



*Town of Alpine*

# SEPTIC PERMIT APPLICATION

**ALL information DUE NO LATER than 12pm on the Monday of the week prior to the scheduled meeting-  
NO EXCEPTIONS WILL BE GIVEN**

\*Failure to complete any one of the steps, warrants cancellation of permit request.  
Applications are valid for 180 days from the date they were submitted to the Town Office.  
There are no refunds on septic application fees.

**P&Z Commission meets the 2<sup>nd</sup> & 4<sup>th</sup> Tuesday of every month at 7:30pm  
A representative must be present for your permit to be approved!**





Town of Alpine

# SEPTIC PERMIT APPLICATION

There will be NO guarantees of being on the P&Z Agenda if...

- You wait until the deadline day for turning in your paperwork or,
- If your septic packet is not complete or,
- Your Review is found to be incomplete or not approved by the Town Building Official.

**\*Failure to complete any one of the steps warrants cancellation of permit request.**

- THE SITE PLAN MUST BE FILLED OUT COMPLETELY
- The Reserve Leach Field must be noted on the site plan and be the same size as the original leach field

LOT# \_\_\_\_\_ SUBDIVISION \_\_\_\_\_

PROPERTY ADDRESS \_\_\_\_\_

PROPERTY OWNER \_\_\_\_\_ HOME PHONE \_\_\_\_\_

MAILING ADDRESS \_\_\_\_\_

SEPTIC CONTRACTOR \_\_\_\_\_ PHONE \_\_\_\_\_

PROJECT \_\_\_\_\_

**1<sup>ST</sup> INSPECTION:** APPLICATION REVIEWED/ PROPERTY INSPECTED: Application is reviewed (including site plan); property is stringed and staked out (home, garage, septic system (including leach fields), and on-site inspection occurs. All surveyor pins must be located and visible.

**2<sup>ND</sup> INSPECTION:** SET SEPTIC TANK AND LEACH FIELDS ARE DUG: Prior to covering any part of septic system, on-site inspection occurs. Septic tank is set and hole is dug for leach fields. Do not put gravel in leach fields or trench yet.

**3<sup>RD</sup> / FINAL INSPECTION:** *Septic tank is plumbed in, gravel is in leach field and leach pipe is installed. Do not cover septic tank yet. Do not cover leach field with straw, dirt or building paper.*

*Installer must be present for inspections.*

**Note: FINAL INSPECTION IS REQUIRED BEFORE BACKFILLING.** If Septic Tank or Leach Field is covered before Final Inspection & Final Approval, Owner will be responsible to excavate tank and/or leach fields in order to complete the Final Inspection.

## GENERAL INFORMATION

### TYPE OF SYSTEM:

- \_\_\_\_\_ Subsurface Wastewater Treatment and Disposal
    - \_\_\_\_\_ Trench
    - \_\_\_\_\_ Mound
  - \_\_\_\_\_ Wastewater Treatment and Containment
    - \_\_\_\_\_ Evapotranspiration Bed
    - \_\_\_\_\_ Privy
    - \_\_\_\_\_ Stabilization Pond
  - \_\_\_\_\_ Other (describe) \_\_\_\_\_
- \_\_\_\_\_ Bed
  - \_\_\_\_\_ Seepage Pit
  - \_\_\_\_\_ Holding Tank
  - \_\_\_\_\_ Chemical Toilet

**I hereby grant authorized Town Personnel, the right of ingress and egress to and from said lands for any and all inspection purposes necessary to the exercise of this permit. I certify, to the best of my knowledge, that the aforementioned information and material is true and correct.**

\_\_\_\_\_  
Property Owner's Signature (and/or applicant)

\_\_\_\_\_  
Date

Permit#:	Date Received:	Amount Due:	Check#/Receipt :
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# GENERAL INSTRUCTIONS AND DESIGN INFORMATION

## I. Introduction

The following instructions were prepared to assist you in submitting an application, design information, and plan sheets for a small wastewater treatment and disposal system. By carefully following the instructions and submitting the required information, delays can be avoided and a permit can be issued to you more promptly.

## II. Disposal field alternatives

The selection of the type of disposal system depends upon site conditions such as terrain, lot layout, soil percolation rates, seasonal high groundwater table and underlying impervious strata. The standard trench or bed type disposal system can be used under most conditions. The trench system tends to require less earthwork and drain field rock than the bed system. However, the bed system is more compact and may be desirable in situations where land area is limited.

If the site conditions are hilly such that the bottom of the disposal area cannot be kept level, then the side hill type disposal field may be desirable.

If the seasonal high groundwater, bedrock or clay layer is within four feet of the bottom of the proposed drain field, then a mounded disposal field, a non-discharging pond, or evapotranspiration bed may be desirable. Since these types of facilities are more difficult to design, separate handouts have been prepared and are available upon request.

A pumping system may be necessary to pump the sewage uphill from your house or septic tank to your drain field. A separate handout is also available for this design.

## III. Complete Application

A complete application package is necessary before a permit can be issued.

One Copy of the following must be included in all application packages:

- \_\_\_\_\_ application form
- \_\_\_\_\_ design information sheets and percolation data
- \_\_\_\_\_ title sheet
- \_\_\_\_\_ plan sheet
- \_\_\_\_\_ septic tank detail sheet

One copy of the following detail sheets must also be included.

### ONLY SUBMIT THOSE SHEETS THAT REPRESENT YOUR SYSTEM.

- \_\_\_\_\_ trench type disposal field detail sheet
- \_\_\_\_\_ seepage pit type disposal field detail sheet
- or-
- \_\_\_\_\_ bed type disposal field detail sheet
- or-
- \_\_\_\_\_ side hill type disposal field detail sheet
- or-
- \_\_\_\_\_ mounded disposal field detail sheet
- or-
- \_\_\_\_\_ non-discharging stabilization pond detail sheet
- or-
- \_\_\_\_\_ evapotranspiration bed detail sheet
- or-
- \_\_\_\_\_ pump system bed detail sheet

## IV. LOADING RATES

The following table provides the wastewater loading rates based upon the percolation rate of your soil. The percolation rate can be determined from the procedure outlined in Appendix A which is attached.

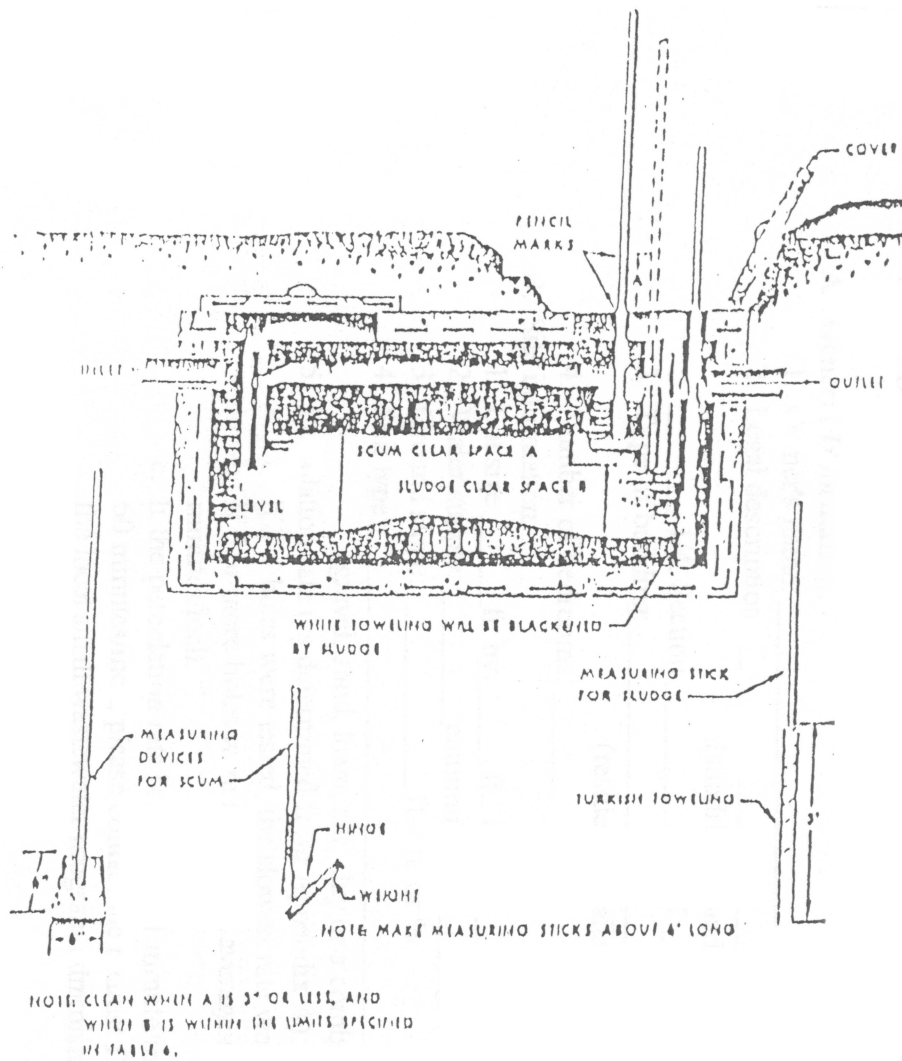
<u>Percolation Rate</u> <u>(minutes/inch)</u>	<u>Loading Rate</u> <u>(gallons/day/sq.ft. of infiltration area)</u>
1-5	0.80
7	0.71
9	0.65
12	0.57
15	0.52
20	0.46
30	0.39
40	0.35
50	0.32
60	0.30

**Table 1 - Allowable Sludge Accumulation**

	Liquid Depth		
	3 feet	4 feet	5 feet
	Distance from bottom of outlet device to top of sludge (inches)		
1,000-----	4	6	8
1,250-----	3	5	6

Scum may be measured with a stick, to which a weighted flap has been hinged or with any device that can be used to feel out the bottom of the scum mat. The stick is forced through the mat, the hinged flap falls into a horizontal position, and the stick is raised until resistance from the bottom of the scum is felt. With the same tool, the distance to the bottom of the outlet device can be found. (See Figure 1)

**FIGURE 1.**



## DESIGN INFORMATION

The following instructions will help you to supply the information that is necessary for us to review your project. The example and instructions will also help you to calculate the size of your wastewater system. This information can then be transferred to the details sheets and submitted for authorization.

**ABBREVIATIONS:** gpd= gallons per day s.f.= square foot

### EXAMPLE:

#### A. GENERAL INFORMATION:

- 1 Owners name: Willie Wastewater
- 2 Legal description: Lot 4, Running Water Estates  
(subdivision and tract)  
NW ¼, Section 5, T16N, R73W
- 3 Type of building: residential home  
(residence, trailer, cabin)
- 4 Number of bedrooms: 3

#### B. SITE INFORMATION:

1. Lot size: 240 ft. by 240 ft., area: 57,600 sq.ft. or 1.3 acres
2. Water supply: \_\_\_\_\_ community  private
3. Ground slope: 2% ft./ft. or %
4. Soil type: loamy sand (your evaluation)  
(gravel, sand, loam, silt, clay or a combination)
5. Percolation rate: (as determined from Appendix A):
  - a. If 3-5 holes were tested, the slowest rate was \_\_\_\_\_ minutes/inch.
  - b. If 6 or more holes were tested, the average rate was 14 minutes/inch.
  - c. If the percolation rate is less than 1 minute/inch or greater than 60 minutes/inch, please contact the nearest DEQ district office or the local small wastewater program administrator for special assistance.
6. The depth to the seasonally high groundwater level is 8 feet below the ground surface. How was this determined?  
backhoe cut  
When was this determined: June 3, 1984  
(The depth to the seasonally high groundwater level can be determined by monitoring the water level during high groundwater with either a shallow well or backhoe cut. Also, a trained soils person can detect "mottling" in the soil which shows where high groundwater levels have been. This can be done anytime of the year with the aid of a backhoe cut. The depth of water in a drinking well is not always reliable and cannot be used. However, a detailed well drillers log could be used to make a rough estimate).
7. The depth to bedrock or impermeable soil (greater than 60 minutes/inch percolation rate) is >11 feet below the ground surface. How was this determined? Dug to 11ft. with backhoe

### YOUR DESIGN:

#### A. GENERAL INFORMATION:

- 1 Owners name: \_\_\_\_\_
- 2 Legal description: \_\_\_\_\_  
(subdivision and tract)
- 3 Type of building: \_\_\_\_\_  
(residence, trailer, cabin)
- 4 Number of bedrooms \_\_\_\_\_

#### B. SITE INFORMATION:

1. Lot size: \_\_\_\_\_ ft. by \_\_\_\_\_ ft., area: \_\_\_\_\_ sq.ft. or \_\_\_\_\_ acres
2. Water supply: \_\_\_\_\_ community \_\_\_\_\_ private
3. Ground slope: \_\_\_\_\_ ft./ft. or %
4. Soil type: \_\_\_\_\_  
(gravel, sand, loam, silt, clay or a combination)
5. Percolation rate: (as determined from Appendix A):
  - a. If 3-5 holes were tested, the slowest rate was \_\_\_\_\_ minutes/inch.
  - b. If 6 or more holes were tested, the average rate was \_\_\_\_\_ minutes/inch.
  - c. If the percolation is less than 1 minute/inch or greater than 60 minutes/inch, please contact the nearest DEQ district office or the local small wastewater program administrator for special assistance.
6. The depth to the seasonally high groundwater level is \_\_\_\_\_ feet below the ground surface. How was this determined?  
\_\_\_\_\_ When was this determined? \_\_\_\_\_
7. The depth to bedrock or impermeable soil (greater than 60 minutes/inch percolation rate) is \_\_\_\_\_ feet below the ground surface. How was this determined? \_\_\_\_\_
8. The type and diameter of inlet/outlet pipe to be installed is: \_\_\_\_\_

4" CAST IRON OR SCHEDULE 40 PVC OR ABS IS REQUIRED



## YOUR DESIGN:

### C. SEPTIC TANK INFORMATION:

1. Size of tank: \_\_\_\_\_ gallons

(The minimum liquid volume of a septic tank shall be 1000 gallons for residences with up to four bedrooms. Additional capacity of 250 gallons per bedroom shall be provided for each bedroom over four.)

2. Manufacturer: \_\_\_\_\_ Model: \_\_\_\_\_

3. Supplier: \_\_\_\_\_ Phone#: \_\_\_\_\_

The design of the septic tank must meet the requirements as stated on the "standard septic tank detail sheet" which is attached.)

4. The estimated earth backfill over the septic tank is \_\_\_\_\_ feet.

5. Material: \_\_\_\_\_

(pre-cast concrete, fiberglass, cast-in-place concrete, etc.)

### D. ABSORPTION SYSTEM INFORMATION:

1. Wastewater volume: 150 gpd/bedroom X \_\_\_\_\_ bedrooms = \_\_\_\_\_ gpd

2. The absorption system loading rate is \_\_\_\_\_ gpd/sf.

This rate is determined from the table on page 1 combined with your percolation rate.

3. The minimum infiltrative surface area=

$$\frac{\text{Wastewater volume}}{\text{Loading rate}} = \frac{\text{_____}}{\text{_____}} = \text{_____ s.f.}$$

The infiltrative surface area is the area of the bottom of the drainfield and the sidewall of the trench (or bed) below the bottom of the distribution pipe.

### E. ABSORPTION SYSTEM LAYOUT

**1. Type of system:** \_\_\_\_\_ (trench or bed)

If you select a trench system, ONLY fill out part 2 below. If you select a bed system, ONLY fill out part 3 below.

#### 2. Trench system (only)

Since I need \_\_\_\_\_ s.f. of infiltration area, I will see if a trench \_\_\_\_\_ ft. long by \_\_\_\_\_ ft. wide with \_\_\_\_\_ ft. of stone under the distribution pipe is adequate.

a. bottom area = \_\_\_\_\_ ft. (total lineal feet of all trenches) X \_\_\_\_\_ ft. (width of each individual trench) = \_\_\_\_\_ s.f.

b. Sidewall area = \_\_\_\_\_ ft. (total lineal feet of all trenches) X \_\_\_\_\_ ft. (depth of stone under each pipe) X 2 walls per trench = \_\_\_\_\_ s.f.

c. total infiltrative area (bottom and sidewall) = \_\_\_\_\_ s.f. Since this value is greater than the \_\_\_\_\_ s.f.

I needed, the system is adequate. If this value was smaller, you would have to go back and either deepen, lengthen or widen the trenches until this minimum value was exceeded.

The actual configuration of your trench layout is up to you. However, you must maintain the separations distances as shown on the "plan sheet" and keep the bottom of the trenches level. If you cannot keep the bottom of the trenches level, you need to go to the "side hill type disposal field detail sheet" for assistance.

#### 3. Bed System/Seepage Pit

Since I need \_\_\_\_\_ s.f. of infiltration area, I will see if a bed/seepage pit that is \_\_\_\_\_ ft. wide X 30 ft. long with \_\_\_\_\_ ft. of stone under the distribution pipe is adequate.

a. bottom area = \_\_\_\_\_ ft. wide X \_\_\_\_\_ ft. long = \_\_\_\_\_ s.f.

b. Sidewall area = \_\_\_\_\_ ft. (depth of stone under pipe) X (\_\_\_\_\_ ft. + \_\_\_\_\_ ft. + \_\_\_\_\_ ft. + \_\_\_\_\_ ft. dimensions of the bed/seepage pit) = \_\_\_\_\_ s.f.

c. total infiltrative area (bottom and sidewall) = \_\_\_\_\_ s.f. Since this value is greater than the \_\_\_\_\_ s.f.

I needed, the system is adequate. If this value was smaller, you would have to go back and either deepen, lengthen or widen the bed/seepage pit until this minimum value was exceeded.

#### 4. Trench System with Infiltrators

Since I need \_\_\_\_\_ s.f. of infiltration area, and a Infiltrator in a bed system is equal to 40 sq.ft., I will see if \_\_\_\_\_ Infiltrator will be adequate.

a. Number of infiltrator(s) = \_\_\_\_\_ sq.ft. of infiltration \_\_\_\_\_ divided by 40 sq.ft. = \_\_\_\_\_

#### 5. Quick4 Unit Infiltrators

Since I need \_\_\_\_\_ s.f. of infiltration area, and an Infiltrator in a bed system is equal to 26.5 sq.ft., I will see if \_\_\_\_\_ Infiltrator will be adequate.

a. Number of infiltrator(s) = \_\_\_\_\_ sq. ft. of infiltration \_\_\_\_\_ divided by 26.5 sq.ft. = \_\_\_\_\_

#### 6. Bed System with Infiltrators

Since I need \_\_\_\_\_ s.f. of infiltration area, and a Infiltrator in a bed system is equal to 36 sq.ft., I will see if \_\_\_\_\_ Infiltrator will be adequate.

a. Number of infiltrator(s) = \_\_\_\_\_ sq.ft. of infiltration \_\_\_\_\_ divided by 36 sq.ft. = \_\_\_\_\_

*Continued..*

**YOUR DESIGN:**

F.  This symbol will be found on the plan detail sheets. This symbol requires that you fill in information or dimensions that apply to your specific design. Most of this information can be obtained from the blanks you just filled out. Now go and complete the detail sheets that are applicable to your system.

G. Installer \_\_\_\_\_

Agent or Contractor \_\_\_\_\_

Mailing Address \_\_\_\_\_  
(Street or P.O. Box, City, County & State)

Phone \_\_\_\_\_

Location of Business \_\_\_\_\_  
(Street, City, County & State)

H. Remarks (to include description of unusual site conditions or limitations, reasons for varying from the standard regulations, special requests, etc.)

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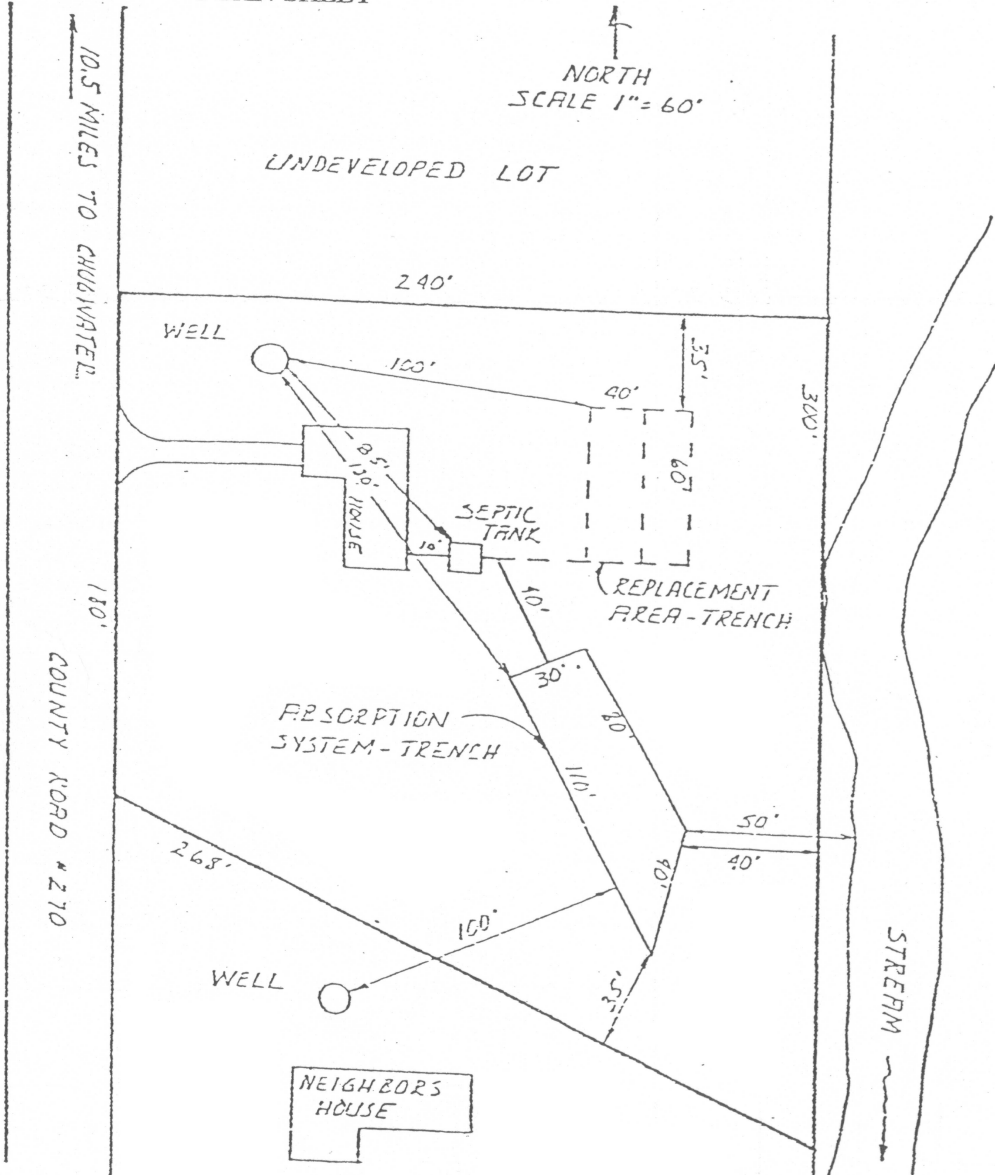
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**EXAMPLE OF PLAN SHEET:**

EXAMPLE OF PLAN SHEET



The percolation rate for each hole is calculated as follows:

$\frac{\text{Time Interval (minutes)}}{\text{Final Water Level Drop (inches)}}$

Example: If the last measured drop in water level after 30 minutes is 5/8 in.,  
 the percolation rate =  $\frac{30 \text{ min.}}{5/8 \text{ in.}} = 48 \text{ min./in.}$  or  $\frac{8 \times 30}{5} = \frac{240}{5} = 48 \text{ in./in.}$

If only three to five percolation tests are performed, the design percolation rate for the absorption system is the slowest rate from all the holes tested. If six more percolation tests are performed, the design percolation rate for the absorption system is the average of all holes tested as determined by the above formula.

a.) Field Data: the water level was measured every \_\_\_\_\_ minutes.

Hole No.	Actual Drop	Water Measured	Level in Inches	Drop of Last Test	Percolation Rate
1					
2					
3					
4					
5					
6					

b.) The depth of the holes varied from \_\_\_\_\_ to \_\_\_\_\_ inches.

TEST PERFORMED BY: \_\_\_\_\_

DATE: \_\_\_\_\_

**THE PERCOLATION TEST SHALL BE DUG AND BORED TO THE PROPOSED DEPTH OF THE ABSORPTION FIELD.**

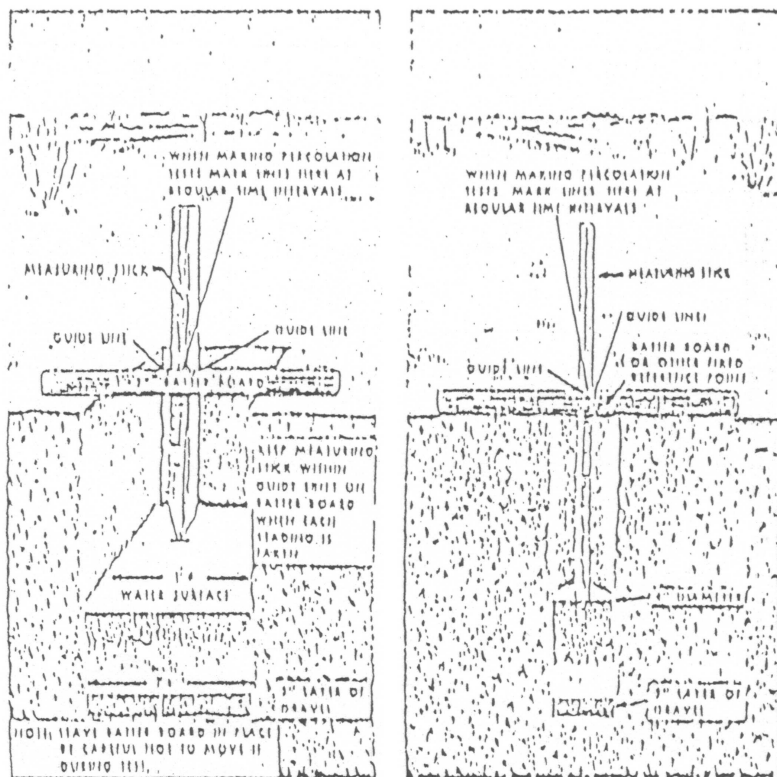


Figure 2.—Methods of making percolation tests.

## **YOU MUST FILL OUT SITE PLAN**

**Show the following information on Plan Sheet:**

### **GENERAL NOTES:**

- 1.) The Plan Sheet shall show the location of property lines, all buildings, all wells within 200 feet, septic tank, disposal field, water lines, streams or surface body of water. Refer to page 6 of the instructions for an example.
- 2.) Septic tanks shall have the following minimum separation distances:
  - 5ft. from dwelling
  - 50ft. from any water well
  - 50ft. from waterways
  - 25ft. from water lines and/or community water lines
  - 10ft. from property lines
- 3.) Disposal field must meet the following minimum separation distances:
  - 100ft. from any water well
  - 50ft. from waterways
  - 25ft. from drinking water lines and/or community water lines
  - 10ft. from dwelling or building
  - 10ft. from septic tank
  - 10ft. from property lines
- 4.) An area shall be shown on the plans for future installation of replacement absorption area.
- 5.) The septic tank inlet pipe should be laid in a straight line. Any single change or accumulative change of alignment of 22 ½ or greater shall be served by a cleanout.
- 6.) Inlet & outlet pipes should be laid at a minimum slope of ¼" per foot.

### **SITE PLAN:**

# Town of Alpine

## CHECKLIST APPLICATION FOR SMALL WASTEWATER SYSTEM PERMIT INSPECTOR'S REPORT SHEET

Location of Project: \_\_\_\_\_

Description of Project: \_\_\_\_\_

YES    NO

- |     |     |   |
|-----|-----|---|
| ___ | ___ | 1. Completed, signed, dated the application   |
| ___ | ___ | 2. Completed and attached Site Plan - it includes the following:  |
| ___ | ___ | a. north arrow  |
| ___ | ___ | b. all property boundaries and dimensions   |
| ___ | ___ | c. location of existing and/or proposed structures  |
| ___ | ___ | d. identification of setbacks. Are the minimum setback requirements met for:  |
| ___ | ___ | 1. Septic tank  |
| ___ | ___ | 2. absorption system (with replacement area)  |
| ___ | ___ | e. location and dimension of off-street parking area, driveway, etc.  |
| ___ | ___ | f. location of access roads   |
| ___ | ___ | g. identification of any easements such as electrical lines (overhead and/or underground), telephone, etc.            |
| ___ | ___ | h. drainage plan - indicated location of existing and/or proposed culverts, ditches or flow of water across the site. |
| ___ | ___ | i. location of irrigation ditches (existing irrigation ditch easements preserved)                                     |
| ___ | ___ | 3. Attached a copy of the recorded deed.  |
| ___ | ___ | 4. Attached a copy of the completed percolation test - taken at the proposed depth of field                           |
| ___ | ___ | 5. Completed and attached design information - it includes the following:   |
| ___ | ___ | a. conversion of percolation drops to percolation rate  |
| ___ | ___ | b. conversion of percolation rate to loading rate   |
| ___ | ___ | c. general information  |
| ___ | ___ | d. site information   |
| ___ | ___ | e. septic tank information  |
| ___ | ___ | f. absorption system information  |
| ___ | ___ | g. absorption system layout   |
| ___ | ___ | h. septic tank detail sheet   |
| ___ | ___ | i. absorption system detail sheet   |

Reviewed by: \_\_\_\_\_ Date: \_\_\_\_\_

Inspected by: \_\_\_\_\_ Date: \_\_\_\_\_