

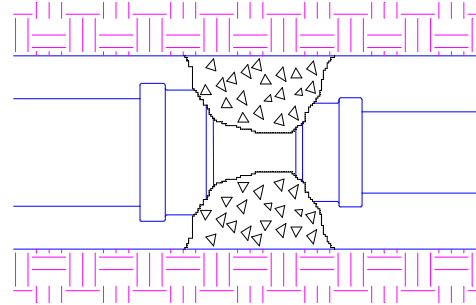
# THRUST BLOCKING INSTRUCTIONS

## Thrust Blocking

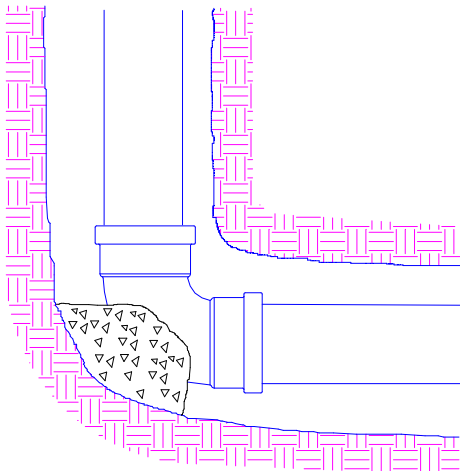
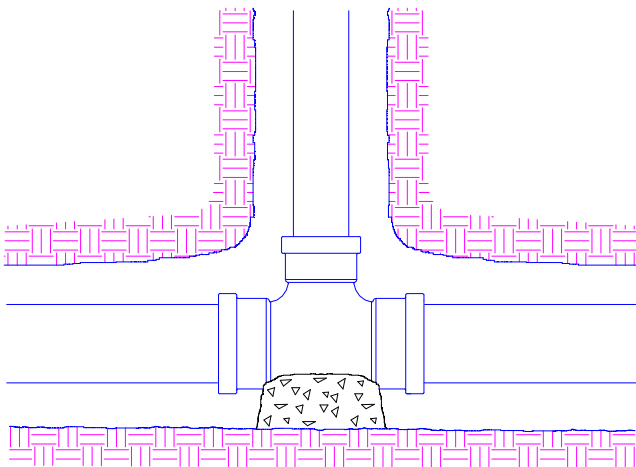
1. Provide poured concrete thrust blocks at all changes in size or direction. Bends, reducers, plugs, and the opposite side of tee branches all require thrust blocks.

2. The size of the thrust block is determined by the working pressure, the size and type of fitting, and the soil conditions at the job site. To calculate the area of contact with the soil, follow these steps:

- Calculate the total thrust by selecting thrust /100 by size and type of fitting from Table 1 and multiplying thrust /100 by system pressure divided by 100.
- Divide the total thrust by the bearing capacity of the soil in excavation (from Table 2) to determine the area (in square feet) of thrust block required to be in contact with the undisturbed soil.



Thrust Blocking is needed at all changes in size or direction.



SIZE	TEE, PLUGS	90° BENDS	45° BENDS	22-1/2° BENDS
2"	363	513	259	141
2-1/2"	531	751	379	207
3"	788	1114	562	307
4"	1302	1841	928	508
6"	2822	3990	2012	1101
8"	4783	6763	3410	1865
10"	7430	10506	5297	2898
12"	10452	14778	7452	4076

For Reducers, subtract small opening plug thrust from large opening plug thrust to calculate thrust /100.

SOIL TYPE	SAFE BEARING LOAD LBS PER SQ FT*
Soft Clay	1000
Sand	2000
Sand and Gravel	3000
Sand and Gravel cement w/ Clay	4000
Hard Pan	10000

\*Harco assumes no responsibility for the above bearing load data. The engineer is responsible for determining safe bearing loads and when doubt exists, soil bearing tests should be specified. The bearing loads given are for horizontal thrust when depth of cover exceeds 2 ft.

