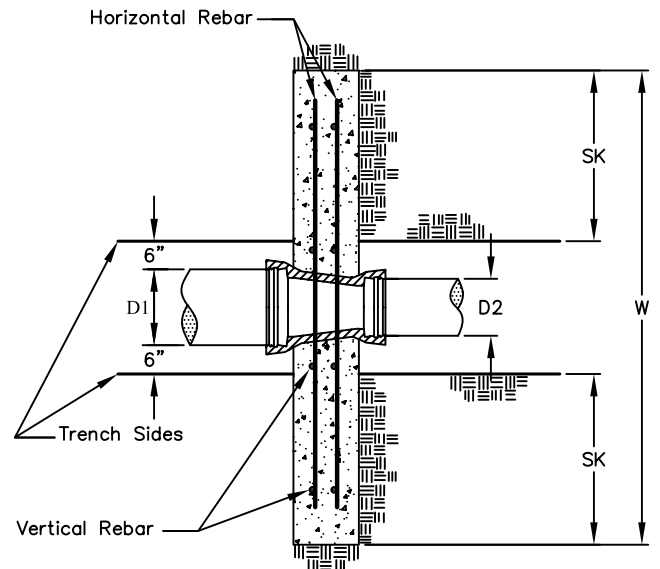


PROFILE VIEW (not to scale)



PLAN VIEW (not to scale)

GENERAL NOTES:

1. Thrust block concrete shall be 560-C-3250.
2. Install #4 rebars using grade 30 steel.
3. Thrust blocks shall be keyed into undisturbed soil using the dimensions for Bottom Key (BK.) and Side Key (SK.) specified in the table below.
4. Design values for Thrust in pounds are for a 250 PSI test pressure. In instances where a test pressure higher than 250 PSI is required, values given in this standard drawing are not valid and special calculations shall be performed.
5. Design values for Thrust Block dimensions are calculated assuming a cohesionless soil (c=0) with an internal angle of friction of 37° and a unit weight of 110 PCF. When the soil conditions under consideration indicate weaker properties, values in this standard do not apply and special calculations shall be performed.
6. Thrust Block concrete shall not be poured on pipe on either side of the reducer or on any fitting bolts.
7. Minimum concrete cover for rebars shall be 3".

THRUST BLOCK BEARING AREA L X H IN SQUARE FEET

<i>Reducer Size D1 x D2 (in.)</i>	<i>Thrust (lbs.)</i>	<i>Width W (in.)</i>	<i>Height H (in.)</i>	<i>Bottom Key BK (in.)</i>	<i>Side Key SK (in.)</i>	<i>Thickness Th (in.)</i>
30 x 24	57526	150	98	54	54	30
24 x 18	44532	132	95	48	48	24
18 x 16	12017	78	54	24	24	19
16 x 12	19792	100	54	36	36	18
12 x 10	7775	60	46	24	18	14
12 x 8	14137	84	51	30	30	14
12 x 6	19085	96	57	36	36	14
12 x 4	22619	96	69	42	36	14
10 x 8	6362	58	43	18	18	12
8 x 6	4948	56	29	18	18	11
8 x 4	8482	68	40	24	24	11
6 x 4	3534	42	31	18	12	9

CITY OF NEWPORT BEACH
PUBLIC WORKS DEPARTMENT

APPROVED:

RCE NO. 36106

PUBLIC WORKS DIRECTOR

REDUCER THRUST BLOCKS

Drawn: M. Elias

Scale: N.T.S.

Date: Jan. 2004

FILED: PBW\Shared\CAD_STD\STD Details\2003_Side STD Water

DRAWING NO.

STD-510-L-B