

CONCRETE THRUST BLOCKING

NOTES:

1. The use of Portland cement concrete thrust blocks is not permissible except as shown on the plans or with the approval of the engineer.

Portland cement concrete thrust blocks shall be placed against undisturbed earth. Where it is not practical to place the concrete thrust block against undisturbed earth, the fill material placed between the pipe's bearing surface and the undisturbed soil shall be compacted to a minimum of 95% of the maximum density as determined in accordance with the requirements of Arizona Test Methods 225, 226, 230 or 231 and 232.

2. The tables found on sheets 2,3,4 and 5 are based on the following:

- a) 200 PSI internal pressure.
- b) 1500 PSF soil bearing pressure.
- c) Class B, 2500 Portland cement concrete per Section 1006, Standard Specifications for Public Improvements.
- d) The corresponding weight of the concrete (Class B) is equal to or greater than the vertical component of thrust on the vertical bend.

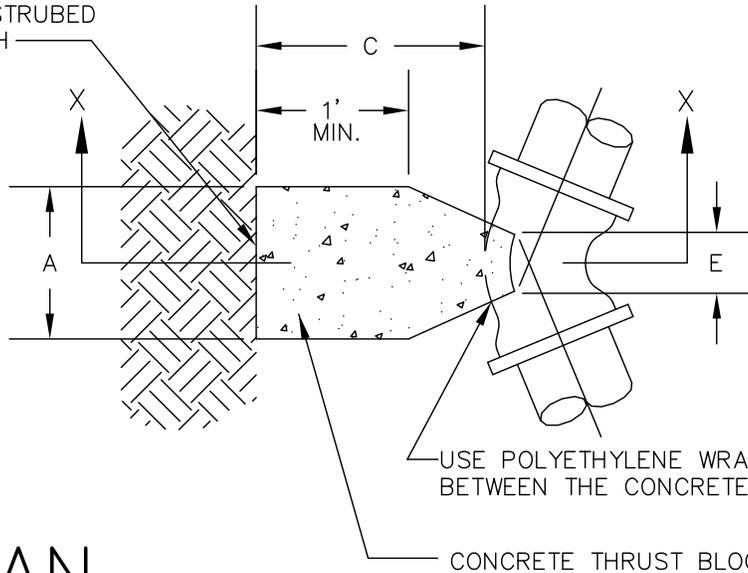
3. Dimensions may be varied as required by field conditions where and as directed by the engineer. The volumes of concrete thrust blocking shall not be less than shown.

4. Earth trench conditions: The "C" dimension shall be as shown. The concrete blocking must be poured against firm soil.

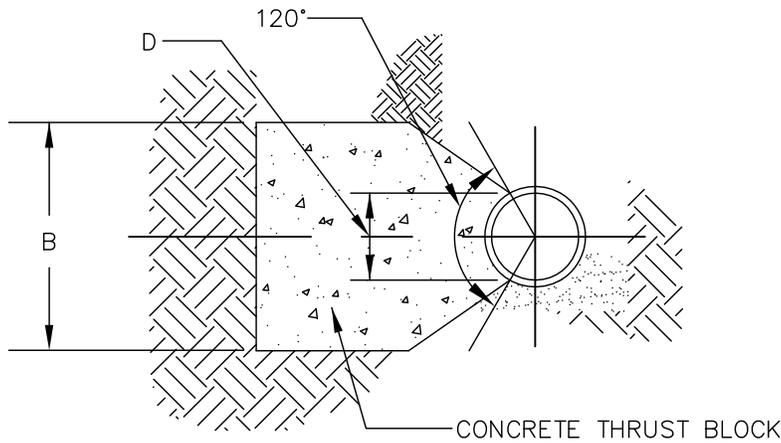
5. Unstable soil: the engineer shall determine if additional thrust blocking is required. The "C" dimension shall be increased as directed by the engineer, based on geotechnical evaluations of the site soils.

ISSUED:		STANDARD DETAIL		DETAIL NO.
6/97		CONCRETE THRUST BLOCKING		SD-610
REVISED:				
7/16				SHEET 1 OF 5

PLACE AGAINST
UNDISTURBED
EARTH



PLAN

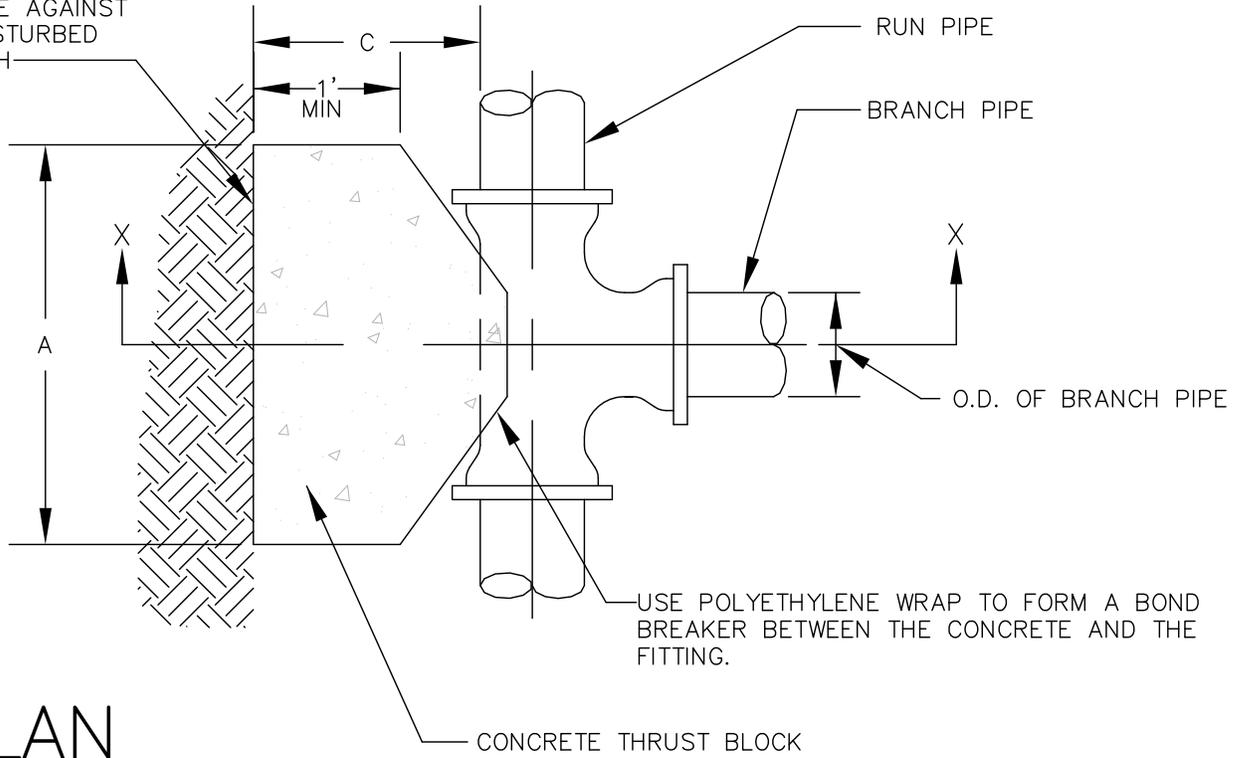


SECTION XX

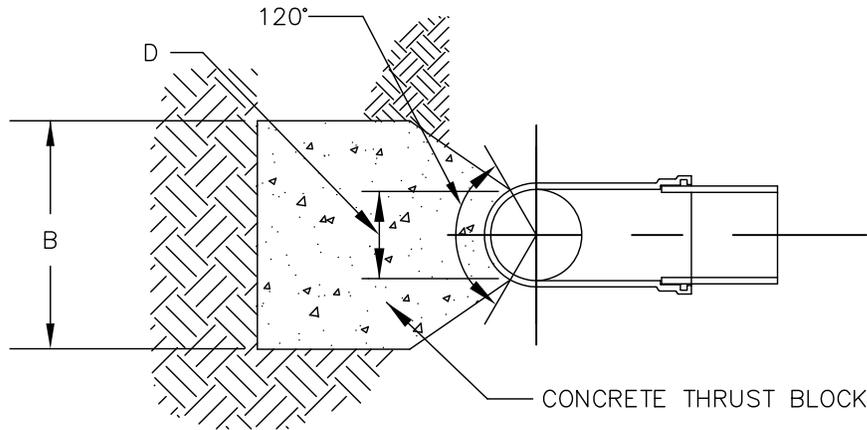
NOMINAL PIPE SIZE	HORIZONTAL BENDS																			
	11 1/4°					22 1/2°					45°					90°				
	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E	A	B	C	D	E
4"	1.0'	1.0'	1.5'	0.4'	0.4'	1.0'	1.5'	1.5'	0.4'	0.8'	2.0'	1.5'	1.5'	0.4'	0.4'	3.5'	1.5'	1.5'	0.4'	0.4'
6"	1.0'	1.5'	1.5'	0.6'	0.4'	1.5'	1.5'	1.5'	0.6'	0.8'	2.5'	1.5'	1.5'	0.6'	0.4'	5.0'	1.5'	1.5'	0.6'	0.4'
8"	1.0'	2.5'	1.5'	0.7'	0.4'	1.5'	2.5'	1.5'	0.7'	0.8'	3.0'	2.5'	1.5'	0.7'	0.4'	7.5'	1.5'	2.5'	0.7'	0.4'
12"	1.5'	2.5'	1.5'	1.0'	0.6'	3.0'	2.5'	1.5'	1.0'	1.1'	6.0'	2.5'	1.5'	1.0'	0.5'	10.5'	2.5'	2.5'	1.0'	0.5'

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PLAN

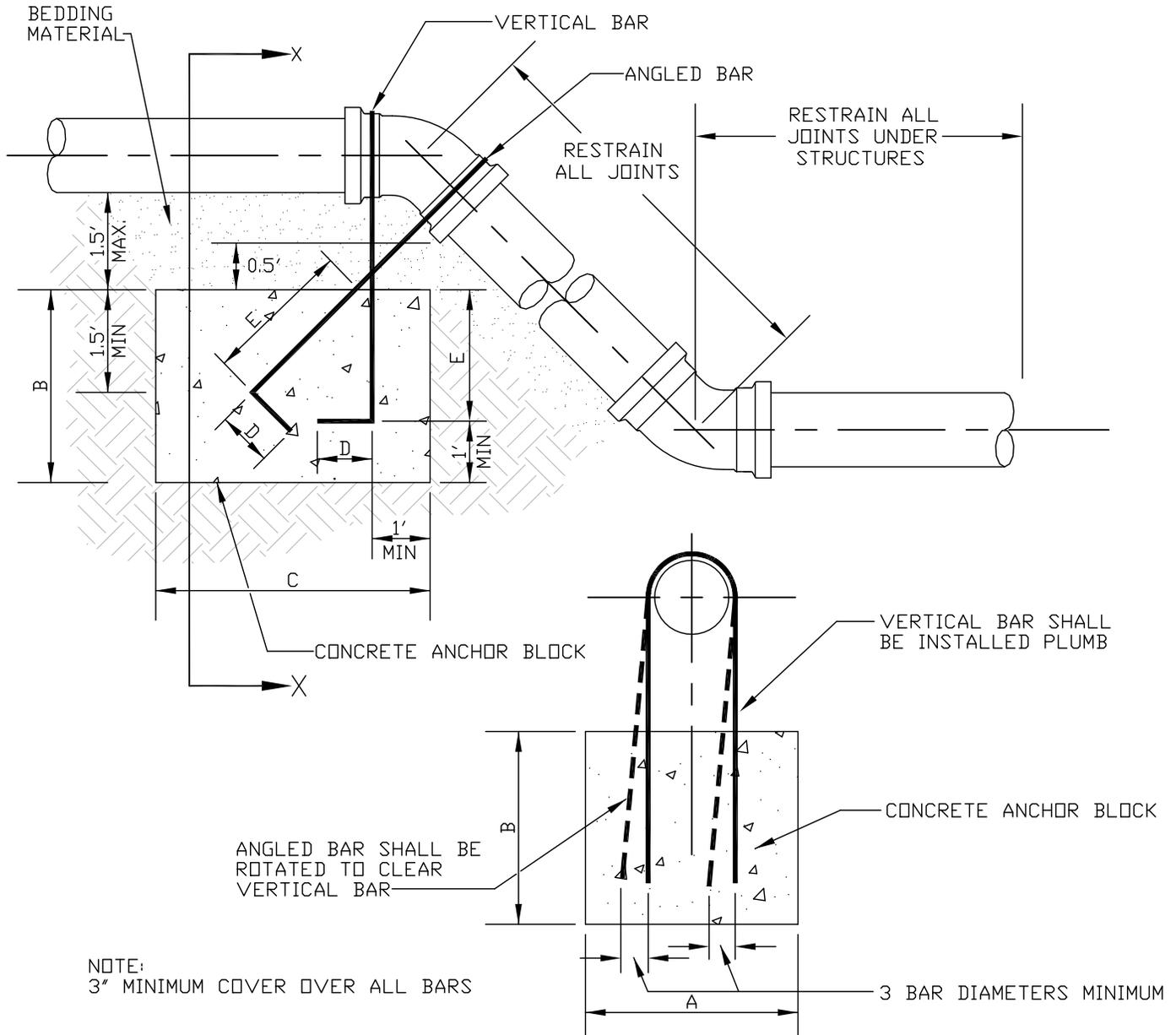


SECTION XX

BRANCH PIPE SIZE*	A	B	C	D
4"	2.5'	1.5'	1.5'	0.4'
6"	3.5'	1.5'	1.5'	0.6'
8"	3.5'	2.5'	1.5'	0.7'
12"	7.5'	2.5'	1.5'	1.0'

*FOR DEAD END FITTINGS
USE THRUST BLOCK DIMENSIONS
FOR SAME SIZE BRANCH PIPE

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SECTION XX

NOMINAL PIPE SIZE	VERTICAL BENDS																	
	11 1/4°						22 1/2°						45°					
	A	B	C	BAR SIZE	D	E	A	B	C	BAR SIZE	D	E	A	B	C	BAR SIZE	D	E
4"	1.5'	2.0'	2.0'	#4	0.5'	1.0'	2.0'	2.5'	2.0'	#4	0.5'	1.0'	2.0'	2.5'	3.0'	#4	0.5'	1.0'
6"	2.0'	2.0'	3.0'	#4	0.5'	1.0'	2.0'	3.5'	3.0'	#4	0.5'	1.0'	3.0'	4.0'	3.0'	#5	0.7'	1.0'
8"	2.0'	3.0'	3.0'	#4	0.5'	1.2'	2.5'	4.5'	3.0'	#5	0.7'	1.2'	3.0'	5.5'	4.0'	#6	0.8'	1.2'
12"	3.0'	4.0'	3.0'	#5	0.7'	1.4'	3.0'	6.0'	4.0'	#6	0.8'	1.4'	4.0'	6.5'	5.0'	#7	1.0'	1.4'

90° BENDS ARE NOT RECOMMENDED

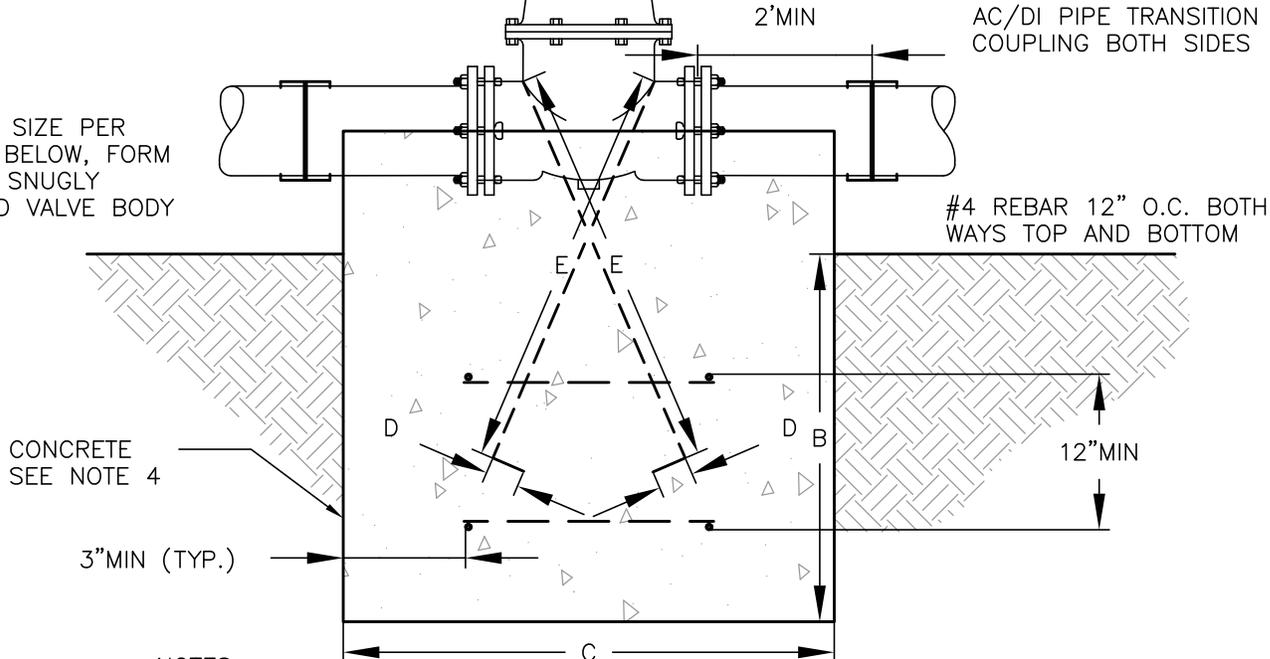
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REVISED:				
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PROFILE VIEW

POLYWRAP VALVE PRIOR TO PLACEMENT OF REBAR, ENSURE REBAR FITS SNUGLY AROUND VALVE BODY PRIOR TO PLACING CONCRETE.

ALTERNATE STRAP MAY BE USED IF SUBMITTED AND APPROVED BY TUCSON WATER

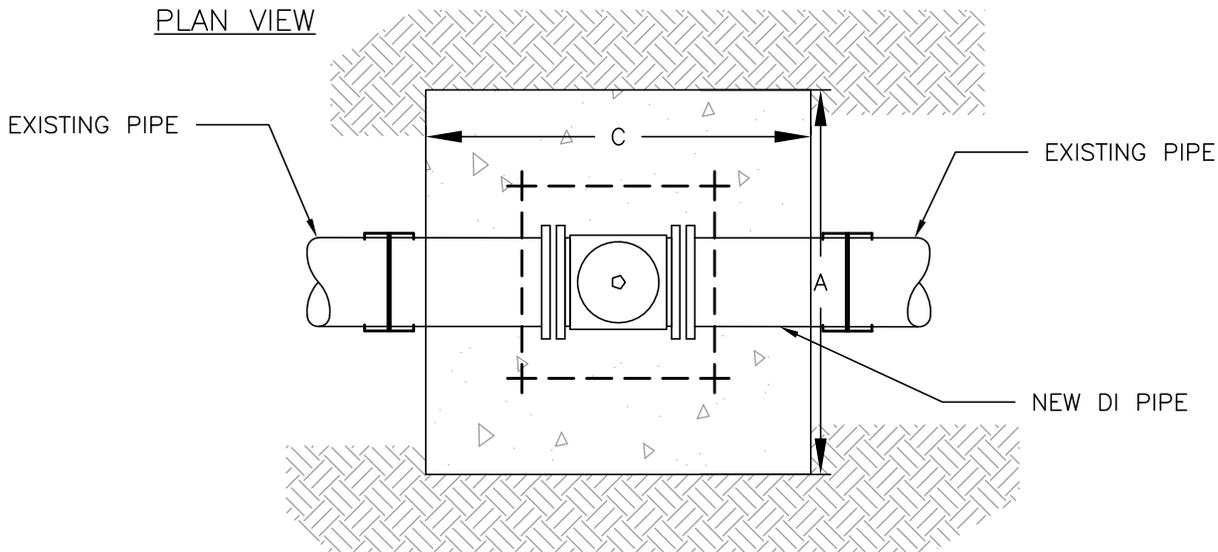
REBAR, SIZE PER CHART BELOW, FORM TO FIT SNUGLY AROUND VALVE BODY



NOTES:

- 1) DIMENSION "B" IS MEASURE FROM BOTTOM OF TRENCH.
- 2) PLACE CONCRETE UP TO SPRINGLINE OF PIPE.
- 3) PLACE CONCRETE IN ALL DIMENSIONS AGAINST UNDISTURBED SOIL.
- 4) USE HIGH EARLY STRENGTH CONCRETE RATED AT 2500 PSI IN 24 HR (MIN.)

PLAN VIEW



DIMENSIONS

NORMAL PIPE SIZE	BAR SIZE	A	B	C	D	E
4"	#4	2.5'	1.5'	1.5'	0.5'	1.0'
6"	#5	3.5'	2.0'	2.0'	0.7'	1.5'
8"	#6	3.5'	2.5'	2.5'	0.8'	2.0'
12"	#7	5.5'	3.5'	3.5'	1.0'	3.0'

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11/17				