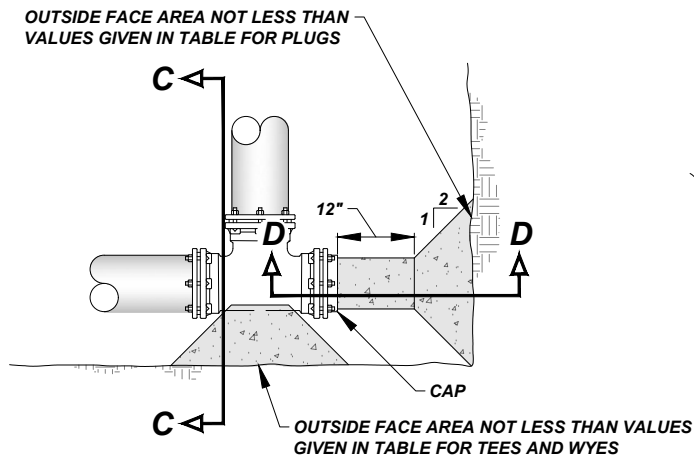
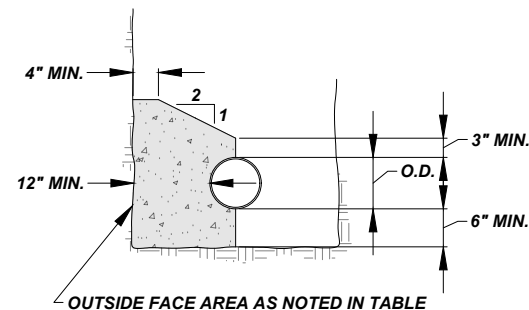
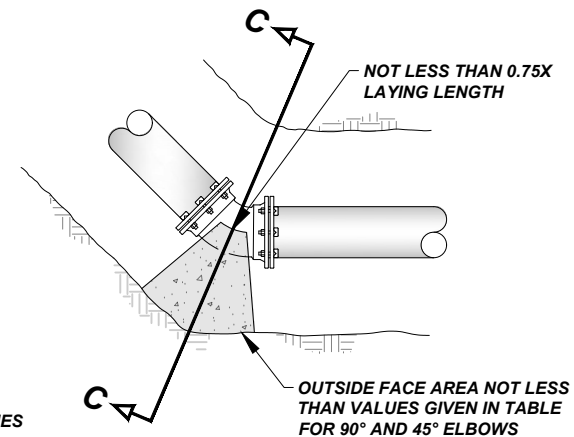


DOWNWARD BEND



OUTSIDE FACE AREA AS NOTED IN TABLE

SECTION D - D



SECTION C - C

BLOCKING FOR PLUGS AND ELBOWS					
OUTSIDE FACE AREA (SQ. FT.)					
PIPE SIZE (IN.)	PLUG	90° ELBOW	45° ELBOW	22 1/2° ELBOW	11 1/4° ELBOW
20	16	25	14	7*	4*
16	12	16	9	5*	3*
12	7	9	5	3*	2*
10	4	7	4	2*	1*
8	3	5	3	2*	1*
6	2	3	2	1*	1*

* NOT REQUIRED UNLESS SPECIFIED

BLOCKING FOR TEES AND WYES		
SIZE OF RUN (IN.)	SIZE OF BRANCH (IN.)	OUTSIDE FACE AREA (SQ. FT.)
20 OR 16	16	12
	12	7
	10	6
	8	5
12 OR LESS	12	7
	10	6
	8	4
	6	2

NOTES:

1. USE CLASS 'B' CONCRETE FOR ALL THRUST BLOCKS
2. THRUST BLOCKS ARE INCIDENTAL TO THE INSTALLATION OF WATER MAIN
3. FOLLOW DIPA PIPE RESTRAINT REQUIREMENTS FOR PIPE LENGTH INTO AND OUT OF A FITTING
4. MECHANICAL RESTRAINTS ARE REQUIRED WITH THRUST BLOCKS

The City Of Goshen
Department of Public Works & Safety
Office of Engineering

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WATER MAIN RESTRAINT/THRUST BLOCKS

NOT TO SCALE

Date Approved By The City Of Goshen Board Of Public Works & Safety and Approved Revisions

03/27/2025

CITY OF GOSHEN, INDIANA
STANDARD DETAIL

Drafted By: J. Hoffman
Approved By: D. Sailor, P.E.

Drawing Number:
WA-103