SYSTEM DESIGN
(Mound System)

1. Planned Residence/Septic Tank Size
   Usage: 5 Bedroom= 1,500 Gal.
                55 Fixture Units= 2,000 Gal.

2. Required septic tank capacity: 2,000 gals.

3. "Worst Case" percolation rate: 54 min./inch (from field tests)

4. Required hydraulic loading: 150 gals./bedroom

5. Required total hydraulic loading: 750 gals./day

6. Mound body infiltration rate (for silty sand):
   1.5 gals./sq.ft./day

7. Distribution area: 750   total hydraulic loading
                      1.5   mound body fill infiltration rate
                    = 500 sq. ft.

8. Distribution bed dimensions: 50 ft. long x 10 ft. wide x 1 ft. deep

9. Mound body fill depth: 3 feet below bottom of distribution bed

10. Topsoil cover depth: 12 inches at center of distribution bed and
                         6 inches at edge of distribution bed.

11. Overall dimensions of proposed mound system:
                75 ft. long x 35.5 ft. wide x 4 ft. deep*
            * 2 ft. above existing ground surface (Plus an additional 1 foot of soil cover)

12. Effluent Distribution System:
    Distribution Laterals
    (length/dia./number/flow per lat.) . . . . 47'/1.5"/3/18.7
    Distribution Manifold
    (length/dia.) . . . . 7'/3"
    Delivery Pipe
    (length/dia.) . . . . 50'/4"

13.   Minimum required pump flow rate: 56 gals./min.

14.   Calculation for determining total dynamic head:

15*(Vertical relief between wet well pump cut-off and invert of the distribution laterals)
0.1 (friction loss over the delivery pipe)
0.1 (friction loss of fittings)
2.0 (desired head over the distribution system)
17.2 ft.

Based on the standard dimensions of the recommended Gould (3) A2-7 Pump on/off switch.

15.   Wet well effluent pump requirements:
Required flow rate: 56 gals./min.
Required total dynamic head (+15%): 19.8 ft.

16.   Wet well sizing: 200 gals. Plus 100 gals./bedroom Over the First.
200 gals. + 400 gals. = 600 gallon Wet Well

Required Components
-Low level water alarm and
 redundant cut-off
-Pump off switch
-Pump on switch
-High water alarm

17.   Wet well mechanical specifications:
-Effluent Pump . . . . Rec.: Gould; Model No. 3887
-Control Panel . . . . Rec.: Gould; SES Series
-Pump On/Off Switch   Rec.: Gould; (3) A2-7
-High/Low Level
-Effluent Sensor   . . . . . Rec.: Gould; Built into control box