

GENERAL NOTES:

THE MINIMUM REQUIREMENTS FOR A RESIDENTIAL SEWAGE PUMPING SYSTEM CONNECTING A SINGLE RESIDENCE OR EQUIVALENT TO THE DISTRICT'S SYSTEM ARE SPECIFIED BELOW. THE DISTRICT ACCEPTS NO RESPONSIBILITY FOR THE DESIGN, OPERATION OR MAINTENANCE OF SUCH PRIVATELY OWNED AND OPERATED SYSTEMS. ALL WORK SHALL COMPLY WITH THE UNIFORM PLUMBING AND BUILDING CODES.

MANUFACTURERS:

ALL EQUIPMENT AND ACCESSORIES SHALL BE INDUSTRY STANDARD MANUFACTURED ITEMS AND THOSE COMING IN DIRECT CONTACT WITH SEWAGE SHALL BE SPECIFICALLY MANUFACTURED FOR SEWAGE USE.

PUMPS:

PUMPS SHALL BE SUBMERSIBLE SOLIDS HANDLING OR GRINDER TYPE SEWAGE PUMPS. PUMP MOTORS FOR RESIDENTIAL SERVICE SHALL BE EXPLOSION PROOF OR MEET CLASS 1, DIVISION 2 REQUIREMENTS PER NEC. ALL COMMERCIAL INSTALLATIONS SHALL CONSIST OF DUPLEX EXPLOSION PROOF PUMPS EACH RATED FOR TOTAL LOADING. ALL PUMP MOTORS SHALL BE UL LISTED.

PUMP SUMP:

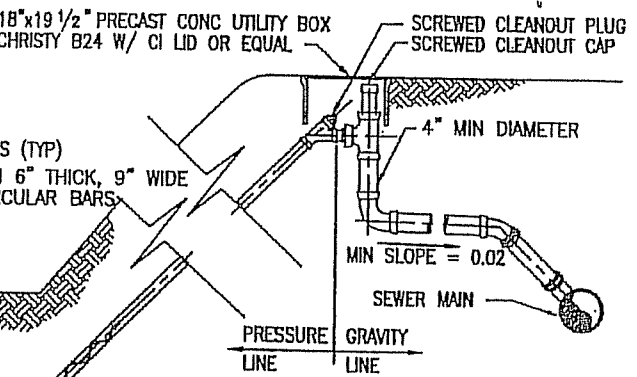
THE PUMP SUMP SHALL BE CONSTRUCTED OUT OF NON-CORROSIVE MATERIAL OF SUITABLE STRENGTH TO WITHSTAND HYDRAULIC AND EARTH LOADS. THE PUMP SUMP SHALL BE A MINIMUM 36" DEEP WITH A MINIMUM CAPACITY OF 100 GALLONS AND SHALL BE PROVIDED WITH A FOUR (4) INCH MINIMUM INLET. IN ANY CASE THE INLET I.D. SHALL BE EQUAL TO OR GREATER THAN THE BUILDING PLUMBING STUB. THE TOP OF THE PUMP SUMP SHALL BE SECURELY ANCHORED TO THE PUMP SUMP BY BOLTS, AND ALL JOINTS BETWEEN THE COMPONENT PARTS SHALL BE SEALED WITH A WATERPROOF MASTIC.

ELECTRIC POWER SERVICE:

THE POWER REQUIREMENTS SHALL BE AS RECOMMENDED BY PACIFIC GAS AND ELECTRIC COMPANY.

ELECTRICAL WORK AND CONTROLS:

ALL ELECTRICAL WIRING AND INSTALLED CABLING, CONDUIT AND CONTROLS SHALL MEET NEC CLASS 1, DIVISION 2 REQUIREMENTS AND CONFORM TO THE REQUIREMENTS OF THE CITY OR COUNTY. THE ELECTRICAL CONTROLS SHALL PROVIDE ADEQUATE PROTECTION FOR MOTOR AND EQUIPMENT. THE ELECTRICAL CONTROL PANEL SHALL MEET NEC AND UL STANDARDS FOR SAFETY. OUTDOOR PANELS SHALL BE WEATHER TIGHT NEMA 4X. INDOOR PANELS SHALL BE NEMA 1.



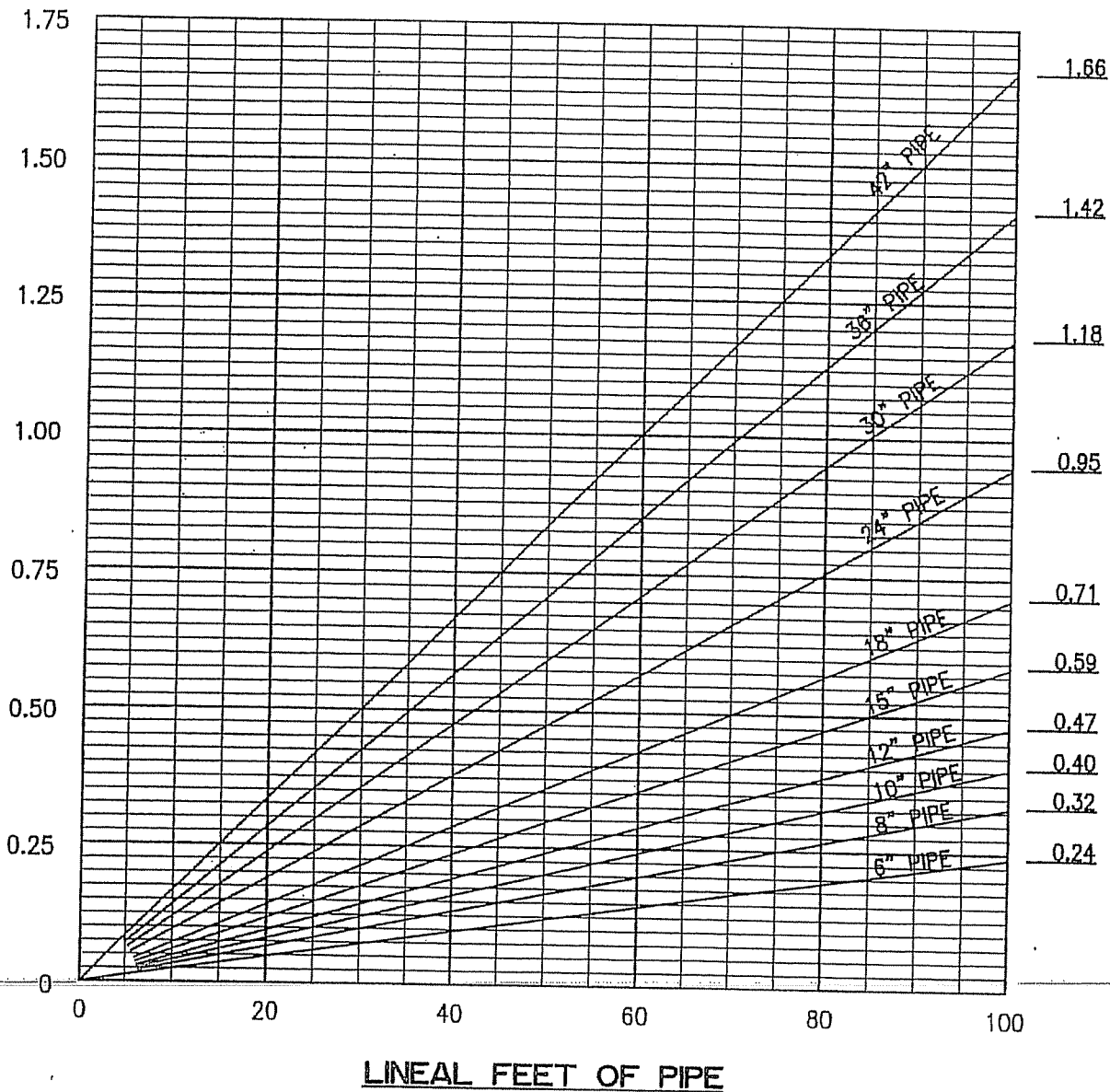
FLOAT SWITCH ASSEMBLY AND HIGH-WATER ALARM:
A VISIBLE RED LIGHT AND AUDIBLE HIGH WATER ALARM SHALL BE PROVIDED. THE HIGH WATER ALARM SHALL BE ACTIVATED BY A DEDICATED FLOAT AND SHALL HAVE BATTERY BACKUP. ALL FLOAT SWITCHES SHALL HAVE GAS-TIGHT MOUNTINGS.

VENT FOR PUMP SUMP:
WHERE SYSTEM IS LOCATED WITHIN THE DWELLING, A VENT TWO (2) INCHES OR LARGER SHALL BE PROVIDED. WHERE SYSTEM IS LOCATED OUTSIDE THE DWELLING, A TWO (2) INCH OR LARGER VENT SHALL BE EXTENDED TO A POINT TEN (10) FEET ABOVE THE PUMP SUMP COVER.

DISCHARGE LINE:
THE PRESSURE PORTION OF THE DISCHARGE LINE SHALL INCLUDE A CHECK VALVE, GATE VALVE AND FLEXIBLE COUPLINGS AND SHALL BE A MINIMUM 1/2" DIAMETER LARGER THAN THE PUMP DISCHARGE. ALL PIPE, VALVES AND COUPLINGS SHALL CONFORM TO THE STANDARD SPECIFICATIONS. THE GRAVITY PORTION OF THE DISCHARGE LINE SHALL BE FOUR (4) INCH MINIMUM DIAMETER PIPE, SHALL MEET THE DISTRICT REQUIREMENT FOR SIDE SEWERS AND SHALL PROVIDE A MINIMUM TWELVE (12) INCH VERTICAL DROP AT THE JUNCTION WITH THE PRESSURE LINE.

MARIN COUNTY SANITARY DISTRICTS CALIFORNIA		
RESIDENTIAL SEWAGE PUMPING SYSTEM		
1995		SD 17

ALLOWABLE LEAKAGE (in gallons per hour)
 (50 GAL PER INCH DIA. PER MILE OF PIPE PER DAY)



CONVERSION TABLE

DIA. OF PIPE OR M.H. IN INCHES	GAL PER FT. OF DEPTH IN PIPE OR M.H.	GAL PER INCH OF DEPTH IN PIPE OR M.H.
6" PIPE	1.5 GAL./FT.	0.125 GAL./IN.
8" PIPE	2.6 GAL./FT.	0.217 GAL./IN.
10" PIPE	4.1 GAL./FT.	0.342 GAL./IN.
15" PIPE	5.9 GAL./FT.	0.492 GAL./IN.
12" PIPE	9.2 GAL./FT.	0.766 GAL./IN.
24" PIPE	23.4 GAL./FT.	1.950 GAL./IN.
48" PIPE	52.7 GAL./FT.	4.390 GAL./IN.
36" M.H.	94.0 GAL./FT.	7.830 GAL./IN.
60" M.H.	147.0 GAL./FT.	12.250 GAL./IN.

**MARIN COUNTY
 SANITARY DISTRICTS
 CALIFORNIA**

**ALLOWABLE LEAKAGE CHART
 WATER TEST**

1995

SD 18