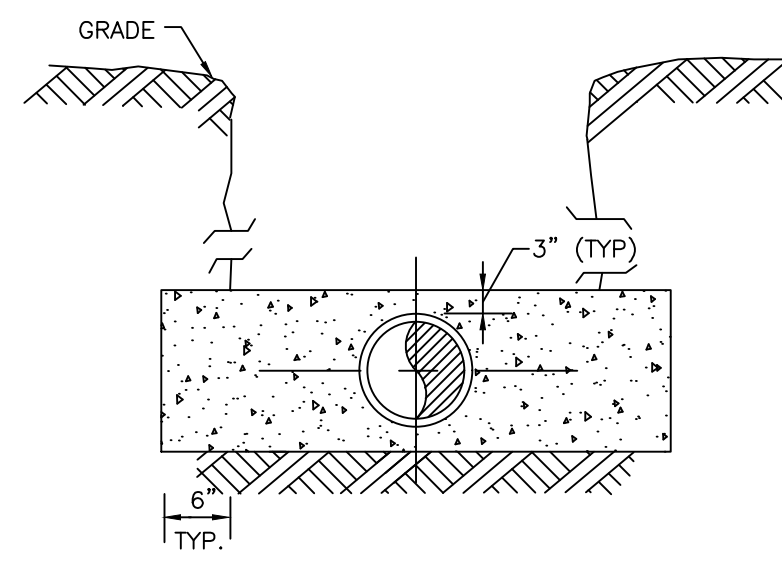
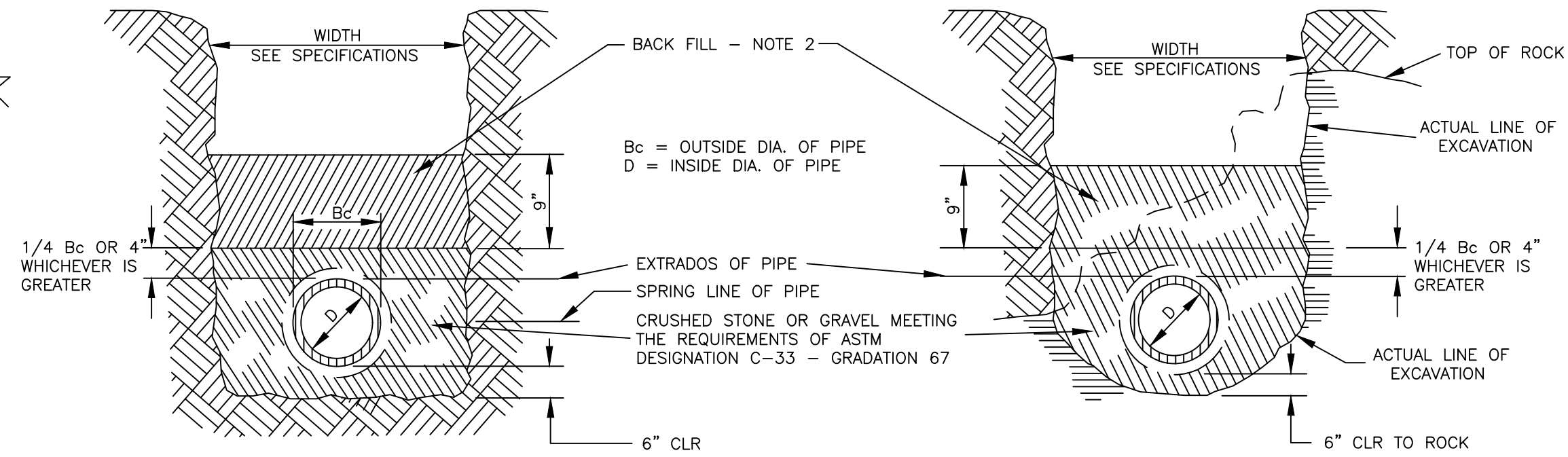


REDUCER ANCHOR
NOT TO SCALE



SECTION B-B
NOT TO SCALE



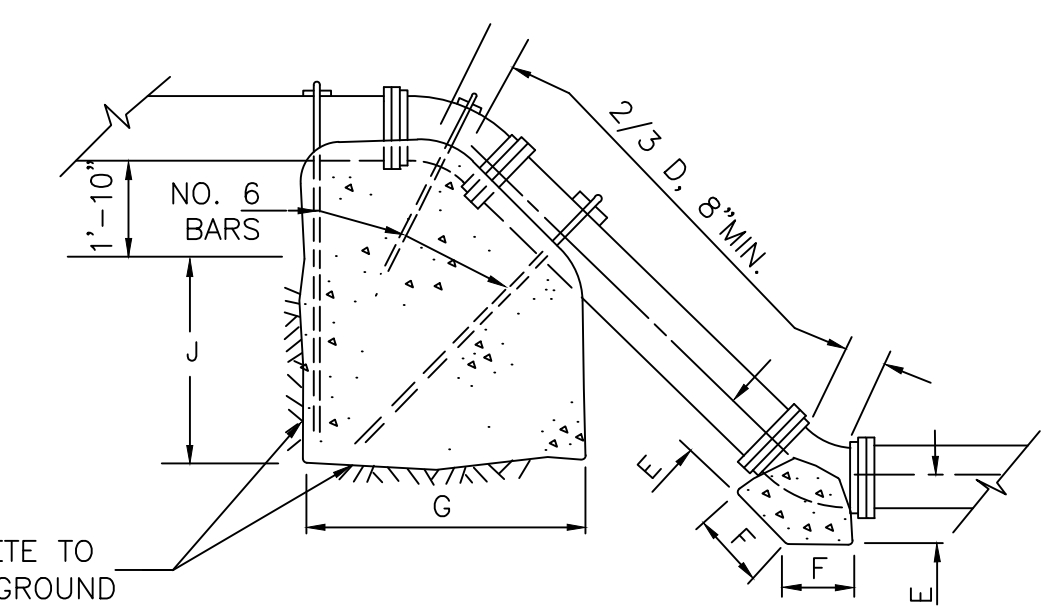
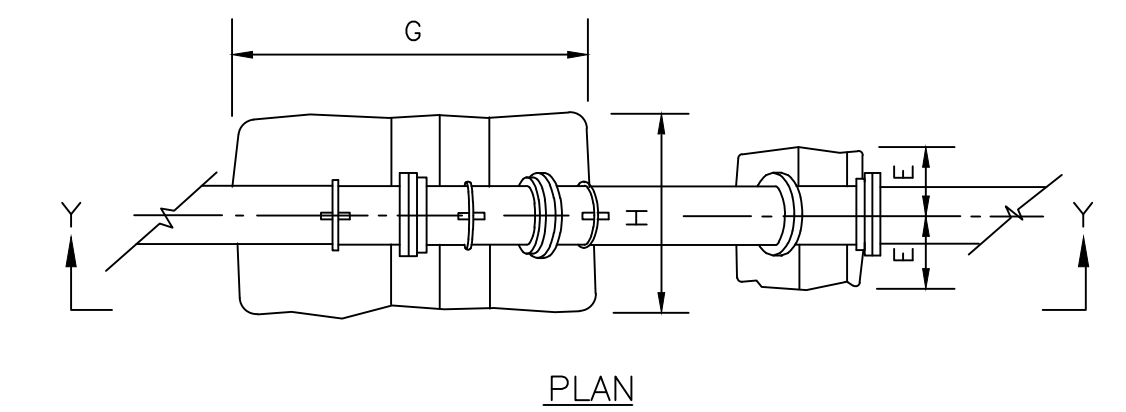
PIPE BEDDING IN EARTH
NOT TO SCALE

PIPE BEDDING IN ROCK
NOT TO SCALE

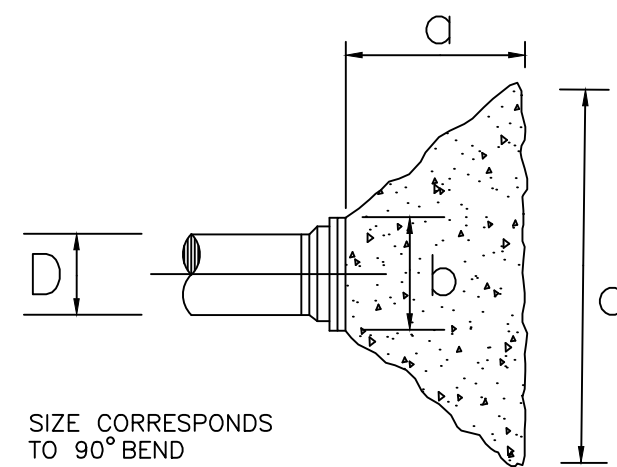
NOTE: WATER MAIN TO MAINTAIN 42" MINIMUM COVER AT ALL LOCATIONS UNLESS OTHERWISE NOTED.

THRUST BLOCK DIMENSIONS FOR VERTICAL BENDS

SIZE OF PIPE (IN)	VERTICAL BENDS (FEET)				
	E	F	G	H	J
4	0.5'	0.75'	2.2'	3.0'	1.0'
6	0.9'	0.9'	3.4'	3.0'	1.5'
8	1.0'	1.5'	3.8'	3.5'	2.0'
10	1.25'	1.8'	5.0'	3.7'	2.25'
12	1.5'	2.2'	6.0'	4.0'	2.5'
14	1.75'	2.7'	7.0'	4.2'	3.0'
16	2.0'	3.2'	8.0'	4.5'	3.5'

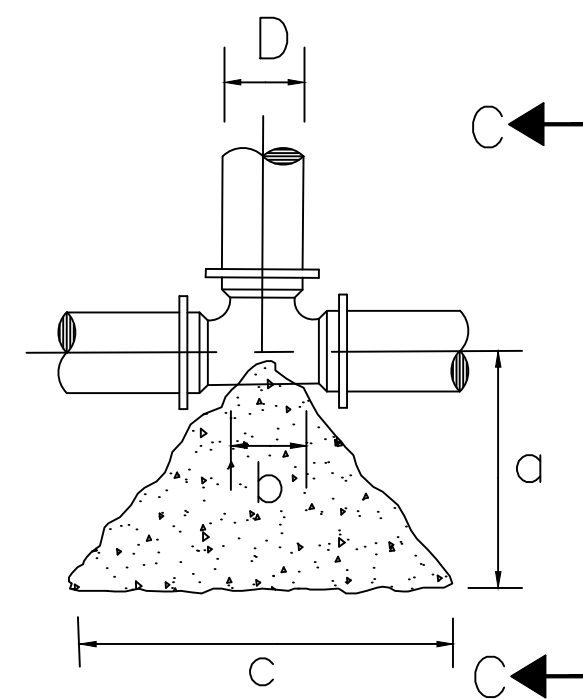


THRUST BLOCK FOR VERTICAL BENDS
NOT TO SCALE

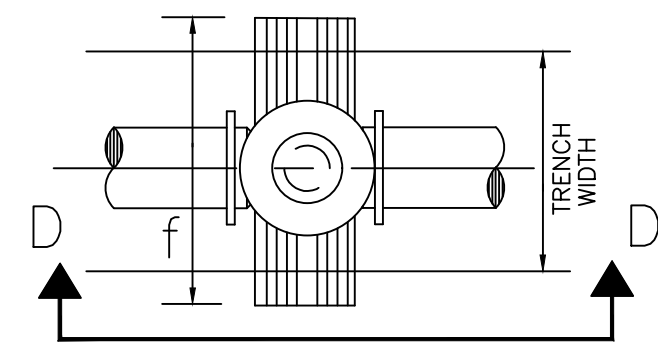


SIZE CORRESPONDS TO 90° BEND

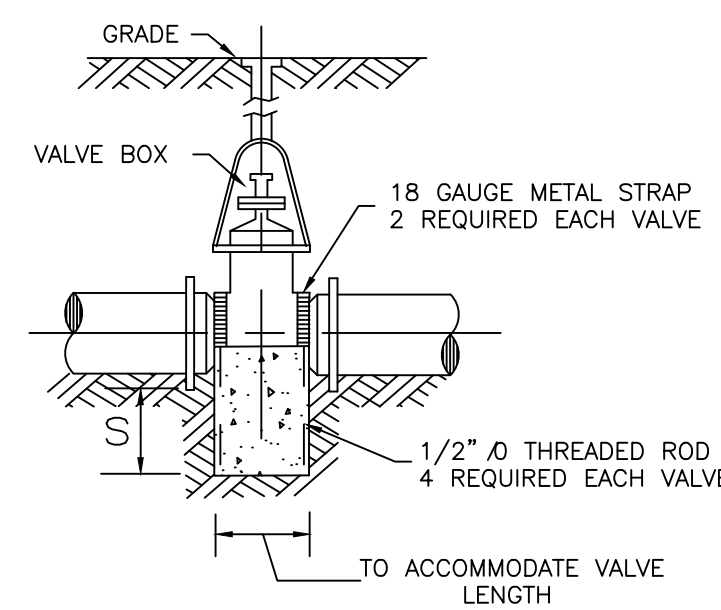
CAP OR PLUG
NOT TO SCALE



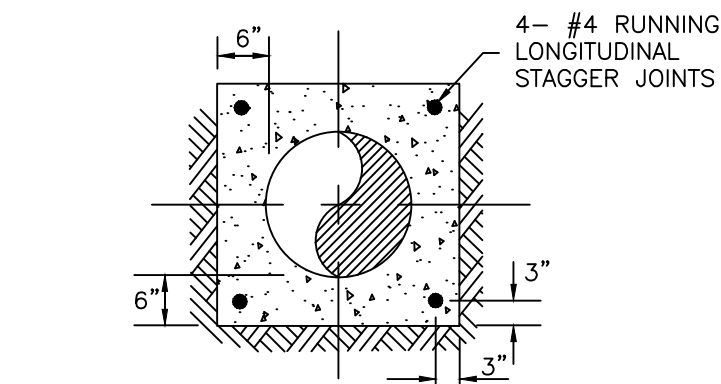
TEE OR WYE BRANCH
NOT TO SCALE



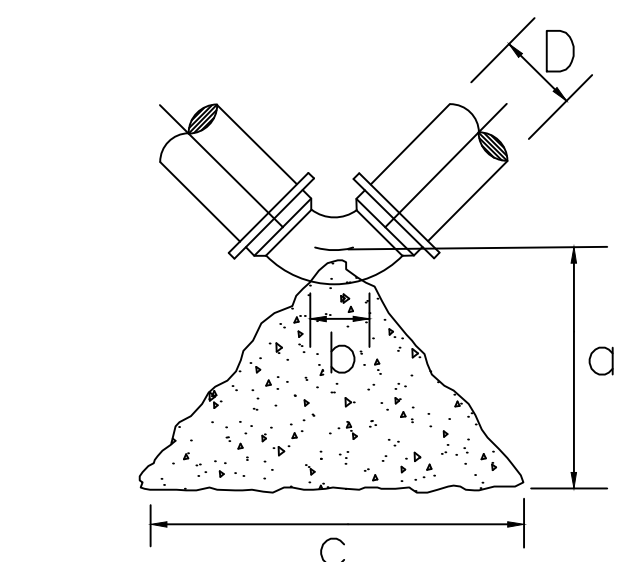
CONCRETE SUPPORT BLOCK FOR VALVES
NOT TO SCALE



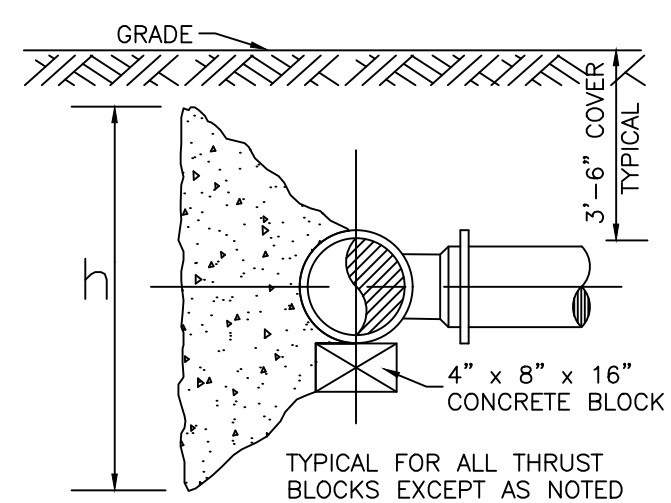
SECTION D-D
NOT TO SCALE



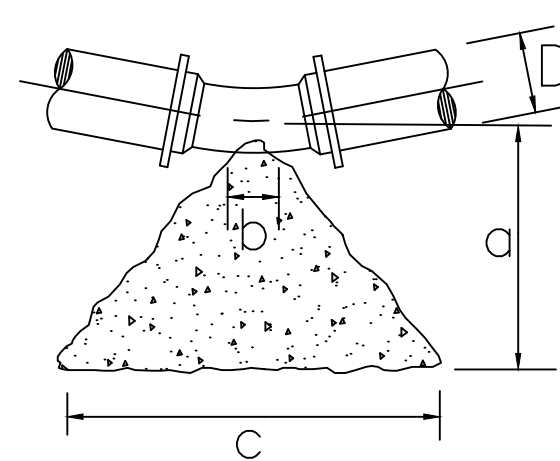
TYPICAL SECTION CONCRETE ENCASEMENT
NOT TO SCALE



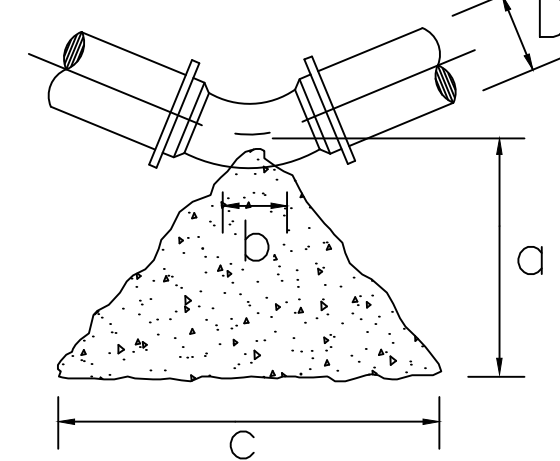
90° BEND
NOT TO SCALE



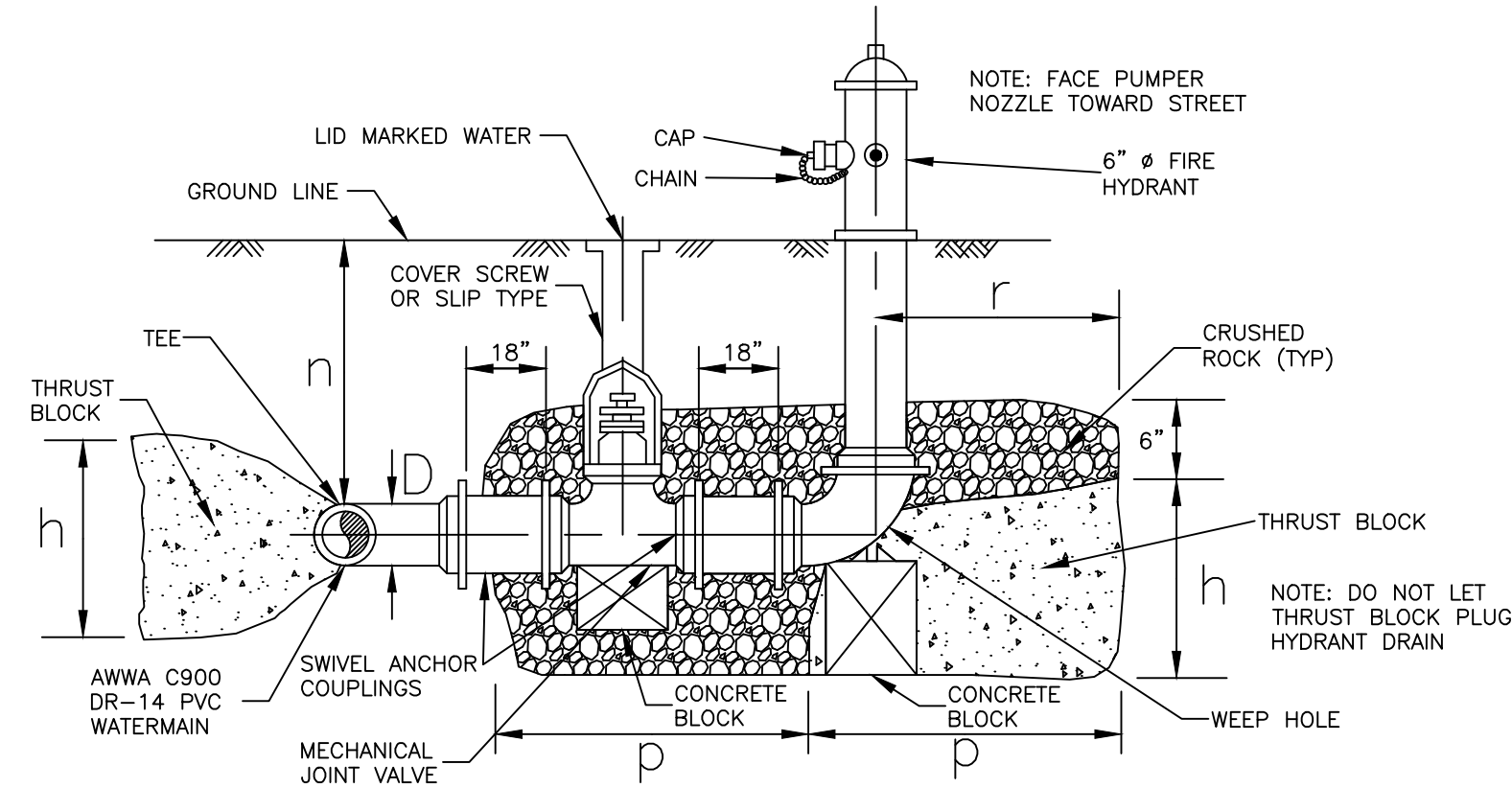
SECTION C-C
NOT TO SCALE



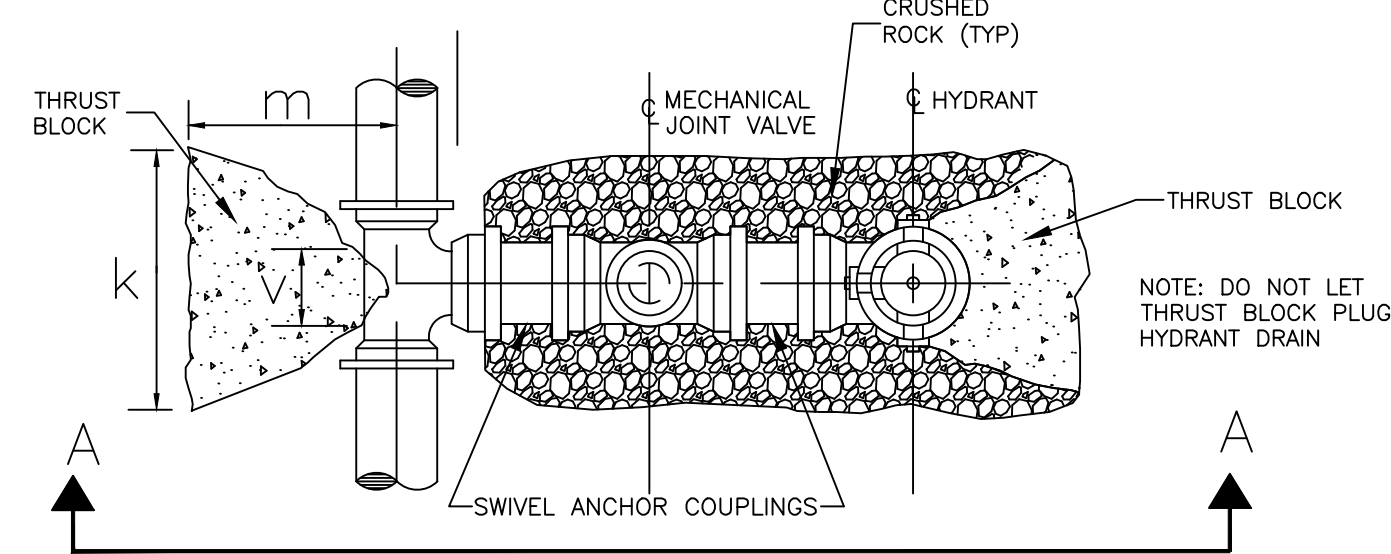
22-1/2° BEND
NOT TO SCALE



45° BEND
NOT TO SCALE



SECTION A-A
NOT TO SCALE



PLAN VIEW
NOT TO SCALE

FIRE HYDRANT ASSEMBLY
NOT TO SCALE

FIRE HYDRANT DETAILS

THRUST BLOCK DIMENSIONS (INCHES)							
PIPE SIZE D	k	v	m	h	n	p	r
2	26	4	14	14	42	26	21
4	26	4	14	14	42	26	21
6	36	6	18	18	42	36	30

THRUST BLOCK DIMENSIONS (INCHES)												
PIPE SIZE D	TEE-PLUG WYE BRANCH			90° BEND		45° BEND		22-1/2° BEND		VALVES		
	a	b	c	h	c	h	c	h	c	h	s	f
4	14	4	26	13	30	15	24	12	16	8	12	36
6	22	6	36	18	44	22	32	16	24	12	18	48
8	29	8	50	25	58	29	42	21	30	15	18	54
10	37	10	62	31	74	37	55	27	40	20	24	54
12	44	12	74	37	88	44	65	33	46	23	24	90
14	52	14	86	43	103	52	76	38	54	27	30	96
16	58	15	98	49	118	58	86	43	60	30	36	96

WATERMETER DETAIL

NOT TO SCALE

- WATERMETER DETAIL**
-
- WATERMETER DETAIL**
NOT TO SCALE
- WATERMETER NOTES:**
- VALVES SHALL BE RESILIENT SEAT, DOUBLE DISC, NON-RISING STEM VALVES WITH OPERATING NUT AND MECHANICAL JOINT FLANGES MANUFACTURED IN ACCORDANCE WITH AWWA SPECIFICATION C509 OR C515. THEY SHALL HAVE O-RING SEALS AND SHALL BE MANUFACTURED BY WATEROUS COMPANY OR EQUIVALENT.
 - CAREFULLY PLACED AND COMPACTED SELECTED EARTH BACKFILL IN 4" LAYERS OR CRUSHED STONE OR GRAVEL WELL GRADED WITHIN THE FOLLOWING LIMITS:

SIEVE SIZE:	% PASSING:	SIEVE SIZE:	% PASSING:
1-1/2"	100	#8	25-60
1"	100	#16	20-40
1/2"	60-100	#20	MAX. 15
#4	40-80		
 - WATERMAIN TO MAINTAIN 42" MINIMUM COVER AT ALL LOCATIONS UNLESS OTHERWISE NOTED.
 - 11-1/4" BEND TO HAVE SAME THRUST BLOCK DIMENSIONS AS 22-1/2" BEND.
 - SECTION C-C ON THIS SHEET TYPICAL FOR ALL THRUST BLOCKS EXCEPT AS NOTED.
 - ALL WATERMAIN, METER VAULT, METER VAULT DRAIN PIPE AND APPURTENANCES METHOD OF CONSTRUCTION AND MATERIALS SHALL CONFORM TO THE CONSTRUCTION STANDARDS AND SPECIFICATIONS OF PUBLIC WATER SUPPLY DISTRICT NO. 2 OF JEFFERSON COUNTY, MODNR, AWWA AND ASTM.
 - ALL TRENCHES UNDER AREAS TO BE PAVED AND UNDER EXISTING PAVING SHALL BE FULL HEIGHT GRANULARLY FILLED WITH COMPACTED SELECT GRANULAR BACKFILL. BACKFILL SHALL BE PLACED IN ACCORDANCE WITH THE CONSTRUCTION STANDARDS AND SPECIFICATIONS OF MODNR AND MODOT, PROJECT SPECIFICATIONS AND AS DIRECTED ON THE PLANS.
 - ALL WATERMAIN PIPING SHALL BE AWWA C900 DR-14 PVC PIPE WITH DUCTILE IRON MECHANICAL JOINT FITTINGS AWWA C153 RESTRAINED WITH MEGALUG RESTRAINERS (OR APPROVED EQUAL). DIP (DUCTILE IRON PIPE) WATERMAIN SHALL BE CLASS 350 AND BE IN ACCORDANCE WITH AWWA C151, WALL THICKNESS AWWA C150, CEMENT-MORTAR LINING AWWA C104, POLYETHYLENE JACKET AWWA C105 AND RESTRAINED JOINTS, MECHANICAL JOINTS OR PUSH-ON JOINTS AWWA C111 WITH DUCTILE IRON MECHANICAL JOINT FITTINGS AWWA C153 RESTRAINED WITH MEGALUG RESTRAINERS (OR APPROVED EQUAL) OR RESTRAINED GASKET FITTINGS AWWA C153; OR LATEST REVISIONS THEREOF.
 - THE CONTRACTOR IS RESPONSIBLE FOR ALL OSHA SAFETY COMPLIANCES WHEN TRENCHING AND LAYING UTILITIES.
 - WATERMAIN LOCATOR WIRE SHALL BE INSTALLED WITH ALL PVC WATERMAIN, FITTING AND VALVE INSTALLATIONS AS SPECIFIED IN THE PROJECT SPECIFICATIONS.
 - BEFORE WATERMANS SHALL BE ACCEPTED AND PUT INTO SERVICE THEY SHALL BE TESTED FOR TWO HOURS ON EACH SEGMENT BETWEEN END POINTS AT A TEST PRESSURE OF AT LEAST 50% IN EXCESS OF NORMAL MAXIMUM OPERATING PRESSURE. WATERMANS SHALL BE STERILIZED AND FLUSHED IN ACCORDANCE WITH PUBLIC WATER SUPPLY DISTRICT NO. 2 OF JEFFERSON COUNTY, MODNR AND AWWA SPECIFICATIONS AND STANDARDS.
 - FIRE HYDRANTS SHALL BE FREEZE PROOF DRY BARREL BREAKAWAY TYPE AND SHALL BE INSTALLED WITH AN AUXILIARY VALVE AND VALVE BOX IN ACCORDANCE WITH AWWA C502. FIRE HYDRANTS SHALL BE POST TYPE WITH A 6" MJ INLET, 5-1/4" DIAMETER VALVE OPENING, A NON-TURNING OPERATING ROD AND SHALL OPEN BY TURNING THE VALVE OPERATING NUT TO THE LEFT OR COUNTERCLOCKWISE. FIRE HYDRANT COATING SHALL BE IN ACCORDANCE WITH AWWA C550. EACH FIRE HYDRANT SHALL HAVE TWO 2-1/2" HOSE CONNECTIONS AND A PUMPER CONNECTION IN ACCORDANCE WITH THE LOCAL FIRE DEPARTMENT. ALL OF THE OPERATING AND WORKING PARTS SHALL BE SERVICEABLE OR REPLACEABLE FROM ABOVE GRADE WITH NO DIGGING OR DISTURBING THE SUPPLY LINE CONNECTION. FIRE HYDRANTS SHALL BE MANUALLY OPERATED BY USING A STANDARD 2" GATE VALVE WRENCH. WHEN OPEN, VALVE SHALL BE 100% UNOBSTRUCTED AND DRAIN HOLE SHALL BE COVERED AND CLOSED. THE FIRE HYDRANT SHALL HAVE PROPER THRUST BLOCKS, ANCHORAGES AND GRANULAR DRAIN POCKETS, AS SHOWN HEREIN.