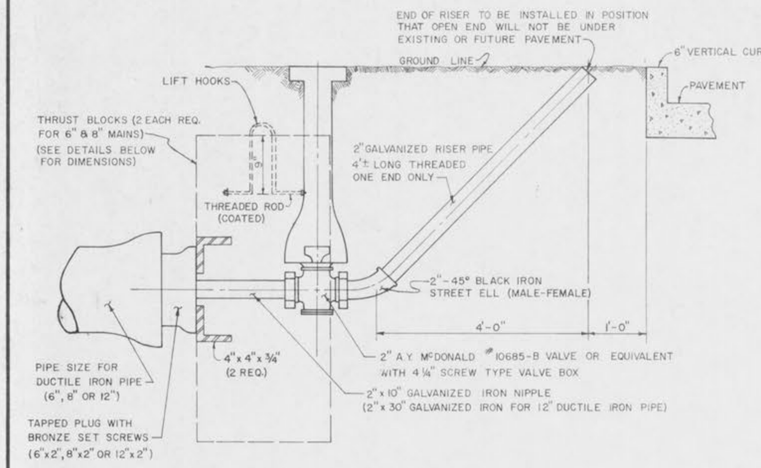
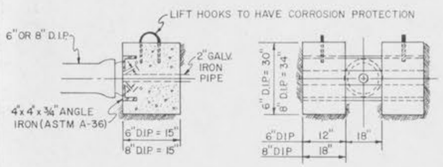
WATER MAIN CONSTRUCTION DETAILS

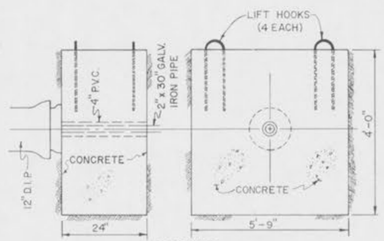
COPPERFIELD PHASE 1
WATER MAIN DETAILS
#82-9893 B 8-4-82



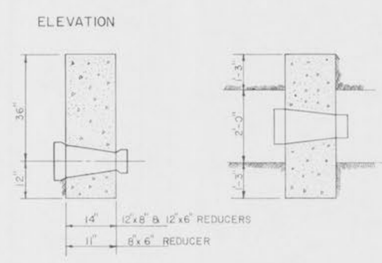
TYPICAL BLOW-OFF VALVE ASSEMBLY
(LOCATED IN CUL-DE-SAC)



DETAILS
THRUST BLOCKS FOR 6" & 8" DUCTILE IRON PIPE
AT BLOW-OFF VALVE ASSEMBLY

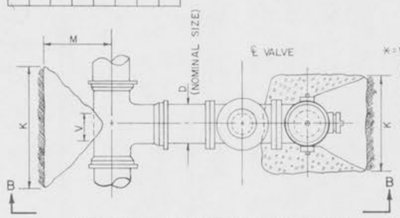


DETAILS
THRUST BLOCK FOR 12" DUCTILE IRON PIPE
AT BLOW-OFF VALVE ASSEMBLY



REDUCER THRUST BLOCKS

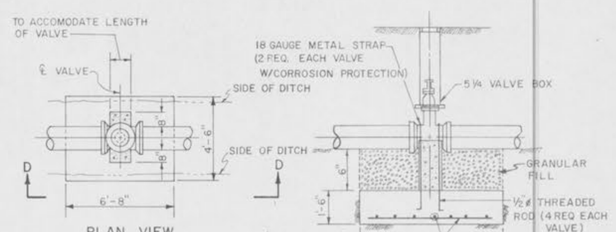
FIRE HYDRANT THRUST BLOCK DIMENSIONS								
D	K	V	M	H	N	P	R
6"	28"	6"	24"	24"	42"	36"	30"



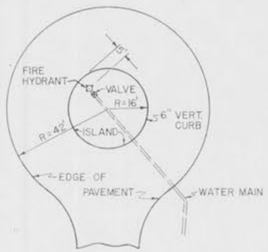
PLAN VIEW-FIRE HYDRANT, AUXILLARY VALVE AND VALVE BOX

SECTION "B-B"

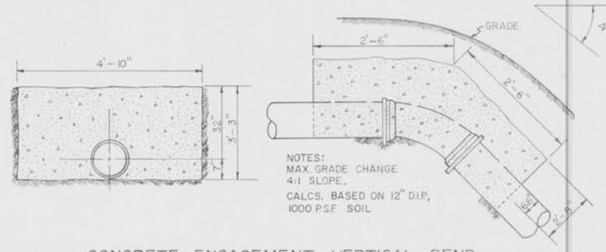
FIRE HYDRANT DETAILS



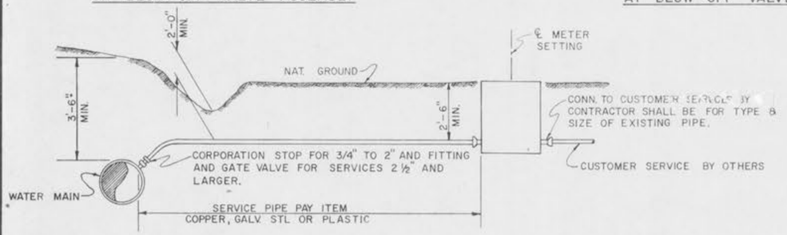
CONCRETE SUPPORT BLOCK FOR VALVES
(THIS BLOCKING IS NOT REQUIRED FOR 6" AND 8" VALVES)



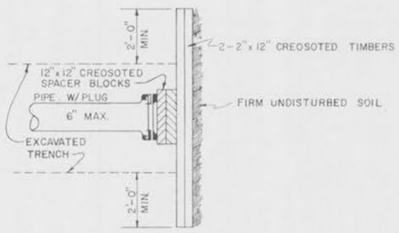
FIRE HYDRANT LOCATION
IN CUL-DE-SAC



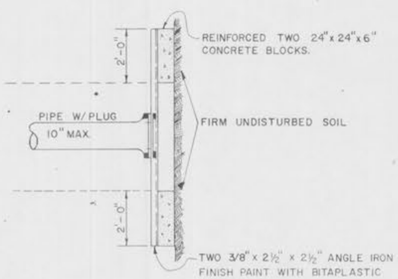
CONCRETE ENCASEMENT-VERTICAL BEND
(USE FOR 6", 8" AND 12" DUCTILE IRON PIPE)



TYPICAL SERVICE ASSEMBLY



PLAN
PLUG DETAIL

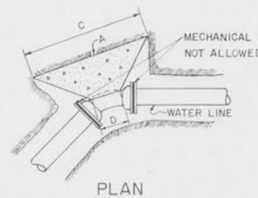


OPTIONAL

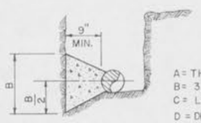
MAXIMUM SIZE SERVICE STRAP CLAMP PERMITTED			
PIPE SIZE INCHES	CAST IRON SIZE	ASBESTOS CEMENT SIZE	GALVANIZED SIZE
2	1"	–	3/4"
2 1/2	1 1/4"	–	1"
3	1 1/2"	–	1 1/2"
4	2"	1"	–
6	2"	1 1/2"	–
8	3"	2"	–
10	3"	2"	–
12	4"	2"	–

MAXIMUM SIZE TAP PERMITTED IN CAST IRON PIPE	
PIPE SIZE	TAP SIZE
2"	1/2"
3"	1/2"
4"	3/4"
6"	1"
8"	1 1/4"
10"	1 1/2"
12"	2"

MAXIMUM TAP AND SERVICE CLAMP SIZES

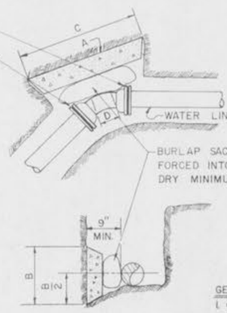


PLAN

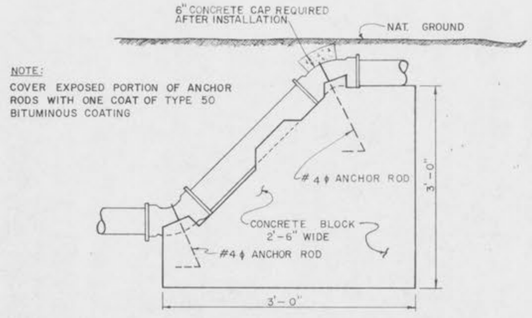


ELEVATION

A= THRUST ANCHORAGE AREA (B x C)
B= 3 x PIPE DIA. (MIN)
C= LENGTH OF THRUST BLOCK
D = DIAMETER OF PIPE (MINIMUM)



OPTIONAL



DETAIL
THRUST BLOCK FOR VERTICAL OFFSETS

DETAILS
THRUST BLOCK FOR HORIZONTAL OFFSETS

ALLOWABLE SAFE LATERAL BEARING OF SOILS IN P.S.F	
MUCK AND PEAT	0*
SOFT CLAY	500
SAND	1,000
SAND AND GRAVEL	1,500
SAND AND GRAVEL CEMENTED W/CLAY	2,000
SHALE	5,000

SOILS ENGINEER TO PROVIDE SOIL BEARING PRESSURE ALLOWABLE

*USE TIE-ROD ANCHORS, LOCKING JOINT FITTINGS, FLANGED FITTINGS OR, TREATED TIMBER PILES W/CONC. THRUST BLOCKS

(THRUSTS FOR VARIOUS FITTINGS AND TEST PRESSURES THRUST IN POUNDS)															
PIPE SIZE	90° BENDS			TEES & DEAD ENDS			45° BENDS			22 1/2° BENDS			11 1/4° BENDS		
	300 TEST PR	150 TEST PR	100 TEST PR	300 TEST PR	150 TEST PR	100 TEST PR	300 TEST PR	150 TEST PR	100 TEST PR	300 TEST PR	150 TEST PR	100 TEST PR	300 TEST PR	150 TEST PR	100 TEST PR
2"	1,400	700	500	1,000	500	–	800	400	–	400	–	–	–	–	–
4"	6,000	3,000	2,000	4,000	2,000	1,000	3,000	1,500	1,000	1,600	800	500	800	400	–
6"	12,000	6,000	4,000	8,000	4,000	3,000	8,000	4,000	2,000	4,000	2,000	1,000	2,000	1,000	600
8"	22,000	11,000	7,000	16,000	8,000	5,000	12,000	6,000	4,000	6,000	3,000	2,000	4,000	2,000	1,000
10"	34,000	17,000	11,000	24,000	12,000	8,000	20,000	10,000	6,000	10,000	5,000	3,000	6,000	3,000	2,000
12"	48,000	24,000	16,000	34,000	17,000	11,000	28,000	14,000	9,000	14,000	7,000	5,000	8,000	4,000	2,000
14"	66,000	33,000	22,000	46,000	23,000	15,000	38,000	19,000	13,000	18,000	9,000	6,000	10,000	5,000	3,000
16"	86,000	43,000	29,000	60,000	30,000	20,000	50,000	25,000	16,000	24,000	12,000	8,000	12,000	6,000	4,000
18"	108,000	54,000	37,000	76,000	38,000	25,000	64,000	32,000	20,000	30,000	15,000	10,000	16,000	8,000	5,000

NOTE: FOR AREA OF THRUST BLOCK IN SQ. FT. DIVIDE APPROPRIATE THRUST BY ALLOWABLE SOIL BEARING. TEST PRESSURES SHALL BE AS INDICATED IN THE SPECIFICATIONS OR SPECIAL CONDITIONS UNDER PRESSURE TESTING OF PIPE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR SELECTING THRUST BLOCKS OR ANCHORAGE FOR VARIOUS PIPE SIZE AND FITTINGS ACCORDING TO APPROPRIATE SOIL BEARING AND TEST PRESSURE. COST OF THRUST ANCHORAGE SHALL BE INCLUDED IN PRICE BID FOR FITTINGS OR PIPE.

THRUST ANCHORAGE DATA

GENERAL NOTES:
1. COVER OVER TOP OF PIPE SHALL BE 42" MINIMUM, 72" MAXIMUM.
2. THRUST BLOCKS SHALL BE BUILT AGAINST UNDISTURBED SOIL WITH ADEQUATE BACKING TO PREVENT MOVEMENT OF FITTING.
3. NO THRUST BLOCKS TO BE PLACED IN SEWER LATERAL DITCHES.
4. THRUST BLOCKING MUST FIT IN EASEMENT

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