THE NEW LPI..

AND OTHER TIPS..

WHAT YOU ALWAYS WANTED TO KNOW.....

We Will Be Covering..

- HHE-200 FORMS
- SITE EVALUATION PROCESS
- SETBACKS
- PERMITING
- BACKFILL MATERIAL
- INSPECTIONS
- COMPLAINTS
- ISSUES

Introduction - Background

- Maine is a rural state and relies on decentralized systems for drinking water and disposal of human waste
- DHHS and it's predecessors have regulated on-site sewage disposal since 1926.
- Improper design or installation of a septic system can cost the homeowner tens of thousands of dollars and create disease and unsanitary conditions.

STATE STATUTE
TITLE 30-A

SS 4211, #3

SUBSURFACE WASTEWATER DISPOSAL SYSTEM:

No person may <u>ERECT A STRUCTURE</u> that requires a subsurface wastewater disposal system until documentation has been provided to the municipal officers that the disposal system can be constructed in compliance with rules adopted under Title 22, Section 42 (MAINE SUBSURFACE WASTEWATER DISPOSAL RULES) and this section.

BUNKHOUSES

A DETACHED BEDROOM HAVING **NO PLUMBING**; ACCESSORY TO A SINGLE FAMILY DWELLING FOR THE TEMPORARY ACCOMODATIONS OF GUESTS OF THE PROPERTY OWNER WHILE THE OWNER IS AN OCCUPANT OF THE PRINCIPAL DWELLING.

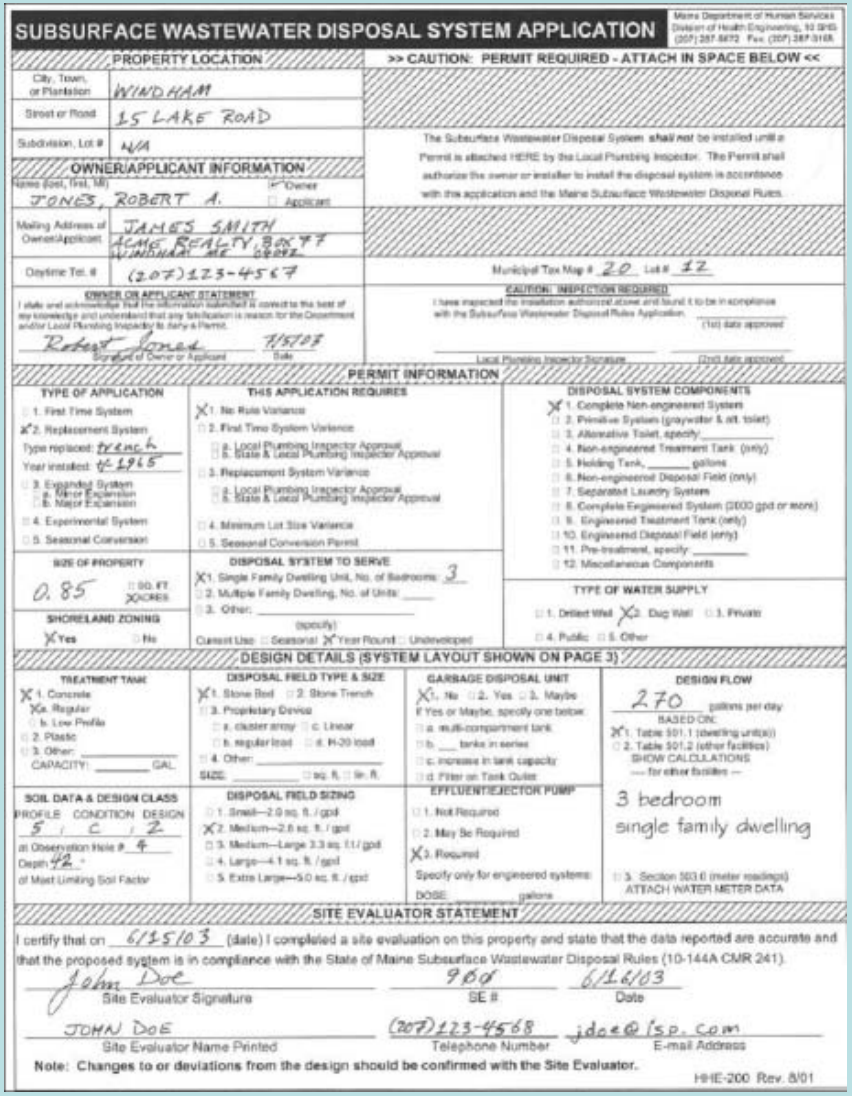
SUBSURFACE WASTEWATER APPLICATIONS (HHE-200)

HHE-200 Form

Page One

Page one of the HHE-200 Form must be signed by both the owner/applicant and the Site Evaluator.

It is important to check that each block on the form is properly completed. If any information is lacking, the LPI should not issue the permit.



SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Department of Human Services, Division of Health Engineering, 10 SHS, (207) 287-5672 Fax: (207) 287-3165

PROPERTY LOCATION

>> CAUTION: PERMIT REQUIRED - ATTACH IN SPACE BELOW <<

City, Town, or Plantation: WINDHAM

Street or Road: 15 LAKE ROAD

Subdivision, Lot #: N/A

The Subsurface Wastewater Disposal System shall not be installed until a Permit is attached HERE by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.

OWNER/APPLICANT INFORMATION

Name (last, first, MI): JONES, ROBERT A. — X Owner ☐ Applicant

Mailing Address of Owner/Applicant: JAMES SMITH ACME REALTY BOX 77 WINDHAM ME 04062

Daytime Tel. #: (207)123-4567

Municipal Tax Map # 20 Lot # 12

OWNER OR APPLICANT STATEMENT

I state and acknowledge that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a Permit.

Robert Jones — Signature of Owner or Applicant — 7/5/03 Date

CAUTION: INSPECTION REQUIRED

I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application. (1st) date approved

Local Plumbing Inspector Signature — (2nd) date approved

PERMIT INFORMATION

TYPE OF APPLICATION

☐ 1. First Time System
X 2. Replacement System
Type replaced: trench
Year installed: ± 1965
☐ 3. Expanded System
☐ a. Minor Expansion
☐ b. Major Expansion
☐ 4. Experimental System
☐ 5. Seasonal Conversion

THIS APPLICATION REQUIRES

X 1. No Rule Variance
☐ 2. First Time System Variance
☐ a. Local Plumbing Inspector Approval
☐ b. State & Local Plumbing Inspector Approval
☐ 3. Replacement System Variance
☐ a. Local Plumbing Inspector Approval
☐ b. State & Local Plumbing Inspector Approval
☐ 4. Minimum Lot Size Variance
☐ 5. Seasonal Conversion Permit

DISPOSAL SYSTEM COMPONENTS

X 1. Complete Non-engineered System
☐ 2. Primitive System (graywater & alt. toilet)
☐ 3. Alternative Toilet, specify:
☐ 4. Non-engineered Treatment Tank (only)
☐ 5. Holding Tank, _____ gallons
☐ 6. Non-engineered Disposal Field (only)
☐ 7. Separated Laundry System
☐ 8. Complete Engineered System (2000 gpd or more)
☐ 9. Engineered Treatment Tank (only)
☐ 10. Engineered Disposal Field (only)
☐ 11. Pre-treatment, specify:
☐ 12. Miscellaneous Components

SIZE OF PROPERTY: 0.85 ☐ SQ. FT. X ACRES

SHORELAND ZONING: X Yes ☐ No

DISPOSAL SYSTEM TO SERVE

X 1. Single Family Dwelling Unit, No. of Bedrooms: 3
☐ 2. Multiple Family Dwelling, No. of Units: ____
☐ 3. Other: _____ (specify)

Current Use: ☐ Seasonal X Year Round ☐ Undeveloped

TYPE OF WATER SUPPLY

☐ 1. Drilled Well X 2. Dug Well ☐ 3. Private
☐ 4. Public ☐ 5. Other

DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)

TREATMENT TANK

X 1. Concrete
X a. Regular
☐ b. Low Profile
☐ 2. Plastic
☐ 3. Other: _____
CAPACITY: _____ GAL.

DISPOSAL FIELD TYPE & SIZE

X 1. Stone Bed ☐ 2. Stone Trench
☐ 3. Proprietary Device
☐ a. cluster array ☐ c. Linear
☐ b. regular load ☐ d. H-20 load
☐ 4. Other: _____
SIZE: _____ ☐ sq. ft. ☐ ln. ft.

GARBAGE DISPOSAL UNIT

X 1. No ☐ 2. Yes ☐ 3. Maybe
If Yes or Maybe, specify one below:
☐ a. multi-compartment tank
☐ b. ___ tanks in series
☐ c. increase in tank capacity
☐ d. Filter on Tank Outlet

DESIGN FLOW

270 gallons per day
BASED ON:
X 1. Table 301.1 (dwelling units)
☐ 2. Table 301.2 (other facilities)
SHOW CALCULATIONS — for other facilities —

3 bedroom single family dwelling

☐ 3. Section 303.6 (meter readings) ATTACH WATER METER DATA

SOIL DATA & DESIGN CLASS

PROFILE: 5 CONDITION: C DESIGN: 2
at Observation Hole # 4
Depth 42 "
of Most Limiting Soil Factor

DISPOSAL FIELD SIZING

☐ 1. Small—2.0 sq. ft. / gpd
X 2. Medium—2.6 sq. ft. / gpd
☐ 3. Medium—Large 3.3 sq. ft. / gpd
☐ 4. Large—4.1 sq. ft. / gpd
☐ 5. Extra Large—5.0 sq. ft. / gpd

EFFLUENT EJECTOR PUMP

☐ 1. Not Required
☐ 2. May Be Required
X 3. Required
Specify only for engineered systems:
DOSE: _____ gallons

SITE EVALUATOR STATEMENT

I certify that on 6/25/03 (date) I completed a site evaluation on this property and state that the data reported are accurate and that the proposed system is in compliance with the State of Maine Subsurface Wastewater Disposal Rules (10-144A CMR 241).

John Doe — Site Evaluator Signature — 900 — SE # — 6/26/03 — Date

JOHN DOE — Site Evaluator Name Printed — (207)123-4568 — Telephone Number — jdoe@isp.com — E-mail Address

Note: Changes to or deviations from the design should be confirmed with the Site Evaluator.

HHE-200 Rev. 8/01

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Department of Human Services
Division of Health Engineering, 10 SHS
(207) 287-5672 Fax: (207) 287-3165

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City, Town, or Plantation: WINDHAM

Street or Road: 15 LAKE ROAD

Subdivision, Lot #: N/A

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Name (Last, First, MI): JONES, ROBERT A. — ☑ Owner ☐ Applicant

Mailing Address of Owner/Applicant: JAMES SMITH
ACME REALTY, BOX 77
WINDHAM ME 04062

Daytime Tel. #: (207) 123-4567

Municipal Tax Map # 20 Lot # 12

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Robert Jones — 7/5/03
Signature of Owner or Applicant — Date

CAUTION: INSPECTION REQUIRED

I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.

(1st) date approved

Local Plumbing Inspector Signature — (2nd) date approved

PERMIT INFORMATION

TYPE OF APPLICATION

☐ 1. First Time System
☒ 2. Replacement System
Type replaced: trench
Year installed: ~1965
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☐ a. Minor Expansion
☐ b. Major Expansion
☐ 4. Experimental System
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THIS APPLICATION REQUIRES

☒ 1. No Rule Variance
☐ 2. First Time System Variance
☐ a. Local Plumbing Inspector Approval
☐ b. State & Local Plumbing Inspector Approval
☐ 3. Replacement System Variance
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☐ b. State & Local Plumbing Inspector Approval
☐ 4. Minimum Lot Size Variance
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☒ 1. Complete Non-engineered System
☐ 2. Primitive System (graywater & alt. toilet)
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0.85 ☐ SQ. FT ☒ ACRES

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CAPACITY: _____ GAL.

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☒ 1. No ☐ 2. Yes ☐ 3. Maybe
If Yes or Maybe, specify one below:
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☐ b. ___ tanks in series
☐ c. increase in tank capacity
☐ d. Filter on Tank Outlet

DESIGN FLOW

270 gallons per day
BASED ON:
☒ 1. Table 501.1 (dwelling unit(s))
☐ 2. Table 501.2 (other facilities)
SHOW CALCULATIONS — for other facilities —

3 bedroom single family dwelling

☐ 3. Section 503.6 (meter readings)
ATTACH WATER METER DATA

SOIL DATA & DESIGN CLASS

PROFILE: 5 CONDITION: C DESIGN: 2
at Observation Hole # 4
Depth 42"
of Most Limiting Soil Factor

DISPOSAL FIELD SIZING

☐ 1. Small—2.0 sq. ft. / gpd
☒ 2. Medium—2.6 sq. ft. / gpd
☐ 3. Medium—Large 3.3 sq. ft./ gpd
☐ 4. Large—4.1 sq. ft. / gpd
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☐ 2. May Be Required
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Specify only for engineered systems:
DOSE: _____ gallons

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John Doe — 900 — 6/26/03
Site Evaluator Signature — SE # — Date

JOHN DOE — (207) 123-4568 — jdoe@isp.com
Site Evaluator Name Printed — Telephone Number — E-mail Address

Note: Changes to or deviations from the design should be confirmed with the Site Evaluator.

HHE-200 Rev. 8/01

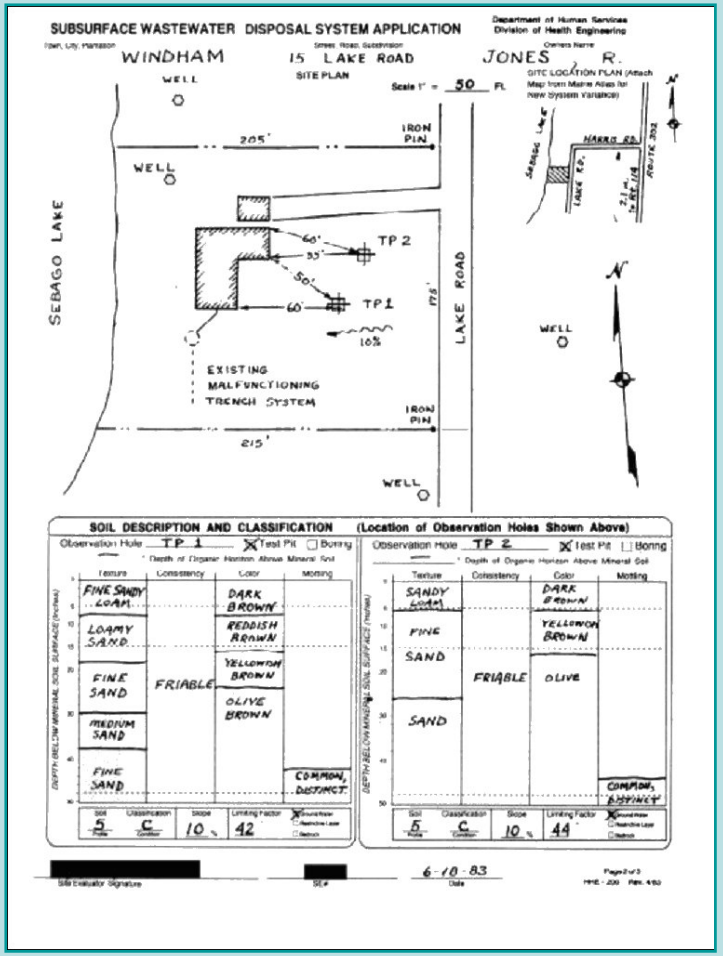
HHE-200 Form

Page Two

Page 2 consists of a general site plan and soil test pit logs.

The LPI should check the soil profile and condition shown in the test pit logs against the profile and condition used for design purposes on Page 1.

The LPI should also check that at least one test pit is located in the disposal area.



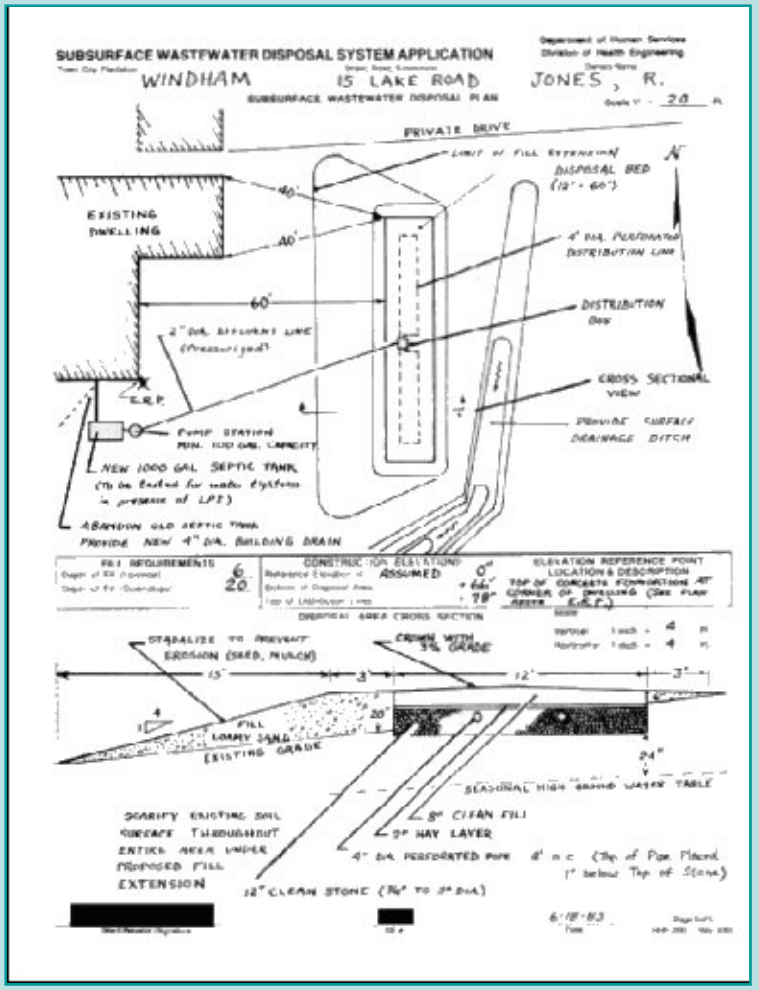
HHE-200 Form

Page Three

Page 3 consists of a detailed construction plan which indicates the location of the treatment tank, disposal field, limits of fill, extension, setbacks, property lines, test pit locations, and elevation reference point location.

This plan must include horizontal swing ties, system layout, and construction elevations.

Page three also contains a representative cross section of the disposal area.



SITE EVALUATION PROCESS

SITE EVALUATION PROCESS

Site Evaluation Process

The physical characteristics of a parcel of land must be fully evaluated in order to design a safe and effective disposal system. Each site has its own unique characteristics and limitations which must be observed and considered in the design.

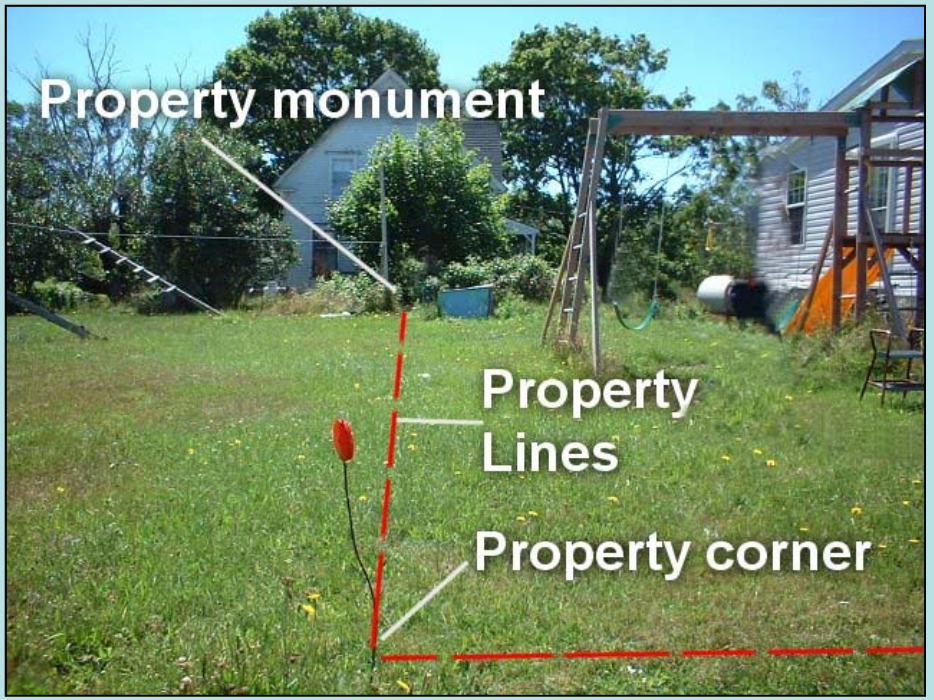
Observations of the surrounding land and development are just as important as viewing the particular parcel of land under consideration.

SITE EVALUATION PROCESS

Site Evaluation Process

Sometimes the applicant has a preference to where the system is to be placed if the soil conditions are accommodating. First considerations should be given to the desired locations if at all possible.

This site's potential locations for a replacement disposal area are limited by adjacent development and a small lot size.



SITE EVALUATION PROCESS

Site Evaluation Process

Existing ground slope beneath the disposal field shall not exceed 20 percent (20 feet in 100 feet). The disposal field is defined as the area under the stone bed or proprietary devices only.

SITE EVALUATION PROCESS

Setback Requirements

Table 7B – Less than 1000 gpd

Waterbody setbacks

Major water body – 100 ft.

Minor water body - 50 ft.

Drainage ditch – 25 ft.

Toe of fill to wetlands - 25 ft.

SITE EVALUATION PROCESS

Setback Requirements
Table 7B – Less than 1000 gpd

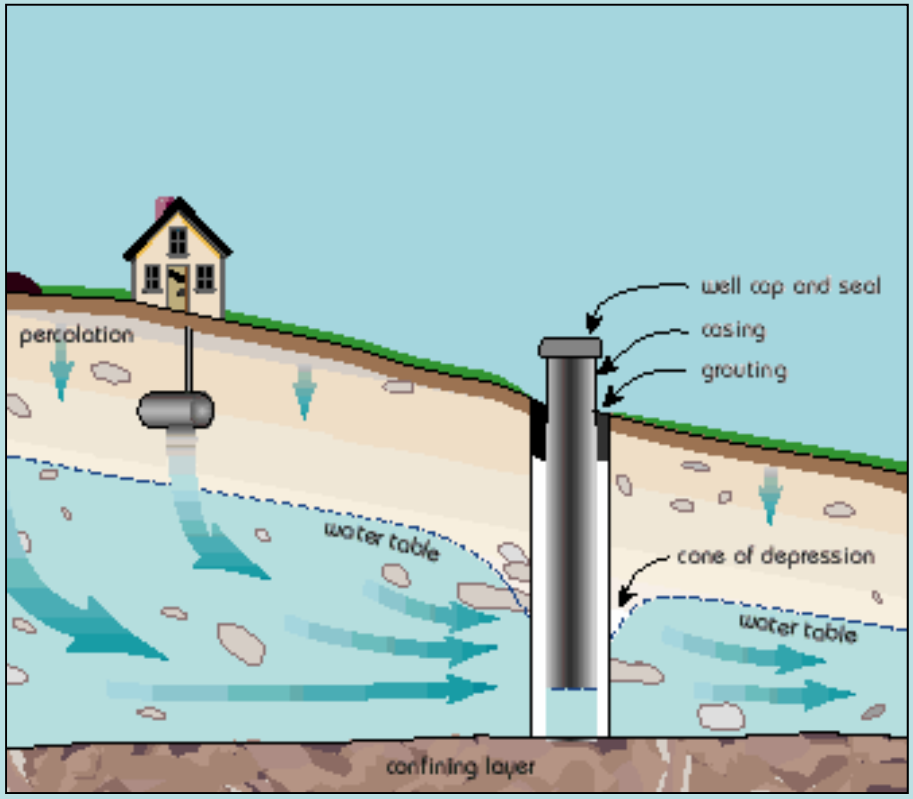
Well setbacks (without variances)

Owner's well – 100 ft.

Abutter's well – 100 ft.

Public supply well – 300 ft.

Water line (not main) – 10 ft.



Subsurface Wastewater Disposal Rules

Setback Requirements

Table 7B – Less than 1000 gpd

Structures and property lines:

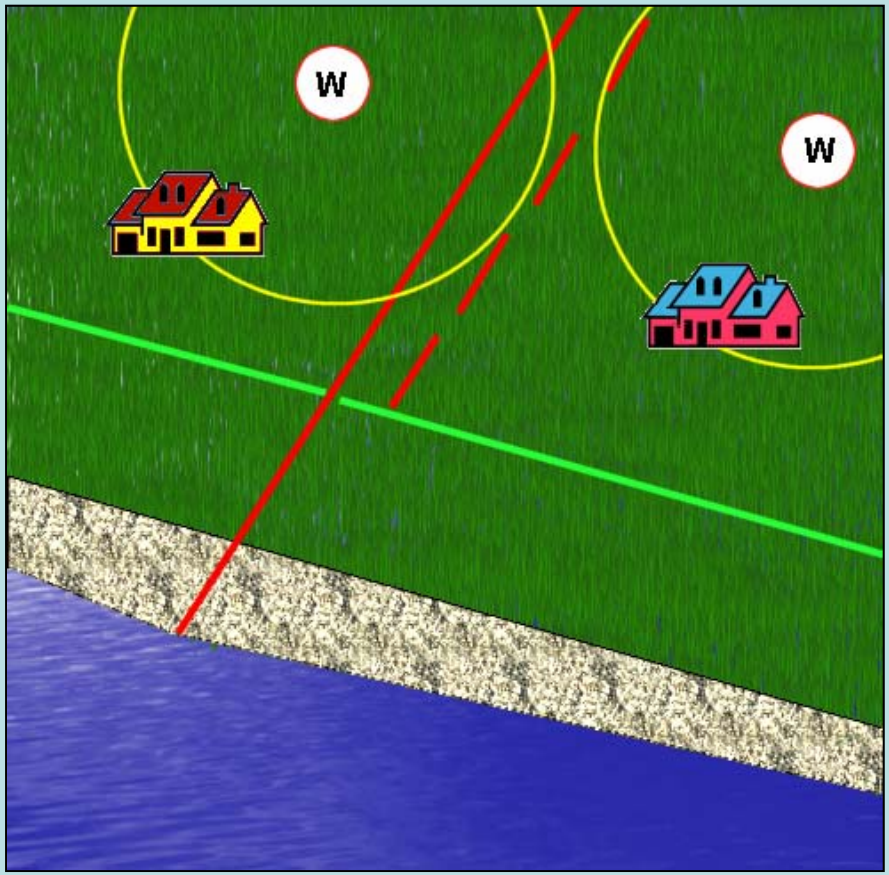
Property lines – 10 ft.

Slopes > 3:1 – 10 ft.

Slab, etc. foundation – 15 ft.

Full foundations/frost walls – 20 ft.

Burial grounds – 25 ft. from toe of fill



Subsurface Wastewater Disposal Rules

Setback Requirements
Table 7B – Less than 1000 gpd

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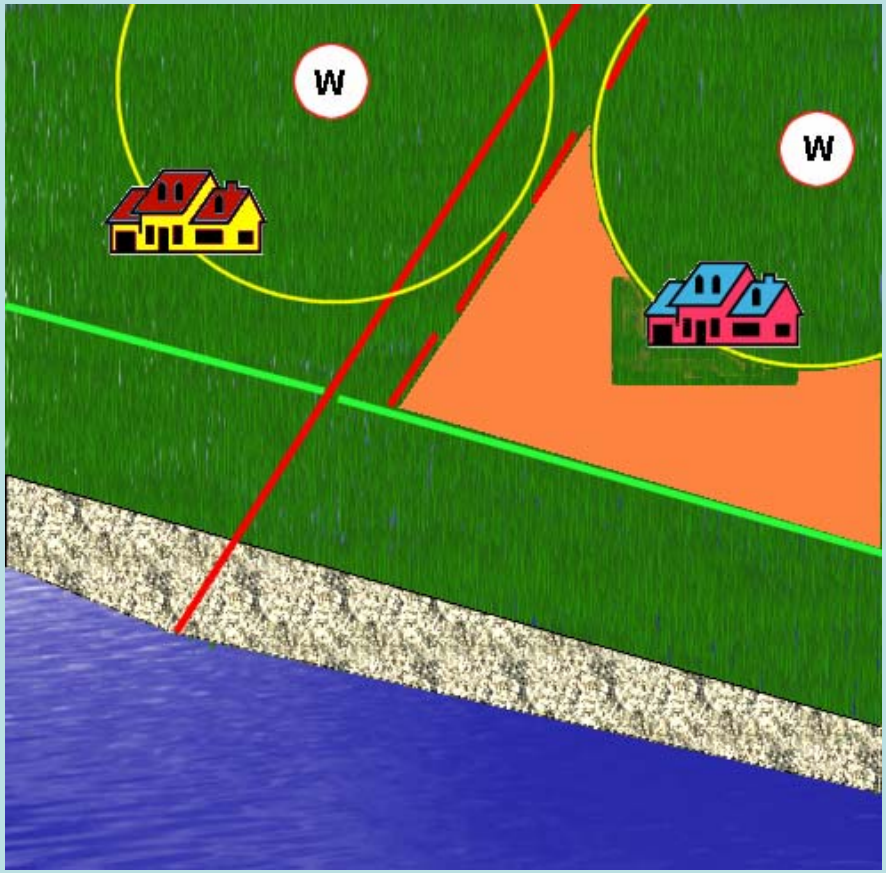

SITE EVALUATION PROCESS

Site Evaluation Process

Disposal of liquids into the soil from a disposal area is through soil pores, between soil aggregates and through root channels. Soil texture, soil structure, moisture content, and root penetration also affect the liquid movement through the soil.

Setbacks for Septic Tanks

- Full Basement – 8 feet
- Slab – 8 feet
- Both can be reduced to 5 feet for Replacement Systems
- Private Wells – 50 feet
- Public Wells – 150 feet
- Can be reduced to 25 feet for Private Wells, no reduction for Public Wells

SITE EVALUATION PROCESS

Site Evaluation Process

Site evaluation combines on-site soil evaluation with consideration of site conditions.

Licensed Site Evaluators are required to have the skill and ability to properly identify and accurately report soil textures and limiting factors so they can adequately classify soils, recognize site limitations and properly size disposal systems.

Limiting Factors

Redoximorphic Features (Drainage Mottles)

Restrictive Horizon

Bedrock

MINIMUM SOIL CONDITIONS **<u>OUTSIDE</u> THE SHORELAND ZONE**

- Table 4F - First Time Systems requires 9 inches to most limiting factor.

MINIMUM SOIL CONDITIONS **INSIDE THE SHORELAND ZONE**

- Table 4F - First Time Systems requires 15 inches to most limiting factor.

SITE EVALUATION PROCESS

TABLE 4E KEY TO DRAINAGE CLASSES

TABLE 4E
SOIL CONDITION
Soil condition determined by measurement from the mineral soil surface to bedrock, seasonal high groundwater
table, or hydraulically restrictive layer condition when redoximorphic features are not present.

Limiting Factor Depth, in inches	Bedrock Limiting Factor Condition	Soil Drainage Limiting Factor or Restrictive Layer Condition
> 48		B
15 to 48	AIII	C
9 to <15	AII	D
<9	AI	E

TABLE 4F MINIMUM PERMITTING CONDITIONS
AND MINIMUM DESIGN REQUIREMENTS
NOTE: "NOT ALLOWED" INDICATES A DISPOSAL FIELD IS NOT ALLOWED.

First Time & Expanded Systems Outside of the Shoreland Area: Separation in Inches								
Soil Profile Ú	Soil ConditionØ	AI	AII	AIII	B	C	D	E
1, 2, 3, 4, 7, 8, 9		Variance Required: Expansion Not Allowed for 1st Time[d]	24	24	12	12	18	Variance Required: Expansions; Not Allowed for 1st Time [d]
5,6		Variance Required: Expansions; Not Allowed for 1st Time [d]	24	24	24	24	24	Variance Required: Expansions; Not Allowed for 1st Time [d]
10		Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed
11, 12		Use Tables 4D and 4E to determine the soil profile and description which best describes the observed conditions.						

First Time & Expanded Systems Within the Shoreland Area: Separation in Inches

Soil Condition Ø	AI	AII	AIII	B	C	D	E
1, 2, 3, 4, 7, 8, 9	Not Allowed	Not Allowed	24	12	12	Variance Required [c]	Not Allowed
5,6	Not Allowed	Not Allowed	24	24	24	Variance Required [c]	Not Allowed
10	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed	Not Allowed
11, 12	Use Tables 4D and 4E to determine the soil profile and description which best describes the observed conditions.						

Replacement Systems: Separation Distances in Inches

Soil Condition Ø	AI	AII	AIII	B	C	D	E
1, 2, 3, 4, 7, 8, 9	24 [a]	24 [b]	24	12	12	18 [b]	24 [a]
5,6	24 [a]	24 [b]	24	24	24	18 [b]	24 [a]
10	24 [a]	24 [a]	24 [a]	24 [a]	24 [a]	24 [a]	24 [a]
11, 12	Use Tables 4D and 4E to determine the soil profile and description which best describes the observed conditions.						

HHE-200 Form

Page One

OWNER - APPLICANT

SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Dept. Health & Human Services
Division of Health Engineering, 10 SHS
(207) 287-5672 Fax: (207) 287-3165

PROPERTY LOCATION

City, Town, or Plantation	***
Street or Road	***
Subdivision, Lot #	***

OWNER/APPLICANT INFORMATION

Name (last, first, MI)	*** ■ Owner ☐ Applicant
Mailing Address of Owner/Applicant	***
	***
Daytime Tel. #	(207) *** _****

OWNER OR APPLICANT STATEMENT

I state and acknowledge that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a Permit.

*** **/**/07

Signature of Owner or Applicant — Date

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The Subsurface Wastewater Disposal System ***shall not*** be installed until a Permit is attached HERE by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.

Municipal Tax Map # _____ Lot # _____

CAUTION: INSPECTION REQUIRED

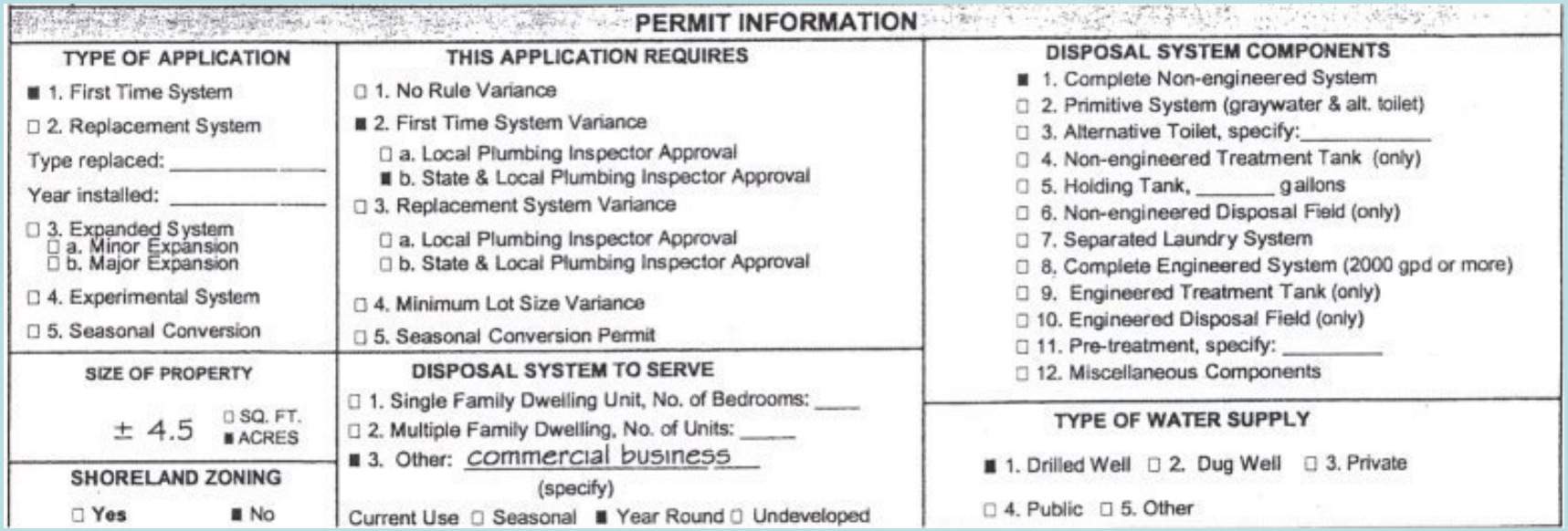
I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.

(1st) date approved

Local Plumbing Inspector Signature — (2nd) date approved

HHE-200 Form

Page One



PERMIT INFORMATION

TYPE OF APPLICATION

- ■ 1. First Time System
- □ 2. Replacement System
  - Type replaced: _____
  - Year installed: _____
- □ 3. Expanded System
  - □ a. Minor Expansion
  - □ b. Major Expansion
- □ 4. Experimental System
- □ 5. Seasonal Conversion

SIZE OF PROPERTY

± 4.5 □ SQ. FT. ■ ACRES

SHORELAND ZONING

□ Yes ■ No

THIS APPLICATION REQUIRES

- □ 1. No Rule Variance
- ■ 2. First Time System Variance
  - □ a. Local Plumbing Inspector Approval
  - ■ b. State & Local Plumbing Inspector Approval
- □ 3. Replacement System Variance
  - □ a. Local Plumbing Inspector Approval
  - □ b. State & Local Plumbing Inspector Approval
- □ 4. Minimum Lot Size Variance
- □ 5. Seasonal Conversion Permit

DISPOSAL SYSTEM TO SERVE

- □ 1. Single Family Dwelling Unit, No. of Bedrooms: ____
- □ 2. Multiple Family Dwelling, No. of Units: ____
- ■ 3. Other: commercial business (specify)

Current Use □ Seasonal ■ Year Round □ Undeveloped

DISPOSAL SYSTEM COMPONENTS

- ■ 1. Complete Non-engineered System
- □ 2. Primitive System (graywater & alt. toilet)
- □ 3. Alternative Toilet, specify: _____
- □ 4. Non-engineered Treatment Tank (only)
- □ 5. Holding Tank, _____ gallons
- □ 6. Non-engineered Disposal Field (only)
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TYPE OF WATER SUPPLY

■ 1. Drilled Well □ 2. Dug Well □ 3. Private

□ 4. Public □ 5. Other

HHE-200 Form

Page One

DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)

TREATMENT TANK
- ■ 1. Concrete
  - ■ a. Regular
  - □ b. Low Profile
- □ 2. Plastic
- □ 3. Other: _____
- CAPACITY: 1,500 GAL.

SOIL DATA & DESIGN CLASS

PROFILE / CONDITION / DESIGN
8 / C / 1
at Observation Hole # 1
Depth 16"
of Most Limiting Soil Factor

DISPOSAL FIELD TYPE & SIZE
- □ 1. Stone Bed □ 2. Stone Trench
- ■ 3. Proprietary Device
  - ■ a. cluster array □ c. Linear
  - ■ b. regular load □ d. H-20 load
  - type: Eljen In-drain
- □ 4. Other: _____
- SIZE: 66 units □ sq. ft. □ lin. ft.

DISPOSAL FIELD SIZING
- □ 1. Small—2.0 sq. ft. / gpd
- □ 2. Medium—2.6 sq. ft. / gpd
- □ 3. Medium—Large 3.3 sq. f.t / gpd
- ■ 4. Large—4.1 sq. ft. / gpd
- □ 5. Extra Large—5.0 sq. ft. / gpd

GARBAGE DISPOSAL UNIT
- ■ 1. No □ 2. Yes □ 3. Maybe

If Yes or Maybe, specify one below:
- □ a. multi-compartment tank
- □ b. ___ tanks in series
- □ c. increase in tank capacity
- □ d. Filter on Tank Outlet

EFFLUENT/EJECTOR PUMP
- □ 1. Not Required
- □ 2. May Be Required
- ■ 3. Required

Specify only for engineered systems:
DOSE: _____ gallons

DESIGN FLOW

750 gallons per day

BASED ON:
- ■ 1. Table 501.1 (dwelling unit(s))
- □ 2. Table 501.2 (other facilities)

SHOW CALCULATIONS for other facilities

50 employees @ 15 gpd each

- □ 3. Section 503.0 (meter readings)

ATTACH WATER METER DATA

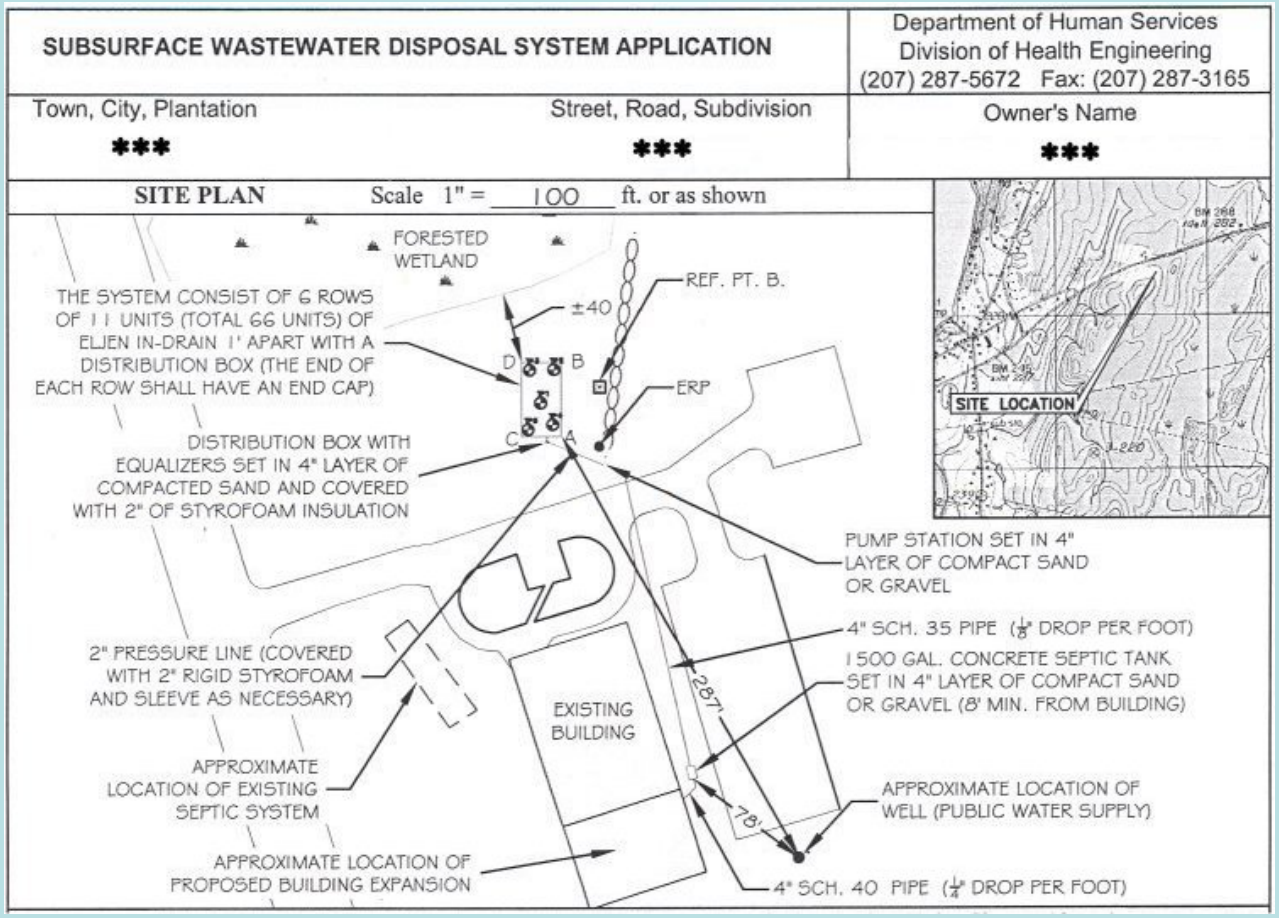
LATITUDE AND LONGITUDE

at center of disposal area

Lat. 044 d 24 m 01.8 s
Lon. 069 d 33 m 25.2 s
if g.p.s, state margin of error: _____

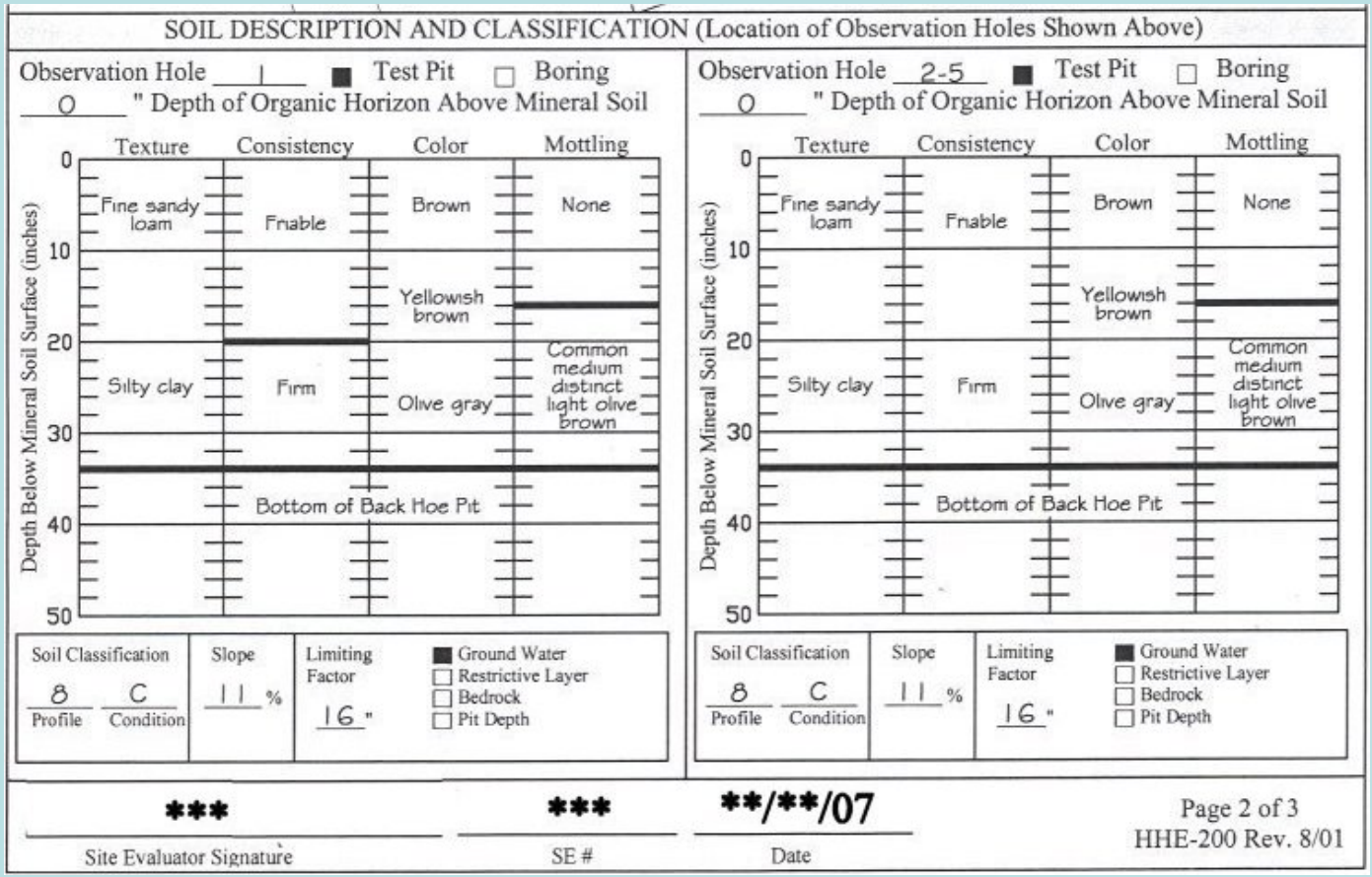
HHE-200 Form

Page Two



HHE-200 Form

Page Two



SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole 1 ■ Test Pit □ Boring

0 " Depth of Organic Horizon Above Mineral Soil

Depth Below Mineral Soil Surface (inches)	Texture	Consistency	Color	Mottling
0–10	Fine sandy loam	Friable	Brown	None
10–20			Yellowish brown	
20–30	Silty clay	Firm	Olive gray	Common medium distinct light olive brown
30–40	Bottom of Back Hoe Pit			
40–50				

Soil Classification	Slope	Limiting Factor	
8 Profile / C Condition	11 %	16 "	■ Ground Water, □ Restrictive Layer, □ Bedrock, □ Pit Depth

Observation Hole 2-5 ■ Test Pit □ Boring

0 " Depth of Organic Horizon Above Mineral Soil

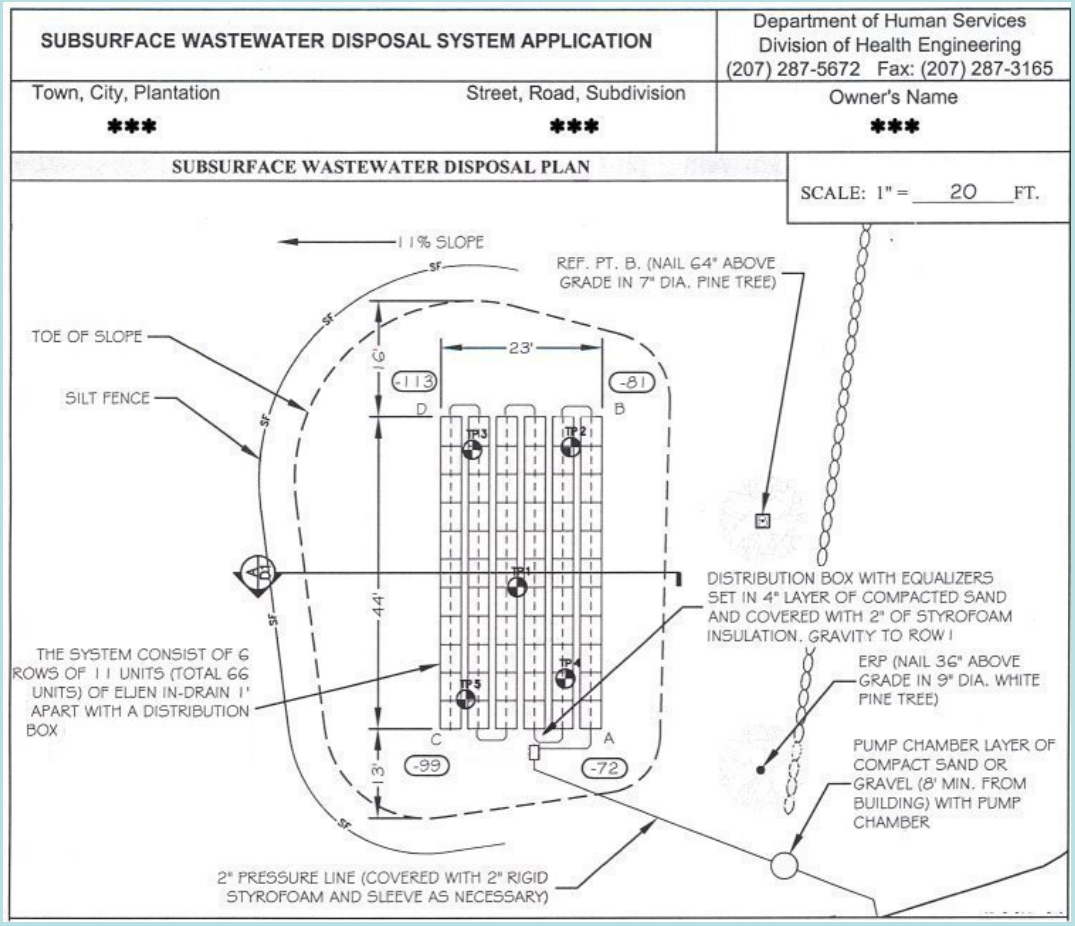
Depth Below Mineral Soil Surface (inches)	Texture	Consistency	Color	Mottling
0–10	Fine sandy loam	Friable	Brown	None
10–20			Yellowish brown	
20–30	Silty clay	Firm	Olive gray	Common medium distinct light olive brown
30–40	Bottom of Back Hoe Pit			
40–50				

Soil Classification	Slope	Limiting Factor	
8 Profile / C Condition	11 %	16 "	■ Ground Water, □ Restrictive Layer, □ Bedrock, □ Pit Depth

Site Evaluator Signature	SE #	Date	
***	***	**/**/07	Page 2 of 3 HHE-200 Rev. 8/01

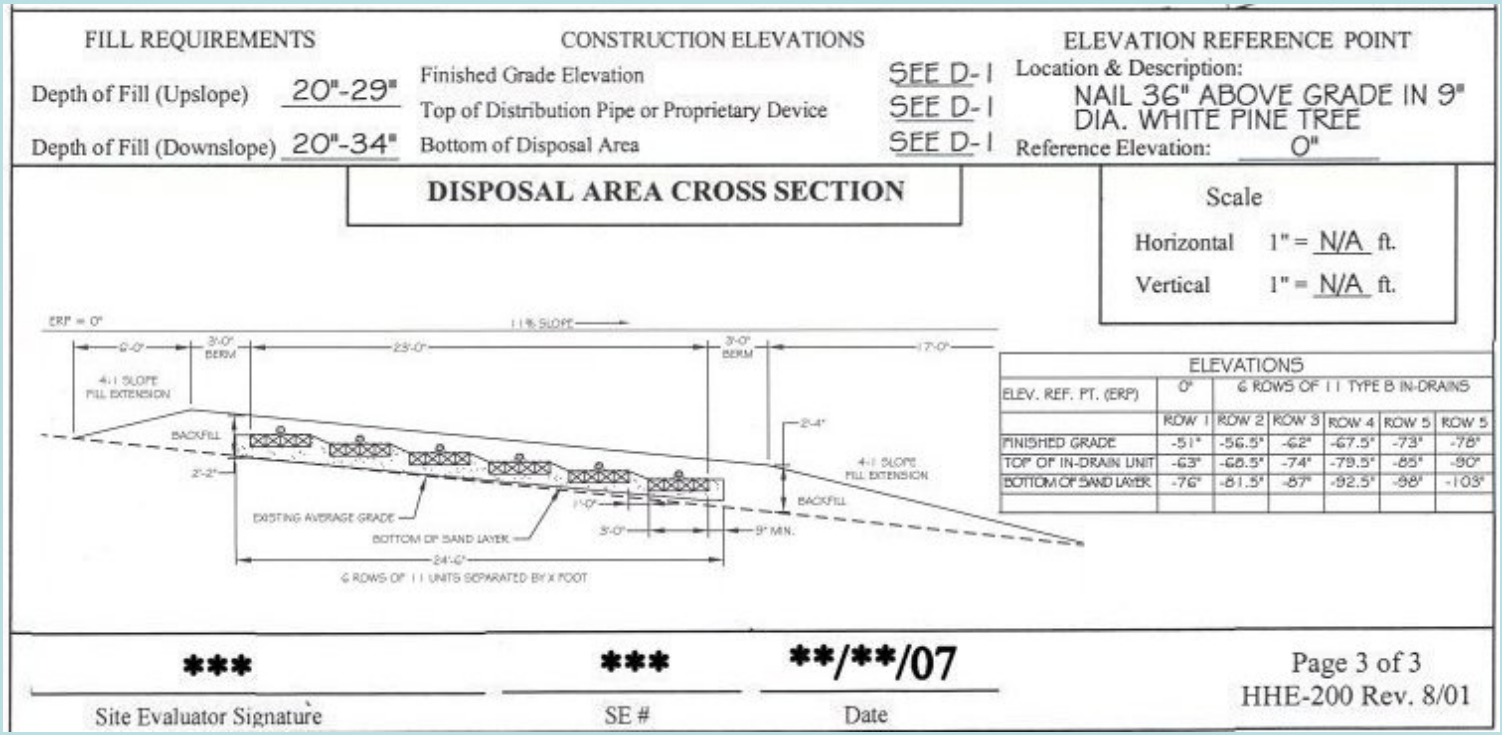
HHE-200 Form

Page Three



HHE-200 Form

Page Three



FILL REQUIREMENTS

Depth of Fill (Upslope) 20"-29"

Depth of Fill (Downslope) 20"-34"

CONSTRUCTION ELEVATIONS

Finished Grade Elevation SEE D-1

Top of Distribution Pipe or Proprietary Device SEE D-1

Bottom of Disposal Area SEE D-1

ELEVATION REFERENCE POINT

Location & Description: NAIL 36" ABOVE GRADE IN 9" DIA. WHITE PINE TREE

Reference Elevation: 0"

DISPOSAL AREA CROSS SECTION

Scale

Horizontal 1" = N/A ft.

Vertical 1" = N/A ft.

ELEVATIONS

ELEV. REF. PT. (ERP)	0"	6 ROWS OF 11 TYPE B IN-DRAINS				
	ROW 1	ROW 2	ROW 3	ROW 4	ROW 5	ROW 5
FINISHED GRADE	-51"	-56.5"	-62"	-67.5"	-73"	-78"
TOP OF IN-DRAIN UNIT	-63"	-68.5"	-74"	-79.5"	-85"	-90"
BOTTOM OF SAND LAYER	-76"	-81.5"	-87"	-92.5"	-98"	-103"

*** *** **/**/07

Site Evaluator Signature SE # Date

Page 3 of 3

HHE-200 Rev. 8/01

SITE EVALUATION PROCESS

Site Evaluation Process

However, if limited soils are available or there are setback conflicts, the Site Evaluator may have to prepare a variance request, for as best a fit as possible when considering existing development.

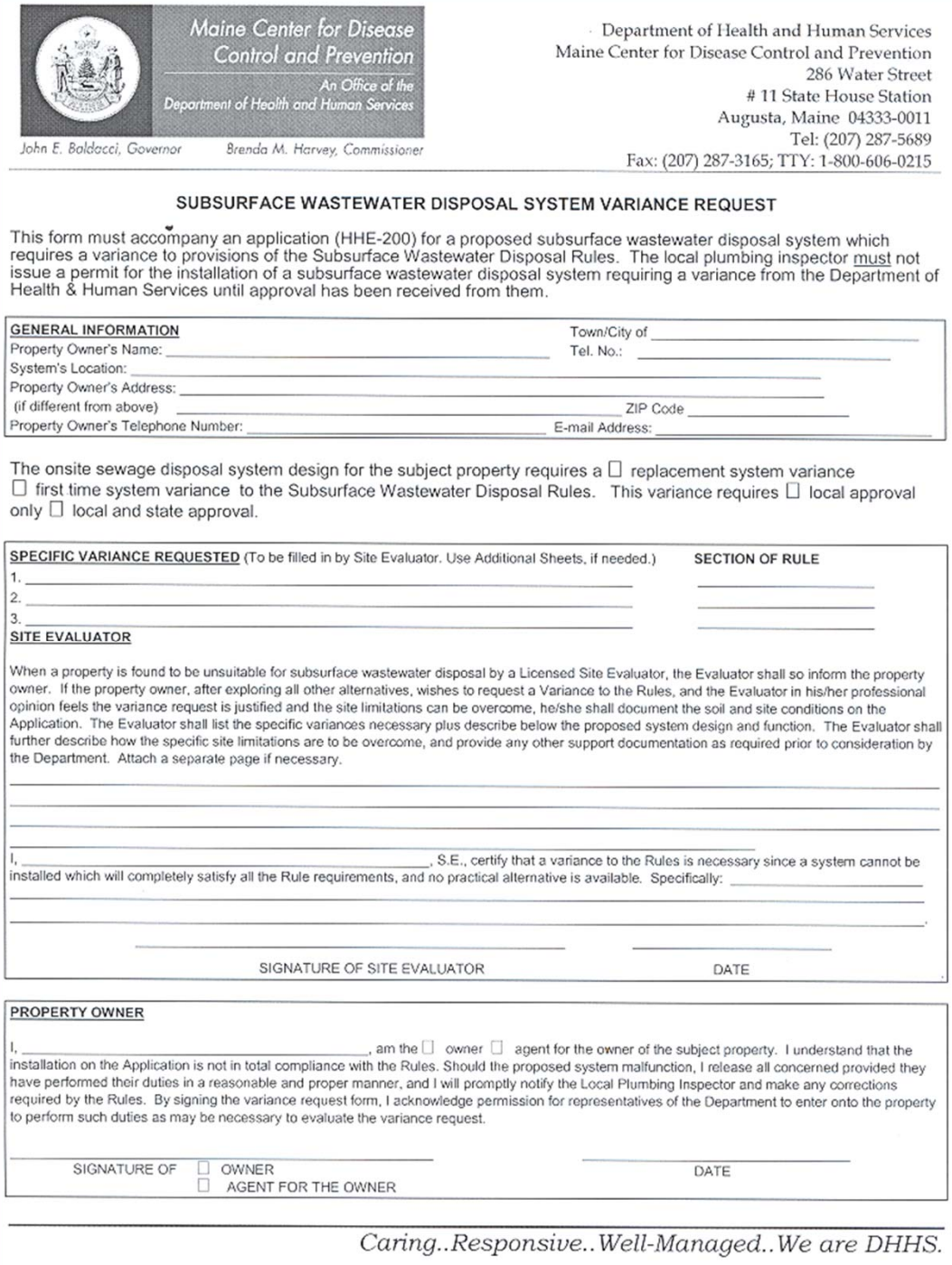
This property abuts the site in the prior slide. Note the location of a non-potable dug well, and the drilled well casing under the oil tank.

SITE EVALUATION PROCESS

System Variance Request – HHE-204

Spring 2011

Division of Environmental Health
Subsurface Wastewater Program



Maine Center for Disease Control and Prevention
An Office of the Department of Health and Human Services

John E. Baldacci, Governor Brenda M. Harvey, Commissioner

Department of Health and Human Services
Maine Center for Disease Control and Prevention
286 Water Street
11 State House Station
Augusta, Maine 04333-0011
Tel: (207) 287-5689
Fax: (207) 287-3165; TTY: 1-800-606-0215

SUBSURFACE WASTEWATER DISPOSAL SYSTEM VARIANCE REQUEST

This form must accompany an application (HHE-200) for a proposed subsurface wastewater disposal system which requires a variance to provisions of the Subsurface Wastewater Disposal Rules. The local plumbing inspector must not issue a permit for the installation of a subsurface wastewater disposal system requiring a variance from the Department of Health & Human Services until approval has been received from them.

GENERAL INFORMATION

Property Owner's Name: _____ Town/City of _____
Tel. No.: _____
System's Location: _____
Property Owner's Address: _____
(if different from above) _____ ZIP Code _____
Property Owner's Telephone Number: _____ E-mail Address: _____

The onsite sewage disposal system design for the subject property requires a ☐ replacement system variance ☐ first time system variance to the Subsurface Wastewater Disposal Rules. This variance requires ☐ local approval only ☐ local and state approval.

SPECIFIC VARIANCE REQUESTED (To be filled in by Site Evaluator. Use Additional Sheets, if needed.) **SECTION OF RULE**

1. _____
2. _____
3. _____

SITE EVALUATOR

When a property is found to be unsuitable for subsurface wastewater disposal by a Licensed Site Evaluator, the Evaluator shall so inform the property owner. If the property owner, after exploring all other alternatives, wishes to request a Variance to the Rules, and the Evaluator in his/her professional opinion feels the variance request is justified and the site limitations can be overcome, he/she shall document the soil and site conditions on the Application. The Evaluator shall list the specific variances necessary plus describe below the proposed system design and function. The Evaluator shall further describe how the specific site limitations are to be overcome, and provide any other support documentation as required prior to consideration by the Department. Attach a separate page if necessary.

_____
_____
_____
_____

I, _____, S.E., certify that a variance to the Rules is necessary since a system cannot be installed which will completely satisfy all the Rule requirements, and no practical alternative is available. Specifically: _____
_____
_____.

_____ _____
SIGNATURE OF SITE EVALUATOR DATE

PROPERTY OWNER

I, _____, am the ☐ owner ☐ agent for the owner of the subject property. I understand that the installation on the Application is not in total compliance with the Rules. Should the proposed system malfunction, I release all concerned provided they have performed their duties in a reasonable and proper manner, and I will promptly notify the Local Plumbing Inspector and make any corrections required by the Rules. By signing the variance request form, I acknowledge permission for representatives of the Department to enter onto the property to perform such duties as may be necessary to evaluate the variance request.

_____ _____
SIGNATURE OF ☐ OWNER ☐ AGENT FOR THE OWNER DATE

Caring..Responsive..Well-Managed..We are DHHS.

SITE EVALUATION PROCESS

Replacement System Variance Request – HHE-204

Spring 2011

Division of Environmental Health
Subsurface Wastewater Program

LOCAL PLUMBING INSPECTOR - Approval at local level

The local plumbing inspector shall review all First Time System Variance requests prior to rendering a decision.
I, _____, the undersigned, have visited the above property and find that the variance request submitted by the applicant does not conform with certain provisions of the wastewater disposal rules. The variance request submitted by the applicant is the best alternative for a subsurface wastewater disposal system on this property. The proposed system (☐ does ☐ does not) conflict with any provisions controlling subsurface wastewater disposal in the shoreland zone. Therefore, I (☐ do ☐ do not) approve the requested variance. I (☐ will ☐ will not) issue a permit for the system's installation as proposed by the application.

LPI Signature _____ Date _____

LOCAL PLUMBING INSPECTOR - Referral to the Department of Health and Human Services

The local plumbing inspector shall review all First Time System Variance requests prior to forwarding to the Division of Environmental Health.
I, _____, the undersigned, have visited the above property and find that the variance request submitted by the applicant does not conform with certain provisions of the wastewater disposal rules. The variance request submitted by the applicant is the best alternative for a subsurface wastewater disposal system on this property. The proposed system (☐ does ☐ does not) conflict with any provisions controlling subsurface wastewater disposal in the shoreland zone or local ordinances controlling such disposal.
Therefore, I (☐ do ☐ do not) recommend the issuance of a permit for the system's installation as proposed by the application.

LPI Signature _____ Date _____

FOR USE BY THE DEPARTMENT ONLY

The Department has reviewed the variance(s) and (☐ does ☐ does not) give its approval. Any additional requirements, recommendations, or reasons for the Variance denial, are given in the attached letter.

SIGNATURE OF THE DEPARTMENT _____ DATE _____

Note: 1. Variances for soil conditions may be approved at the local level as long as the total point assessment is at least the minimum allowed. (See Section 701.2 for Municipal Review.)

2. Variances for other than soil conditions or soil conditions beyond the limit of the LPI's authority are to be submitted to the Department for review. (See Section 701.1 for Department Review.) The LPI's signature is required on these variance requests prior to submission to the Department.

SOIL, SITE AND ENGINEERING FACTORS FOR FIRST TIME SYSTEM VARIANCE ASSESSMENT WITH LIMITING SOIL DRAINIANGE CONDITIONS (SEE TABLES 700.3 to 700.13)

	CHARACTERISTIC	POINT ASSESSMENT
Soil Profile		
Depth to Groundwater/Restrictive Layer		
Terrain		
Size of Property		
Waterbody Setback		
Water Supply		
Type of Development		
Disposal Area Adjustment		
Vertical Separation Adjustment		
Additional Treatment		
TOTAL POINT ASSESSMENT:		

Minimum Points (Check one): Outside Shoreland-50 ☐ Inside Shoreland-65 ☐ Subdivision-65 ☐

THIS IS NOT A CORRECT RETAINING WALL FOR FILL EXTENSIONS…

Permitting

Maine Department of Health and Human Services
Bureau of Health, Division of Health Engineering
Wastewater and Plumbing Control Program

Section 3A.1 PERMIT REQUIRED

WORK MUST NOT BE STARTED UNTIL THE PLUMBING INSPECTOR HAS ISSUED A DISPOSAL SYSTEM PERMIT FOR THE WORK

Section 3C.2a LATE PERMIT FEE: A person who starts construction without first obtaining a permit must pay double the permit fee.

Section 3B.6 TIME LIMIT- WORK MUST BE COMMENCED WITHIN 24 MONTHS OF PERMIT ISSUANCE.

Section 3B.7 DEPARTURES FROM DESIGN- MUST BE APPROVED BY THE SITE EVALUATOR

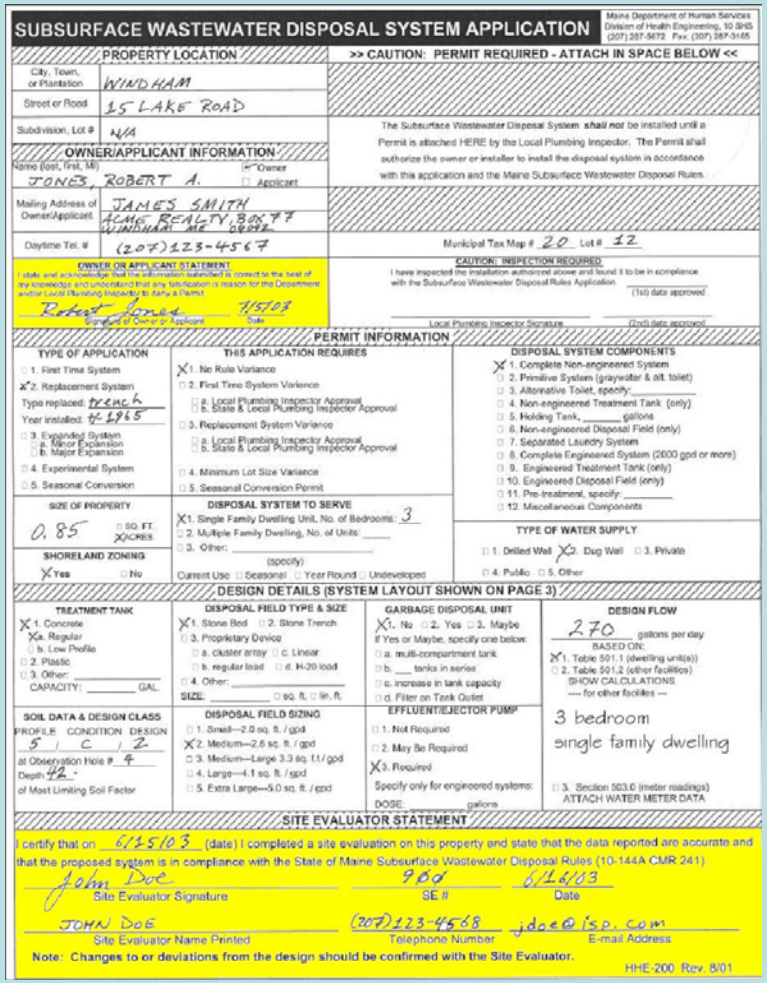
Section 11I.6 NOTIFICATION REQUIRED- THE LPI SHALL BE NOTIFIED 24 HOURS BEFORE THE SYSTEM IS READY FOR INSPECTION

Permitting

Application

It is important to check that each block on the form is properly completed.

Page one of the HHE-200 Form must be signed by both the owner/applicant and the Site Evaluator before a permit can be issued.



SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Department of Human Services
Division of Health Engineering, 10 SHS
(207) 287-5672 Fax: (207) 287-3165

PROPERTY LOCATION

>> CAUTION: PERMIT REQUIRED - ATTACH IN SPACE BELOW <<

City, Town, or Plantation: WINDHAM
Street or Road: 15 LAKE ROAD
Subdivision, Lot #: N/A

The Subsurface Wastewater Disposal System **shall not** be installed until a Permit is attached HERE by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.

OWNER/APPLICANT INFORMATION

Name (last, first, MI): JONES, ROBERT A. — ☑ Owner ☐ Applicant
Mailing Address of Owner/Applicant: JAMES SMITH, ACME REALTY, BOX 77, WINDHAM, ME 04062
Daytime Tel. #: (207)123-4567

Municipal Tax Map # 20 Lot # 12

OWNER OR APPLICANT STATEMENT
I state and acknowledge that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department and/or Local Plumbing Inspector(s) to deny a Permit.
Robert Jones — Owner or Applicant — 7/5/03 Date

CAUTION: INSPECTION REQUIRED
I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.
(1st) date approved
Local Plumbing Inspector Signature — (2nd) date approved

PERMIT INFORMATION

TYPE OF APPLICATION
☐ 1. First Time System
☒ 2. Replacement System
Type replaced: French
Year installed: +/- 1965
☐ 3. Expanded System ☐ a. Minor Expansion ☐ b. Major Expansion
☐ 4. Experimental System
☐ 5. Seasonal Conversion

THIS APPLICATION REQUIRES
☒ 1. No Rule Variance
☐ 2. First Time System Variance ☐ a. Local Plumbing Inspector Approval ☐ b. State & Local Plumbing Inspector Approval
☐ 3. Replacement System Variance ☐ a. Local Plumbing Inspector Approval ☐ b. State & Local Plumbing Inspector Approval
☐ 4. Minimum Lot Size Variance
☐ 5. Seasonal Conversion Permit

DISPOSAL SYSTEM COMPONENTS
☒ 1. Complete Non-engineered System
☐ 2. Primitive System (graywater & alt. toilet)
☐ 3. Alternative Toilet, specify: ____
☐ 4. Non-engineered Treatment Tank (only)
☐ 5. Holding Tank, _____ gallons
☐ 6. Non-engineered Disposal Field (only)
☐ 7. Separated Laundry System
☐ 8. Complete Engineered System (2000 gpd or more)
☐ 9. Engineered Treatment Tank (only)
☐ 10. Engineered Disposal Field (only)
☐ 11. Pre-treatment, specify: ____
☐ 12. Miscellaneous Components

SIZE OF PROPERTY: 0.85 ☐ SQ. FT. ☒ ACRES

SHORELAND ZONING: ☒ Yes ☐ No

DISPOSAL SYSTEM TO SERVE
☒ 1. Single Family Dwelling Unit, No. of Bedrooms: 3
☐ 2. Multiple Family Dwelling, No. of Units: ____
☐ 3. Other: _____ (specify)
Current Use: ☐ Seasonal ☐ Year Round ☐ Undeveloped

TYPE OF WATER SUPPLY
☐ 1. Drilled Well ☒ 2. Dug Well ☐ 3. Private ☐ 4. Public ☐ 5. Other

DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)

TREATMENT TANK
☒ 1. Concrete ☒ a. Regular ☐ b. Low Profile
☐ 2. Plastic
☐ 3. Other: _____
CAPACITY: _____ GAL.

DISPOSAL FIELD TYPE & SIZE
☒ 1. Stone Bed ☐ 2. Stone Trench
☐ 3. Proprietary Device ☐ a. cluster array ☐ c. Linear ☐ b. regular load ☐ d. H-20 load
☐ 4. Other: _____
SIZE: _____ ☐ sq. ft. ☐ lin. ft.

GARBAGE DISPOSAL UNIT
☒ 1. No ☐ 2. Yes ☐ 3. Maybe
If Yes or Maybe, specify one below:
☐ a. multi-compartment tank
☐ b. ___ tanks in series
☐ c. increase in tank capacity
☐ d. Filter on Tank Outlet

DESIGN FLOW
270 gallons per day
BASED ON:
☒ 1. Table 501.1 (dwelling unit(s))
☐ 2. Table 501.2 (other facilities)
SHOW CALCULATIONS
--- for other facilities ---
3 bedroom
single family dwelling
☐ 3. Section 503.0 (meter readings) ATTACH WATER METER DATA

SOIL DATA & DESIGN CLASS
PROFILE CONDITION DESIGN
5 / C / 2
at Observation Hole # 4
Depth 42"
of Most Limiting Soil Factor

DISPOSAL FIELD SIZING
☐ 1. Small---2.0 sq. ft. / gpd
☒ 2. Medium---2.6 sq. ft. / gpd
☐ 3. Medium---Large 3.3 sq. ft./ gpd
☐ 4. Large---4.1 sq. ft. / gpd
☐ 5. Extra Large---5.0 sq. ft. / gpd

EFFLUENT/EJECTOR PUMP
☐ 1. Not Required
☐ 2. May Be Required
☒ 3. Required
Specify only for engineered systems:
DOSE: _____ gallons

SITE EVALUATOR STATEMENT

I certify that on 6/25/03 (date) I completed a site evaluation on this property and state that the data reported are accurate and that the proposed system is in compliance with the State of Maine Subsurface Wastewater Disposal Rules (10-144A CMR 241)

John Doe — Site Evaluator Signature
900 — SE #
6/26/03 — Date
JOHN DOE — Site Evaluator Name Printed
(207)123-4568 — Telephone Number
jdoe@isp.com — E-mail Address

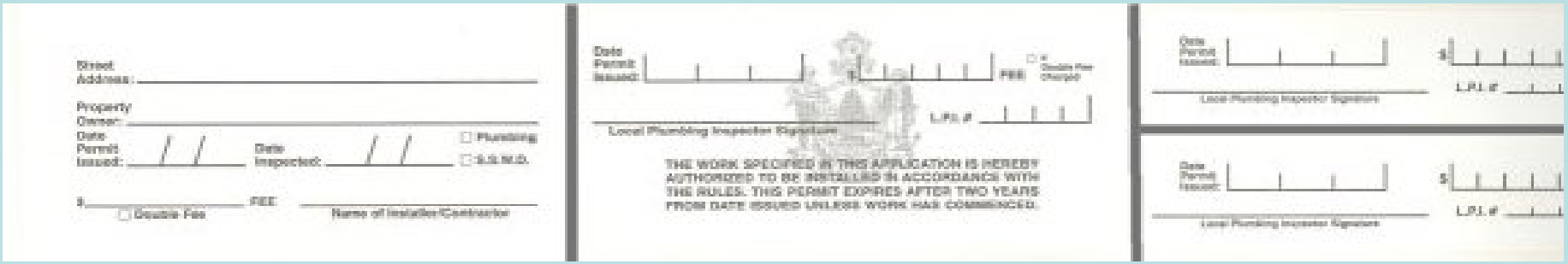
Note: Changes to or deviations from the design should be confirmed with the Site Evaluator.

HHE-200 Rev. 8/01

Permitting

Permit labels

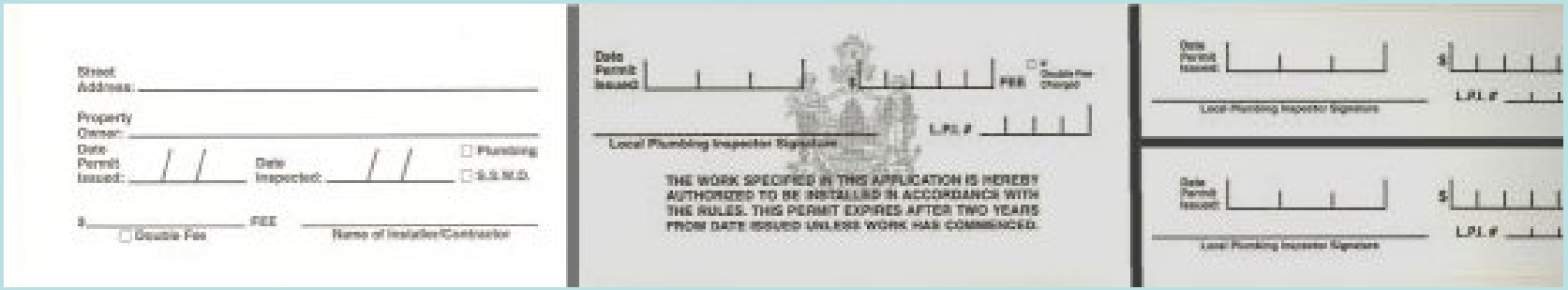
Permit labels will only be issued to the Local Plumbing Inspector appointed to the area. Permit labels should be ordered when the LPI's quantity reaches ten. This gives the Department time to process the order. If an LPI has more than one area, make sure the correct area is printed on the label in which the permit label is being issued.



Permitting

Permit labels

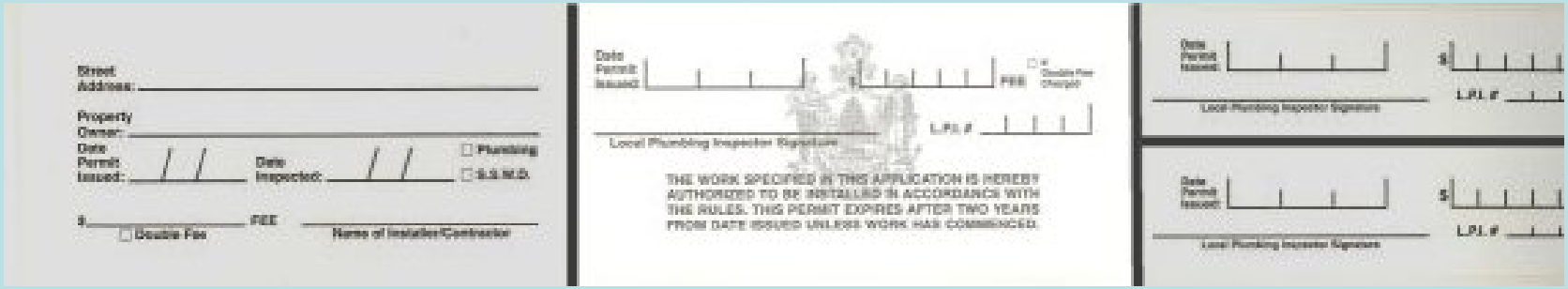
The label on the far left is the permanent record for the permit number, permittee's name, date of issue and inspection, fee charged, and installer's name. Eventually, after final inspection, this will be forwarded to the Department.



Permitting

Permit labels

The center label is to be placed on the owner's copy of the HHE-200 Form. It serves as formal notice to any interested party that a legitimate permit has been issued to install an onsite sewage disposal system.



Permitting

Permit labels

The two smaller labels on the far right are to be placed on the Town and State copy of the HHE-200 Form, respectively. These copies serve as permanent records of the design, but not of any subsequent inspections.

Permitting

Record Keeping

HHE-200 Forms and Plumbing Applications should be kept on file by the Town.

Filing by map and lot number is the most popular method simply because everything that has to deal with that certain property is all contained in one folder.

>> CAUTION: PERMIT REQUIRED - ATTACH IN SPACE BELOW <<

The Subsurface Wastewater Disposal System ***shall not*** be installed until a Permit is attached HERE by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.

Municipal Tax Map # 20 Lot # 12

CAUTION: INSPECTION REQUIRED

I have inspected the installation authoirzed above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application. _____ (1st) date approved

_____ Local Plumbing Inspector Signature _____ (2nd) date approved

Permitting

Replacement Septic Tanks

No soil test needed

The LPI can prepare an application for a replacement septic tank by completing Page 1 of an HHE-200 Form.

Permitting

Vault Privies

Vault privies are permitted as “Alternative Toilet”.

Sealed vaults shall have a minimum liquid capacity of at least 500 gallons.

The LPI can prepare an application for a vault privy by completing Page 1 of an HHE-200 Form.

Permitting

Holding Tanks

Holding tanks require an HHE-200 Form from the SE PROVING NO PRACTICAL ALTERNATIVE and a completed holding tank pumper agreement (HHE-233) with an owner and municipality statement and deed covenant.

HOLDING TANKS
-
EXPANSIONS

HOLDING TANKS – Section 7D

Holding tanks **<u>can not</u>** be used to satisfy the requirements of:

- **FIRST TIME HOLDING TANKS WITHOUT A LOCAL ORDINANCE FOR RESIDENTIAL USE**
- **First time system located within the shoreland zoned area of major water courses**
- **Seasonal Conversion Permits**
- **The facility served must not require a license as an eating establishment from the Department.**

HOLDING TANKS – Section 7D

- VISUAL / AUDIBLE ALARM
- MIN. 1000 GAL. or 7 Times the Design Flow
- Permitted as holding tank after July 1,1974, Discontinuance must meet first time criteria
- Nonresidential design flow must not exceed 100 GPD or 500 gallons per week greater flows has to be referred to Dept.

EXPANSIONS – Section 9

DEFINITION: THE ENLARGEMENT OR CHANGE IN USE OF A **STRUCTURE** USING AN EXISTING SUBSURFACE WASTEWATER DISPOSAL SYSTEM THAT BRINGS THE TOTAL STUCTURE INTO A CLASSIFICATION THAT REQUIRES LARGER SUBSURFACE WASTEWATER DISPOSAL SYSTEM COMPONENTS

EXPANSIONS: Section 9A.3

- The initial expansion of a single family home after May 1, 1995 by one or more bedrooms or the introduction of mechanically pressurized water formerly served by hand pumped or hand carried water.

- Other structures- increase in design flow of 10% or more.

Expansions **Outside** the shoreland zone

Owner may elect not to install at the time of expansion provided the existing system is not malfunctioning.

- Provide a completed HHE-200 form
- Recorded with the registry of deeds, (does not need to be permitted)
- Person seeking to expand must notify abutters by certified mail with a copy of the notice of documentation. (HHE-200)
- Protection of future installation

Expansions inside the shoreland zone

9A.4a: MUST BE INSTALLED PRIOR TO THE EXPANSION

9C: Expansion design criteria inside the shoreland zone: Expanded disposal systems of one bedroom or less than 25 percent of the total design flow must meet replacement system design criteria as set forth in Section 8.

Expanded disposal systems of two bedrooms or more, or equal to or greater than 25 percent of the total design flow must meet first time system design criteria as set forth in Section 7.

SYSTEM TYPES

Engineered Systems
Section 10

Scope: This Chapter governs the design and installation of engineered systems with design flows of 2,000 gpd or more, or disposing of wastewater with a combined BOD5 and total suspended solids concentration greater than 1,400 mg/l.

Multi User System
Chapter 10F

10F Designed to serve three or more parcels with structures under individual and separate ownerships and when the disposal system is not owned by one individual.

10G General: Ownership of all parts of the multi-user system beyond the building sewer must be vested in a single and independent, legally established entity under Maine law.

Subsurface Wastewater Disposal Rules

SYSTEM TYPES

Cesspools, Clay Agricultural Drainage Tiles and Vee-Notched Plank trenches – still legal to operate as long as they are not Malfunctioning.

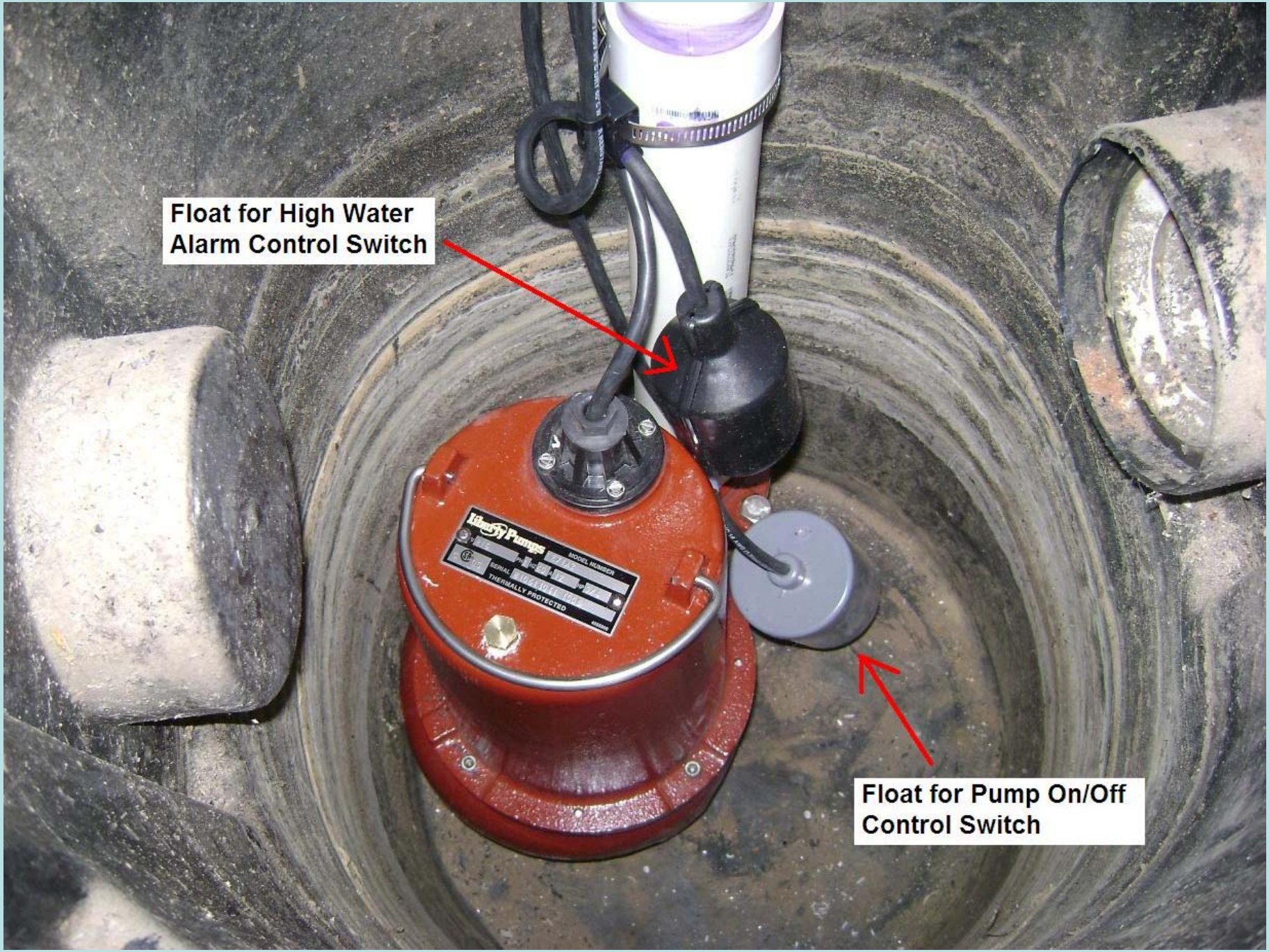
Primitive systems --consist of an alternate toilet such as a pit privy and a small graywater disposal area to accommodate a hand carried or hand pumped water supply

Limited systems– alternative toilet, septic tank & disposal field which handles only gray water originating from elevated storage tanks, cisterns of no more than 1000 gallons

A Combined System -- typically comprised of a septic tank and a disposal area sized to accommodate a pressurized water supply with full plumbing fixture loads.

Not a Primitive System

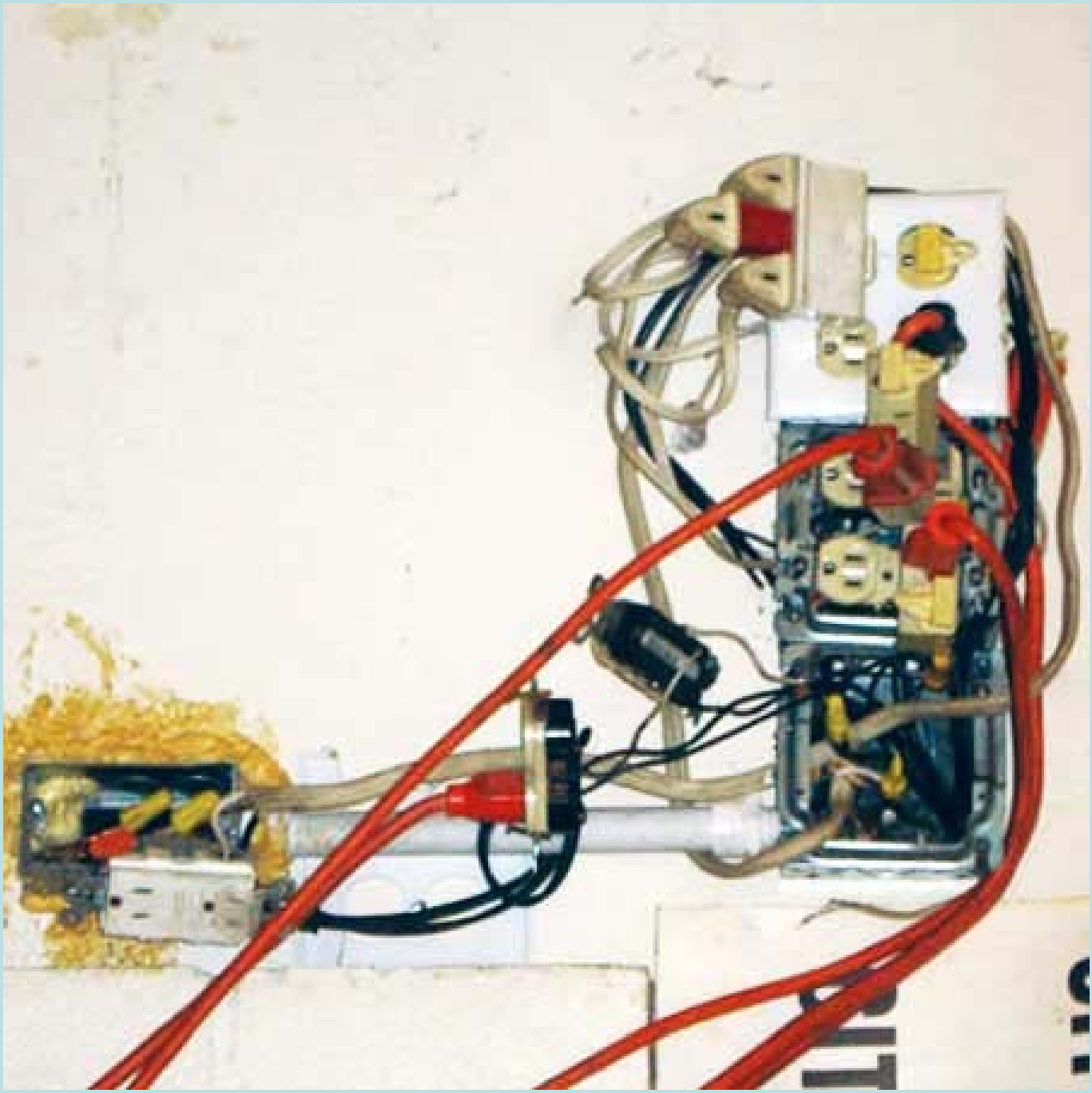
This is not a legal pump station

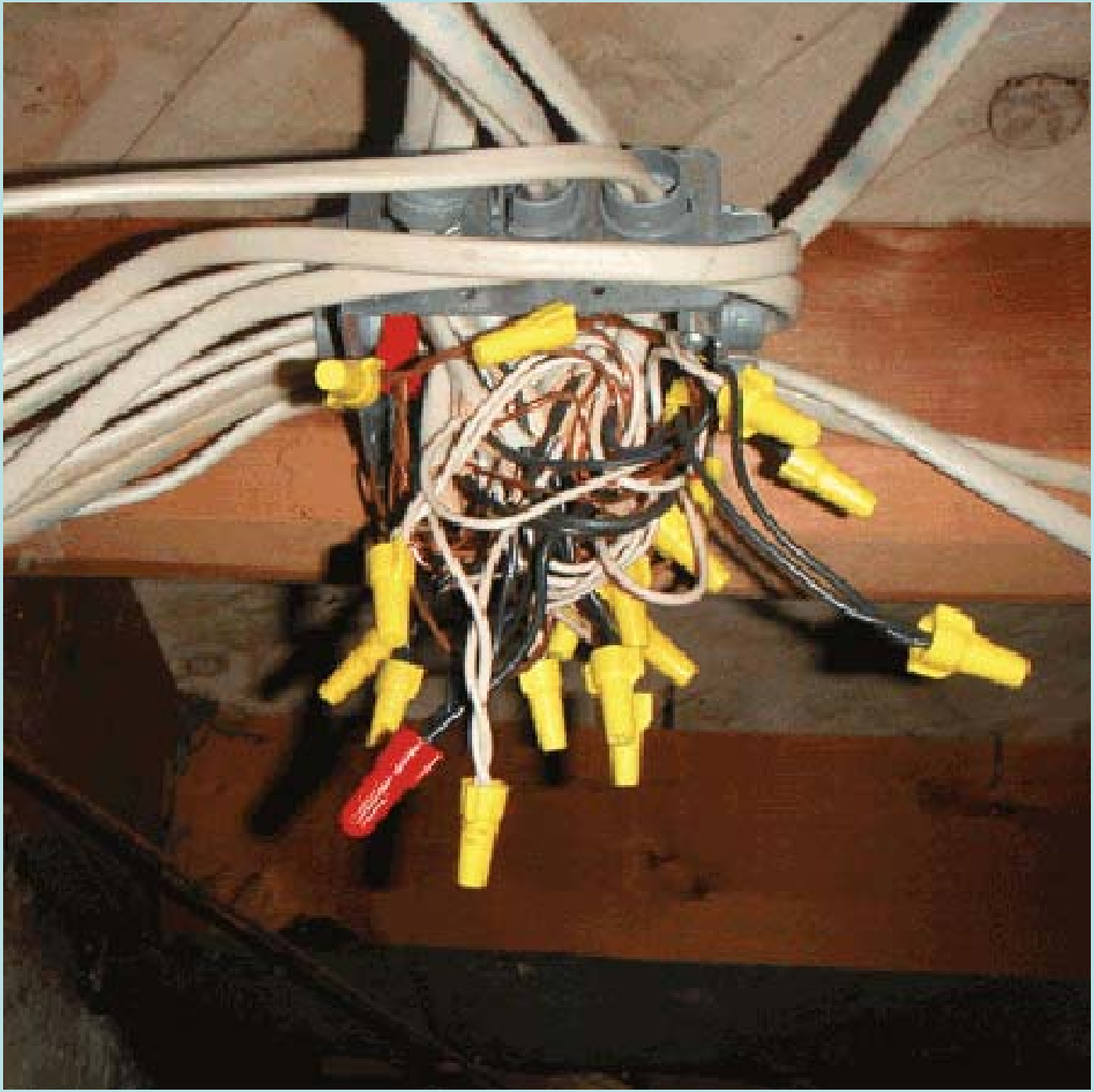

Float for High Water
Alarm Control Switch
Float for Pump On/Off
Control Switch

Section 6S.10
High-Water Alarm

The alarm and its switch must not be on the same electrical circuit as the pump and its switch.

Control panel breakers must be of less amp then main breaker box.





Inspections

Maine Department of Health and Human Services
Bureau of Health, Division of Health Engineering
Wastewater and Plumbing Control Program


There I Fixed It

Section 11D.1 CONSTRUCTION

<u>THE INSTALLER</u> OF THE SYSTEM SHALL MAKE CERTAIN THAT THE SYSTEM AND ALL ITS COMPONENT PARTS ARE INSTALLED IN CONFORMANCE WITH THE REQUIREMENTS OF THIS CODE, THE SE PLAN AND ANY OTHER SPECIAL ENGINEERING REQUIREMENTS.

Section 11D.2
SOIL AND BACKFILL MATERIAL

<u>THE INSTALLER</u> OF THE SYSTEM SHALL MAKE CERTAIN THAT THE CONSTRUCTION AND INSTALLATION ARE PERFORMED WITHOUT AFFECTING THE CAPACITY OF THE SOIL AND BACKFILL MATERIAL TO ABSORB AND TREAT THE EFFLUENT.

Timing & Sequence

There are a minimum of two inspections required for subsurface wastewater disposal systems.

The first inspection shall be made after site preparation to confirm that:

SOIL EROSION & SEDIMENT CONTROL

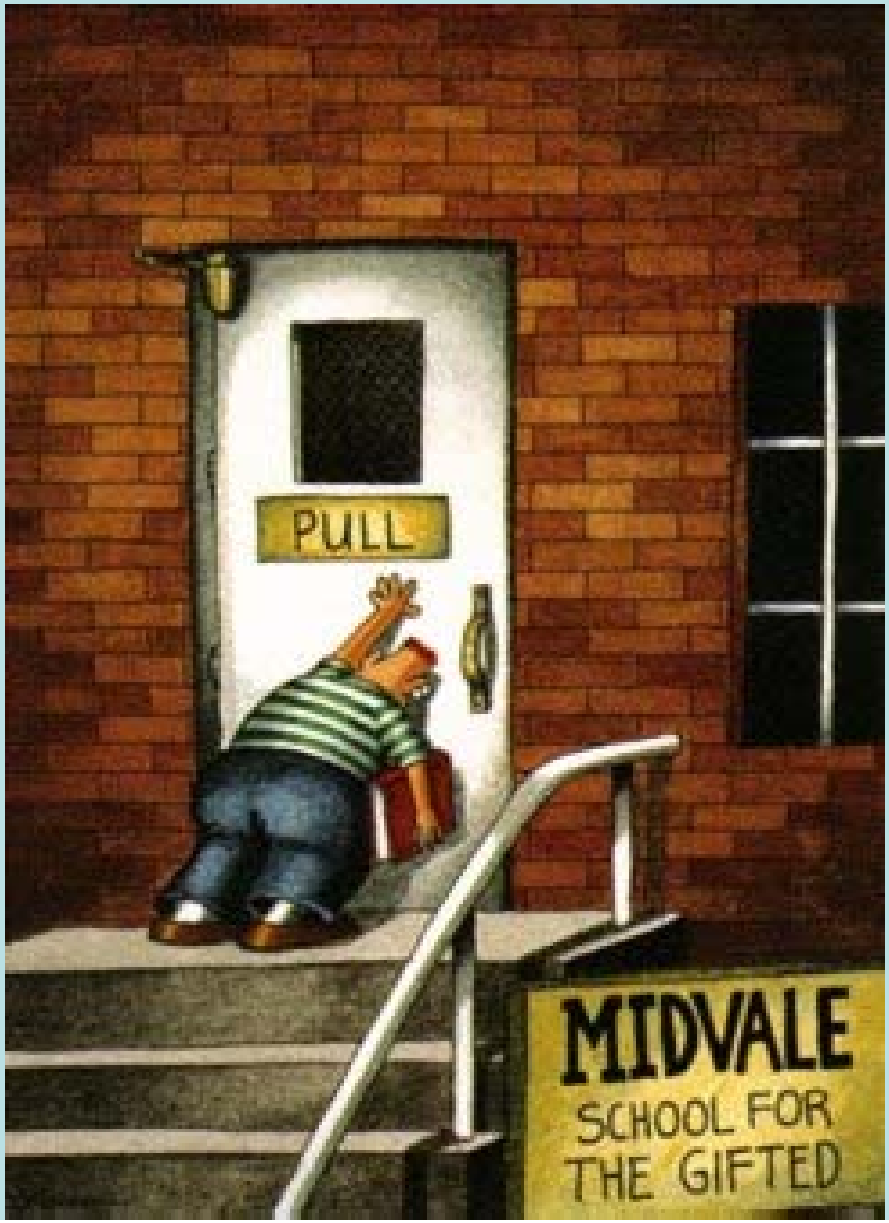
CLEARING OF THE SITE

SCARIFICATION

TRANSITION HORIZON

Pay attention to obvious signs

IS THERE STANDING WATER ON TOP OF THE SCARIFICATION?



DO YOU NOTICE A WELL CLOSER THEN WHAT'S ON THE PLAN?

Site Preparation

11B.1a Soil Erosion and Sediment Control

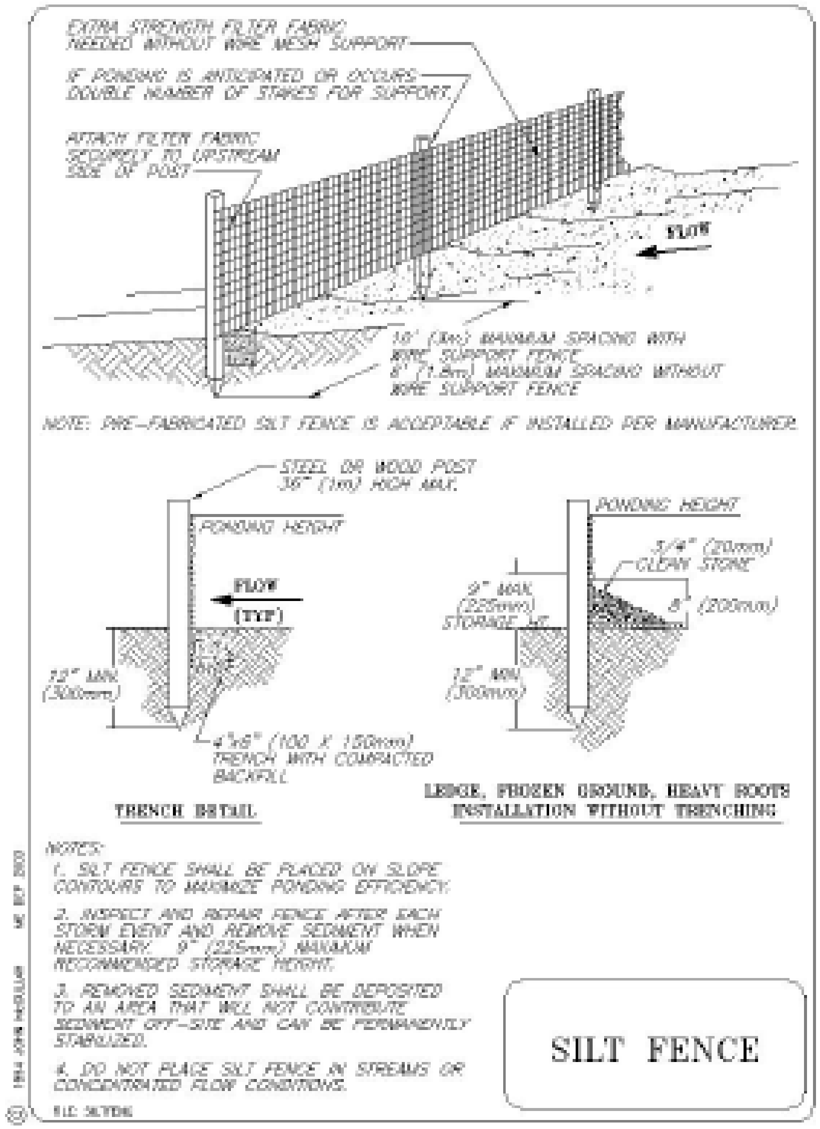
IN AREAS ADJACENT TO A WATER BODY OR WETLANDS, PREVENTATIVE EROSION AND SEDIMENT CONTROL MEASURES SHOULD BE EMPLOYED CONSISTENT WITH SECTION 11M.

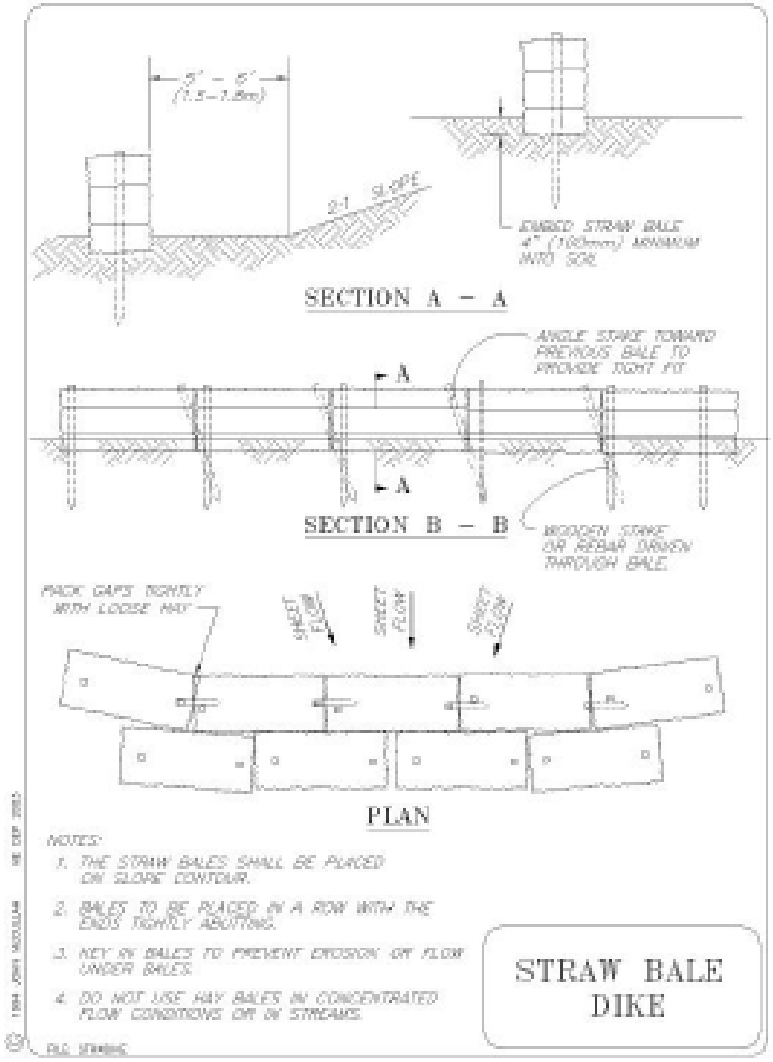
11M - WORK ADJACENT TO SPECIAL WETLANDS AND WATER BODIES

11M.3 - RUNOFF PREVENTION

1H – Wetlands and Waterbodies

1) SITES WITH SLOPES OF LESS THAN 33% REQUIRE A 25" UNDISTURBED SETBACK, MORE THAN 33% SLOPE WITHIN 25' REQUIRES A 75' SETBACK FROM ANY SOIL DISTURBANCE


EXTRA STRENGTH FILTER FABRIC
NEEDED WITHOUT WIRE MESH SUPPORT
IF PONDING IS ANTICIPATED OR OCCURS
DOUBLE NUMBER OF STAKES FOR SUPPORT.
ATTACH FILTER FABRIC
SECURELY TO UPSTREAM
SIDE OF POST
FLOW
10' (3m) MAXIMUM SPACING WITH
WIRE SUPPORT FENCE
6' (1.8m) MAXIMUM SPACING WITHOUT
WIRE SUPPORT FENCE
NOTE: PRE-FABRICATED SILT FENCE IS ACCEPTABLE IF INSTALLED PER MANUFACTURER.
STEEL OR WOOD POST
36" (1m) HIGH MAX.
PONDING HEIGHT
FLOW
(TYP)
12" MIN.
(300mm)
4"x6" (100 X 150mm)
TRENCH WITH COMPACTED
BACKFILL
TRENCH DETAIL
PONDING HEIGHT
3/4" (20mm)
CLEAN STONE
9" MAX.
(225mm)
STORAGE HT.
8" (200mm)
12" MIN.
(300mm)
LEDGE, FROZEN GROUND, HEAVY ROOTS
INSTALLATION WITHOUT TRENCHING
NOTES:
1. SILT FENCE SHALL BE PLACED ON SLOPE
CONTOURS TO MAXIMIZE PONDING EFFICIENCY.
2. INSPECT AND REPAIR FENCE AFTER EACH
STORM EVENT AND REMOVE SEDIMENT WHEN
NECESSARY. 9" (225mm) MAXIMUM
RECOMMENDED STORAGE HEIGHT.
3. REMOVED SEDIMENT SHALL BE DEPOSITED
TO AN AREA THAT WILL NOT CONTRIBUTE
SEDIMENT OFF-SITE AND CAN BE PERMANENTLY
STABILIZED.
4. DO NOT PLACE SILT FENCE IN STREAMS OR
CONCENTRATED FLOW CONDITIONS.
SILT FENCE


3' - 5'
(1.5 - 1.8m)
2:1 SLOPE
EMBED STRAW BALE
4" (100mm) MINIMUM
INTO SOIL
SECTION A - A
ANGLE STAKE TOWARD
PREVIOUS BALE TO
PROVIDE TIGHT FIT
A
A
SECTION B - B
WOODEN STAKE
OR REBAR DRIVEN
THROUGH BALE
PACK GAPS TIGHTLY
WITH LOOSE HAY
SHEET
FLOW
SHEET
FLOW
SHEET
FLOW
PLAN
NOTES:
1. THE STRAW BALES SHALL BE PLACED ON SLOPE CONTOUR.
2. BALES TO BE PLACED IN A ROW WITH THE ENDS TIGHTLY ABUTTING.
3. KEY IN BALES TO PREVENT EROSION OR FLOW UNDER BALES.
4. DO NOT USE HAY BALES IN CONCENTRATED FLOW CONDITIONS OR IN STREAMS.
STRAW BALE
DIKE

Section 11B.1b - CLEARING THE SITE

- VEGETATION MUST BE CUT AND REMOVED FROM THE AREA WHERE BACKFILL IS PLACED

DOES THIS INCLUDE THE FILL EXTENSIONS?

SCARIFICATION

Section 11B.3 - SCARIFY THE SITE

WHERE POSSIBLE, THE AREA UNDER THE DISPOSAL FIELD AND BACKFILL EXTENSIONS MUST BE PLOWED OR DISKED TO PRODUCE A THOROUGHLY ROUGHENED SURFACE. PLOWING MUST BE DONE PARALLEL TO THE TOPOGRAPHIC CONTOUR IN SUCH A DIRECTION THAT EACH PLOW FURROW WILL BE THROWN UPSLOPE.

THE SOIL SHOULD BE BROKEN UP TO A DEPTH OF 6-8 INCHES.

ALTERNATIVELY, A ROTO-TILLER OR THE TEETH OF A BACKHOE MAY BE USED.

Section 11B.3
TRANSITIONAL HORIZON

ON SITES WHERE THE BACKFILL MATERIAL IS COARSER THAN THE ORIGINAL SOIL, A MINIMUM OF 4 INCHES OF BACKFILL MATERIALS MUST BE MIXED (BY PLOWING, DISCING OR ROTO-TILLING) INTO THE ORIGINAL SOIL TO FORM A TRANSITIONAL HORIZON BENEATH THE DISPOSAL AREA FOOTPRINT AND ALL SIDE AND DOWNHILL FILL EXTENSIONS.

11B.5 - FILL LARGE HOLES

- LEFT AS A RESULT OF STUMP AND STONE REMOVAL, MUST BE FILLED WITH BACKFILL MATERIAL THAT MEETS THE REQUIREMENTS OF SECTION 804 BACKFILL

4A.8 SURFACE WATER DIVERSION

SURFACE WATER MUST BE DIVERTED AWAY FROM THE DISPOSAL FIELD AND FILL EXTENSIONS

BAD TRANSITIONAL HORIZONS & SCARIFICATION


CAT
CAT

ANOTHER SITE

BACKFILL

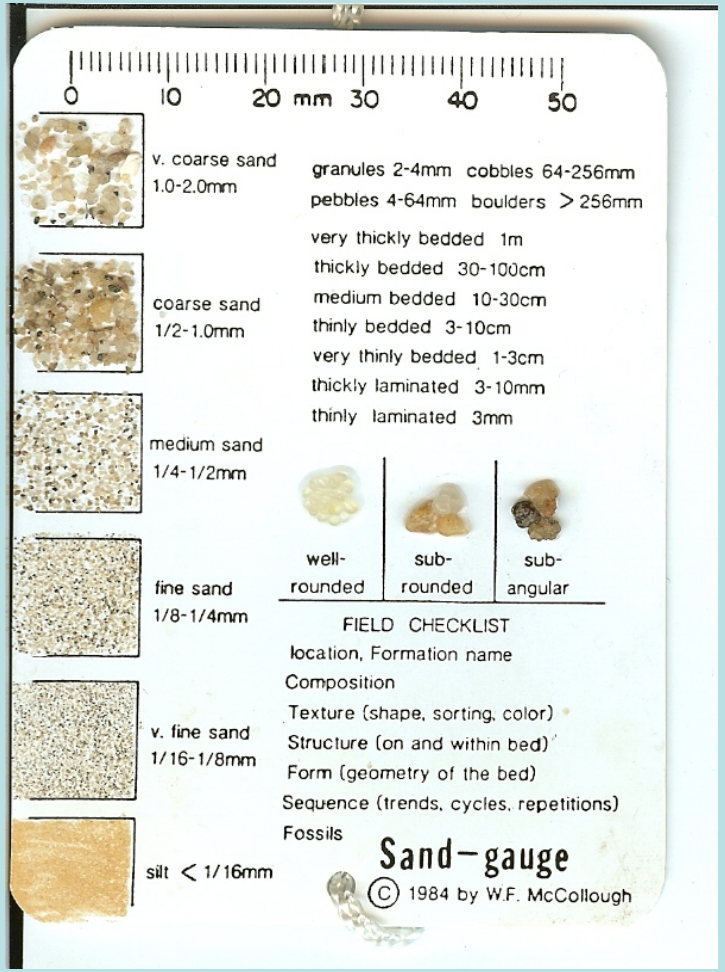
STANDARDS

11E.2 Backfill standards: The backfill material must be gravelly coarse sand which meets the following requirements:

Table 11A – Backfill Textural Gradation

Sieve Size	Percent Passing by Weight
3”	100
1.5”	95-100
0.75”	90-100
#4	75-100
#10	55-85
#20	30-65
#40	15-45
#60	10-25
#100	5-15
#200	2-8
Clay Fraction	0-2

Construction Related Rules
How to Check Sand Spec:



Construction Related Rules

Table 1. Soil Separates

Name of Separate	Diameter (range) mm.
Very coarse sand	2.00 - 1.00
Coarse sand	1.00 - 0.50
Medium sand	0.50 - 0.25
Fine sand	0.25 - 0.10
Very fine sand	0.10 - 0.05
Silt	0.05 - 0.002
Clay	less than 0.002

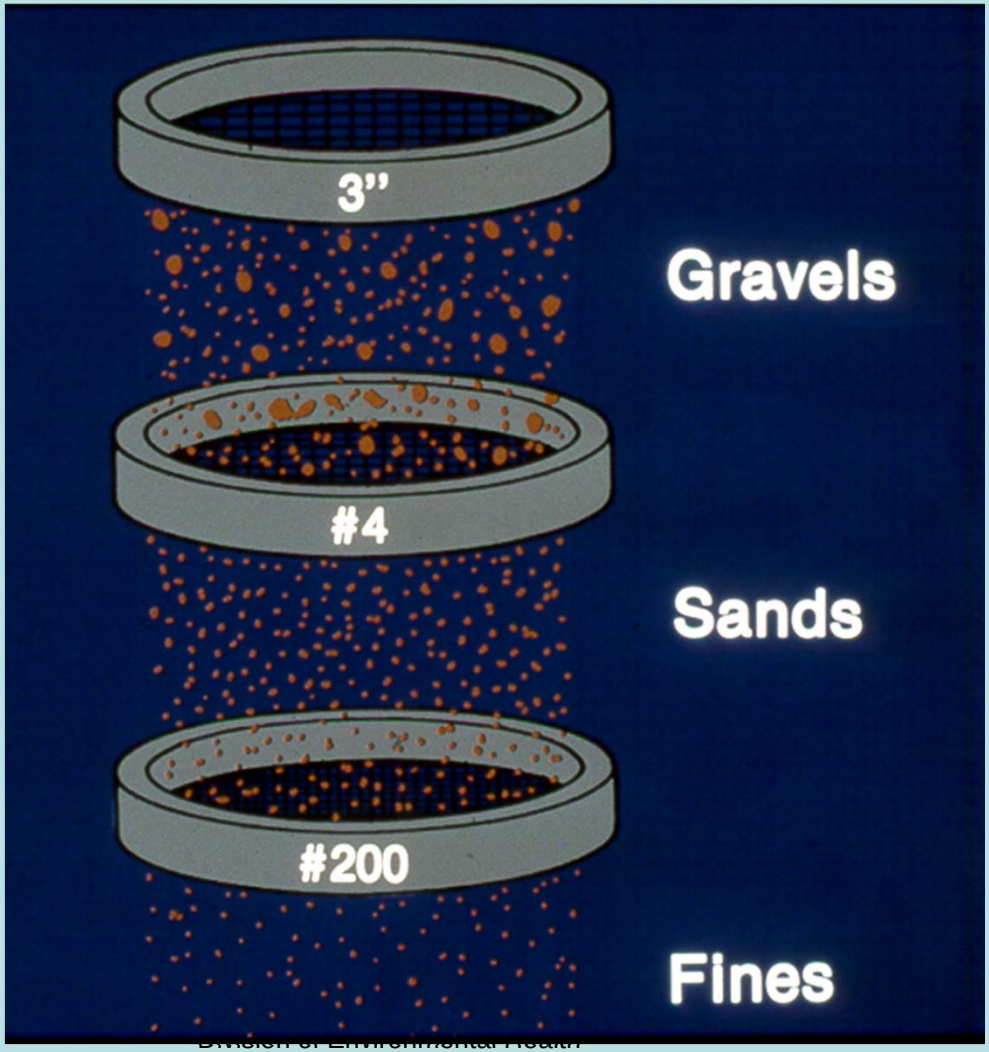
Gravel / Sand / Fines

- Gravels are between # 4 sieve and 3”
- Sands are between # 200 sieve and # 4 sieve
- Fines are smaller than # 200 sieve

- Particle Sizes
  - Gradation or Mechanical Analyses
  - Sieves for larger particles
  - Hydrometer for fine particles

Sieve Analyses

Sieve Analyses



Sieve Designation - Large

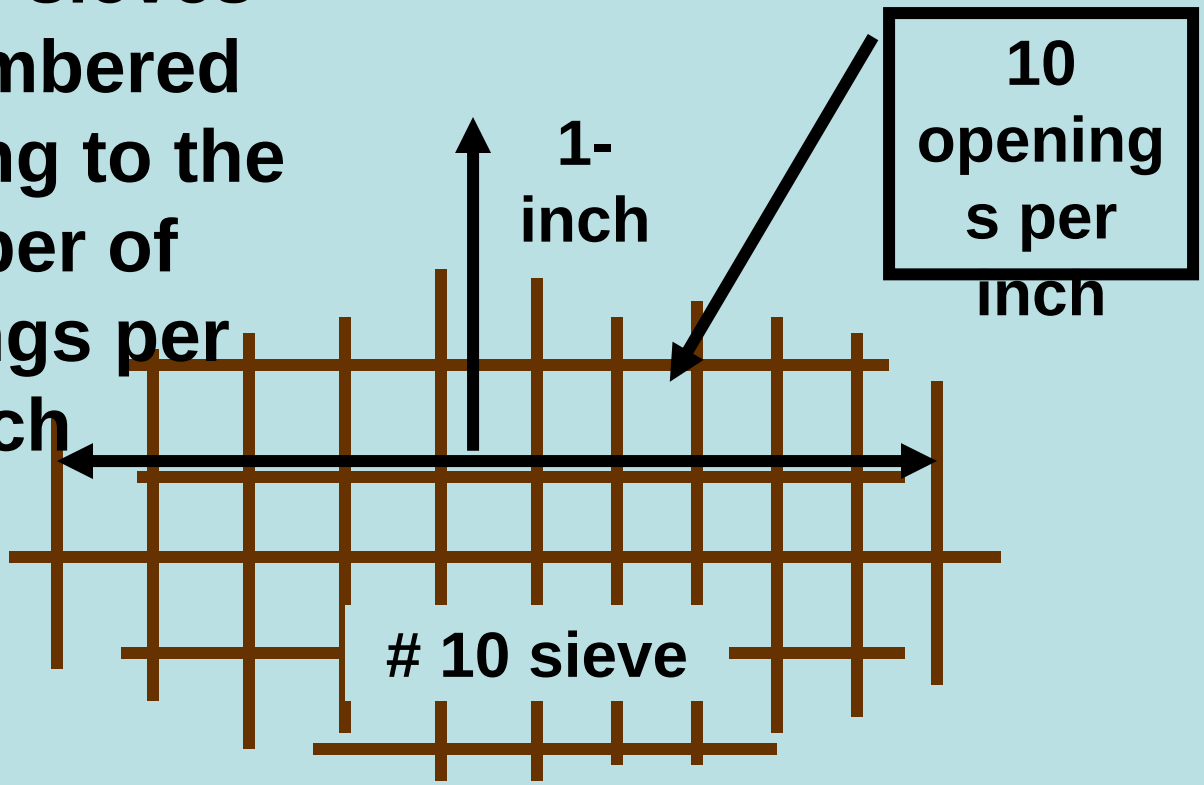
Sieves larger than the #4 sieve are designated by the size of the openings in the sieve

Review Activity 2

- Commonly used larger size sieves
  - 3 inch
  - 2 inch
  - 1-1/2 inch
  - 1 inch
  - 3/4 inch
  - 1/2 inch
  - 3/8 inch

Sieve Designation - Smaller

Smaller sieves are numbered according to the number of openings per inch



Construction Related Rules

S.W.COLE ENGINEERING, INC.

Report of Gradation

ASTM C-117 & C-136

t Name TUPPER PIT TESTING

Client CONSTRUCTION CONSULTANTS

Material Type IN DRAIN SAND

Material Source

Project Number 04-0426

Lab ID 1664G

Date Received 5/6/2004

Date Completed 5/7/2004

Tested By CRAIG TURCOTTE

STANDARD DESIGNATION (mm/µm)	SIEVE SIZE	AMOUNT PASSING (%)	SPECIFICATIONS (%)
150 mm	6"	100	
100 mm	4"	100	
75 mm	3"	100	
50 mm	2"	100	
38.1 mm	1-1/2"	100	
25.0 mm	1"	100	
19.0 mm	3/4"	100	
12.5 mm	1/2"	100	
9.5 mm	3/8"	94	100
4.75 mm	No. 4	89	95 - 100
2.36 mm	No. 8	82	80 - 100
1.18 mm	No. 16	71	50 - 85
600 um	No. 30	51	25 - 60
300 um	No. 50	26	5 - 30
150 um	No. 100	10	0 - 10
75 um	No. 200	3.9	

Construction Related Rules

Washed concrete sand meeting the ASTM C-33 specification.

Sieve Designation		Percentage by Weight Passing Square Mesh Sieves
Metric	English	
9.5 mm	3/8 inch	100
4.75 mm	No. 4	95-100
2.36 mm	No. 8	80-100
1.18 mm	No. 16	50-85
600 µm	No. 30	25-60
300 µm	No. 50	10-30
150 µm	No. 100	2-10
75 µm	No. 200	0-5.0 maximum

COARSE SAND

MEDIUM SAND

WET SITES on 9 INCH SOILS and REPLACEMENT SYSTEMS

PLASTIC LIMIT

11A.1 General: On sites with fine soil textures, excavations that expose the bottom and sidewall area of the disposal field must not be carried out when the soil moisture content is above the plastic limit except when correcting a nuisance, there is no practical alternative, the plumbing inspector agrees and special construction techniques are used. The absolute plastic limit can be estimated by rolling the soil with the fingers. If the soil forms a wire or rod 1/8th of an inch in diameter and does not crumble when handled, the soil moisture content is too high to proceed with the excavation.

PLASTIC LIMIT

The soil must be dry and friable when site prep is started.
Smearing and compaction due to construction in a wet soil decrease the soil's ability to absorb wastewater. If a sample of the soil at the trench bottom depth forms a ribbon (e.g. 1/8-inch diameter) when rolled between the palms of the hands, the soil is too wet to excavate. If the soil crumbles into its natural structure, excavation may proceed. This pre-scarification examination is essential to help ensure proper operation of the system.

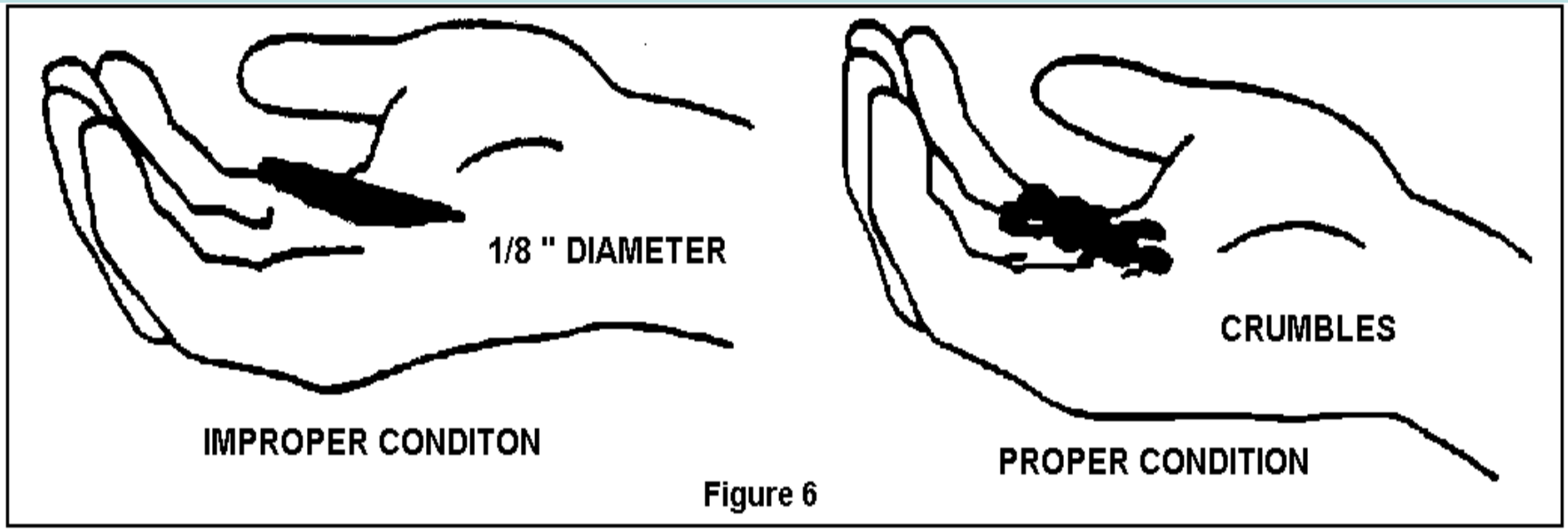


Figure 6

Maine Department of Health & Human Services
Maine Center for Disease Control & Prevention
Division of Environmental Health – Subsurface Wastewater Unit

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Voluntary Certification Program

Subsurface Wastewater Disposal System Installer

In association with the Maine Department of Environmental Protection, Nonpoint Source Training and Resource Center the Division of Environmental Health is pleased to offer a voluntary certification program for individuals who install subsurface wastewater disposal systems. The Maine Subsurface Wastewater Disposal Rules, CMR 241, do not require certification as a condition of obtaining a permit for the purpose of installing a subsurface wastewater disposal system; however possession of this certification **may allow the installer to sign an affidavit (HHE-238B) to cover the first system inspection noted in Section 111.5.1 of the Rules if the local plumbing inspector is in agreement.**

Once issued the certification is good for five (5) years. The following criteria must be met for initial certification by the Department:

1. Attendance at one (1) Basic System Installation Training Session conducted by the Subsurface Wastewater Program; and
2. Submission of page one from two (2) HHE-200 Forms which were permitted and installed by the applicant and inspected and found in compliance with the Rules by the Local Plumbing Inspector. **PLEASE MAKE SURE THAT THE 1ST AND 2ND INSPECTIONS ARE DONE ON THESE HHE FORMS.**

The certification will be automatically renewed after five (5) years if the certified individual submits proof of attendance at subsurface waster related training session(s) providing a minimum of 6 contact hours within the past certification period. Individuals attending JETCC sponsored sessions will be credited automatically. It is the responsibility of the certified individual to insure that proof of attendance is provided to the Division of Environmental Health.

Mail to: **Maine Department of Health & Human Services**
Division of Environmental Health
Attn: Wendy Austin
11 State House Station
Augusta, Maine 04333-0011

Name: _____

Company: _____

Address: _____

Municipality: _____ State: _____ Zip: _____

Telephone: _____ Email: _____

Training Session Attended: _____ Date: _____

Revised 12/10/09

DIVISION OF ENVIRONMENTAL HEALTH

SUBSURFACE WASTEWATER PROGRAM

AFFIDAVIT OF SITE PREPARATION

This affidavit is to be completed by a certified system installer and submitted to the Local Plumbing Inspector to document compliance with **Section 111.5.1** of the Maine Subsurface Wastewater Disposal Rules, **144 CMR 241.** ***Permission to utilize this document in lieu of a site preparation inspection by the Local Plumbing Inspector must be verified when the permit is issued.*** This affidavit is ***not*** to be utilized in place of the system inspection described in **Section 111.5.2** of the Rules.

INSTALLER NAME: _____
(Please Print)

CERTIFICATION NUMBER: _____

SSWD PERMIT NUMBER: _____

PERMIT ISSUE DATE: _____

PROPERTY OWNER NAME: _____

PROPERTY ADDRESS: _____

MUNICIPALITY: _____

By signing and submitting this document to the Local Plumbing Inspector, I certify that all construction activities noted in **Section 111.5.1** including removal of all vegetation from the disposal field area and fill extensions as specified in **Section 801.3**; roughening of the ground surface as specified in **Section 801.4**; establishment of a transitional horizon as specified in **Section 801.5**; and placement of erosion control devices as specified in **Section 801.2** have been completed in full compliance with the Maine Subsurface Wastewater Disposal Rules, **144 CMR 241** for the referenced SSWD permit.

INSTALLER SIGNATURE: _____

DATE SUBMITTED: _____

By signing and accepting this document from the Certified Installer, I acknowledge that a site preparation inspection was not conducted for the referenced SSWD permit.

LPI SIGNATURE: _____

ACCEPTANCE DATE: _____

HHE-238-B (Revision 01/2008)

THIS FORM ONLY TO BE USED AFTER THE LPI'S APPROVAL

EXCAVATION

Section 11C.2
BOTTOM OF DISPOSAL FIELD

- THIS SERVES AS THE FINAL STAGE OF THE DISTRIBUTION NETWORK

- MUST BE INSTALLED AT THE ELEVATION SPECIFIED ON THE PERMIT.

- MUST MAINTAIN A LEVEL GRADE.
  (2” WITHIN 100’)

Section 11C.3

AVOID UNNECESSARY COMPACTION

- RUBBER TIRED VEHICLES SHOULD NOT BE DRIVEN OVER THE EXPOSED BOTTOM OF THE DISPOSAL FIELD

- SHOULD BE CARRIED OUT BY A BACKHOE OPERATING OUTSIDE THE PERIMETER OF THE DISPOSAL AREA

Which looks like…….

And if not corrected could look like…..

Which would result in……

11C.4 - REOPEN SMEARED OR COMPACTED BOTTOM OR SIDEWALL SURFACES

- THIS PORTION MUST BE SCARIFIED TO RE-OPEN SOIL PORES.

- ROTO-TILLING MAY BE NECESSARY TO REACH THE LIMIT OF COMPACTED SOIL DEPTH.

Section 11C.5 - WEATHER CONDITIONS

- **WORK SHOULD BE SCHEDULED SO THAT EXCAVATED AREAS ARE NOT EXPOSED TO RAINFALL OR WIND BLOWN SILT**

- **DEBRIS MUST BE REMOVED BEFORE BACKFILLING**

- **DISPOSAL FIELDS SHOULD NOT BE INSTALLED IN FROZEN GROUND OR WHEN THE AMBIENT AIR TEMP. IS BELOW FREEZING**

11I - INSPECTIONS

11I.1 REQUIRED:

IT SHALL BE THE DUTY OF THE PLUMBING INSPECTOR TO ENFORCE THE PROVISIONS OF THIS CODE AND TO MAKE SUCH INSPECTIONS AS MAY BE REQUIRED BY THIS CODE

Inspections

The second inspection shall be made after installation of the system components, including stone, pipes or proprietary devices, tanks, hay, filter fabric, and fill beneath and beside of the disposal area but before backfill is placed above the disposal system components.

Inspections

No part of a system may be backfilled until it has been inspected and approved. If any part is covered before being inspected and approved, it shall be uncovered at the discretion of the plumbing inspector and at the expense and risk of the owner.

If inspection discloses defective material, design, siting, or poor construction that does not conform to the requirements of the Rules, the nonconforming parts shall be removed, replaced, and reinspected.

The LPI must sign the inspection block on the HHE-200 Form or Plumbing Application, just below the permit label area, which comprises a Certificate of Approval.

The LPI should simultaneously sign the permittee's copy and the Town's copy. This will provide the Town and the permitee with a permanent record that the inspection took place.

Construction Related Rules

Chapter 6 – Septic Tanks, Dosing Tanks & Grease Interceptors

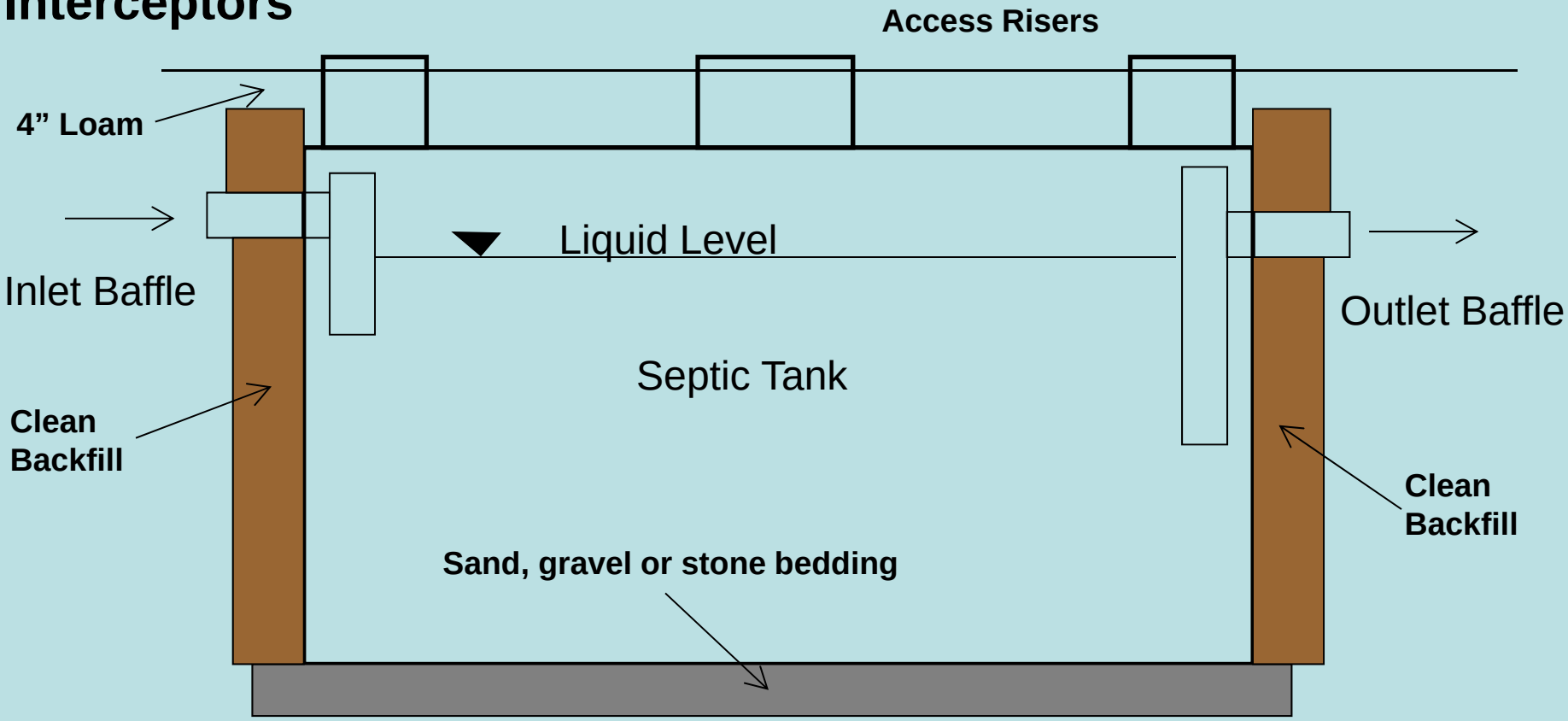


Illustration of Tank Installation

Plastic Chambers

- Chambers are used in the trench or cluster configuration. Permitted substitutions can be found on Page 60, Table 6H of the new rules.
- Just remember, you can substitute a High Capacity for a High Capacity of another manufacturer but not a High Capacity for a Standard, Quick 4 or Low Profile.

Concrete Chambers

- Each 4’ by 8’ chamber in trench configuration with 8’ sidewalls has an infiltration area of 90sqft
- Infiltration area of 77 sqft for 4’ sidewall.
- The 8’ by 8’ chamber has an infiltration area of 128 sqft in cluster configuration and 154 sqft in trench configuration.
- Any approved manufacturer of concrete chambers can substitute for another as long as the size is the same.

RISERS, RESIDENTIAL

- IF BURIED, WATER TIGHT RISERS TO WITHIN 6” OF ORIGINAL GRADE ARE REQUIRED.

- RISER OPENING MUST BE 18” IN DIAMETER OVER THE TANK COVER

- IF THERE IS A PUMP STATION WITHIN THE TANK, THE RISER DIAMETER MUST BE 24”

- OUTLET BAFFLES THAT UTILIZE AN EFFLUENT FILTER MUST HAVE A RISER OF AT LEAST 18”

RISERS, OTHER FACILITIES

ALL RISERS MUST BE LOCATED AT GRADE. GRADE MUST SLOPE AWAY FROM THE OPENINGS

Construction Related Rules

TABLE 11B
Maximum Percent passing by weight

		Nominal Stone Size	
		1 ½”	¾”
Sieve Size	2”	100	100
	1 ½’”	95 - 100	100
	3/4”	0 - 40	90 - 100
	1/2”	0 - 20	0 - 55
	3/8”	0 - 8	0 - 25
	#4	0 - 5	0 - 10
	#200	0 - 2	0 - 2

Construction Related Rules

Chapter 11 - Disposal Field Construction Techniques

Section 11F.2d Placement

Stone may be placed in the disposal field site using a back-hoe, front-end loader, or dump truck, from the sides of the disposal field rather than by driving onto the prepared area of the disposal field.

In the case of large disposal fields, tracked equipment may be operated within the disposal field.

Inspections

Second Inspection

A common installation error is use of poor quality or poorly sized stone, which results in reduced void space and occasional sealing off by very fine particles.

Stone must be ¾" OR 1 ½" in size, clean, and evenly sized to provide sufficient void space.

Some installers wrongly interpret the size range as allowing a mix of sizes.

PIPING BETWEEN COMPONENTS

Section 6M - PIPING

- **GRAVITY FLOW – NO LESS THEN 3”, PRIMITIVE 1.5”**
- **PUMP DISCHARGE - NO LESS THAN MANUFACTURER SPEC.**
- **JOINTS - MADE WATERTIGHT**
- **LAID IN A FIRM FOUNDATION AND PROTECTED FROM FREEZING**

- **BUILDING SEWER PITCH – PIPES UNDER 4” = 1/4 “ PER FOOT**
- **PIPES 4” & LARGER = 1/8” PER FOOT MAY BE AUTHORIZED BY THE LPI**

- **EFFLUENT LINE PITCH – 1/8” PER FOOT**

The disposal field stone shall be covered with a layer of non-woven fabric or two (2) inches of compressed hay.

Non-woven fabric may be used, provided the edges of adjacent sheets of fabric overlap by a minimum of 6 inches; and the for the fabric shall be 4.0 ounces/square yard (per ASTM D-3776).

SECOND INSPECTION ELEVATIONS, BACKFILL, SLOPE, PITCH…

PRIOR TO COVERING THE SYSTEM

SYSTEM COMPONENTS

STONE, PIPES OR PROPRIETARY DEVICES

TANKS, HAY, FILTER FABRIC

FILL BENEATH AND BESIDE THE DISPOSAL FIELD INCLUDING FILL EXTENSIONS

CURTAIN DRAINS, DIVERSION DITCHES, BERMS

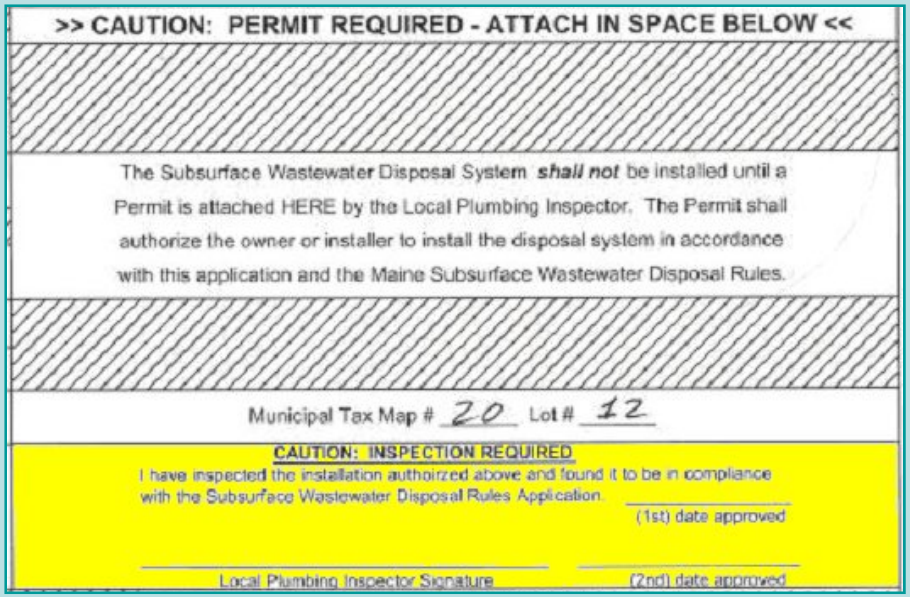
SHOULDER, FILL EXTENSIONS

Permitting

Certificates of Approval

The LPI must sign the inspection block on the HHE-200 Form or Plumbing Application, just below the permit label area, which comprises a Certificate of Approval.

The LPI should simultaneously sign the permittee's copy and the Town's copy. This will provide the Town and the permitee with a permanent record that the inspection took place.


>> CAUTION: PERMIT REQUIRED - ATTACH IN SPACE BELOW <<

The Subsurface Wastewater Disposal System ***shall not*** be installed until a Permit is attached HERE by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.

Municipal Tax Map # 20 Lot # 12

CAUTION: INSPECTION REQUIRED

I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.

(1st) date approved

Local Plumbing Inspector Signature

(2nd) date approved

Section 11E
FILL MATERIAL PLACEMENT ABOVE DISPOSAL FIELD

IMMEDIATELY ABOVE THE FILTER FABRIC OR HAY, FILL IS REQUIRED AS SPECIFIED ON THE PLANS, (TABLE 800.1)

A MINIMUM OF 8 INCHES INCLUDING COVER MATERIAL

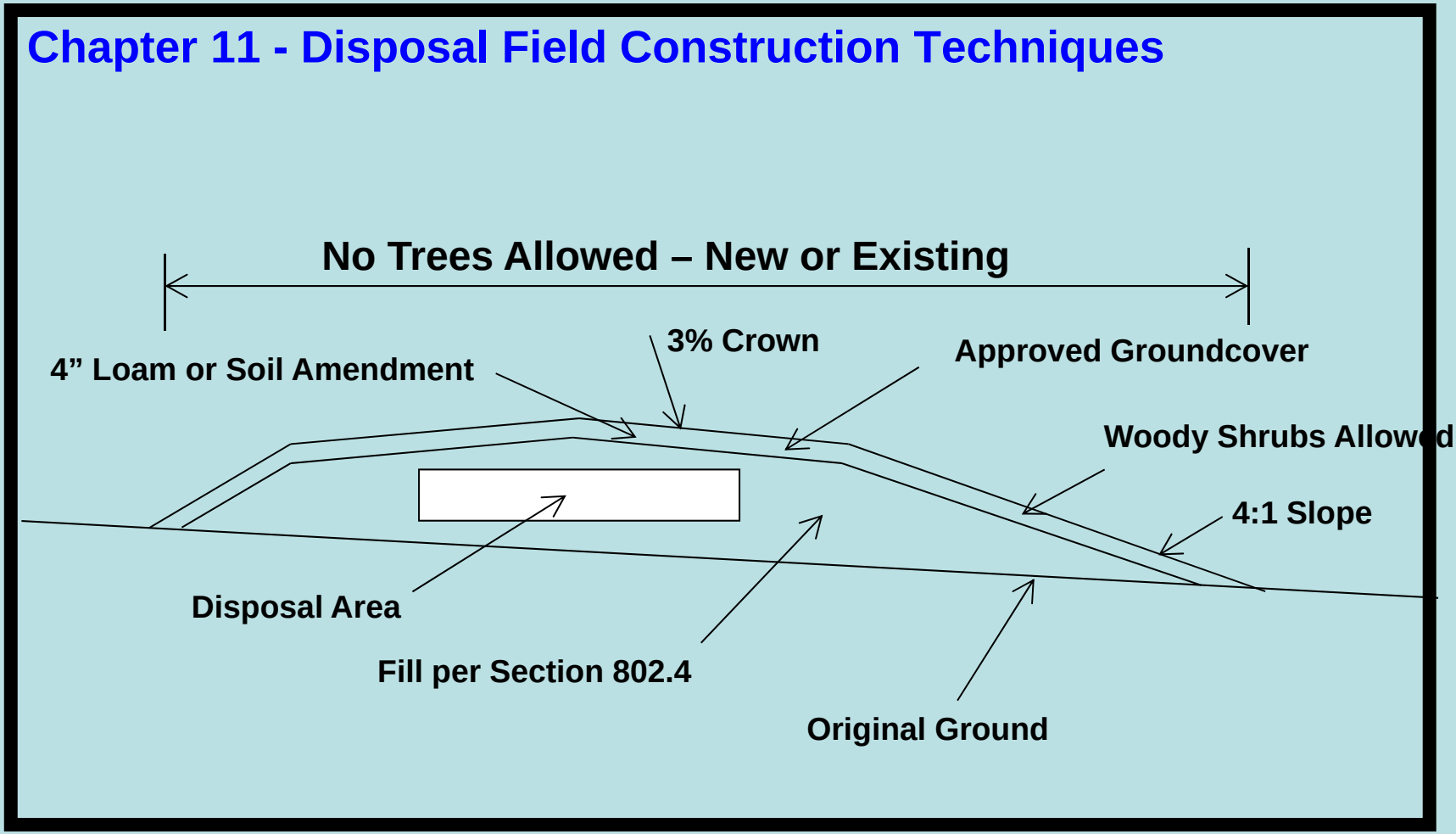
COVER MATERIAL

11E.2d - Cover Material

IMMEDIATELY ABOVE THE BACKFILL OR FILL MATERIAL, A MINIMUM OF 4” OF SOIL OR SOIL AMENDMENT MIX, SUITIBLE FOR ESTABLISHMENT OF A GOOD VEGITATIVE COVER MUST BE PLACED OVER THE ENTIRE DISTURBED SOIL AREA, INCLUDING FILL EXTENSIONS

3% CROWN, 3’ SHOULDER AND 4:1 FILL EXTENSIONS

Construction Related Rules



Length of Fill Extensions

Upslope thickness of fill in feet at edge of shoulder

---------- -------

(Proposed finish grade slope in feet per foot + existing ground grade in feet per foot)

(4 to 1 = 25 % = 0.25 feet per foot) + (rise over run, difference in elevation / distance)

12 inches / 12 = 1.00’

---------- = 2.5 feet round up to 3 feet

0.25 feet per foot + 4 feet / 20 feet

0.25 + 0.15

Note: When existing ground upslope is three (3) percent or less the existing ground slope should be calculated to be level.

Length of Fill Extensions

Shoulder Slope = 3’ x.03 = 0.09

5 % Existing ground slope = 3’ x0.05 = 0.15 – 0.09 = 0.06/(0.25 + 0.05) = 0.20 feet less

10% Existing ground slope = 3’ x0.10 = 0.30 – 0.09 = 0.21/(0.25 + 0.10) = 0.60 feet less

15% Existing ground slope = 3’ x0.15 = 0.45 – 0.09 = 0.36/(0.25 + 0.15) = 0.90 feet less

20% Existing ground slope = 3’ x0.20 = 0.60 – 0.09 = 0.51/(0.25 + 0.20) = 1.13 feet less

Length of Fill Extensions

$$\frac{\text{Down slope thickness of fill in feet at edge of shoulder}}{\text{(Proposed finish grade slope in feet per foot -- existing ground grade in feet per foot)}}$$

(4 to 1 = 25 % = 0.25 feet per foot)(rise over run, difference in elevation / distance)

$$\frac{\text{36 inches / 12 = 3.00'}}{\text{0.25 feet per foot – 4 feet / 20 feet}} = 40 \text{ feet}$$

0.25 – 0.15

Length of Fill Extensions

Shoulder Slope = 3’ x.03 = 0.09

5 % Existing ground slope = 3’ x0.05 = 0.15 – 0.09 = 0.06/(0.25 – 0.05) = 0.3 feet more

10% Existing ground slope = 3’ x0.10 = 0.30 – 0.09 = 0.21/(0.25 - 0.10) = 1.4 feet more

15% Existing ground slope = 3’ x0.15 = 0.45 – 0.09 = 0.36/(0.25 – 0.15) = 3.6 feet more

20% Existing ground slope = 3’ x0.20 = 0.60 – 0.09 = 0.51/(0.25 - .20) = 10.2 feet more

11G.7 - FINAL EROSION CONTROL

VEGETATIVE COVERS

GRASS, CLOVER, TREFOIL, VETCH, WILD FLOWERS, ETC..

OTHER COVERS
BARK CHIPS, WOOD CHIPS

WOODY SHRUBS AND TREES ARE UNACCEPTABLE EXCEPT FOR WOODY SHRUBS ON FILL EXTENSIONS

Spring 2009

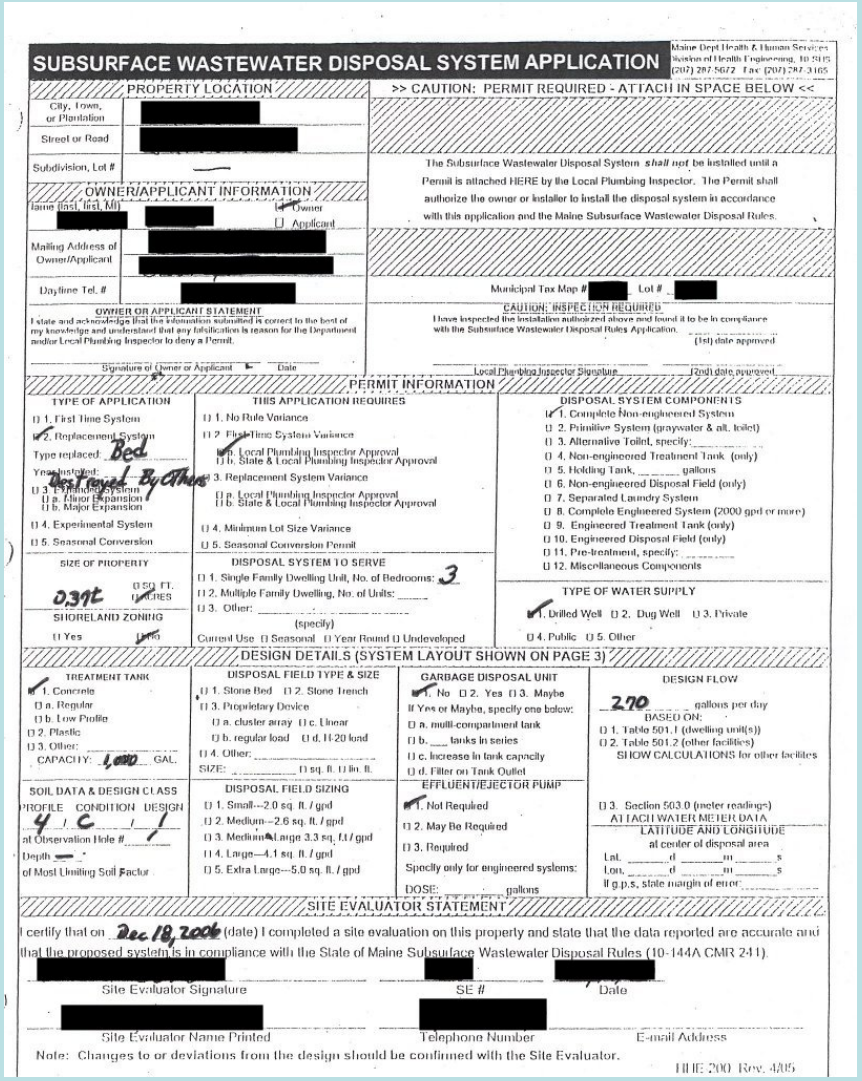
Division of Environmental Health
Subsurface Wastewater Program

POOR SITE EVALUATION

HHE-200 Form

Page one of the HHE-200 Form must be signed by both the owner/applicant and the Site Evaluator before a permit can be issued.

It is important to check that each block on the form is properly completed. If any information is lacking, the LPI should not issue the permit.



SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Maine Dept Health & Human Services
Division of Health Engineering, 10 SHS
(207) 287-5672 Fax: (207) 287-3165

PROPERTY LOCATION

>> CAUTION: PERMIT REQUIRED - ATTACH IN SPACE BELOW <<

City, Town, or Plantation: [redacted]
Street or Road: [redacted]
Subdivision, Lot #: —

OWNER/APPLICANT INFORMATION

Name (last, first, MI): [redacted] ☑ Owner ☐ Applicant
Mailing Address of Owner/Applicant: [redacted]
Daytime Tel. #: [redacted]

The Subsurface Wastewater Disposal System *shall not* be installed until a Permit is attached HERE by the Local Plumbing Inspector. The Permit shall authorize the owner or installer to install the disposal system in accordance with this application and the Maine Subsurface Wastewater Disposal Rules.

Municipal Tax Map # [redacted] Lot # [redacted]

OWNER OR APPLICANT STATEMENT

I state and acknowledge that the information submitted is correct to the best of my knowledge and understand that any falsification is reason for the Department and/or Local Plumbing Inspector to deny a Permit.

Signature of Owner or Applicant — Date

CAUTION: INSPECTION REQUIRED

I have inspected the installation authorized above and found it to be in compliance with the Subsurface Wastewater Disposal Rules Application.

(1st) date approved

Local Plumbing Inspector Signature — (2nd) date approved

PERMIT INFORMATION

TYPE OF APPLICATION
☐ 1. First Time System
☑ 2. Replacement System
Type replaced: Bed
Year installed: Don't Know / By Other
☐ 3. Expansion of System
☐ a. Major Expansion
☐ b. Major Expansion
☐ 4. Experimental System
☐ 5. Seasonal Conversion

THIS APPLICATION REQUIRES
☐ 1. No Rule Variance
☐ 2. Flood Time System Variance
☑ a. Local Plumbing Inspector Approval
☐ b. State & Local Plumbing Inspector Approval
☐ 3. Replacement System Variance
☐ a. Local Plumbing Inspector Approval
☐ b. State & Local Plumbing Inspector Approval
☐ 4. Minimum Lot Size Variance
☐ 5. Seasonal Conversion Permit

DISPOSAL SYSTEM COMPONENTS
☑ 1. Complete Non-engineered System
☐ 2. Primitive System (graywater & alt. toilet)
☐ 3. Alternative Toilet, specify: ____
☐ 4. Non-engineered Treatment Tank (only)
☐ 5. Holding Tank, ____ gallons
☐ 6. Non-engineered Disposal Field (only)
☐ 7. Separated Laundry System
☐ 8. Complete Engineered System (2000 gpd or more)
☐ 9. Engineered Treatment Tank (only)
☐ 10. Engineered Disposal Field (only)
☐ 11. Pre-treatment, specify: ____
☐ 12. Miscellaneous Components

SIZE OF PROPERTY
0.39± ☐ SQ. FT. ☐ ACRES

SHORELAND ZONING
☐ Yes ☑ No

DISPOSAL SYSTEM TO SERVE
☐ 1. Single Family Dwelling Unit, No. of Bedrooms: 3
☐ 2. Multiple Family Dwelling, No. of Units: ____
☐ 3. Other: ____ (specify)
Current Use ☐ Seasonal ☐ Year Round ☐ Undeveloped

TYPE OF WATER SUPPLY
☑ 1. Drilled Well ☐ 2. Dug Well ☐ 3. Private
☐ 4. Public ☐ 5. Other

DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)

TREATMENT TANK
☑ 1. Concrete
☐ a. Regular
☐ b. Low Profile
☐ 2. Plastic
☐ 3. Other: ____
CAPACITY: 1,000 GAL.

DISPOSAL FIELD TYPE & SIZE
☐ 1. Stone Bed ☐ 2. Stone Trench
☐ 3. Proprietary Device
☐ a. cluster array ☐ c. Linear
☐ b. regular load ☐ d. H-20 load
☐ 4. Other: ____
SIZE: ____ ☐ sq. ft. ☐ lin. ft.

GARBAGE DISPOSAL UNIT
☑ 1. No ☐ 2. Yes ☐ 3. Maybe
If Yes or Maybe, specify one below:
☐ a. multi-compartment tank
☐ b. ____ tanks in series
☐ c. Increase in tank capacity
☐ d. Filter on Tank Outlet

DESIGN FLOW
270 gallons per day
BASED ON:
☐ 1. Table 501.1 (dwelling unit(s))
☐ 2. Table 501.2 (other facilities)
SHOW CALCULATIONS for other facilities
☐ 3. Section 503.0 (meter readings)
ATTACH WATER METER DATA

SOIL DATA & DESIGN CLASS
PROFILE CONDITION DESIGN
4 / C / 1
at Observation Hole # ____
Depth — "
of Most Limiting Soil Factor

DISPOSAL FIELD SIZING
☐ 1. Small—2.0 sq. ft. / gpd
☐ 2. Medium—2.6 sq. ft. / gpd
☐ 3. Medium/Large 3.3 sq. ft / gpd
☐ 4. Large—4.1 sq. ft. / gpd
☐ 5. Extra Large—5.0 sq. ft. / gpd

EFFLUENT/EJECTOR PUMP
☑ 1. Not Required
☐ 2. May Be Required
☐ 3. Required
Specify only for engineered systems:
DOSE: ____ gallons

LATITUDE AND LONGITUDE
at center of disposal area
Lat. ____ d ____ m ____ s
Lon. ____ d ____ m ____ s
If g.p.s., state margin of error: ____

SITE EVALUATOR STATEMENT

I certify that on Dec 18, 2006 (date) I completed a site evaluation on this property and state that the data reported are accurate and that the proposed system is in compliance with the State of Maine Subsurface Wastewater Disposal Rules (10-144A CMR 241).

[redacted] — Site Evaluator Signature
[redacted] — SE #
[redacted] — Date
[redacted] — Site Evaluator Name Printed
[redacted] — Telephone Number
E-mail Address

Note: Changes to or deviations from the design should be confirmed with the Site Evaluator.

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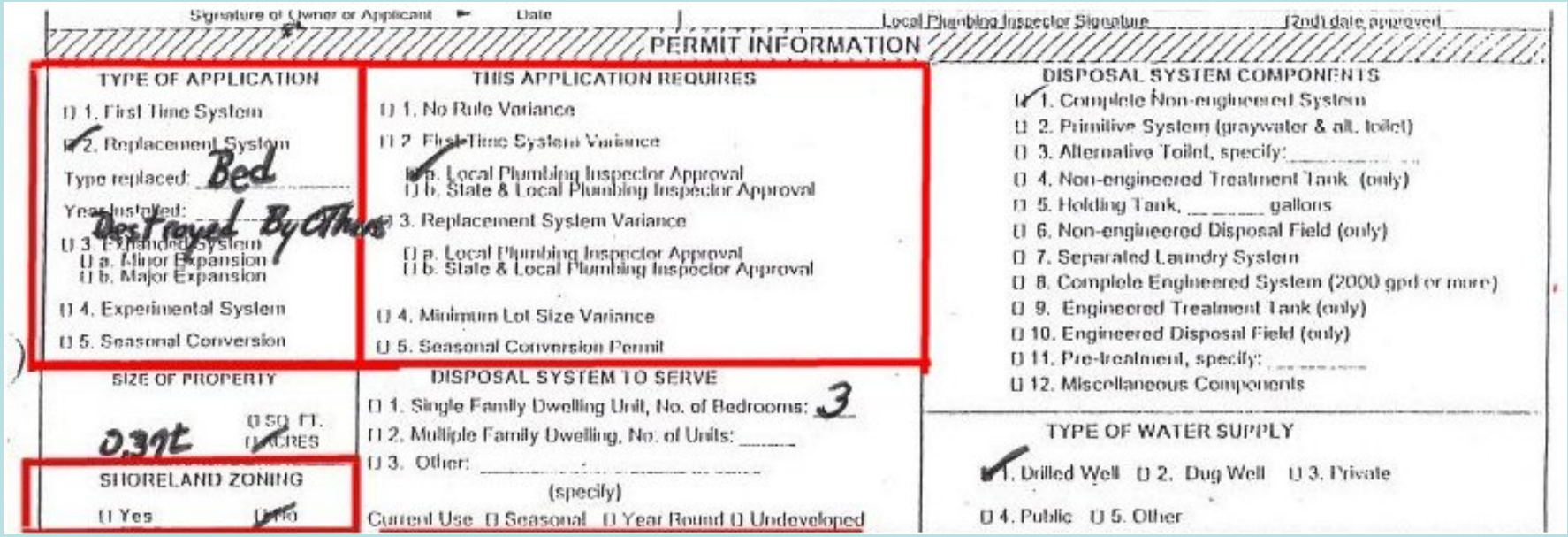
HHE-200 Form

Page One



Signature of Owner or Applicant ► Date

Local Plumbing Inspector Signature (2nd) date approved

PERMIT INFORMATION

TYPE OF APPLICATION

- ☐ 1. First Time System
- ☑ 2. Replacement System
  - Type replaced: Bed
  - Year Installed: Destroyed By Other
- ☐ 3. Expanded System
  - ☐ a. Minor Expansion
  - ☐ b. Major Expansion
- ☐ 4. Experimental System
- ☐ 5. Seasonal Conversion

THIS APPLICATION REQUIRES

- ☐ 1. No Rule Variance
- ☐ 2. First Time System Variance
  - ☑ a. Local Plumbing Inspector Approval
  - ☐ b. State & Local Plumbing Inspector Approval
- ☐ 3. Replacement System Variance
  - ☐ a. Local Plumbing Inspector Approval
  - ☐ b. State & Local Plumbing Inspector Approval
- ☐ 4. Minimum Lot Size Variance
- ☐ 5. Seasonal Conversion Permit

DISPOSAL SYSTEM COMPONENTS

- ☑ 1. Complete Non-engineered System
- ☐ 2. Primitive System (graywater & alt. toilet)
- ☐ 3. Alternative Toilet, specify: _____
- ☐ 4. Non-engineered Treatment Tank (only)
- ☐ 5. Holding Tank, _____ gallons
- ☐ 6. Non-engineered Disposal Field (only)
- ☐ 7. Separated Laundry System
- ☐ 8. Complete Engineered System (2000 gpd or more)
- ☐ 9. Engineered Treatment Tank (only)
- ☐ 10. Engineered Disposal Field (only)
- ☐ 11. Pre-treatment, specify: _____
- ☐ 12. Miscellaneous Components

SIZE OF PROPERTY

0.39 ☐ 50 FT. ☑ ACRES

SHORELAND ZONING

☐ Yes ☑ No

DISPOSAL SYSTEM TO SERVE

- ☐ 1. Single Family Dwelling Unit, No. of Bedrooms: 3
- ☐ 2. Multiple Family Dwelling, No. of Units: _____
- ☐ 3. Other: _____ (specify)

Current Use ☐ Seasonal ☐ Year Round ☐ Undeveloped

TYPE OF WATER SUPPLY

☑ 1. Drilled Well ☐ 2. Dug Well ☐ 3. Private

☐ 4. Public ☐ 5. Other

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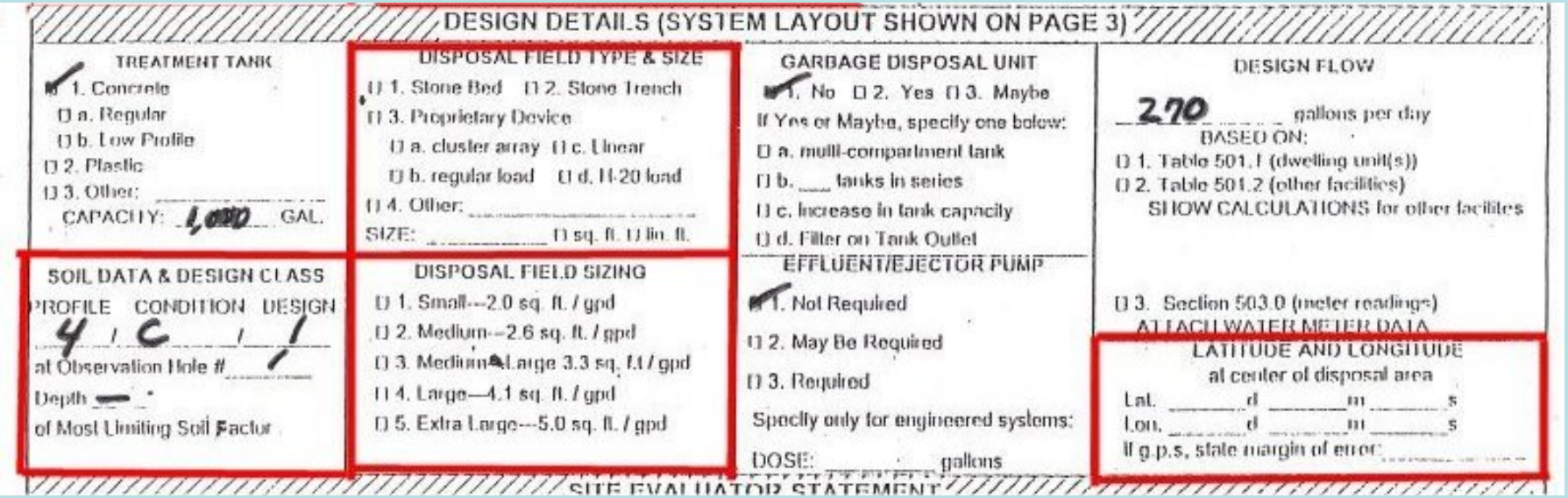
Page One



DESIGN DETAILS (SYSTEM LAYOUT SHOWN ON PAGE 3)

TREATMENT TANK
- ☑ 1. Concrete
  - ☐ a. Regular
  - ☐ b. Low Profile
- ☐ 2. Plastic
- ☐ 3. Other: _____

CAPACITY: 1,000 GAL.

DISPOSAL FIELD TYPE & SIZE
- ☐ 1. Stone Bed ☐ 2. Stone Trench
- ☐ 3. Proprietary Device
  - ☐ a. cluster array ☐ c. Linear
  - ☐ b. regular load ☐ d. H-20 load
- ☐ 4. Other: _____

SIZE: _____ ☐ sq. ft. ☐ lin. ft.

GARBAGE DISPOSAL UNIT
- ☑ 1. No ☐ 2. Yes ☐ 3. Maybe

If Yes or Maybe, specify one below:
- ☐ a. multi-compartment tank
- ☐ b. ___ tanks in series
- ☐ c. Increase in tank capacity
- ☐ d. Filter on Tank Outlet

DESIGN FLOW

270 gallons per day

BASED ON:
- ☐ 1. Table 501.1 (dwelling unit(s))
- ☐ 2. Table 501.2 (other facilities)

SHOW CALCULATIONS for other facilities

SOIL DATA & DESIGN CLASS

PROFILE / CONDITION / DESIGN

4 / C / 1

at Observation Hole # 1

Depth — "

of Most Limiting Soil Factor

DISPOSAL FIELD SIZING
- ☐ 1. Small---2.0 sq. ft. / gpd
- ☐ 2. Medium---2.6 sq. ft. / gpd
- ☐ 3. Medium-Large 3.3 sq. ft. / gpd
- ☐ 4. Large---4.1 sq. ft. / gpd
- ☐ 5. Extra Large---5.0 sq. ft. / gpd

EFFLUENT/EJECTOR PUMP
- ☑ 1. Not Required
- ☐ 2. May Be Required
- ☐ 3. Required

Specify only for engineered systems:

DOSE: _____ gallons

- ☐ 3. Section 503.0 (meter readings)

ATTACH WATER METER DATA

LATITUDE AND LONGITUDE
at center of disposal area

Lat. _____ d _____ m _____ s

Lon. _____ d _____ m _____ s

If g.p.s, state margin of error: _____

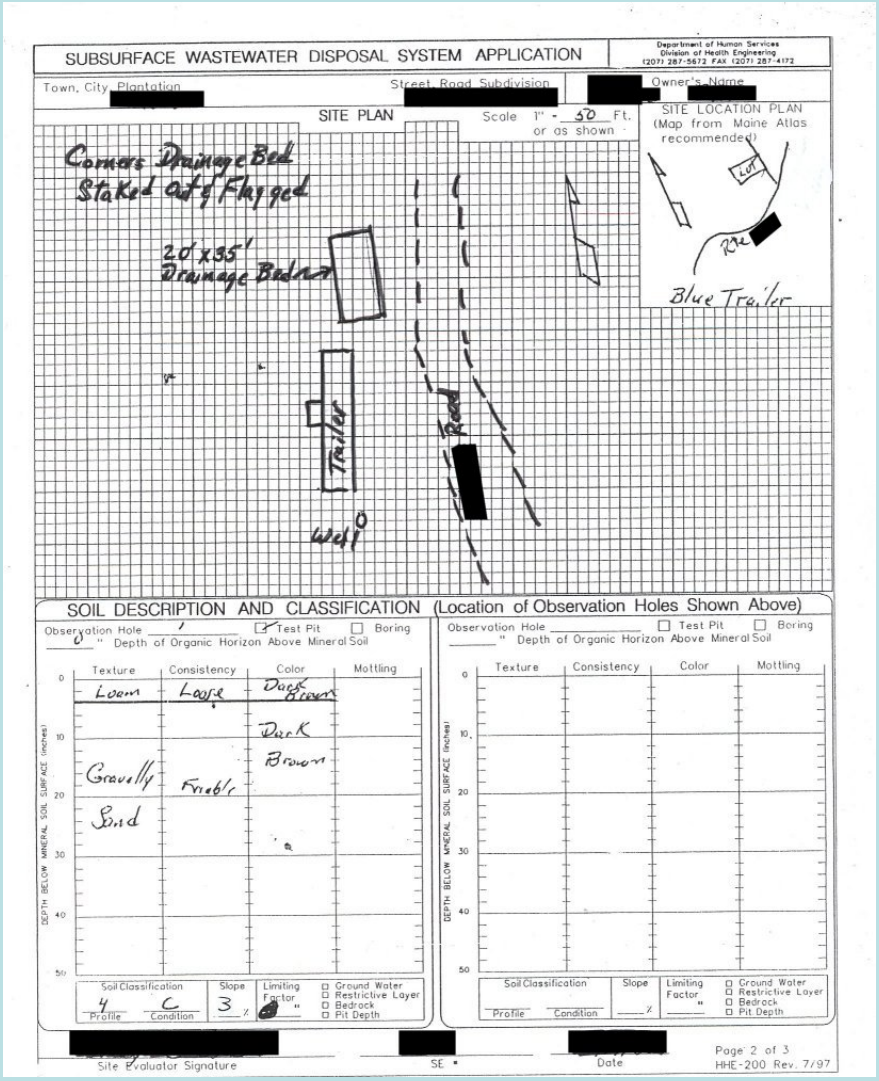
SITE EVALUATOR STATEMENT

HHE-200 Form

Page Two

The site plan should show all prominent features in the vicinity of the proposed system.

Test pit logs should be complete and accurate.



SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering
(207) 287-5672 FAX (207) 287-4172

Town, City Plantation [redacted] Street, Road, Subdivision [redacted] Owner's Name [redacted]

SITE PLAN

Scale 1" = 50 Ft. or as shown

Corners Drainage Bed Staked out & Flagged

20'x35' Drainage Bed

Trailer

Well

SITE LOCATION PLAN
(Map from Maine Atlas recommended)

LOT

Rte

Blue Trailer

SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole 1 ☑ Test Pit ☐ Boring
0 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0	Loam	Loose	Dark Brown	
10	Gravelly Sand	Friable	Dark Brown	
20				
30				
40				
50				

Soil Classification: 4 Profile C Condition | Slope 3 % | Limiting Factor " | ☐ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

Observation Hole ____ ☐ Test Pit ☐ Boring
" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)	Texture	Consistency	Color	Mottling
0				
10				
20				
30				
40				
50				

Soil Classification: Profile Condition | Slope % | Limiting Factor " | ☐ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

[redacted] Site Evaluator Signature [redacted] SE # [redacted] Date

Page 2 of 3
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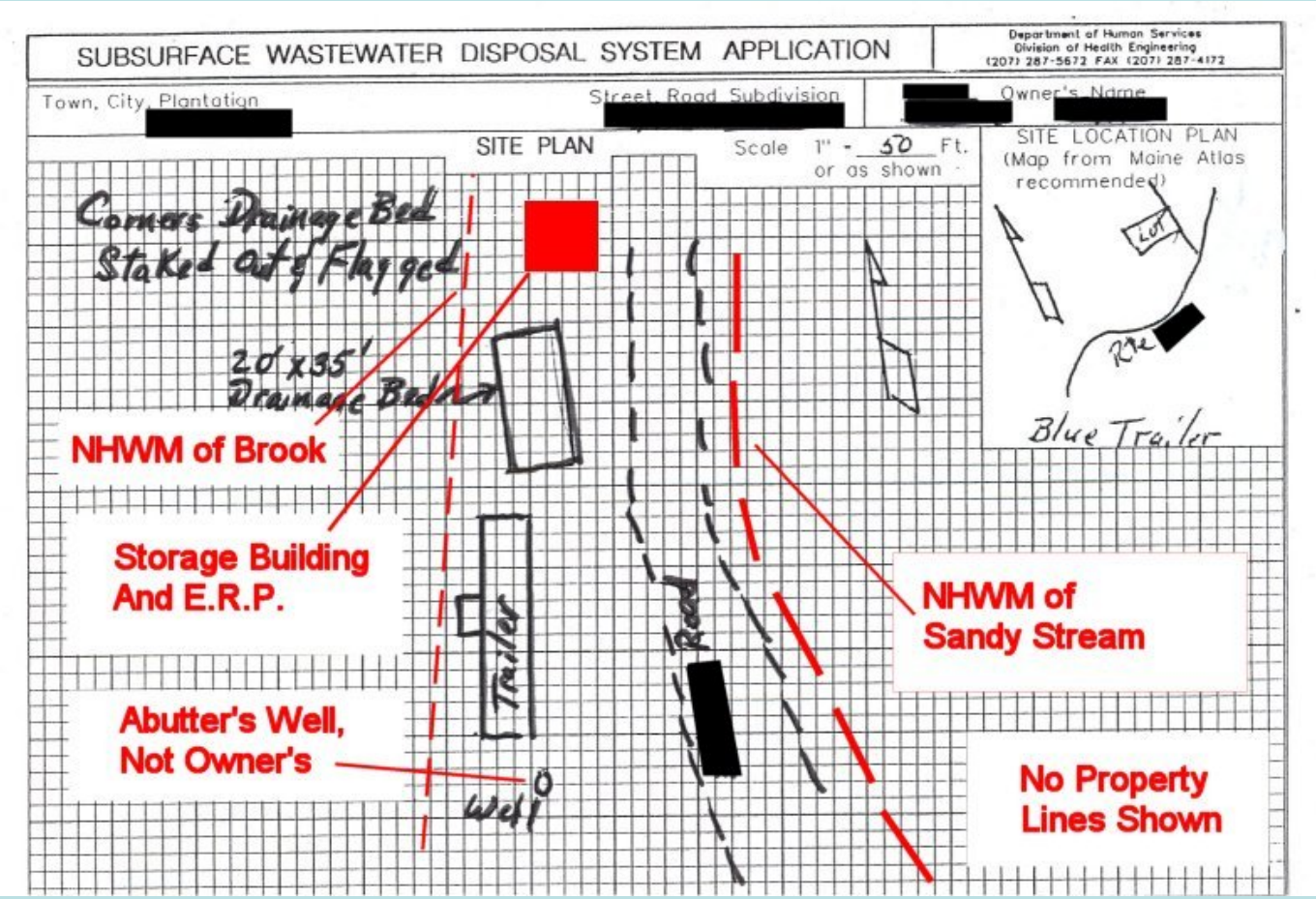
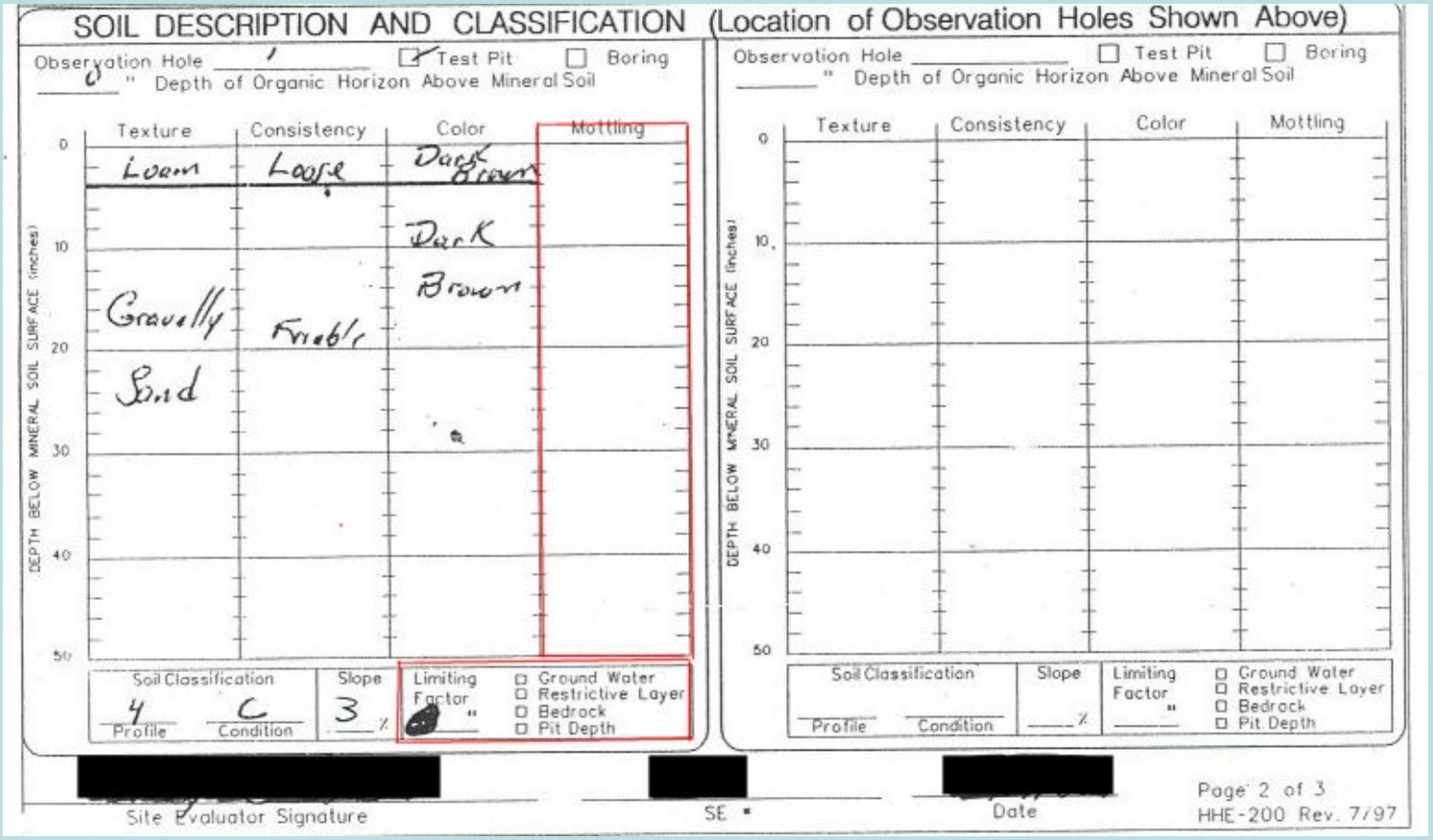
Page Two



HHE-200 Form

Page Two



SOIL DESCRIPTION AND CLASSIFICATION (Location of Observation Holes Shown Above)

Observation Hole 1 ☑ Test Pit ☐ Boring

0 " Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0	Loam	Loose	Dark Brown	
10	Gravelly	Friable	Dark Brown	
20	Sand			
30				
40				
50				

Soil Classification: 4 Profile / C Condition

Slope: 3 %

Limiting Factor: " ☐ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

Site Evaluator Signature [redacted] SE [redacted] Date [redacted]

Page 2 of 3

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Observation Hole ☐ Test Pit ☐ Boring

" Depth of Organic Horizon Above Mineral Soil

DEPTH BELOW MINERAL SOIL SURFACE (inches)

	Texture	Consistency	Color	Mottling
0				
10				
20				
30				
40				
50				

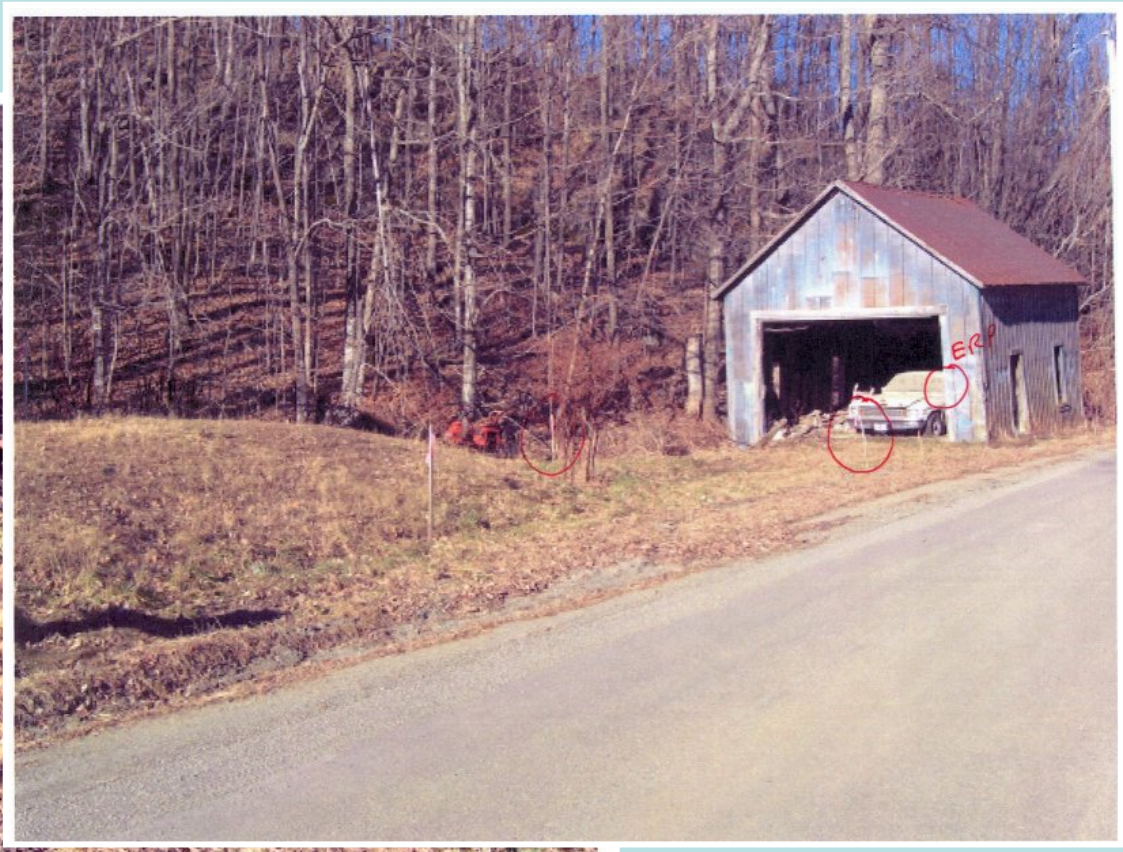
Soil Classification: Profile / Condition

Slope: %

Limiting Factor: " ☐ Ground Water ☐ Restrictive Layer ☐ Bedrock ☐ Pit Depth

HHE-200 Form

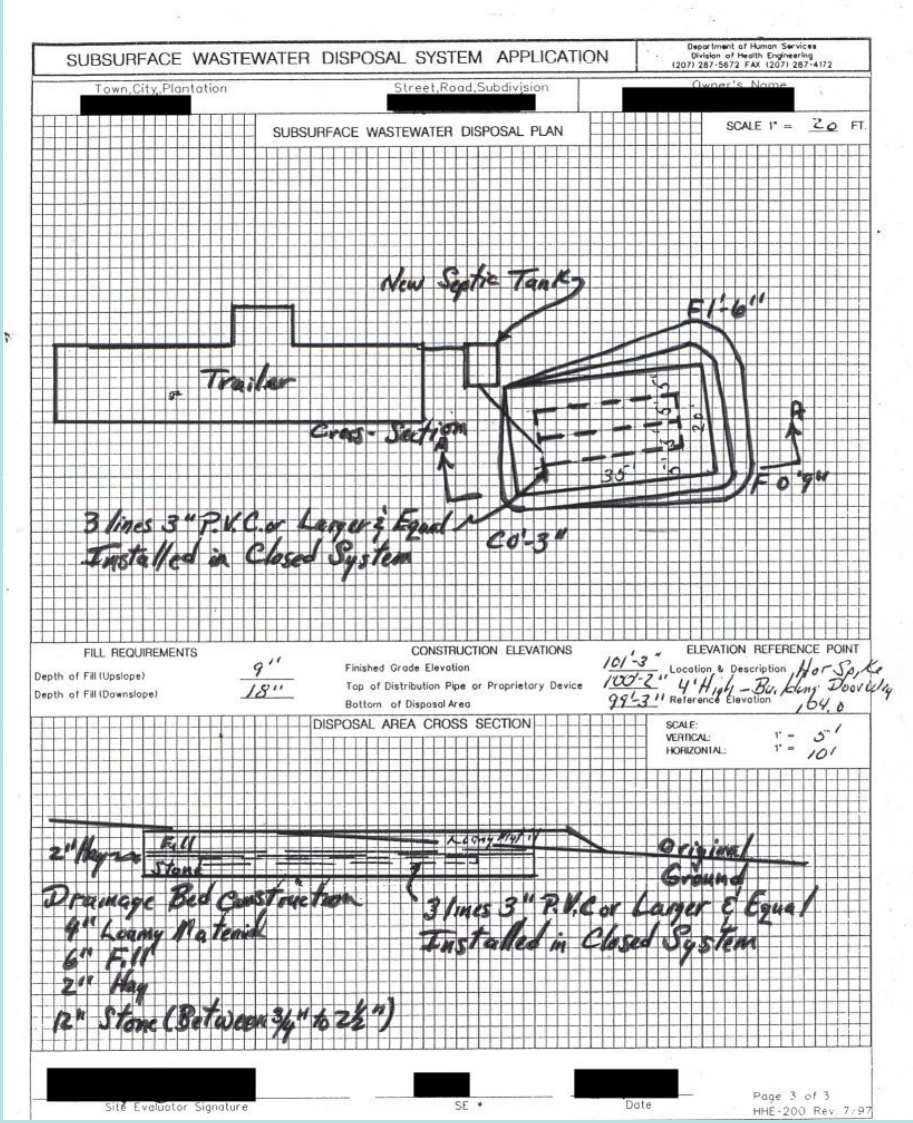
Page Two



HHE-200 Form

Page Three

Page three should contain all necessary construction data for installation of the disposal area.



SUBSURFACE WASTEWATER DISPOSAL SYSTEM APPLICATION

Department of Human Services
Division of Health Engineering
(207) 287-5672 FAX (207) 287-4172

Town, City, Plantation [redacted] Street, Road, Subdivision [redacted] Owner's Name [redacted]

SUBSURFACE WASTEWATER DISPOSAL PLAN

SCALE 1" = 20 FT.

New Septic Tank

Trailer

Cross-Section

E 1'-6"

F 0'-9"

3 lines 3" P.V.C. or Larger & Equal Installed in Closed System

C 0'-3"

FILL REQUIREMENTS

Depth of Fill (Upslope) 9"

Depth of Fill (Downslope) 18"

CONSTRUCTION ELEVATIONS

Finished Grade Elevation 101'-3"

Top of Distribution Pipe or Proprietary Device 100'-2"

Bottom of Disposal Area 99'-3"

ELEVATION REFERENCE POINT

Location & Description Hor. Spike 4' High - Back Door Wall

Reference Elevation 104.0

DISPOSAL AREA CROSS SECTION

SCALE:
VERTICAL: 1" = 5'
HORIZONTAL: 1" = 10'

2" Hay

Fill

Stone

Original Ground

Drainage Bed Construction
4" Loamy Material
6" Fill
2" Hay
12" Stone (Between ¾" to 2½")

3 lines 3" P.V.C. or Larger & Equal Installed in Closed System

[redacted] Site Evaluator Signature [redacted] SE # [redacted] Date

Page 3 of 3
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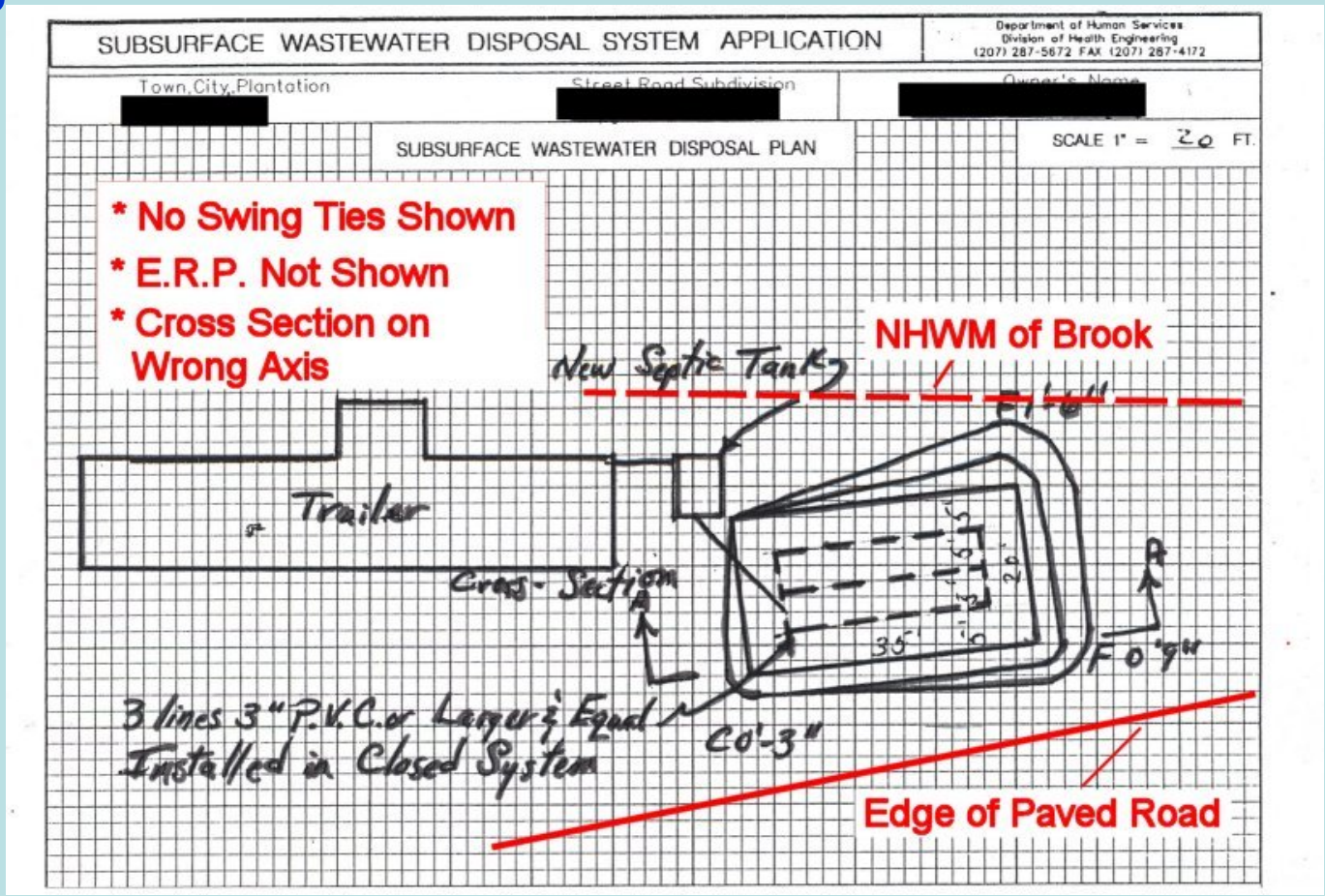
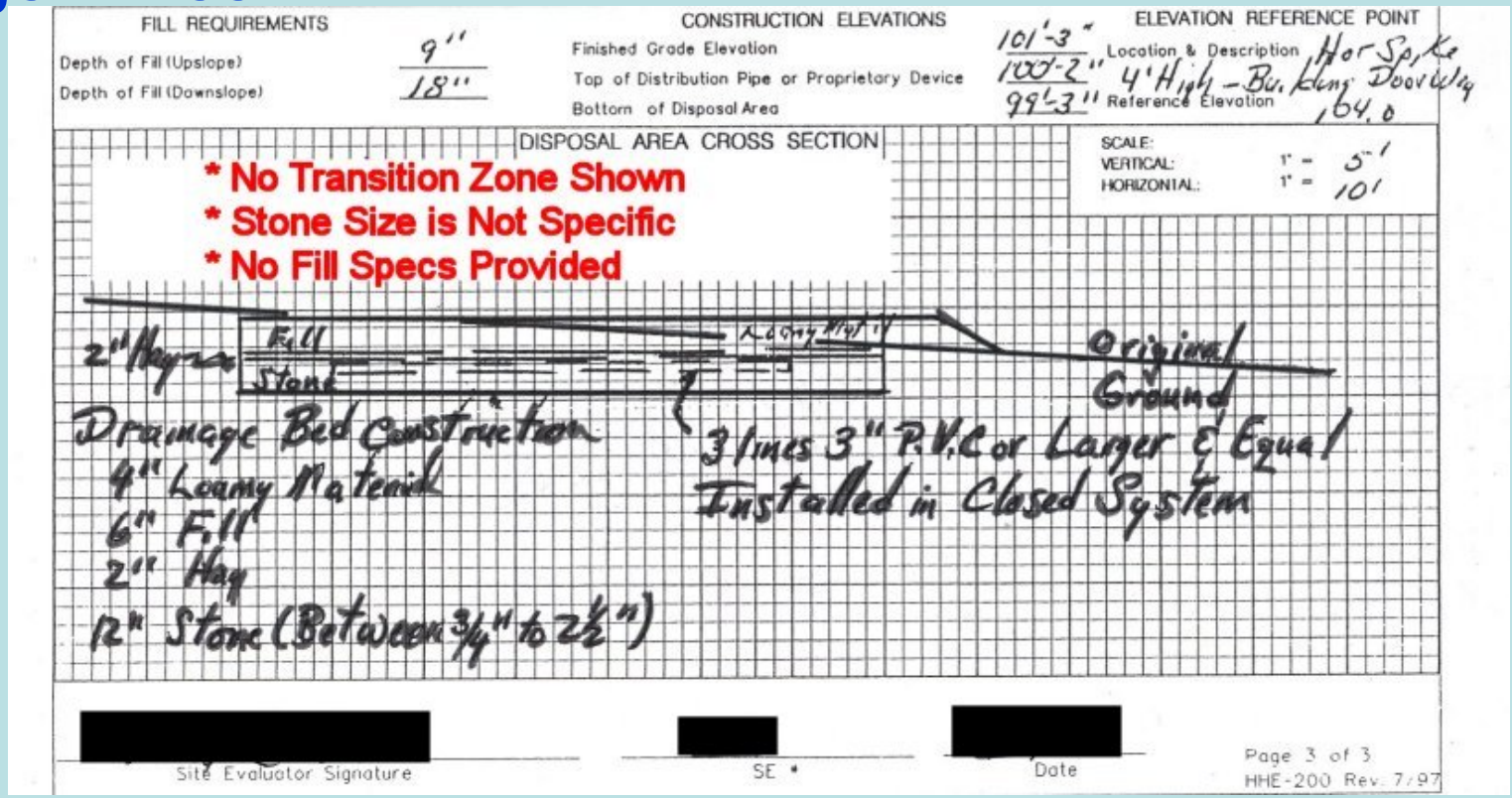
Page Three



HHE-200 Form

Page Three



FILL REQUIREMENTS

Depth of Fill (Upslope) 9"

Depth of Fill (Downslope) 18"

CONSTRUCTION ELEVATIONS

Finished Grade Elevation 101'-3"

Top of Distribution Pipe or Proprietary Device 100'-2"

Bottom of Disposal Area 99'-3"

ELEVATION REFERENCE POINT

Location & Description Nail Spike 4' High - Bu. King Door Jamb

Reference Elevation 164.0

DISPOSAL AREA CROSS SECTION

SCALE:
VERTICAL: 1" = 5'
HORIZONTAL: 1" = 10'

* No Transition Zone Shown
* Stone Size is Not Specific
* No Fill Specs Provided

2" Hay
Fill
Stone
Original Ground
3 lines 3" P.V.C or Larger & Equal Installed in Closed System

Drainage Bed Construction
4" Loamy Material
6" Fill
2" Hay
12" Stone (Between 3/4" to 2 1/2")

[redacted]
Site Evaluator Signature

[redacted]
SE #

[redacted]
Date

Page 3 of 3
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MALFUNCTION COMPLAINTS

Maine Subsurface Wastewater Disposal Rules
Definition of Malfunction

Malfunctioning system: A system that is not operating or is not functioning properly based on the following indicators:

• Ponding or outbreak of wastewater or septic tank effluent onto the surface of the ground;

• Seepage of wastewater or septic tank effluent into parts of buildings below ground;

• Back-up of wastewater into the building being served that is not caused by a physical blockage of the internal plumbing;

• Or contamination of nearby water wells or water bodies/courses.

Anatomy of a Malfunction Investigation

Breakout of Effluent.

Anatomy of a Malfunction Investigation

Breakout of Effluent and Abutter's Boat

It is the municipality's responsibility to remedy a malfunctioning subsurface wastewater disposal system per Title 30-A §3428

1. Abatement procedure. Upon complaint of any person resulting in documentation of a malfunctioning waste water disposal unit or on their own information, the municipal officers shall serve an order to remedy a malfunctioning waste water disposal unit upon the owner of any premises within that municipality that has such a malfunctioning unit.

2. Content of order. The order must be addressed to the owner of the premises and must contain:

A. The date

B. The fact of the malfunctioning waste water disposal unit;

C. A notice to **remedy the nuisance within 10 days** of service of the order; and

D. The signatures of the municipal officers.

The municipal officers may allow the owner of the premises to request an extension of the 10-day period for no longer than an **additional 20 days** and may explain how to request an extension in the order. The municipal officers or their agents may approve an extension if it is reasonably necessary for and likely to result in remediation of the nuisance.

It is the municipality's responsibility to remedy a malfunctioning subsurface wastewater disposal system per Title 30-A §3428

3. Service and return of service. One of the municipal officers or a law enforcement officer shall serve the order personally upon the owner, tenant or occupant in possession. The server shall make and file a return of service indicating the method used and the person served.

4. Abatement. If the nuisance is not abated within the 10-day period or such period up to but not exceeding the additional 20 days as allowed by the municipal officers under subsection 2, the municipal officers or their agents may enter the premises and have the malfunction adequately remedied. To recover any actual and direct expenses, including reasonable attorney's fees if the municipality is the prevailing party, incurred by the municipality in the abatement of such nuisances, the municipality shall:

A. File a civil action against the owner. The costs, including reasonable attorney fees, to create and prosecute an action to collect expenses following such a civil complaint, shall also be recovered from the owners; or
B. Assess a special tax against the land on which the waste water disposal unit is located for the amount of the expenses. This amount shall be included in the next annual warrant to the tax collector of the municipality for collection in the same manner as other state, county and municipal taxes are collected. Interest as determined by the municipality pursuant to Title 36, section 505, in the year in which the special tax is assessed, shall accrue on all unpaid balances of any special tax beginning on the 60th day after the day of commitment of the special tax to the collector. The interest shall be added to and become part of the tax.

The Department's Role in the remedy of a malfunctioning subsurface wastewater disposal system per Title 30-A §4212

1. Administration of rules. The department is responsible for ensuring the proper administration of the subsurface wastewater disposal rules and permitting processes by municipalities. **The department shall assist municipalities in complying with this subchapter and with section 3428.**

2. Review. The department shall review the administration of subsurface wastewater disposal rules and laws in each municipality for compliance with this subchapter and with section 3428. This review must be made on a regular basis and may be made in response to a written complaint from any person as necessary. The department shall inspect the municipality's records and discuss the administration of the program with the local plumbing inspector. The local plumbing inspector shall be available during the department's review and shall cooperate in providing all necessary information. The department shall report the results of its review in writing to the municipality and, when applicable, to the complainant. The written notice must set forth the department's findings of whether the municipality is in compliance with this subchapter and section 3428.

The Department's Role in the remedy of a malfunctioning subsurface wastewater disposal system per Title 30-A §4212

3**. Violation; penalty.** If after review the department finds any violation of this subchapter or section 3428, it shall **notify the municipality that it has 30 days in which to take enforcement action** and shall specify what action must be taken in order to achieve compliance.

The municipality shall file a plan acceptable to the department setting forth how it will attain compliance.

The department shall notify the municipality that it will **review the municipality for compliance within 60 days of accepting the plan** and shall conduct that review.

Any municipality which fails to file an acceptable plan with the department or which **remains in violation at the expiration of the 60-day period is subject to a civil penalty of at least $500.**

The department shall enforce this section in any court of competent jurisdiction.

Every 30-day period that a municipality remains in violation after review and notification constitutes a separate offense.

ISSUES / COMPLAINTS

Malfunction

Possible Malfunction

WHEN DOING INSPECTIONS

BE PREPARED TO SEE ANYTHING

Campgrounds


VALTERRA

Why can’t I hook up to my septic?