revoked if in the future the well is found to be within 50 feet of the septic tank and/or 100 feet of the disposal field.

NOTES: SDR 35, 4" PIPE FROM BLDG (SITE) TO SEPTIC TANK. 11' SCHEDULE 40, 4" SEPTIC TANK OUTLET THEN SDR 35, 4" PIPE USED. BIODIFFUSERS INSTALLED ON 3' CENTERS.



EL PASO COUNTY ENVIRONMENTAL HEALTH SERVICES  
301 South Union Boulevard Colorado Springs, CO 80910-3123

APPLICATION FOR A NEW, REMODEL, REPAIR, OR ADDITION  
TO AN INDIVIDUAL SEWAGE DISPOSAL SYSTEM

Owner Michael W. O'Neil Phone (719) 390-3770  
 Address of Property 13350 Davis Drive Lot Size 1.26 acres Water Supply Well  
 Tax Sch # 52032-29-001 Septic Contractor & Phone # Murray Construction 783-2442  
52032-03-006 685-995-0065  
 Legal Description Lots 1, 2, 10 Block 28 & Lots 10, 11, 12 Block 3 -  
Brentwood Country Club and Cabin Sites Tract 1  
 Type of Building Manufactured Owner's Mailing Address 1875 Main Street  
Security, CO 80911

MAXIMUM POTENTIAL BEDROOMS 3  
 Basement  Y  N Percolation Test Attached  Y  N  
 Garbage Disposal  Y  N Clothes Washer  Y  N

I have supplied a plot plan as described on the back of this form. I acknowledge the completeness of the application is conditional upon such further mandatory and additional tests and reports as may be required by the Department to be made and furnished by a applicant for purposes of evaluating the application, and issuance of the permit is subject to such terms and conditions as deemed necessary to ensure compliance with rules and regulations adopted pursuant to C.R.S. 10-25-101 et. seq. I hereby certify all represented to be true and correct to the best of my knowledge and belief, and are designed to be relied on by the El Paso County Department of Health and Environment in evaluating the same for purposes of issuing the permit applied for herein. I further understand any falsification or misrepresentation may result in the denial of the application or revocation of any permit granted based upon said application and in legal action for perjury as provided by law.

OWNER'S SIGNATURE Michael O'Neil Date 10/13/98

**DEPARTMENT OF HEALTH USE ONLY**

<u>945<sup>+</sup> MINIMUM</u>	<u>1250</u>	<u>10/15/98</u>
Absorption Area	Tank Capacity	Date of Site Inspection

REMARKS: CONTACT PE FOR DESIGN AND OR ALTERNATIVE ISDS  
(OR ATTACHED) PE TO INSPECT AND CERTIFY INSTALLATION.  
MUST MEET ALL SETBACKS AND MINIMUM DISTANCES FOR  
COMPONENTS.

EHS INSPECTOR Kemper Date 10/15/98  APPROVED  DENIED 10/14/98  
for La. Food Plain

PERMIT # 12779 FEE  NO FEE  DATE TO EPC PLANNING DEPT 10/15/98  
Check # 1334 BOK attached OA

We require the ORIGINAL of your percolation (**PERC**) TEST.

The following information must be on your PLOT PLAN.

- ✓ Property lines
- ✓ Proposed septic system site
- ✓ Well(s)
- ✓ Building(s)
- ✓ Water line
- ✓ Subsoil drain(s)
- ✓ Property dimensions
- ✓ Designated alternate septic system site
- Adjacent property well(s)
- Proposed building(s)
- Cistern

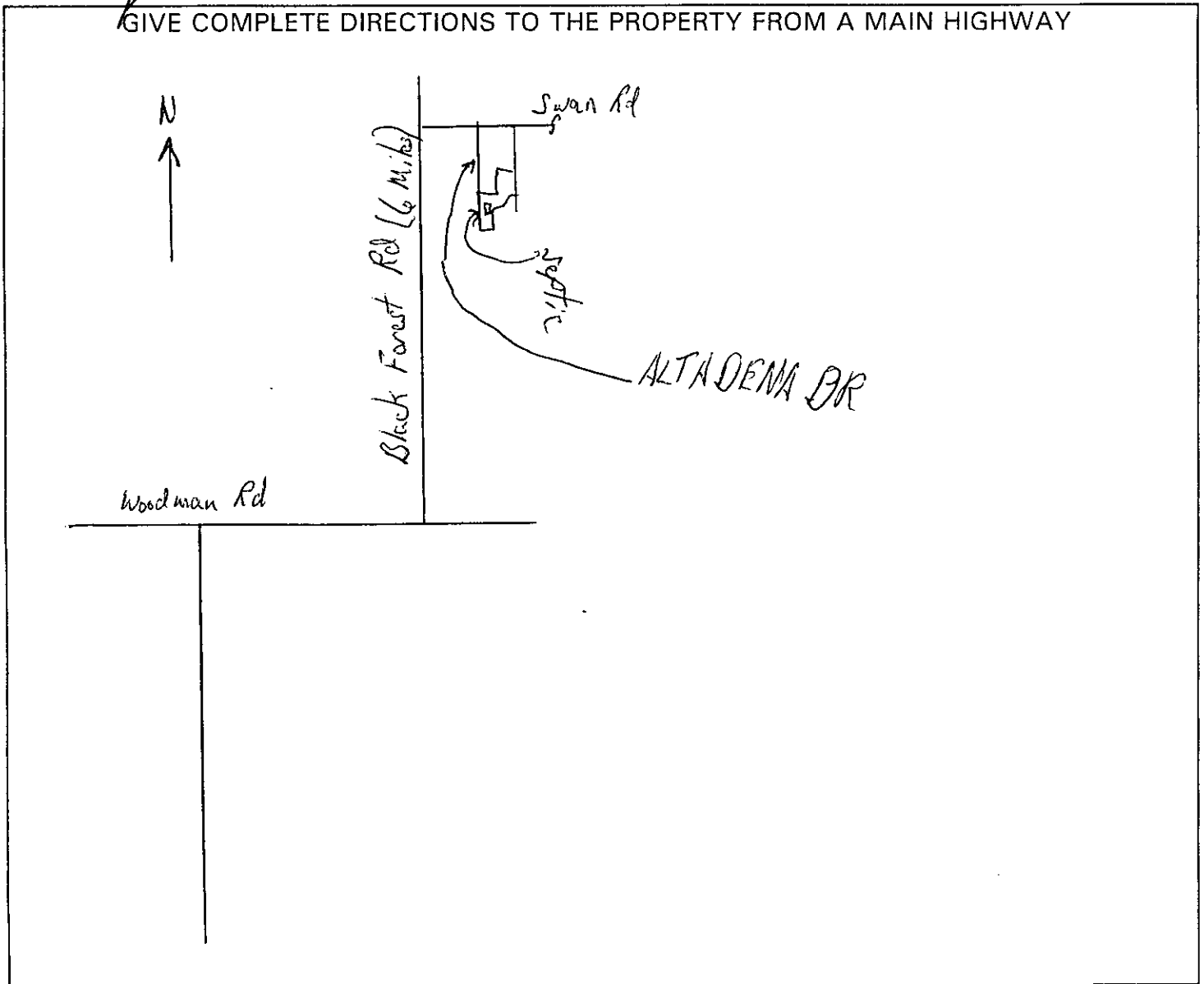
If any of these are within 100 feet of your proposed septic system include on your plot plan

Spring(s)  
Pond(s)  
Dry Gulch(s)

Lake(s)  
Stream(s)  
Natural drainage course(s)

PROPERTY AND PERC HOLES MUST BE CLEARLY MARKED OR POSTED

GIVE COMPLETE DIRECTIONS TO THE PROPERTY FROM A MAIN HIGHWAY



55,086.6 SQ FT

EL PASO COUNTY • DEPARTMENT OF HEALTH AND ENVIRONMENT

301 South Union Blvd. • Colorado Springs, Colorado • 578-3125

Water Supply: 123 F.

Permit 12770

Receipt No. 10-20-98  
jm

PERMIT

TO CONSTRUCT, ALTER, REPAIR OR MODIFY ANY INDIVIDUAL SEWAGE DISPOSAL SYSTEM

Issued to MICHAEL W. O'NEIL

Date 10-20-98

Address of Property 13350 DAVIS DRIVE, BRENTWOOD COUNTRY CLUB

Phone 390-3770

(Permit valid at this address only)

Sewage-Disposal System work to be performed by MURRAY CONSTRUCTION

Phone 683-2442

This Permit is issued in accordance with 25-10-106 Colorado Revised Statutes 1973, as amended. PERMIT EXPIRES upon completion-installation of sewage-disposal system or at the end of twelve (12) months from date of issue- whichever occurs first-(unless work is in progress). This permit is revokable if all stated requirements are not met.

**-THIS PERMIT DOES NOT DENOTE APPROVAL OF ZONING AND ACREAGE REQUIREMENTS-**

\$245.00

PERMIT FEE (NOT REFUNDABLE)

10-20-99

DATE OF EXPIRATION

Steven J. Englander, MD  
DIRECTOR, DEPARTMENT OF HEALTH AND ENVIRONMENT

K. Hillman 578-3132  
ENVIRONMENTALIST

NOTE: LEAVE ENTIRE SEWAGE-DISPOSAL SYSTEM UNCOVERED FOR FINAL INSPECTION. 48 HOUR ADVANCE NOTICE REQUIRED.

SEPTIC TANK: 1250 gallons	TRENCH SYSTEM: total square feet <u>945 SQ. FT. MINIMUM</u> ____ ft. of trench _____ inches wide ____ ft. of trench _____ inches wide	BED SYSTEM: total square feet _____	SEEPAGE PIT SYSTEM: total square feet _____ rings or _____ diam.x _____ w/d
------------------------------	--	--	---

NOTES: P.E. TO INSPECT AND CERTIFY INSTALLATION. MUST MEET ALL SETBACKS AND MINIMUM DISTANCES FOR COMPONENTS. AN APPROVAL LETTER FROM ENGINEER CERTIFYING INSTALLATION WAS DONE PER P.E. DESIGN IS REQUIRED BEFORE HEALTH DEPARTMENT'S FINAL APPROVAL.

The Health Office shall assume no responsibility in case of failure or inadequacy of a sewage-disposal system, beyond consulting in good faith with the property owner or representative. Free access to the property shall be authorized at reasonable time for the purpose of making such inspections as are necessary to determine compliance with requirements of this law.

APN 5208203011

E

13350 Davis Drive

ON 0020587

11/24/98

Allison Engineering, Inc.  
4245 Log Road  
Peyton, Colorado 80831  
(719) 331-6538 (PCS)  
(719) 683-5547 (FAX)

December 1, 1998

Blue Rose Homes  
1837 Main Street  
Security, Colorado

Reference:

Lots 1, 2, 10 of Block 28 and  
Lots 10, 11, 12 of Block 3  
Brentwood Country Club and Cabin Sites Tract 1

This letter confirms an open-hole inspection performed December 1, 1998 at the above referenced address. The inspection found the installation of the septic system to be acceptable and in accordance with a previously provided design.

Sincerely,

*James L. Allison*

Jim Allison, Ph.D., P.E.



Allison Engineering, Inc.  
4245 Log Road  
Peyton, Colorado 80831  
(719) 331-6538 (PCS)  
(719) 683-5547 (FAX)

December 30, 1998

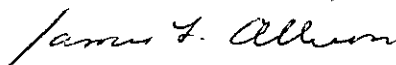
Blue Rose Homes  
1837 Main Street  
Security, Colorado 80911

Reference:

Lots 1, 2, 10 of Block 28 and  
Lots 10, 11, 12 of Block 3  
Brentwood Country Club and Cabin Sites Tract 1  
El Paso County, Colorado

An open-hole inspection conducted October 30, 1998 found the installation of a subsurface drain at the above referenced location to be acceptable by this engineer.

Sincerely,



Jim Allison, Ph.D., P.E.



Allison Engineering, Inc.  
4245 Log Road  
Peyton, Colorado 80831  
(719) 331-6538 (PCS)  
(719) 683-5547 (FAX)

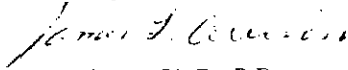
December 1, 1998

Blue Rose Homes  
1837 Main Street  
Security, Colorado

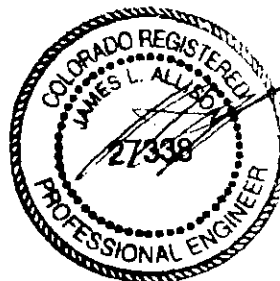
Reference:  
Lots 1, 2, 10 of Block 28 and  
Lots 10, 11, 12 of Block 3  
Brentwood Country Club and Cabin Sites Tract 1

This letter confirms an open-hole inspection performed December 1, 1998 at the above referenced address. The inspection found the installation of the septic system to be acceptable and in accordance with a previously provided design.

Sincerely,



Jim Allison, Ph.D., P.E.





**EL PASO COUNTY**  
DEPARTMENT OF  
**HEALTH AND ENVIRONMENT**

301 SOUTH UNION BLVD. • COLORADO SPRINGS, CO 80910-3123 • (719) 578-3199 • FAX (719) 578-3192

Certified Mail Z 038 171 552

December 21, 1998

Mr. Michael W. O'Neil  
1875 Main Street  
Security, CO 80911

RE: Individual Sewage Disposal System (ISDS) located at 13350 Davis Drive  
Legal: Lots 1, 2, 10, Block 28 and lots 10, 11, 12 Block 3 Brentwood Country Club & Cabin  
Sites Tract 1  
Tax Schedule Numbers: 52082029-001 and 52082-03-006

Dear Mr. O'Neil;

I recently inspected the ISDS on your property.

In conformance with the Colorado Department of Public Health and Environment Guidelines, Chapter 25, Article 10, CRS 1973, as amended, and in accordance with the El Paso County Department of Health & Environment Individual Sewage Disposal System Regulations, effective October 11, 1996, and your permit for the ISDS, your system required design by or construction under the supervision of a registered professional engineer.

Your system was designed by Henry Danley of Darlow Engineering Company.

Accordingly, per paragraph III, N. Final Inspection: "If the system has been designed by or constructed under the supervision of a registered professional engineer, the applicant shall require that said engineer at this time certify in writing to the Department that construction and installation of the system has been completed in accordance with the terms of the permit and these regulations." (page12)

Following is a notice of the deficiencies:

Engineer letter stating that the "construction and installation of the system has been completed in accordance with the terms of the permit and these (ISDS, October 11, 1996) regulations."

We can not approve your system until we receive the engineer's letter, or you correct the deficiencies as stated above. If the permit is allowed to expire before the system is approved, a new permit and fee may be required before approval will be granted.

You may appeal this disapproval/denial in accordance with the ISDS regulations (October 11, 1996). Per the regulations, paragraph III, O, (4), the "appeal must be filed within 30 days from the date of the denial."

If you have any questions, or if I can be of any help, please call me at (719) 578-3141.

Sincerely,



Janet Christensen  
Environmental Health Specialist  
Environmental Health Services

Kenneth G. Rowberg  
Planning Director

Carl F. Schueler  
Assistant Director

## El Paso County Planning Department



August 18, 1998

Lona G. Schwab  
5503 Kingston Drive  
Midland, Texas 79705

Michael W. O'Neil  
1875 Main Street  
Colorado Springs, Colorado 80911

RE: Lot Area Variance (BOA-98-026)

This is to inform you the above-referenced request by Lona G. Schwab, as owner, and Michael W. O'Neil, as contract purchaser, for a variance to permit a lot area of 55,087.6 square feet (1.26 acres), in the RR-3 (Rural Residential) District, where the requirement is five (5) acres was heard and approved by the El Paso County Board of Adjustment on August 12, 1998. The property is located in the Black Forest area southeast of the intersection of Swan and Black Forest Roads. Legally described as Lots 1, 2, 10, Block 28 and Lots 10 to 12 inclusive, Block 3, Brentwood Country Club and Cabin Sites Tract I, the property is identified by County Assessor's records by tax schedule numbers 52082-29-001 and

52082-03-006. *These #'s are to be consolidated*

This approval is subject to the following conditions and notations:

### CONDITIONS

1. The approval applies only to the plot plan as submitted. Any construction or additions will require separate Board of Adjustment application and approvals in the event the development requirements of the applicable zoning district cannot be met.
2. Prior to plot plan approval authorizing issuance of a building permit, documentation shall be provided to the Planning Department by the applicant that all criteria required by the County Health Department have been met regarding placement of a septic system.
3. Prior to plot plan approval authorizing the issuance of a building permit, the request to vacate that portion of Monte Vista Road adjacent to the subject shall have been approved by the El Paso County Board of County Commissioners.
4. Prior to plot plan approval authorizing the issuance of a building permit, the applicant shall submit an application to merge the lots identified by tax schedule #52082-29-001, and those portions of Monte Vista Road that have been vacated.

PERCOLATION TEST FOR:

BLUE ROSE HOMES  
Lot 1&2 'Block 28  
BRENTWOOD COUNTRY CLUB & CABIN SITES

PERFORMED BY:

CERTIFIED PERC TEST  
Stan Crew  
14160 Neva Lane  
Colorado Springs Colorado 80908-3309  
(719) 495-3502

REVIEWED BY:

ALLISON ENGINEERING INC.  
James I. Allison Ph.D. P.E. (Civil Engineering)  
4245 Log Road  
Peyton Colorado 80831  
(719) 683-2756

TEST DATE:  
June 30 1998

PERCOLATION TEST CONCLUSIONS:

An open-hole inspection is required before approval of site or depth of system can be confirmed  
A system design is required at the location at which this percolation test was performed. Please consult the engineer whose stamp is affixed for suggestions on lower cost alternatives



*James I. Allison*

FILE  
Muller

ALLISON ENGINEERING INC.

James L. Allison, P.E.

4245 Log Rd.

Peyton CO 80831

(719) 683-2756

WATER LEVEL 96 +"

Mottled soils may record seasonal water levels

Depth	DEEP SOIL SAMPLE HOLE DESCRIPTION
0-12"	Packed, fine-coarse moderate heavy sand, fine trace gravel, trace moderate silt/clay, tan
12"-36"	Hard packed, fine-coarse moderate heavy sand, fine trace gravel, trace moderate silt/clay, tan
36"-48"	Very hard packed, fine-coarse moderate sand, moderate silt/clay, buff, slightly moist, mottle
48"-72"	Very hard packed, fine-medium moderate sand, moderate silt/clay, rust/brown, slightly moist, massive mottle
72"-84"	Very hard packed, fine-coarse moderate sand, moderate silt/clay, olive/brown, slightly moist, mottle
84"-96"	Very hard packed, fine-coarse moderate sand, fine trace gravel, moderate silt/clay, olive/brown, slightly moist, mottle

TIME	TEST HOLE # 1		TEST HOLE # 2		TEST HOLE # 3		TEST HOLE # 4		TEST HOLE # 5		TEST HOLE # 6	
	INCH	DROP	INCH	DROP	INCH	DROP	INCH	DROP	INCH	DROP	INCH	DROP
8:30	14"	5/8	14"	15/16	14"	3/4						
8:45	14"	5/16	14"	1	14"	9/16						
9:00	14"	7/16	14"	1 1/16	14"	1/2						
9:15	14"	3/8	14"	1 1/8	14"	1/2						
9:30	14"	3/8	14"	1	14"	9/16						
9:45	14"	3/8	14"	15/16	14"	1/2						
10:00												
	MIN./INCH		MIN./INCH		MIN./INCH		MIN./INCH		MIN./INCH		MIN./INCH	
	40		16		30							

\* all ratiocination subject to final approval by your local health dept. \*

Soil Texture\*

Sample Depth	Sand	Silt	Clay
2'	73%	4%	23%
4'	40%	10%	50%
6'	46%	11%	43%
8'	60%	10%	30%

LaMott soil testing is a qualitative method of classifying soils by clay-silt-sand composition using volume

	DATE	TIME
DRILL	6/29/98	3:30 PM
FILL	6/30/98	3:00 PM
TEST	6/30/98	8:30 PM

CUSTOMER & LOCATION
BLUE ROSE HOMES
Lot #1 Block #28 BRENTWOOD COUNTRY CLUB & CABIN SITES
ALL TESTS SUBJECT TO FINAL APPROVAL OF YOUR LOCAL HEALTH DEPT.

test valid to 1 year of test date

AVERAGE: 28.7 MIN./INCH

To My Customer:

I thought it might be helpful to you to know a little bit about the percolation test process. After all, you're paying for this and I always feel better if I understand what I'm paying for. So here is a brief look at what you're getting for your money.

**What is a Percolation Test?** The percolation test consists of several steps. In the area where the septic system is to be installed, a minimum 8 foot hole is drilled. The soils are examined visually as they are augured, so that a description of the soil at different levels can be made. This is called the profile hole. Comments are made concerning the type of material and depth at which any change is observed. The presence of water, if detected, is also noted.

Three other holes are drilled around the profile. These are drilled to the appropriate depth for the expected septic installation; usually 3 feet. They are filled with water and left to soak for approximately 24 hours. Then they are cleaned, refilled and soaked for approximately another hour. Then they are refilled, and the rate at which the water level drops in each hole is recorded. This will tell how fast the water percolates through the surrounding soil. A value showing the number of minutes required for the water to drop one inch is calculated from these readings.

**What does this information do for me?** The rate of percolation tells the septic designer and/or installer how well the system should function. It tells him how large the system must be and if a specially designed system is needed. If the percolation rate is too slow, special care must be given, since the effluent will move through the system too slowly, backing up into your house or yard. If the percolation rate is too fast, effluent may move through too quickly, possibly entering the ground water system before fully purified by soil filtering. Since it's better to have a proper design now than to replace it later, an accurate percolation test is a very desirable thing.

A percolation test is not only a good idea, but is required by local County Health Departments of almost every county in Colorado issuing a septic installation permit.

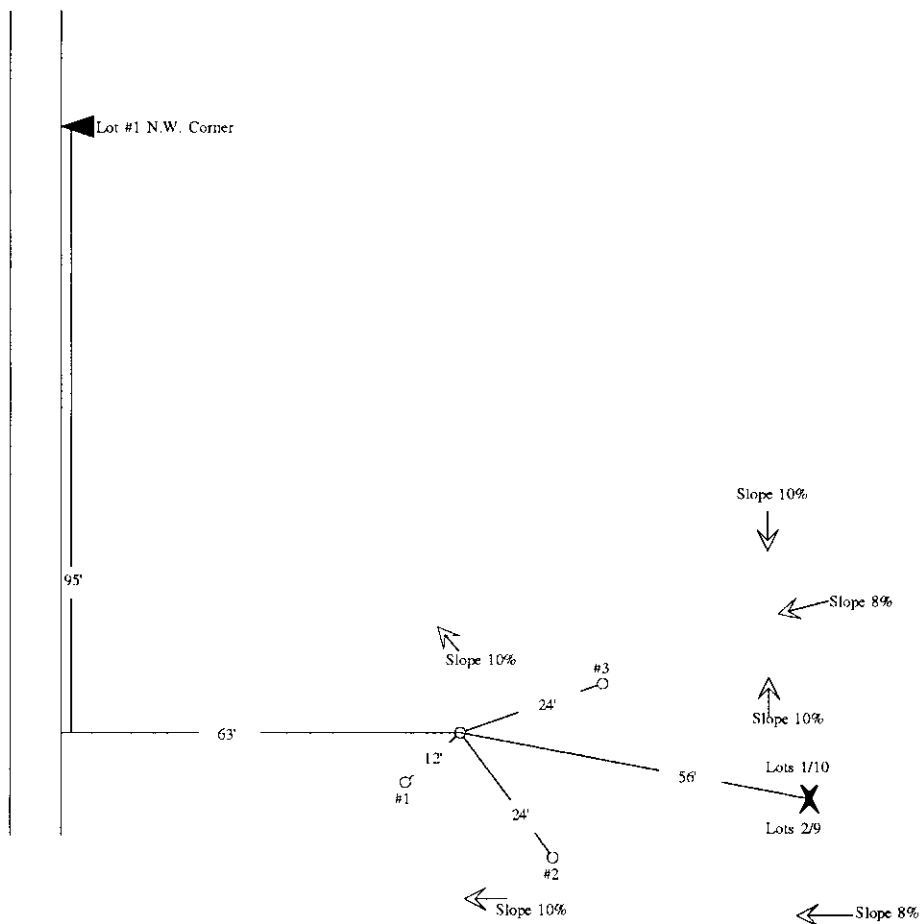
**Does a percolation test then insure a perfectly functioning septic system?** The health department has done their best to put in place guidelines that will allow proper design. We work hard to give you valid information and conform to health department standards. All conscientious designers and installers are careful to comply with health department requirements. All these factors are designed to minimize your risk.

However, there is still no surety that all will be perfect. Soil conditions can vary tremendously within a few feet. Outstanding percolation test results may occur inches from an area that would have failed and is part of the installation area. Also, conditions in the soil can change regarding underground water flow and other factors. Therefore, although everything reasonable is done to minimize your risk and to employ the best techniques known at this time, there is no absolute guarantee.

I hope this has been of some help. If you have any further questions, please let me know.

CERTIFIED PERCOLATION TEST  
Stan Crew


ALLISON ENGINEERING INC.  
James L. Allison, P.E.



Lot #1 Block #28 BRENTWOOD COUNTRY CLUB & CABIN SITES

Scale 1"=30'

Page 3 of 4

 = not to scale

ALLISON ENGINEERING, INC.

4245 Log Road  
Peyton, Colorado 80831  
(719) 331-6538 (PCS)  
(719) 683-5547 (FAX)

Septic System Design  
FOR

Blue Rose Homes  
1837 Main Street  
Security, Colorado 80911

LOCATION

Lots 1, 2, 10 of Block 28 and  
Lots 10, 11, 12 of Block 3  
Brentwoods Country Club and Cabin Sites Tract 1  
El Paso County, Colorado

PERFORMED AND REVIEWED  
BY

*James L. Allison*  
James L. Allison, Ph.D., P.E.

DATED

October 3, 1998



## SITE DESCRIPTION

The location of this soils test is Lots 1, 2, 10 of Block 28 and Lots 10, 11, 12 of Block 3 Brentwoods Country Club and Cabin Sites Tract 1, El Paso County, Colorado. This site is generally characterized as pine forest covered rolling hills. It is this engineer's understanding that a home of modular construction without a basement is proposed for this location.

## JUSTIFICATION

From a percolation test performed June 30, 1998 by Mr. Stan Crew it has been determined that a designed septic system will be required at this location due to the very hard packed soil and lower impermeable clay layers.

## CALCULATIONS

4 bedrooms X 150 gallons per bedroom X 150% = 900 gallons

Area =  $900 \times 28.7^{1/2} / 5 \times (1.4 \text{ for automatic washer})$

Area = 1350 square feet

A bed system is proposed at this location. Bio-diffusers may be used with a discount in required area of 30%. Thus the required area will be 945 square feet.

1500 gallon septic tank

## INSTALLATION INSTRUCTIONS

The area at which this septic system is to be installed is problematic for the following reasons:

- The ground is rolling hills – a one-vertical to three-horizontal slope away from the septic system will be required.
- The soil is hard-packed – soil will need to be broken up for a minimum distance of 5 feet on the downhill and end sides around and below the bed to facilitate effluent transport.
- Below the hard-packed soil is impermeable clay – a minimum of 4 feet of disturbed permeable material will be required between the leach lines and the top of the impermeable clay.
- The exact depth to impermeable clay varies – the installer will need to maintain an offset from the clay that will be spot checked by the engineer. Imported material may be required.
- A rectangular bed is to be installed with axis following a ground contour. Suggested dimensions are 18' X 55'.
- Natural drainage across the area of the proposed leach field must be diverted.

Otherwise all regulations of the El Paso County Health Department are to be adhered to.

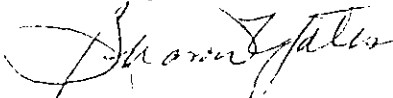
Lona G. Schwab  
Michael W. O'Neil  
August 18, 1998  
Page 2

**NOTATIONS**

1. The approved site plan is to be attached to the Board of Adjustment approval resolution.
2. Physical variances approved for a proposed structure (except for lot area variances) are valid only if construction on the structure is initiated within twelve (12) months of the date of the Board of Adjustment approval.
3. In the event that the vacation of Monte Vista Road is disapproved the Board of County Commissioners, the Board of Adjustment approval for lot area variance shall be null and void.

Should you have any questions or if I can be of further assistance, please contact me at (719) 520-6300.

Sincerely,



Sharon Yates, Planner I

cc: J. Rothmeyer/ File: BOA-98-026  
ec: Fred Williams, El Paso County Department of Transportation