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INSTRUCTIONS FOR PAPERWORK SUBMITTAL

For a gravity mound system, complete Page 1.

For a pump to gravity mound system, complete Pages 1 and 2.

For a pressurized mound system, complete Pages 1, 2, and 3.

All submittals must be accompanied by the On-site Sewage System Design Form.

Installation permits will not be issued until LMAS approves system design paperwork.

Some advanced treatment designs will also require deed restriction and system contract to be submitted before issuance of installation permit.

All system designs shall ensure compliance with other local, state and Federal codes and regulations.

All system designs shall comply with Upper Peninsula Environmental Health Code or Technical Manual. Variances shall be pursued on a case-by-case basis and supporting documentation must be submitted along with the requirements outlined above.

Mound Design Worksheet

I. Site Information

1. Property Owner: _____
2. Tax ID: _____
3. Proposed date of installation: _____
4. Site Preparation Requirements:

II. Design Data

1. Volume of flow (gallons/day) _____
2. Loading rate _____ gal./sq. ft./day

III. Tank(s)

1. Tank 1 Capacity: _____ gal.; Use: _____
A. Material: _____; Manufacturer: _____
B. Effluent filter: Yes/No C. Riser: Yes/No
2. Tank 2 Capacity: _____ gal.; Use: _____
A. Material: _____; Manufacturer: _____
B. Effluent filter: Yes/No C. Riser: Yes/No
3. Tank 2 Capacity: _____ gal.; Use: _____
A. Material: _____; Manufacturer: _____
B. Effluent filter: Yes/No C. Riser: Yes/No

IV. Drainfield - Mound

1. Amount of Fill on grade: _____ in. Fill Type: _____
2. Pipe material: _____ Pipe diameter: _____ in.

V. Design Drawing

1. Submit detailed site plan (use On-site Sewage System Design Form)
2. Submit additional paperwork relevant to system installation

VI. Design Consultant Certification

1. Prepared by: _____
2. Firm: _____ Phone: _____
3. Signature: _____ Date: _____

VII. Pump Selection

1. Minimum flow rate to maintain velocity of 2 fps

Pipe Diameter	Minimum GPM
1 1/2"	12
2"	21
2 1/2"	30
3"	46

Pipe size: _____ Minimum GPM Capacity: _____

2. Total Dynamic Head

A. Static Head: _____

B. Friction Head

i. Discharge pipe length: _____

ii. Friction loss factors of fitting and valves (complete table below)

Fitting	Size	Quantity	x Equivalent Length	Total
90s				
45s				
Tees				
Check valve				
Gate valve				
Union				

Total Equivalent Length: _____

(Discharge Pipe length _____) + (Total Equivalent Length _____) = _____
 ÷ 100 = _____ 100' increments

iii. Friction Head per 100' of _____ pipe at _____ GPM = _____ '
 x _____ 100' increments = _____ Friction Head

C. Static Head _____ + Friction Head _____ = Total Dynamic Head _____

3. Pump duty point _____ gpm at _____ feet TDH
 (attach copy of pump performance curve)

Pump make: _____

Pump model: _____

hp: _____

VIII. Pressurized Mound System

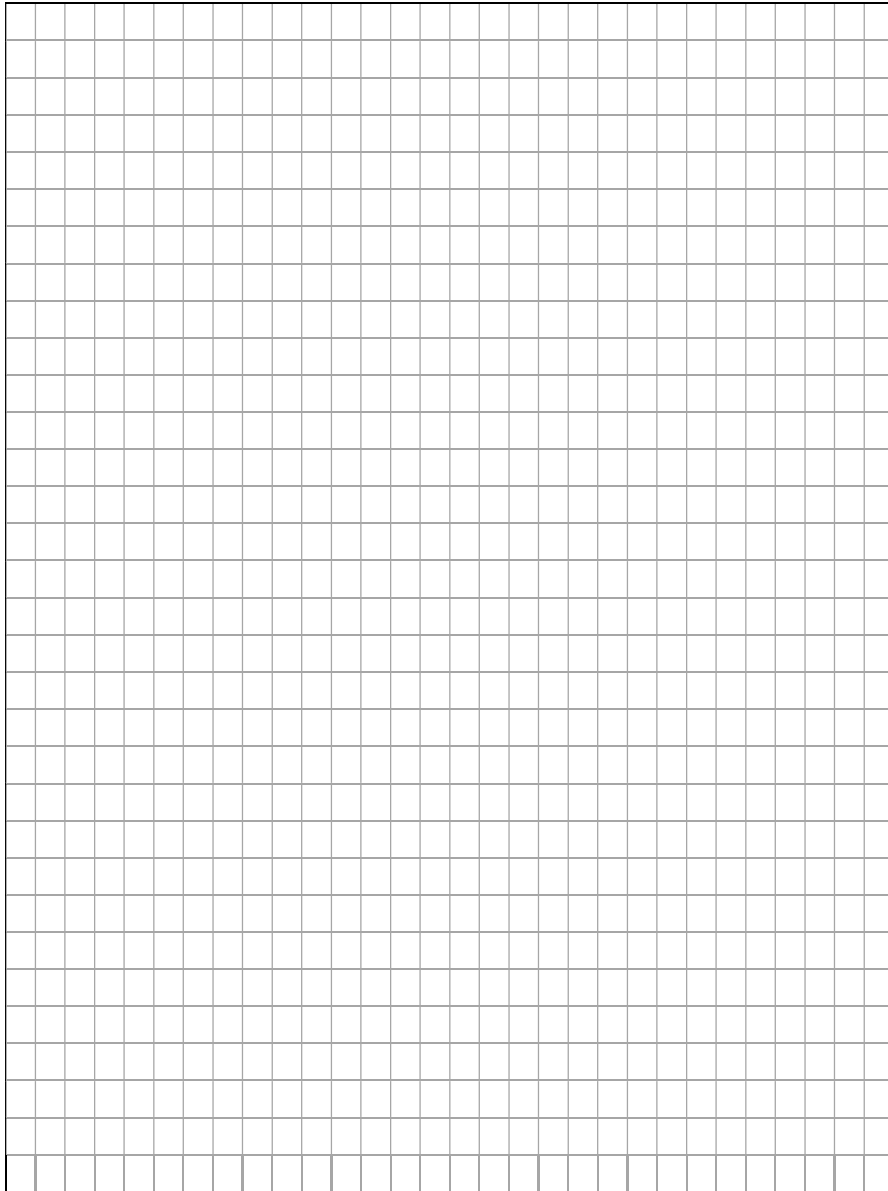
1. Complete following table of parameters or submit design software printout

Discharge Assembly Size (inches)	
Transport Length Before Valve (feet)	
Transport Line Size (inches)	
Transport Pipe Class/Schedule	
Max Elevation Lift/Static Head (feet)	
Manifold Length (feet)	
Manifold Line Diameter (inches)	
Number of Laterals per cell	
Lateral Length (feet)	
Lateral Line Size (inches)	
Orifice Size (inches)	
Orifice Spacing (feet)	
Residual Head at Last Orifice (feet)	
Total Number of Orifices	
Doses per Day	
Dose Volume	

ON-SITE SEWAGE SYSTEM DESIGN – System Type: _____

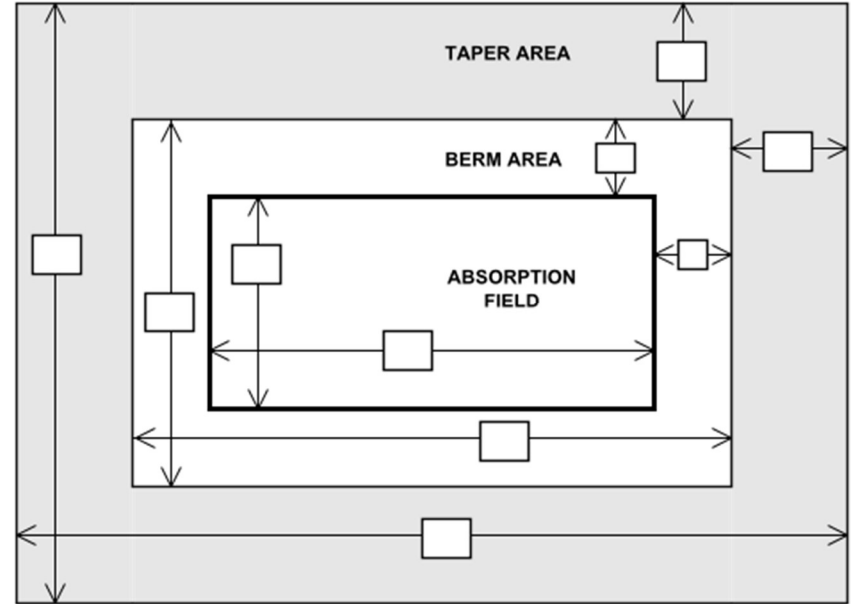
Property Owner: _____ Tax ID: _____

DETAILED SITE LAYOUT

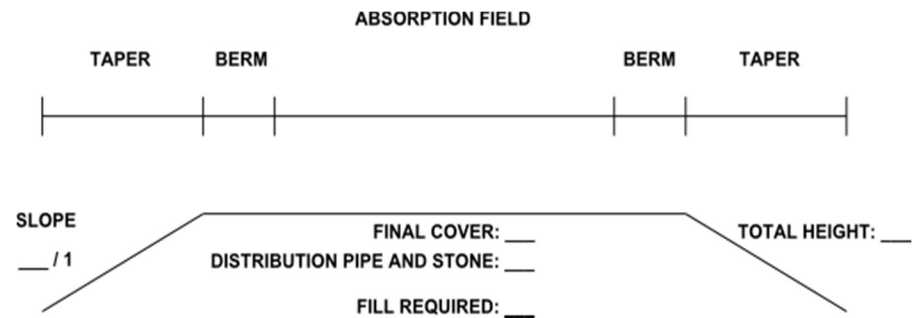


*Include benchmarks, site buildings, isolation distances, etc. in drawing

AERIAL VIEW



CROSS-SECTION



OFFICE USE ONLY

Y N

Design Specifications reviewed and meet criteria set forth in Technical Manual

Sanitarian Signature _____

Date _____