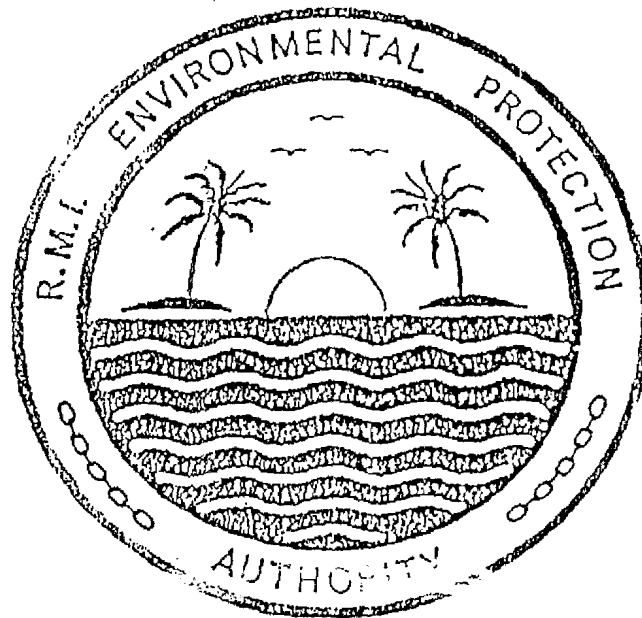


REPUBLIC OF THE MARSHALL ISLANDS

ENVIRONMENTAL PROTECTION AUTHORITY



TOILET FACILITIES AND SEWAGE DISPOSAL REGULATIONS

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REPUBLIC OF THE MARSHALL ISLANDS  
ENVIRONMENTAL PROTECTION AUTHORITY

TOILET FACILITIES AND SEWAGE DISPOSAL REGULATIONS

PART I - GENERAL PROVISIONS

1. Authority

a) These regulations are promulgated by the Republic of the Marshall Islands Environmental Protection Authority with the approval of the Minister of Health Services pursuant to Section 21 of the National Environmental Protection Act 1984.

b) These regulations supercede all previous publications and repeal 63 Trust Territory Code Chapter 13, Subchapter V, Toilet Facilities and Sewage Disposal Regulations.

c) These regulations have the force and effect of law.

2. Purpose

The purpose of these regulations is to establish minimum standards for toilet facilities and sewage disposal to minimize environmental pollution, health hazards, and public nuisance from such facilities.

3. Effective date

These regulations shall come into force one day after their approval by the Cabinet.

4. Interpretation

In these regulations, unless the context otherwise requires:

a) "Absorption system" means a device constructed under the ground surface to receive and to distribute effluent in such a manner that the effluent is effectively filtered and retained below ground surface.

b) "Authority" means the Republic of the Marshall Islands Environmental Protection Authority or its authorized staff representative.

e) "Owner of property" includes owner, occupant, possessor, lessee, and any person who has control of the property.

f) "Person" means any individual, corporation, company, association, partnership, agency, authority, commission, foundation, the Republic of the Marshall Islands government or its political subdivisions, or any local, state, or foreign government or municipality, or other institution or entity, whether public or private.

g) "Privy" means a structure and ground excavation for the disposal of human excreta by non-water carriage methods. Examples are: "water seal toilet" (see FIGURE 4), "ventilated improved pit latrine" (see FIGURE 5), "pit privy", "outside benjo", "outhouse", "mea bwidej", and "trench latrine".

h) "Public building" means any enclosed structure in which ten or more persons may gather for any lawful purpose. Examples of public buildings are, but not limited to: schools, churches, theaters, courtrooms, commercial establishments, sporting arenas, jails, hospitals, hotels, food establishments, indoor exhibits or exhibitions, resorts, and auditoriums.

i) "Scum" means a mass of sewage solids floating on the surface of wastes in a septic tank which is buoyed up by gas, grease, or other substances.

j) "Seepage pit" means an absorption system consisting of a covered pit with open jointed lining into which septic tank effluent or laboratory, kitchen or laundry waste may seep or leak into the surrounding soil.

k) "Septic tank" means a water-tight receptacle which receives raw sewage designed and constructed so as to retain solids, digest organic matter through a period of detention, and allow the liquid to discharge into the sub-soil outside the tank through a buried open-joint piping system or a seepage pit.

l) "Septic tank system" means a septic tank as defined above together with the buried soil absorption system.

m) "Sewage" includes untreated or insufficiently treated human excreta, food waste disposed of through sewers, liquid waste from residences, commercial and industrial establishments, and such diluting water as may have entered the waste disposal system.

n) "Sewerage system" means any arrangement of devices and structures used for collecting, treating, transporting, conveying, or disposing of sewage

## PART II - TOILET AND SEWAGE FACILITIES REQUIREMENTS

### 5. General requirements

It is required that all public buildings or any buildings which may be used for dwellings shall have toilet and sewage facilities in accordance with the types as provided in Part III of these regulation.

## PART III - TYPE OF TOILET AND SEWAGE FACILITIES

### 6. Type 1

Type 1 refers to a toilet which is flushed with water and connected to a sewerage system available to the public.

### 7. Type 2

Type 2 refers to a toilet which is flushed with water and connected to a septic tank.

### 8. Type 3

Type 3 refers to a privy (outside benjo).

### 9. Sewerage system

Where a sewerage system is available to the public, all wastewater plumbing outlets from any buildings shall be connected to the sewerage system, and all toilet facilities shall be Type 1. This regulation shall apply to all public buildings or any buildings which may be used for dwellings, and are constructed after the effective date of this regulation.

10. Water available

Where water is available from a public works division, other government agency, or private franchise, but a sewerage system is not available to the public, toilet facilities shall be Type 2; except that if, in the opinion of the Authority, a Type 2 facility may not function properly due to poor seepage rate, inappropriate water supply, lot condition, or other reason, the Authority may at its discretion and by written instrument, require a Type 1 or Type 3 facility to be used. This regulation shall apply to all public buildings or any buildings which may be used for dwellings, and are constructed after the effective date of this regulation.

11. Pre-existing buildings

All other public buildings or any buildings which may be used for dwellings which are in existence before the effective date of this regulation and are using Type 2 facilities, may continue to use such facilities if they meet the applicable sanitation requirements and pose no immediate water pollution threat or public health hazard.

Provided, however, that one year from the effective date of this regulation, the said facilities shall be connected to a sewerage system available to the public, and if no such system is available, shall be caused to conform to Part VI of these regulations.

All other public buildings or any buildings which may be used for dwellings which are in existence before the effective date of this regulation and are using Type 3 facilities, may continue to use such facilities if they meet the applicable sanitation requirements and pose no immediate water pollution threat or public health hazard.

Provided, however, that one year from the effective date of this regulation or upon written notification by the Authority, whichever is earlier, if a water supply is available the said facilities shall be upgraded by the owner of the property to Type 2 facilities conforming to Part VI of these regulations, and if a water supply is not available the said facilities shall be made by the owner of the property to conform with Part VII of these regulations.

12. Absence of public water system

In the absence of water and sewerage systems available to the public, all toilet and disposal facilities shall be at least Type 3. Toilet and disposal facilities may be Type 2 with the written approval of the Authority.

## PART IV - PERMITS

### 13. Permit required

No building construction, public or private, may be initiated without first obtaining a permit from the Authority providing that the toilet disposal facilities intended to serve such building will be in compliance with these regulations.

### 14. Application for permit

a) Application for permits shall be on a form approved by the Authority and shall include the following information:

- (i) plot plan drawn to scale completely dimensioned, showing direction and approximate slope of surface, location of all present and proposed structures, drainage channels, utilities, roads, surface water and sewage facilities in relation to property line and other structures;
- (ii) description of the complete installation of toilet facilities and sewage disposal including quality, kind and grade of material, equipment and method of assembly and installation.

b) Applications shall be made no later than 30 calendar days before the building construction is scheduled to begin.

c) Applications shall be accompanied by a processing fee of \$25.00, which is not refundable, except that no fee is required by the government of the Republic of the Marshall Islands. The Authority may waive the processing fee for good reason upon written request of the applicant.

d) Each application shall be signed by the applicant and shall constitute an agreement that the applicant will assume responsibility for undertaking building construction in accordance with these regulations.



15. Special conditions

The Authority may, upon issuing a permit, impose any conditions or special requirements as it sees fit. All such conditions and requirements shall be listed on a written instrument attached to the permit.

16. Other permits

No building permit or occupancy permit under any Republic of the Marshall Islands law or regulation shall be issued without prior compliance with these regulations.

PART V - TYPE 1 SEWERAGE SYSTEM STANDARDS

17. General requirements

A sewerage system available to the public shall conform to the requirements of all building, operations, maintenance, and plumbing plans and specifications, which shall be made available to the public by the operator of the sewerage system and which shall be approved by the Authority. Any deviations from prescribed procedure and materials must be approved by the person responsible for the operation of the sewerage system and the Authority before installation.

18. Connections

The connection of any building to a sewerage system available to the public shall conform to the requirements of the building, operations, maintenance, and plumbing plans and specifications, which shall be made available to the public and which shall be approved by the Authority. Any deviations from prescribed procedure and materials must be approved by the person responsible for the operation of the sewerage system and the Authority before installation. All such connections shall be made gas-tight and water-tight.

19. Additional requirements

In addition to the requirements set forth in regulation 17, the person responsible for the operation of a sewerage system available to the public shall:

- (i) safely operate, maintain, modify, inspect, clean and repair the system;
- (ii) keep permanent, detailed, up-to-date records of equipment and operations;
- (iii) keep a written contingency plan for emergency operations, immediately correct emergency conditions and continue corrective work until the unit is operational;
- (iv) collect all contractually and statutorily required environmental data;
- (v) check, inspect, and verify all aspects of operations to ensure continuity of operation in accordance with the system's design;
- (vi) immediately clean up any surface leakage from the system;
- (vii) provide maintenance, inspection, repair and modification to the sewage outfall systems, and well as make every reasonable effort to record daily outflow;
- (viii) operate a sewage truck to be used to pump public and private septic tanks for disposal in the sewerage system.

PART VI - TYPE 2 SEPTIC TANK STANDARDS

20. General requirements

Septic tanks shall be constructed of sound, durable, watertight materials that are not subject to excessive corrosion or decay. They shall be designed to be watertight below the liquid level, to withstand all expected physical forces, to provide settling of solids, accumulation of sludge and scum, and access for appropriate inspection and cleaning.

21. Typical construction and design features

Septic tanks may be constructed of the following:

- (i) precast reinforced concrete;
- (ii) poured-in-place concrete;
- (iii) concrete block;
- (iv) materials approved by the Authority.

b) Septic tanks may have single or multiple compartments and may be oval, circular, rectangular, or square in plan, provided the distance between the inlet and outlet of the tank is at least equal to the liquid depth of the tank. In general, tank length should be at least two to three times the width. Refer to FIGURE 1 for examples of three typical septic tank shapes appropriate to the Republic of the Marshall Islands.

c) A typical concrete septic tank is illustrated in FIGURE 2.

22. Freeboard storage

Freeboard storage volume shall consist of fifteen percent or more of the required liquid capacity of the tank and shall be provided in the space between the liquid surface and the top of inlet and outlet devices.

23. Liquid Depth

The liquid depth of a septic tank shall be not less than thirty inches nor more than seventy two inches.

24. Accessibility of tank

Septic tanks shall be installed in a location so as to be accessible for servicing and cleaning, and shall have no structure or other obstruction placed over them so as to interfere with such operations.

25. Location

No septic tank system or seepage pit shall be located, constructed or maintained so as to contaminate any potable water supply, and in no case shall any septic tank system or seepage pit be located at a horizontal distance of less than fifteen feet from any body of water; nor shall any septic tank system or seepage pit be located less than one hundred feet from any well, without the express written permission of the Authority.

26. Cover

a) Every septic tank or seepage pit shall be provided with a substantial and watertight cover and shall be provided with properly placed manhole coverings not less than eighteen inches in diameter and handhole openings no less than six inches in diameter for cleaning purposes.

b) No cover shall be placed over any septic tank system or seepage pit until it has been inspected and approved by the Authority.

27. Tank excavation and backfill

The hole to receive the tank shall be large enough to permit the proper placement of the tank and backfill. Tanks shall be installed on a solid base that will not settle and shall be level.

28. Absorption systems

a) Septic tank effluent shall be conducted to the absorption system through a watertight PVC pipe and fittings.

b) Distribution pipe for gravity-flow absorption systems shall be four inches in diameter and shall be perforated. Distribution pipe and pipe fittings shall be of materials capable of withstanding corrosive action by sewage and sewage-generated gases.

c) A one foot minimum separation is required between trench bottom and the maximum ground water table.

d) A typical absorption field installation for level or nearly level topography is illustrated in FIGURE 3.

29. Seepage pits

Seepage pits may be used to supplement the subsurface disposal field or in lieu of such field where conditions favor the operation of seepage pits, as may be found necessary and approved by the Authority on a case-by-case basis. Every seepage pit where caving is possible shall be lined with concrete building blocks, stones, precast concrete or similar durable material.

PART VII - TYPE 3 PRIVY STANDARDS

30. General requirement

All Type 3 facilities shall be constructed of such material as will prevent access to human excreta by rodents, flies or other vectors. All such facilities shall be designed so as to minimize odor, environmental pollution, health hazards, and public nuisance. Two typical examples of Type 3 facilities are illustrated in FIGURE 4 (a water seal toilet) and FIGURE 5 (a ventilated improved pit latrine).

31. Cover

All non-water carriage excreta disposal pits shall be covered from time to time, as necessary, with earth or lime to exclude flies and prevent odor.

32. Location

No Type 3 facility shall be located, constructed or maintained so as to contaminate any potable water supply, and in no case shall any Type 3 facility be located at a horizontal distance of less than fifteen feet from any body of water.

33. Inspection

No Type 3 facility shall be put in use until it has been inspected and approved by the Authority.

34. Replacement

Type 3 facilities shall be replaced and properly sealed and filled with earth when the level of excreta reaches within two feet of the ground surface.

PART VIII - TOILET FACILITY STANDARDS

35. Seats

All toilet seats shall have a close-fitting cover.

36. Ventilation

Ventilation shall be provided for each Type 1 and Type 2 toilet facility to extend outside the building, and shall not be less than six feet high measured from the ground level.

PART IX - DISPOSITION OF SEWAGE AND EXCRETA

37. Unlawful disposal

It shall be unlawful to dispose of treated, semitreated, or untreated sewage or excreta into any pond, well, reservoir, body or water, or onto the ground, whether public or private, unless it is clearly shown that such activity is necessary for economic and social value or for research purposes, and that the said activity poses no public health hazard. A special permit shall be required from the Authority for each such activity.

## PART X - MAINTENANCE AND REPAIR RESPONSIBILITY

### 38. Maintenance

Toilets and sewage facilities shall be maintained at all times in good repair and in a clean and sanitary condition. The owner of the property is primarily responsible for the structural completeness, good repair, and maintenance of toilet and sewage facilities in conformity with applicable sanitation regulations.

### 39. Repair or replacement

Any toilet and sewage disposal facility, septic tank, seepage pit, or privy which fails to comply with the provisions of these regulations, shall be repaired, altered, cleaned, emptied, or removed and replaced by the owner of the property as may be ordered by the Authority.

## PART XI - ENFORCEMENT

### 40. Violations

a) A person who violates any provision of these regulations or any permit, requirement or order issued thereunder, shall be subject to enforcement action by the Authority.

b) The enforcement action may be any or all of the following:

- (i) revocation of a permit issued under these regulations;
- (ii) the making of a cease and desist order in relation to the subject matter of the violation;
- (iii) the imposition of a civil penalty, fixed by the Authority, not exceeding \$10,000.00 for each day on which the violation continues;

- (iv) the institution of civil proceedings to restrain the violation; and
- (v) any other action authorized by the National Environmental Protection Act 1984 or any other law.

41. Right to enter

The Authority may, whenever it is necessary for the purposes of these regulations, enter any establishment or upon any property, at reasonable times, for the purposes of inspection or obtaining information to carry out the purpose of these regulations.

42. Public hearing

(a) When the Authority revokes a permit under regulation 24 b)(i) or makes a cease and desist order under regulation 24 b)(ii), or both, a public hearing shall be conducted by the Authority to determine the authenticity of the facts upon which the order was made.

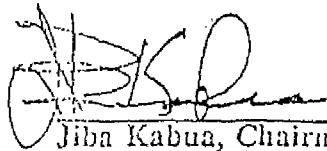
(b) Adequate notice of the hearing, and an adequate opportunity to appear and be heard at the hearing, shall be given to all interested persons.

43. Penalty for lack of permit

Any person required to have a permit under these regulations and engaged in a activity without such a permit shall be subject to a civil penalty of \$100.00 per day for each day the activity is conducted without a permit.

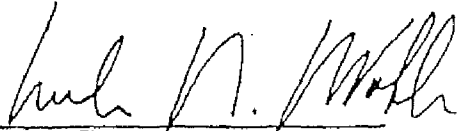


Adopted by the Authority on February 6, 1990.



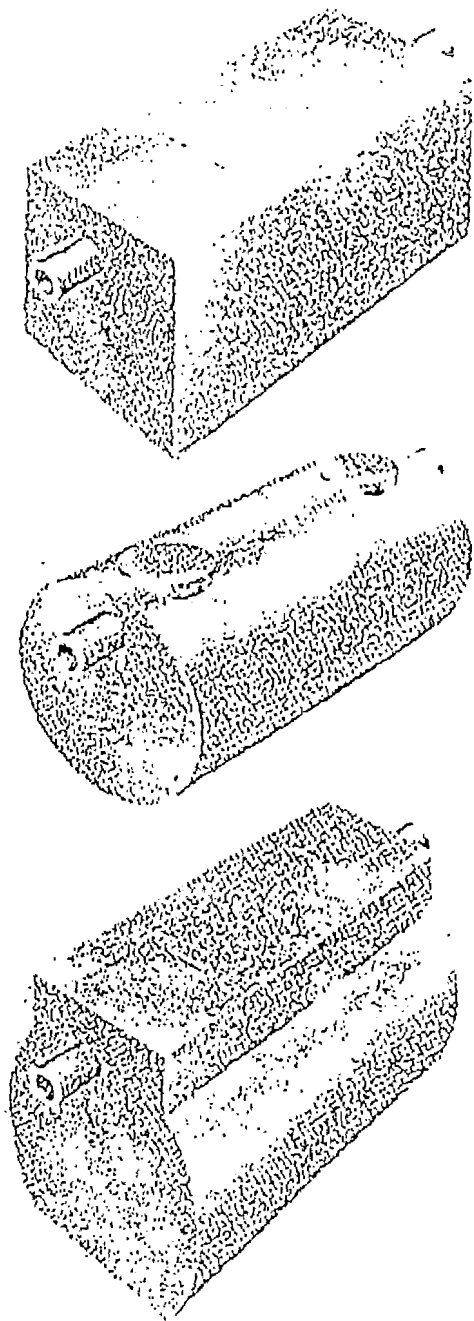
Jiba Kabua, Chairman  
Environmental Protection Authority  
Republic of the Marshall Islands

Approved by the Minister of Health Services on February 9,  
1990.



Ruben Zackhras  
Minister of Health Services  
Republic of the Marshall Islands

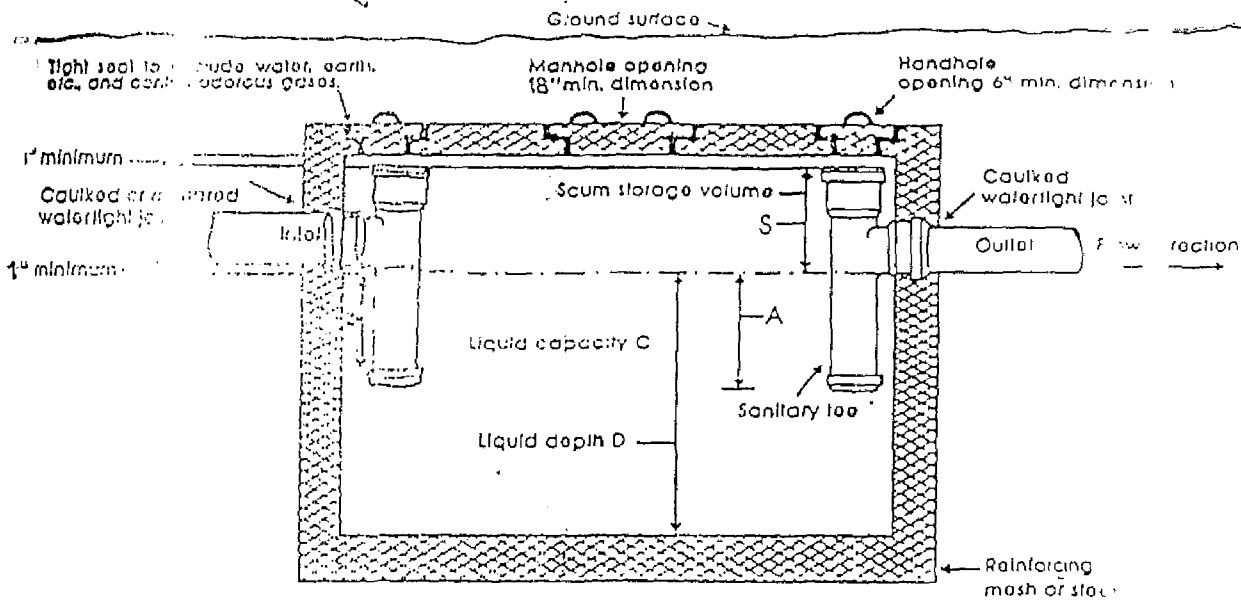
EFFECTIVE DATE: February 24, 1990



Typical septic tank shapes.

FIGURE 1

Min. 6" over tanktop.



SECTION

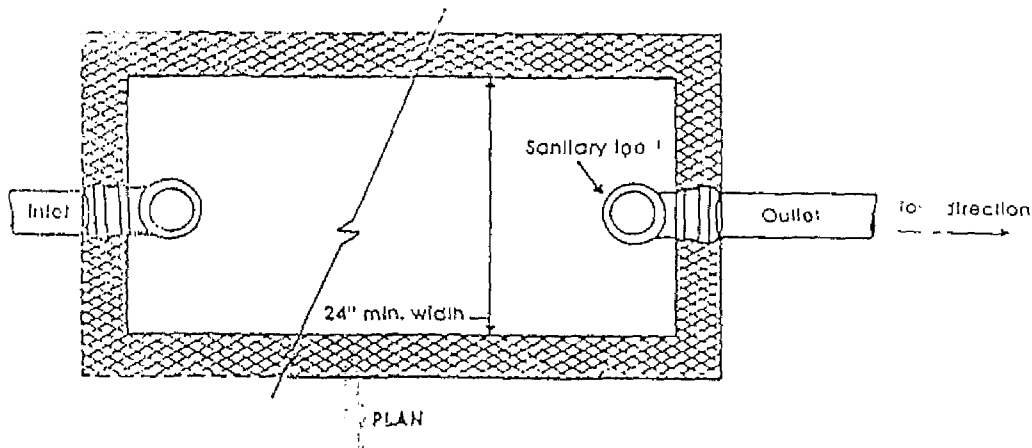
A - Shall be approximately 40% of depth D for tanks with vertical sides.

C - Liquid capacity in gallons equals inside volume in cu. ft.  $(L \times W \times \text{Liquid depth}) \times 7.48$ .

D - Not less than 30" depth. Greater than 72" should not be considered in tank capacity.

S - Not less than 15% of the required liquid capacity C.

Z - Minimum of 6" but not greater than 40% of the depth D.



PLAN

SINGLE COMPARTMENT SEPTIC TANK  
(CONCRETE)  
TYPICAL EXAMPLE

FIGURE 2

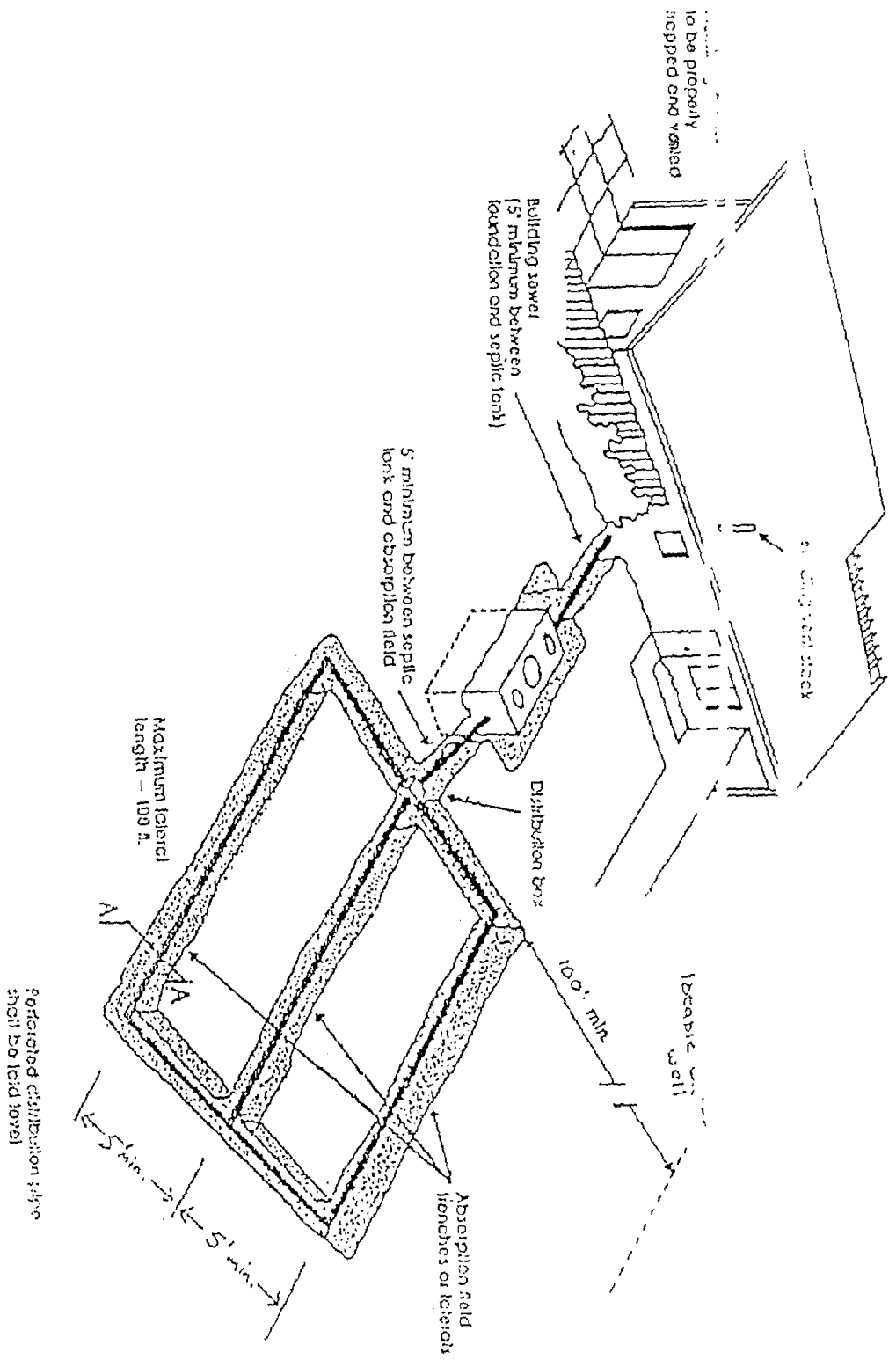
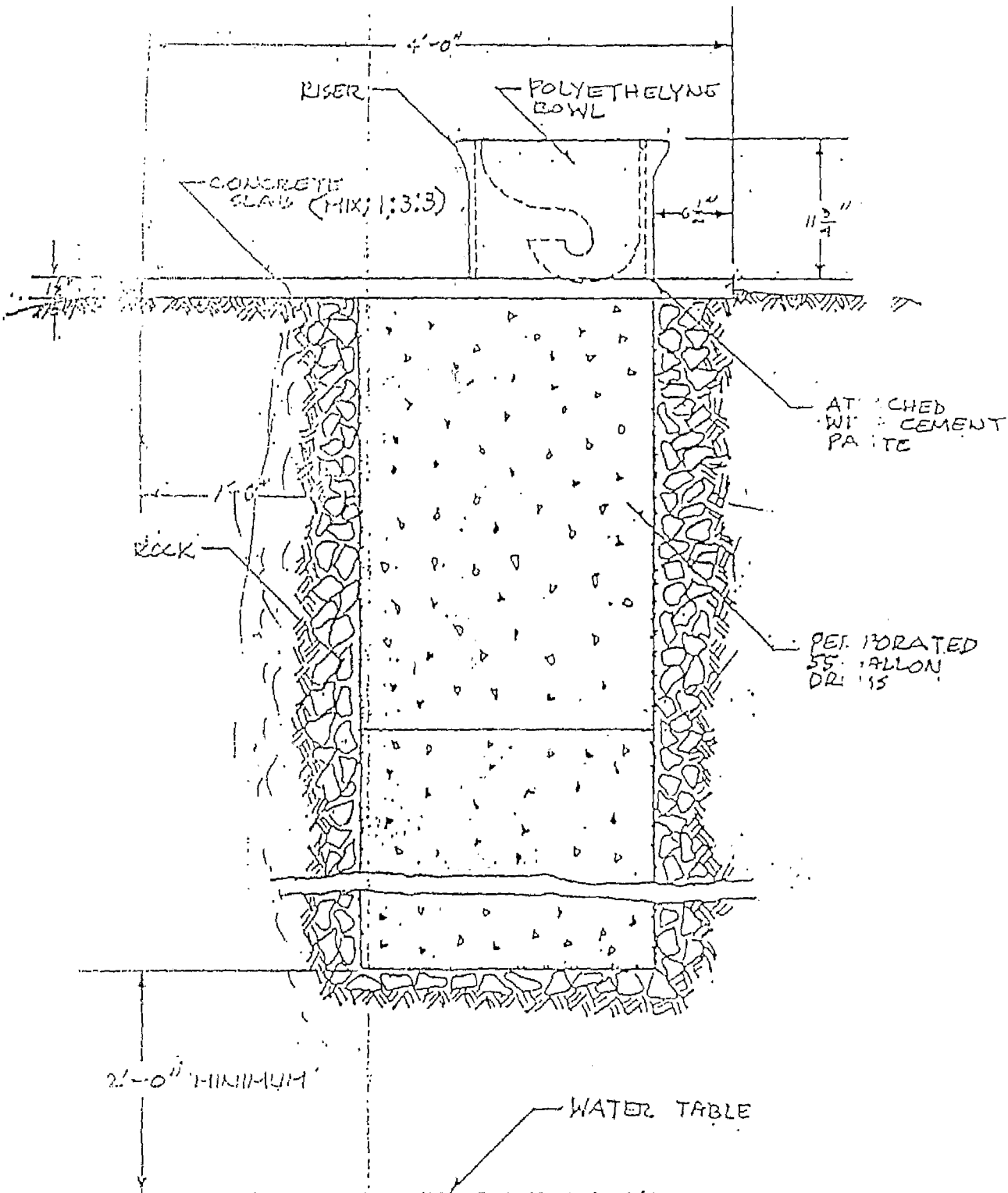


FIGURE 3. SEPTIC TANK AND ABSORPTION FIELD INSTALLATION WITH 100' FIELD LEVEL TOPOGRAPHY

ABSORPTION FIELD INSTALLATION LEVEL ON NEARLY LEVEL TOPOGRAPHY

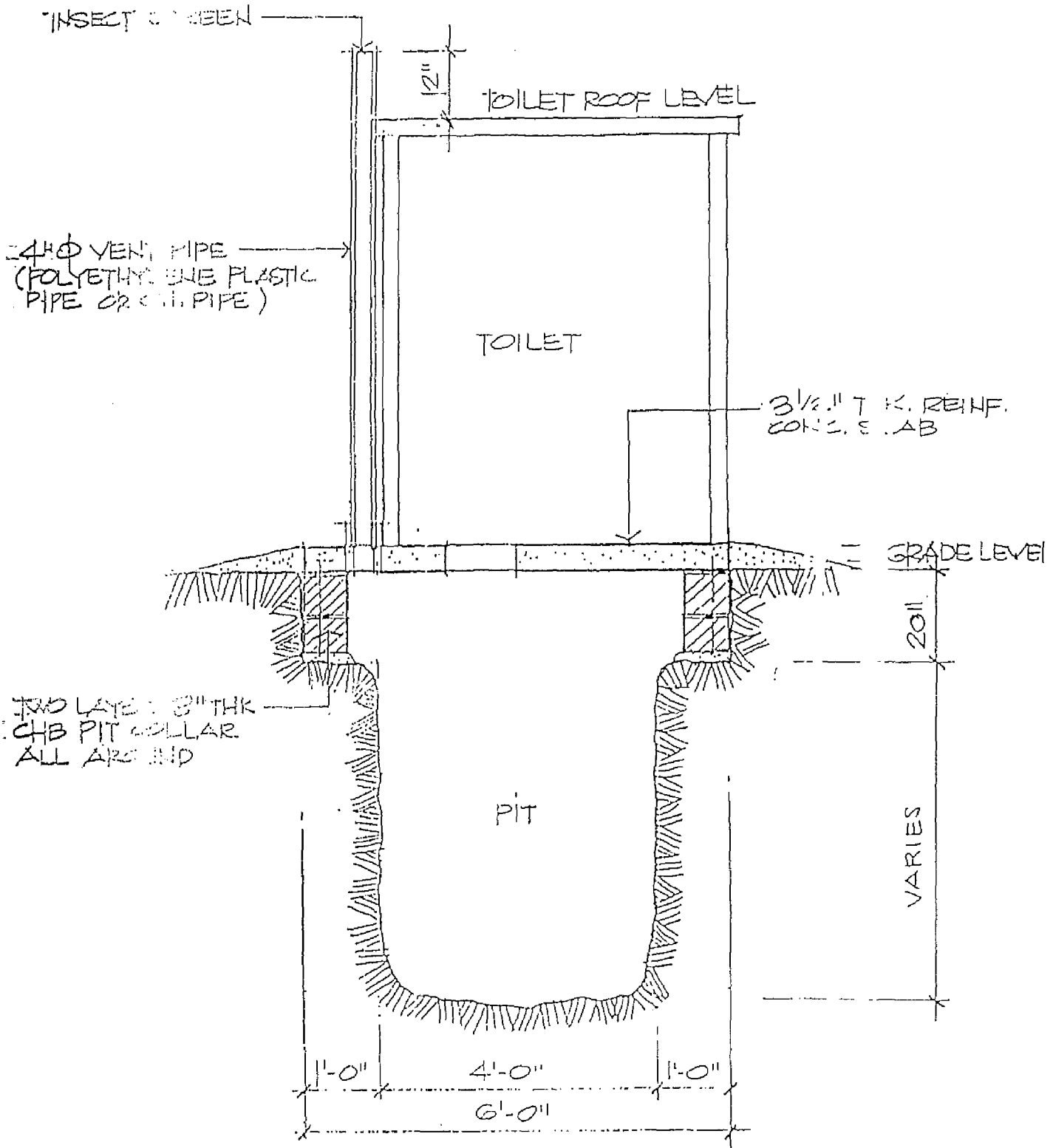
FIGURE 3



SCALE: 1"=1'-0"

WATER SEAL TOILET - TYPICAL EXAMPLE

FIGURE 4



VENTILATED IMPROVED PIT (VIP) LATRINE - TYPICAL EXAMPLE

FIGURE 5