

# Outdoor Toilets



The use of outdoor toilets is allowed by the provisions of Minnesota Rules Chapter 7080.0172, subpart 2. If the pit has an earth bottom, this point should be at least three feet above saturated soil conditions. If this separation distance cannot be achieved in the location of the privy, then the pit should be liquid-tight, with the wastes periodically removed by someone who services septic tanks. The privy should be securely attached to the ground or to the tank used for the pit.

An outdoor toilet can be kept relatively odor-free and can be constructed for year-round use. But while an outdoor toilet is the least costly alternative to a flush toilet, it may be the least desirable alternative for a residence in a northern climate.

An improperly constructed and maintained privy can be an abomination to both eyes and nose. Several methods can be used to minimize the sanitary privy odor problem caused by decomposition of the organic matter in the pit.

- Chemical additives can change the bacterial action so that less odor is generated.
- Both the pit and the upper part of the structure must be vented.
- There should be tight fitting covers on the seat openings.
- Finally, the inside of the structure should be painted with a polyurethane-type paint to minimize the penetration of odors into the wood.

## Additives

A number of products on the market claim to minimize odors in a sanitary privy. One that is reasonably effective is hydrated lime. Associated compounds containing the same chemical are slaked lime, quicklime, hot lime, chloride of lime, and pebbled lime.

Approximately one cup of hydrated lime sprinkled over the solids in the pit will minimize odors and aid in decomposition. As the odors again become objectionable another cup of lime should be added. Excess amounts of hydrated lime will retard decomposition, however, rather than promote it, although the generation of odors will be inhibited. Caution should be used to keep the hydrated lime dust out of eyes and nostrils.

Commercial compounds are available and may be tried by the individual owner in order to determine their effectiveness. Some of them are odor suppressants while others change the bacterial environment within the pit.

## Ventilation

To minimize odors in the upper part of the privy, vent the pit. Insect-proof openings should be placed in the walls below the seat. A vent should extend from the underside of the seat board through the roof or up to a horizontal vent open to the sides of the toilet. All vent openings to the outside should be properly screened to keep out insects.

The vent must be flush with the underside of the seat board and must not extend down into the pit. Gases which cause odors are lighter than air, and if the vent extends down below the seat board, these gases will collect under the seat board to be released upward into the privy when the seat cover is opened.

The opening in the seat board must have a tight-fitting cover. The type of seat and cover used on a flush toilet is not satisfactory unless weather stripping is added. The cover should be kept in place when the privy is not in use, and can be hinged to close automatically.

At the top of the privy there should be a screened opening on each side or, preferably, all the way around the top to allow air to pass through and carry away any odors which may seep into the upper part of the structure.

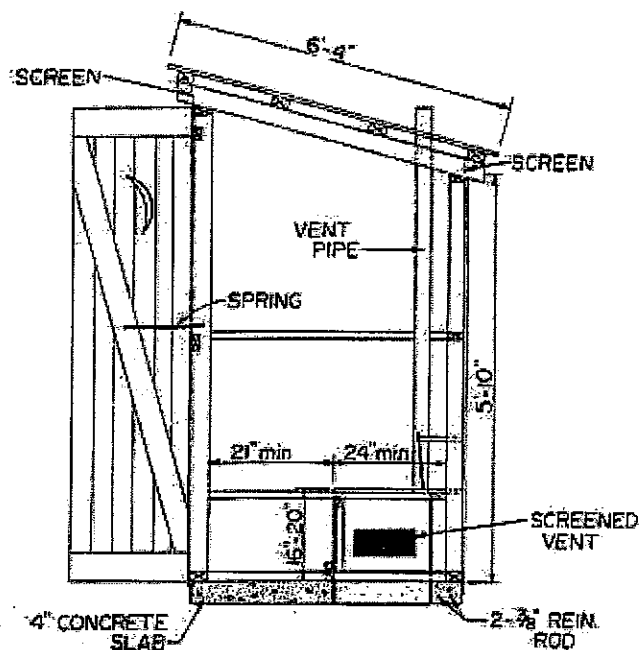
A tight-fitting door, preferably with a self-closing feature, such as a spring, should be used to minimize the number of insects that get into the privy. (A crescent-shaped window, also screened, may be cut into the door so that the utility of the structure will be recognized.)

## Keeping Wood Odor-Free

Any odors which in the past have risen into the structure of an old privy have probably become entrapped in the pores of the wood. To remove these odors, make a solution of disinfectant and trisodium phosphate, and scrub the inside walls and all other inside surfaces of the privy. This solution will remove odors from the pores of the wood. After the wood has dried, paint the inside of the privy with a polyurethane compound to prevent any additional odors from penetrating the wood.

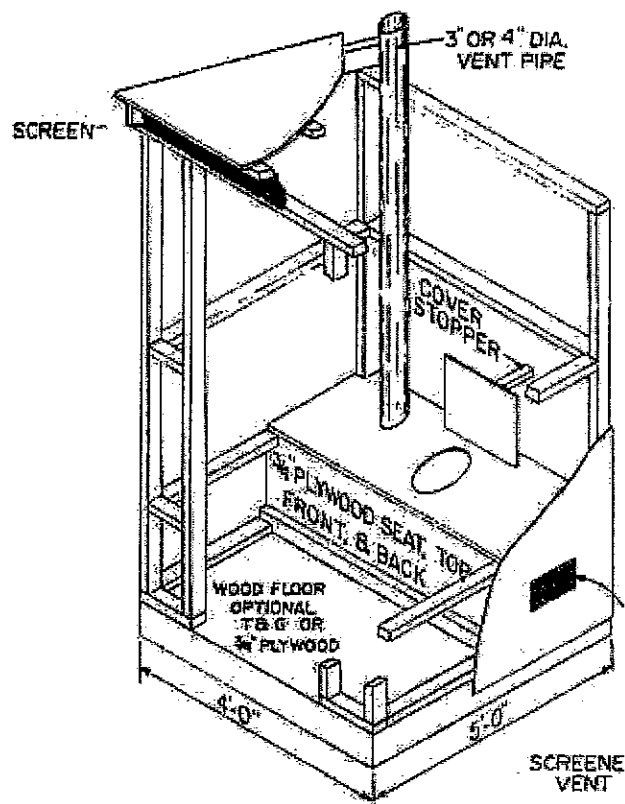
These techniques should minimize the odor that collects in the structure of a sanitary

privy. Proper air circulation can be very helpful in carrying away any odors, so proper venting of the structure is absolutely essential.



#### CONSTRUCTION NOTES

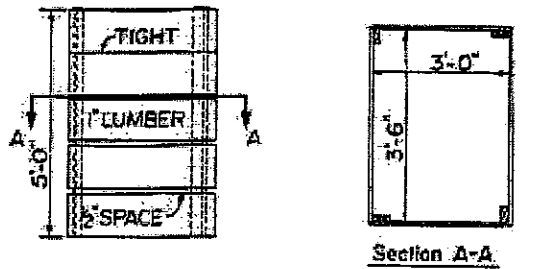
1. SIDES & DOOR CAN BE TONGUE & GROOVE WOOD OR EXTERIOR PLYWOOD
2. DIMENSION LUMBER CAN BE 2"x3" OR 2"x4"
3. ROOF CAN BE ANY WATERTIGHT MATERIAL OF ADEQUATE STRENGTH



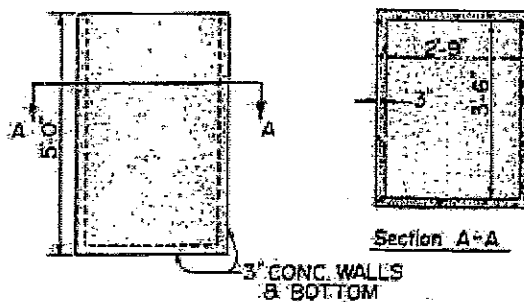
#### NOTES

1. THE PRIVY MUST BE LOCATED AT LEAST 100 FEET FROM ANY DOMESTIC WATER SUPPLY AND SET BACK FROM A LAKE AS REQUIRED BY THE SHORELAND STANDARDS (75 FEET FOR A GENERAL DEVELOPMENT LAKE, 100 FEET FOR A RECREATIONAL

DEVELOPMENT LAKE, AND 200 FEET FOR A NATURAL ENVIRONMENT LAKE).



WOODEN CRIBBED PIT w/ OPEN BOTTOM



CONCRETE PIT (WATER TIGHT TANK)

2. THE BOTTOM OF AN OPEN PIT CANNOT LEGALLY BE CLOSER THAN 3 FEET TO THE WATER TABLE. A WATERTIGHT CONCRETE TANK CAN BE INSTALLED INTO THE WATER TABLE IF NECESSARY.

3. THE PIT SHOULD HAVE AT LEAST 50 CUBIC FEET OF STORAGE CAPACITY AND BE CONSTRUCTED OF MATERIALS THAT DO NOT DETERIORATE RAPIDLY.

4. VENT THE PIT THROUGH THE SEAT BOARD WITH A FLUE OF AT LEAST 7 SQ. IN. OF AREA. INSTALL THE FLUE FLUSH WITH THE UNDERSIDE OF THE SEAT BOARD AND EXTEND IT AT LEAST 12 IN. ABOVE ROOF LEVEL. INSTALL VENTS TO ALLOW ENTRANCE OF AIR INTO THE PIT

5. PROVIDE A SCREENED VENT NEAR THE TOP OF THE BUILDING TO PREVENT TRAPPED ODORS.

6. THE PRIVY SHOULD BE INSECT TIGHT WITH A SELF-CLOSING DOOR (SPRING OR COUNTER WEIGHT). ALL VENTS SHOULD BE COVERED WITH 16 MESH SCREEN.

7. HINGE THE SEAT COVER IN SUCH A MANNER THAT IT WILL FALL SHUT. THE SEAT COVER SHOULD FIT TIGHTLY OVER THE SEAT OPENING TO KEEP OUT PIT ODORS.

8. USE POLYURETHANE PAINT ON ALL INSIDE WOOD SURFACES.