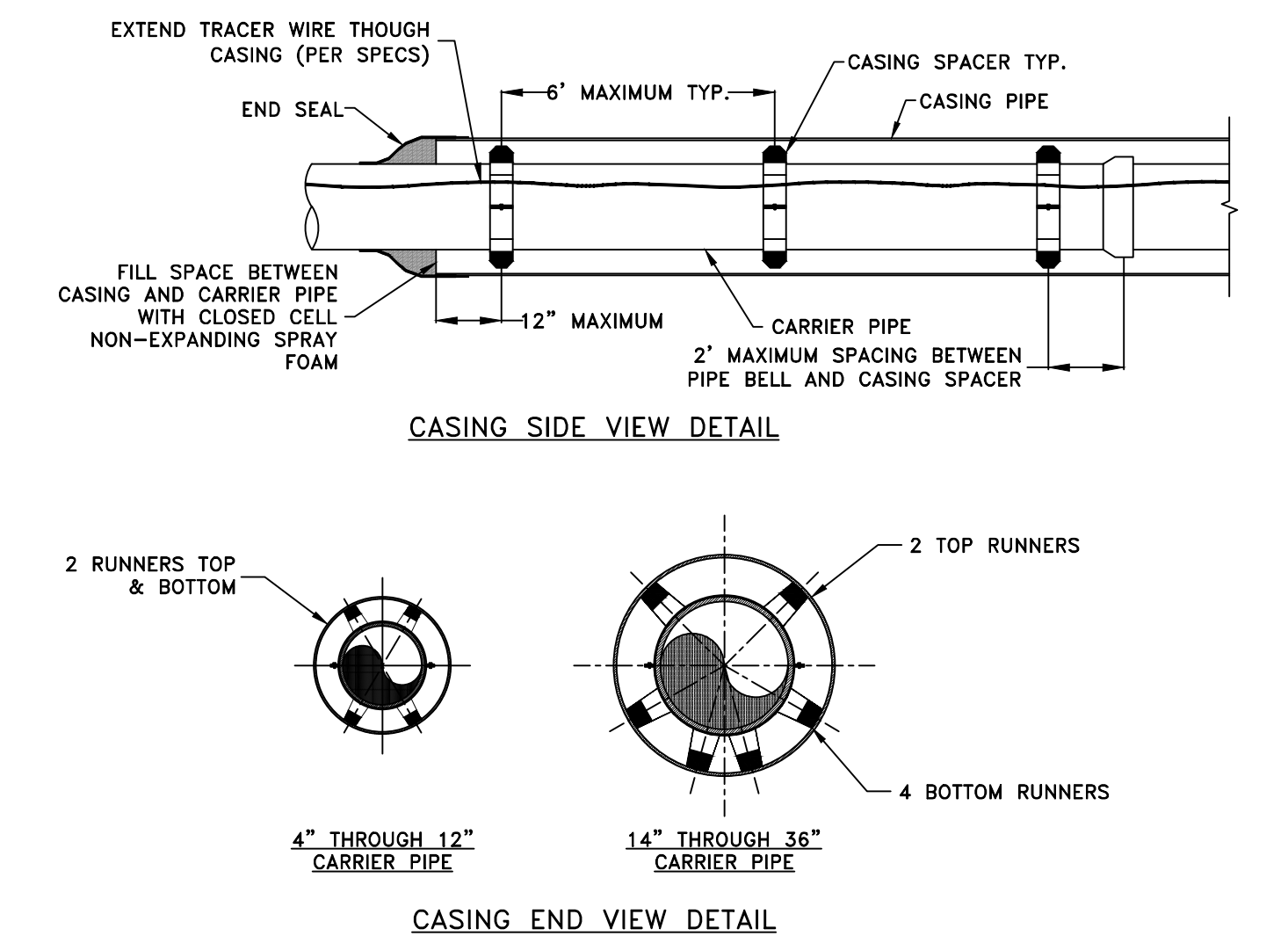
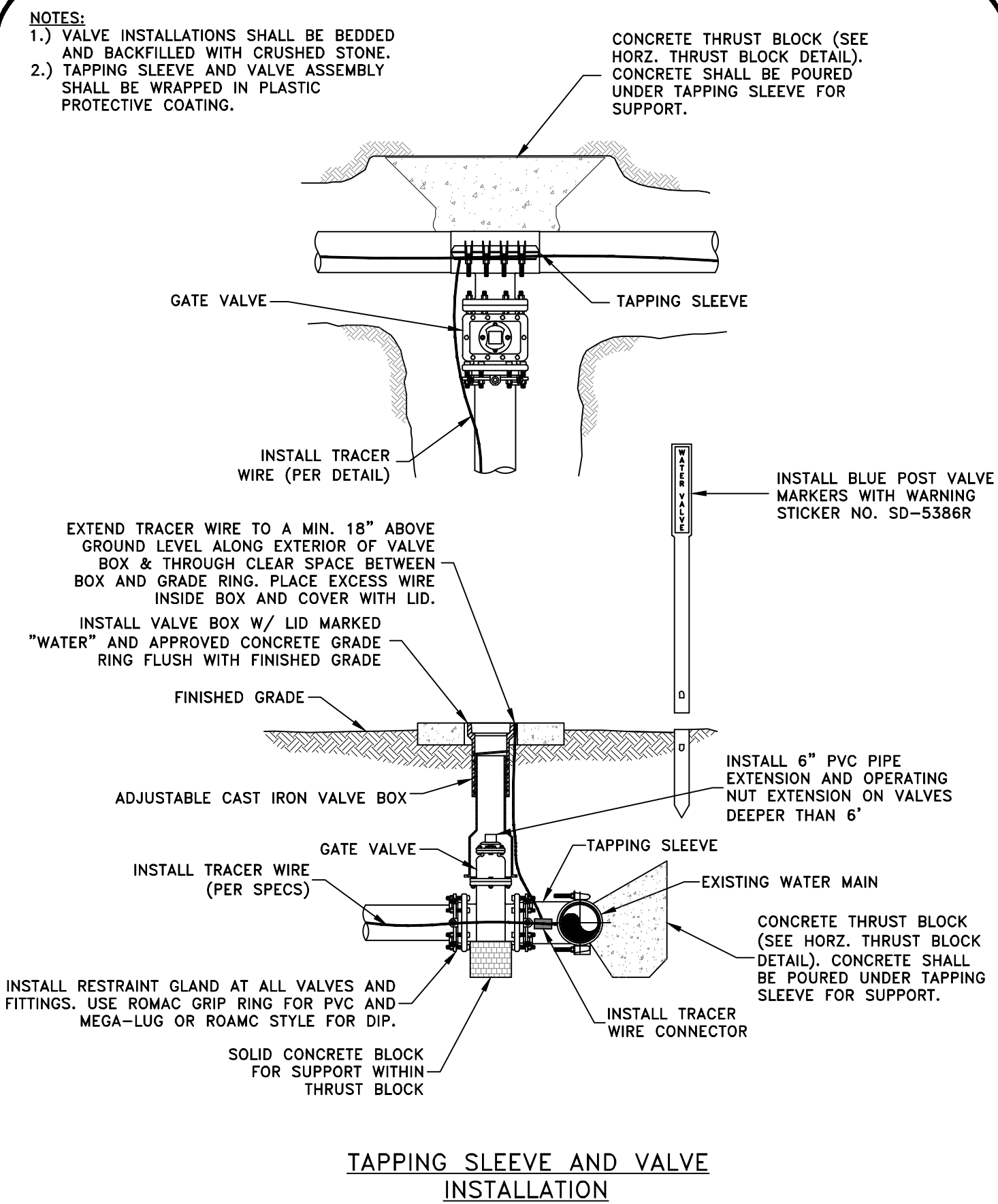
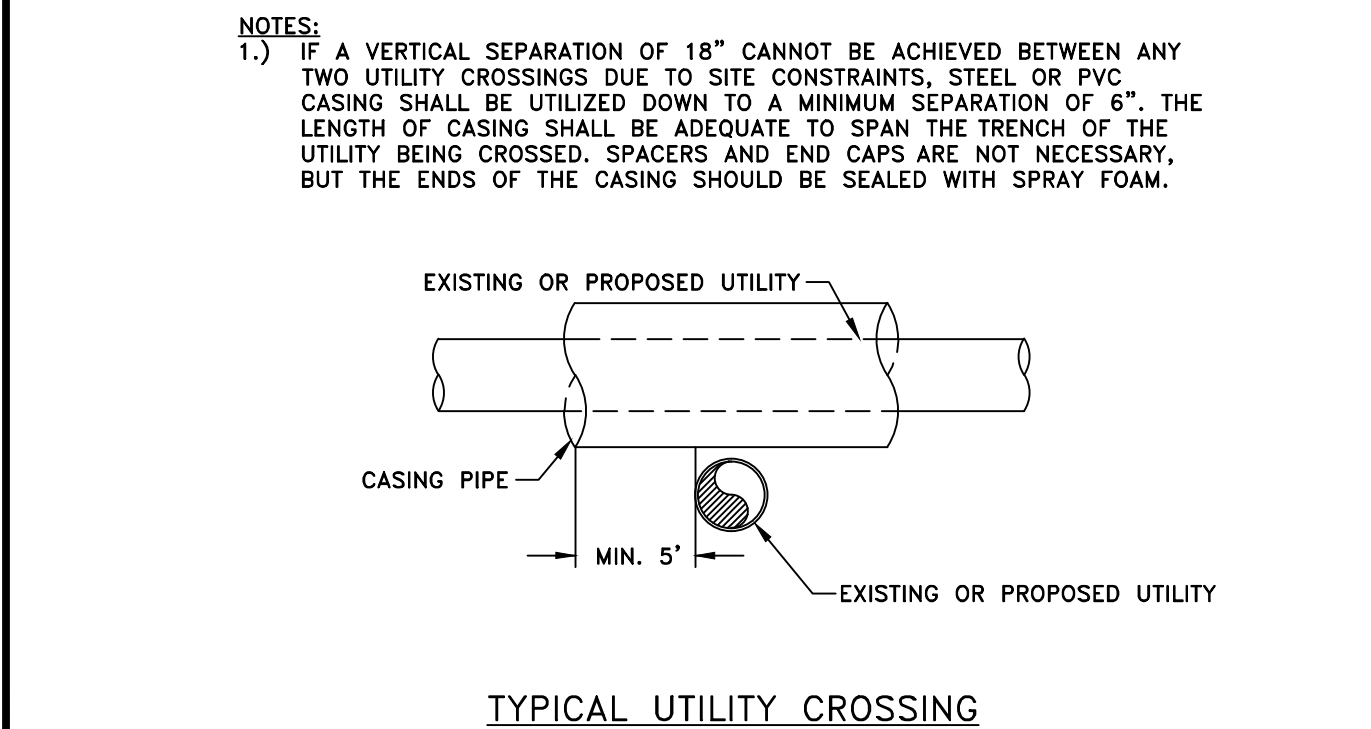
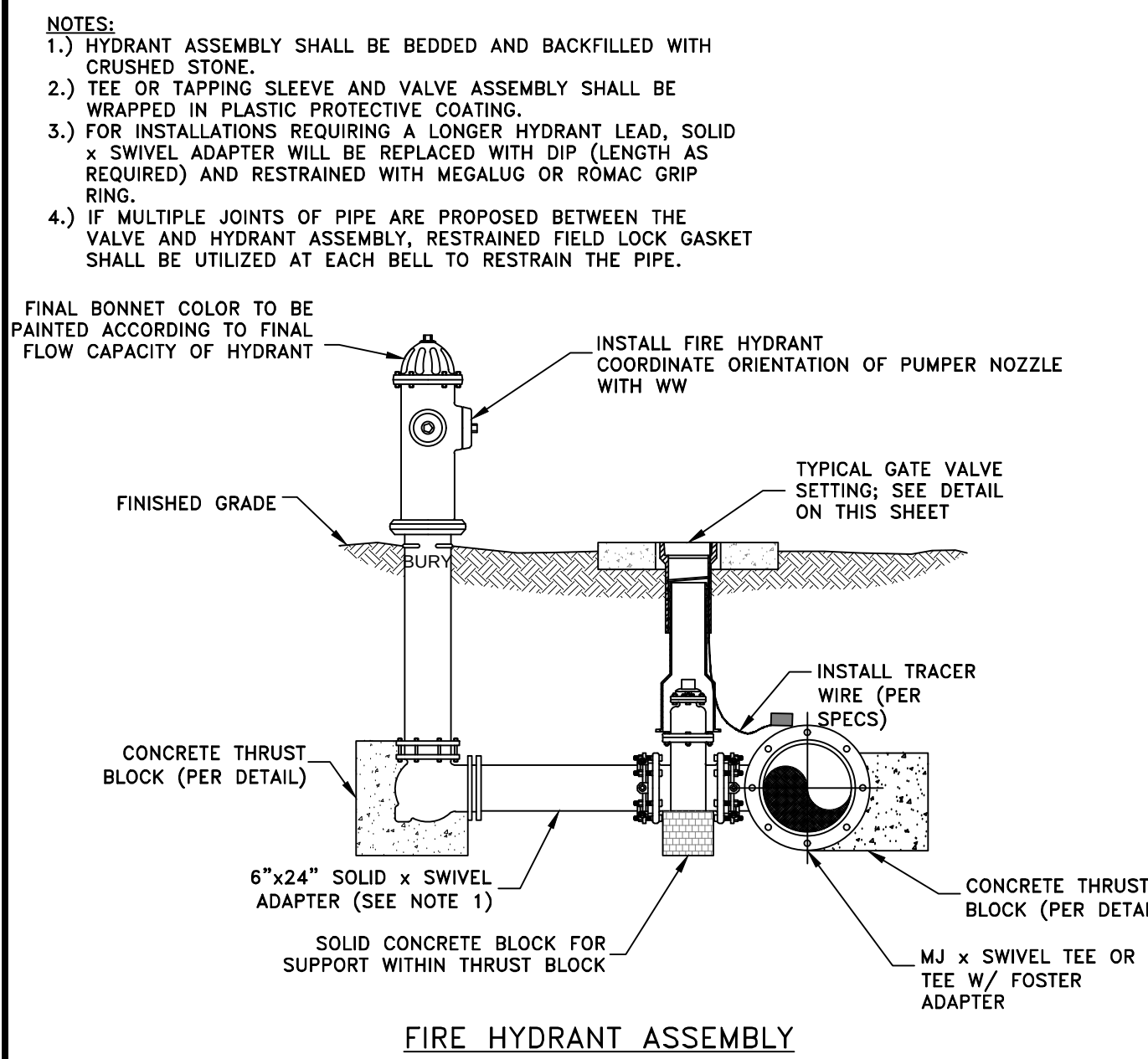
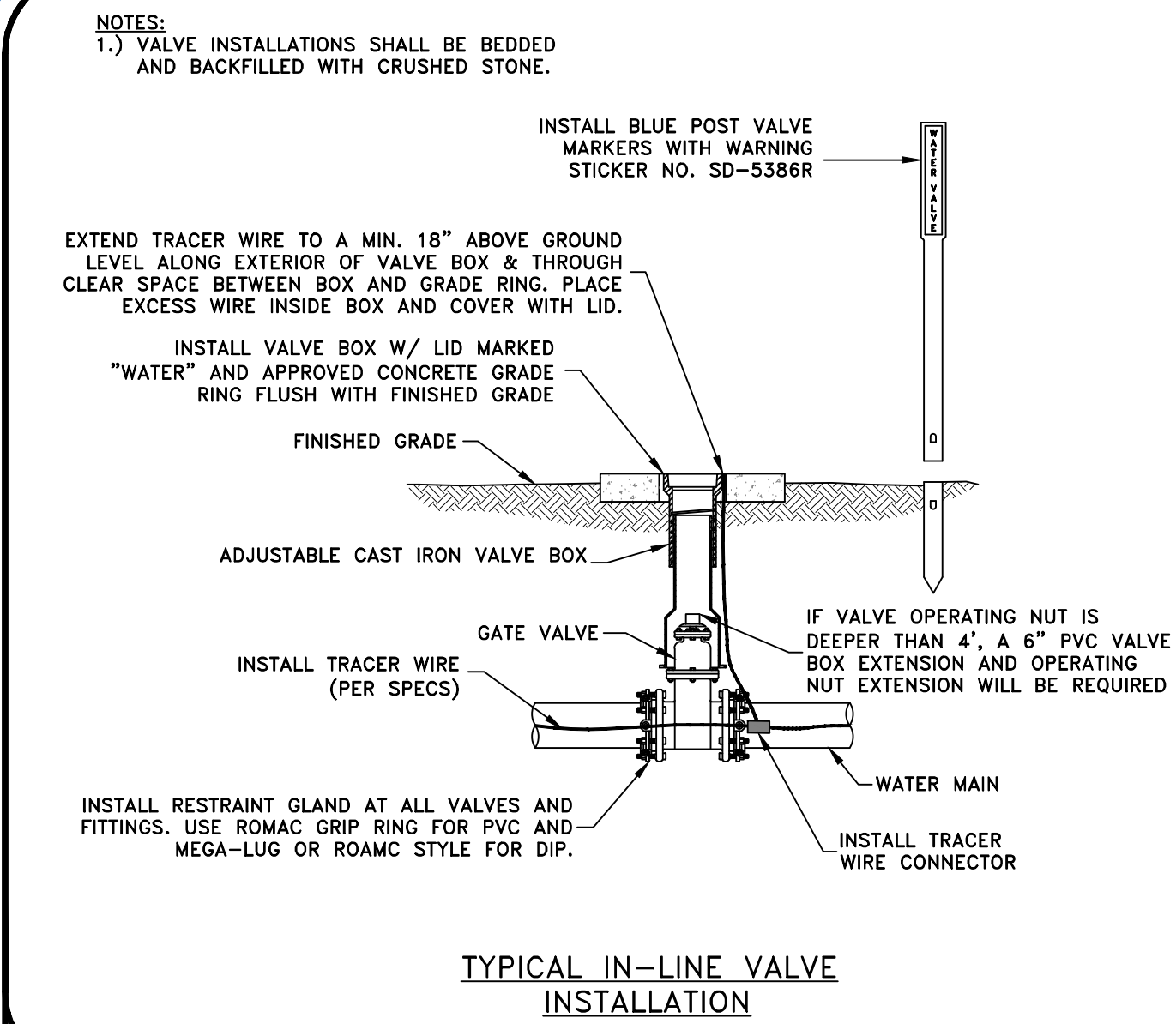
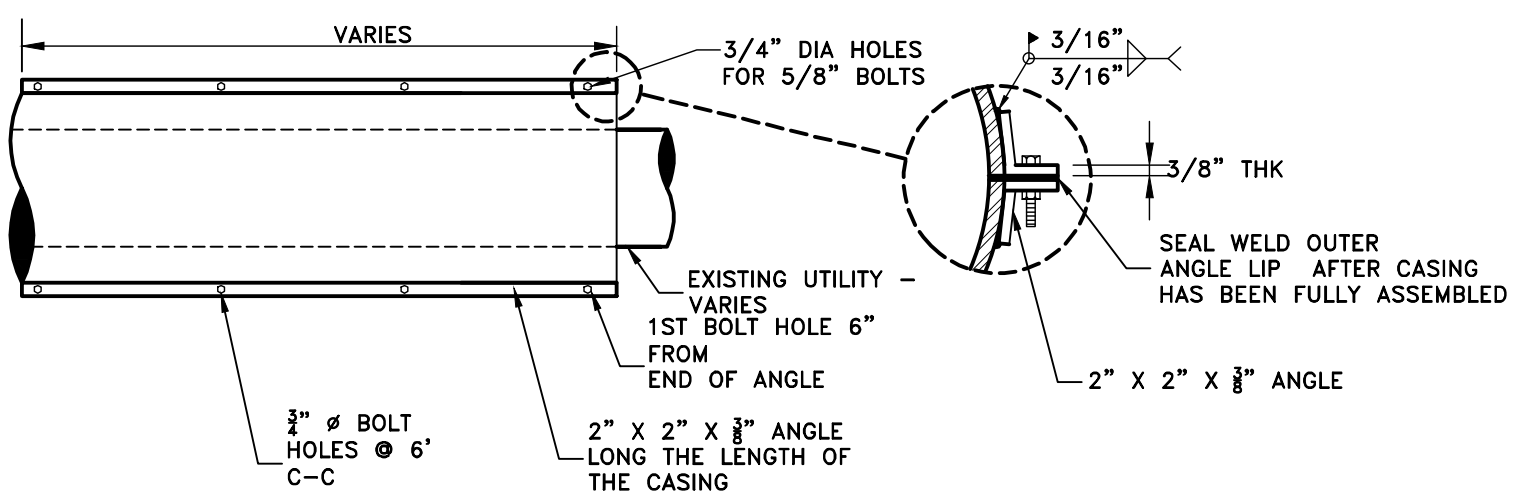
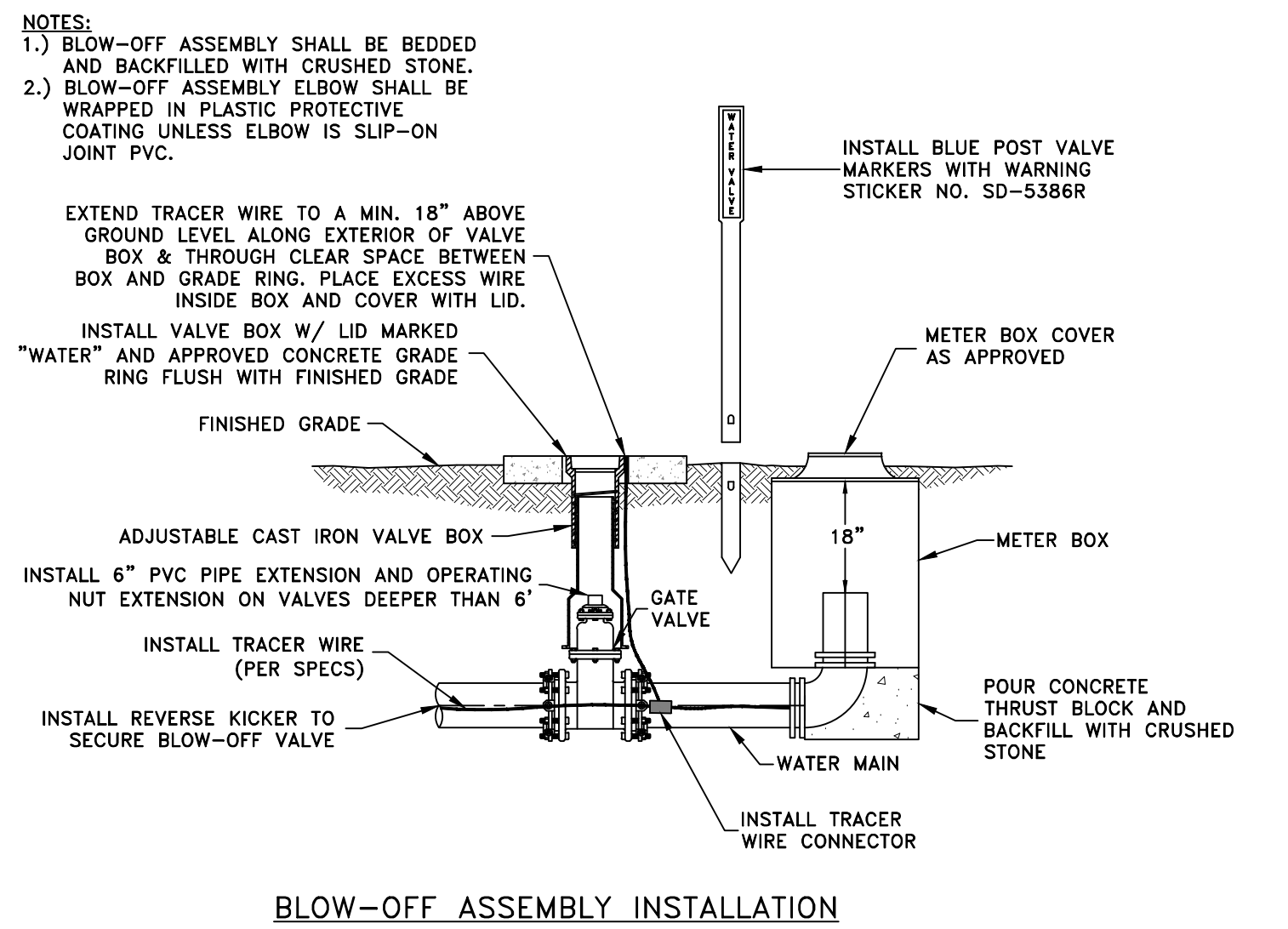




CARRIER TYPE AND CASING PIPE SIZES (MIN) IN INCHES										
CARRIER PIPE NOM. DIA. (D1)	4	6	8	10	12	16	20	24	30	
CASING PIPE NOM. DIA. (D2)	12	12	16	20	20	24	30	36	42	
WALL THICKNESS	0.375	0.375	0.375	0.375	0.375	0.500	0.500	0.500	0.625	

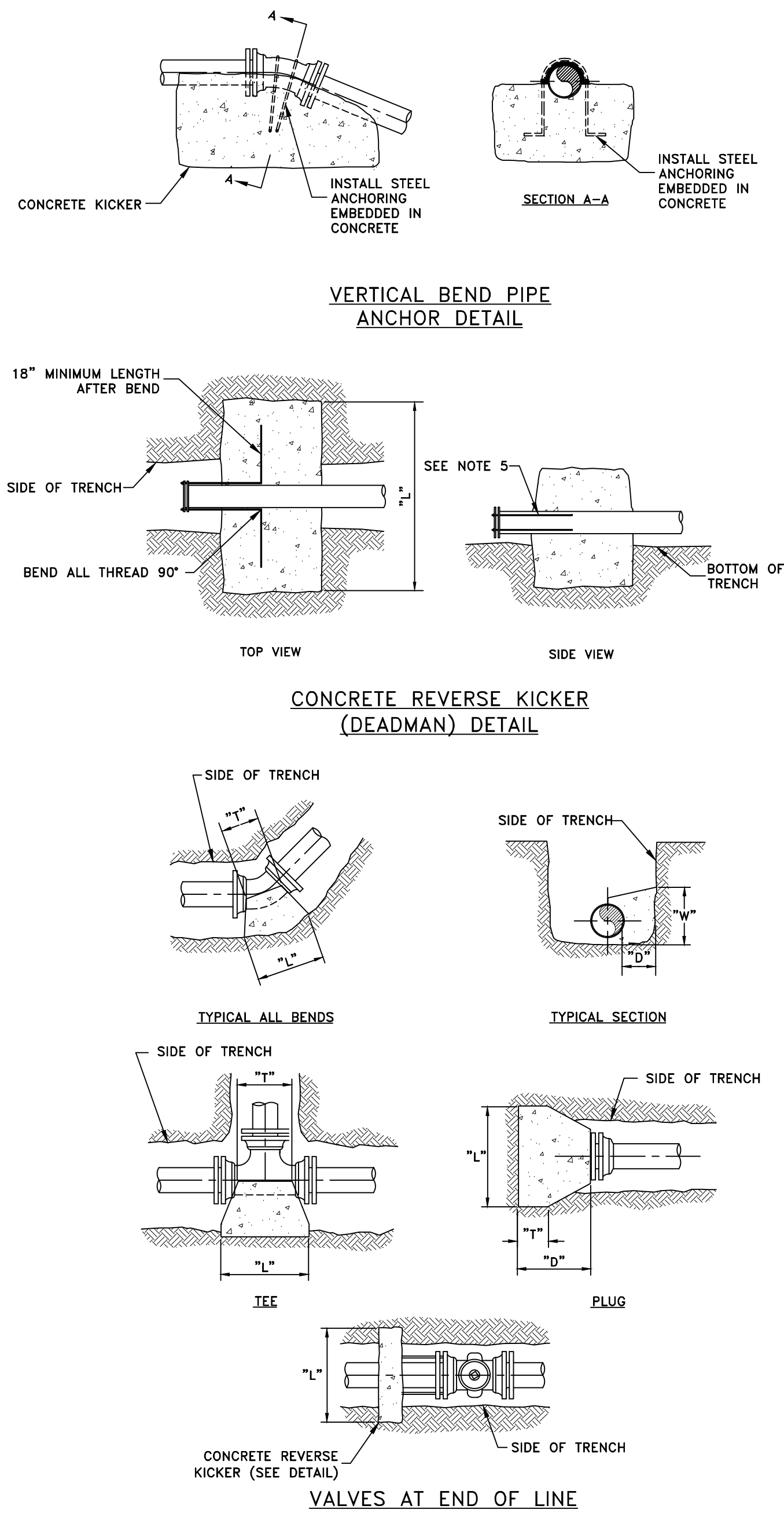
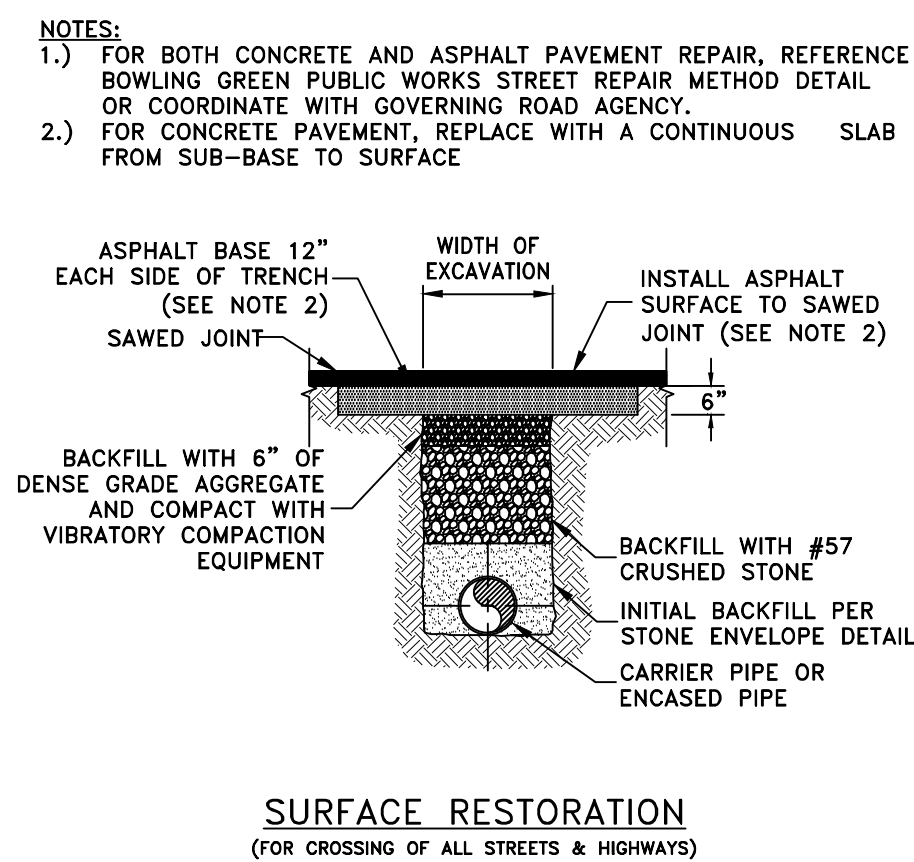
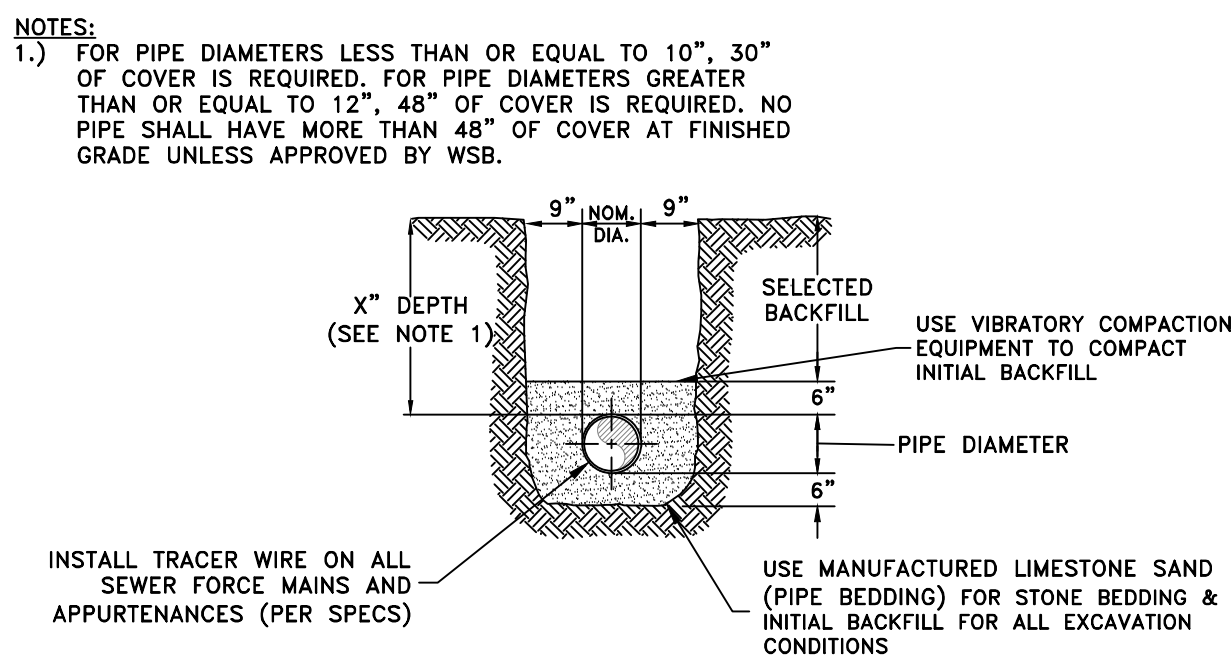
- NOTES
- CASING SIZES ARE BASED ON A TYPICAL TYTON JOINT WITH RESTRAINED JOINT GASKETS. IF A TRADITIONAL RESTRAINED JOINT SIMILAR TO TR FLEX OR EQUIVALENT IS UTILIZED, COORDINATE WITH WSB TO ENSURE SUFFICIENT CASING SIZE IS PROVIDED.
 - MINIMUM COVER AT LOWEST POINT IN RIGHT OF WAY SHOULD BE 4' TO TOP OF CASING FOR KYTC AND COUNTY ROADWAYS AND 5.5' TO BASE OF RAIL ON RAILROADS.
 - ALL CASINGS SHALL EXTEND THROUGH RIGHT OF WAY.
 - THE INSIDE DIAMETER OF THE CASING PIPE SHALL BE A MINIMUM OF 4 INCHES GREATER THAN THE OUTSIDE DIAMETER OF THE CARRIER PIPE BELL OR COUPLING.
 - FOR CASINGS 50 FEET IN LENGTH OR LONGER, ALL CARRIER PIPE SHALL BE DUCTILE IRON PIPE AND HAVE MECHANICAL RESTRAINED JOINTS.
 - STAINLESS STEEL SPACERS SHALL BE USED FOR ALL DUCTILE IRON PIPE OR ANY PIPE 12" IN DIAMETER AND LARGER.
 - PIPE TO BE USED AS A CASING SHALL CONFORM TO ASTM A252 STANDARD SPECIFICATION FOR WELDED & SEAMLESS STEEL PIPE PILES WITH A MINIMUM YIELD STRENGTH OF 35,000 PSI

TYPICAL CASING DETAIL – WATER



- NOTES
- SPLIT CASINGS ARE INTENDED FOR OPEN CUT INSTALLATIONS ONLY AND PRIMARILY FOR PROTECTING EXISTING UTILITIES.
 - SPLIT CASING WILL NOT BE ACCEPTABLE FOR BORE AND JACK INSTALLATIONS.
 - CASING SPACERS SHALL BE PROVIDED AS SPECIFIED FOR TYPICAL CASING INSTALLATIONS.
 - SIZING AND SPACER CONFIGURATION PER TYPICAL CASING DETAIL.

TYPICAL SPLIT CASING DETAIL



NOTES:
1.) ALL FITTINGS SHALL INCLUDE RESTRAINT GLANDS: USE ROMAC RESTRAINT FOR PVC, USE ROMAC OR MEGA-LUG RESTRAINT FOR DIP.
2.) CONCRETE THRUST BLOCKS TO BE POURED AGAINST UNDISTURBED EARTH.
3.) PLASTIC BARRIER SHALL BE PLACED BETWEEN ALL CONCRETE AND PIPE AND/OR FITTINGS.
4.) ANCHOR BAR SHALL BE 5/8" MINIMUM DIAMETER.
5.) RODDING FOR A CONCRETE REVERSE KICKER SHALL BE AS FOLLOWS: ≤4" USE 2 RODS, 6"-10" USE 4 RODS & ≥12" PER ENGINEER.
6.) FITTINGS SHALL BE INSTALLED AS REQUIRED PER WSB INSPECTOR.

90° BENDS																
SIZE	2	4	6	8	10	12	14	16	18	20	24	30				
"D"	6	8	8	10	12	14	22	22	24	24	30	30				
"L"	16	20	24	30	32	34	68	68	80	80	96	120				
"W"	8	10	12	18	22	24	34	34	40	40	48	60				
"T"	10	12	16	20	22	22	38	38	40	40	44	52				

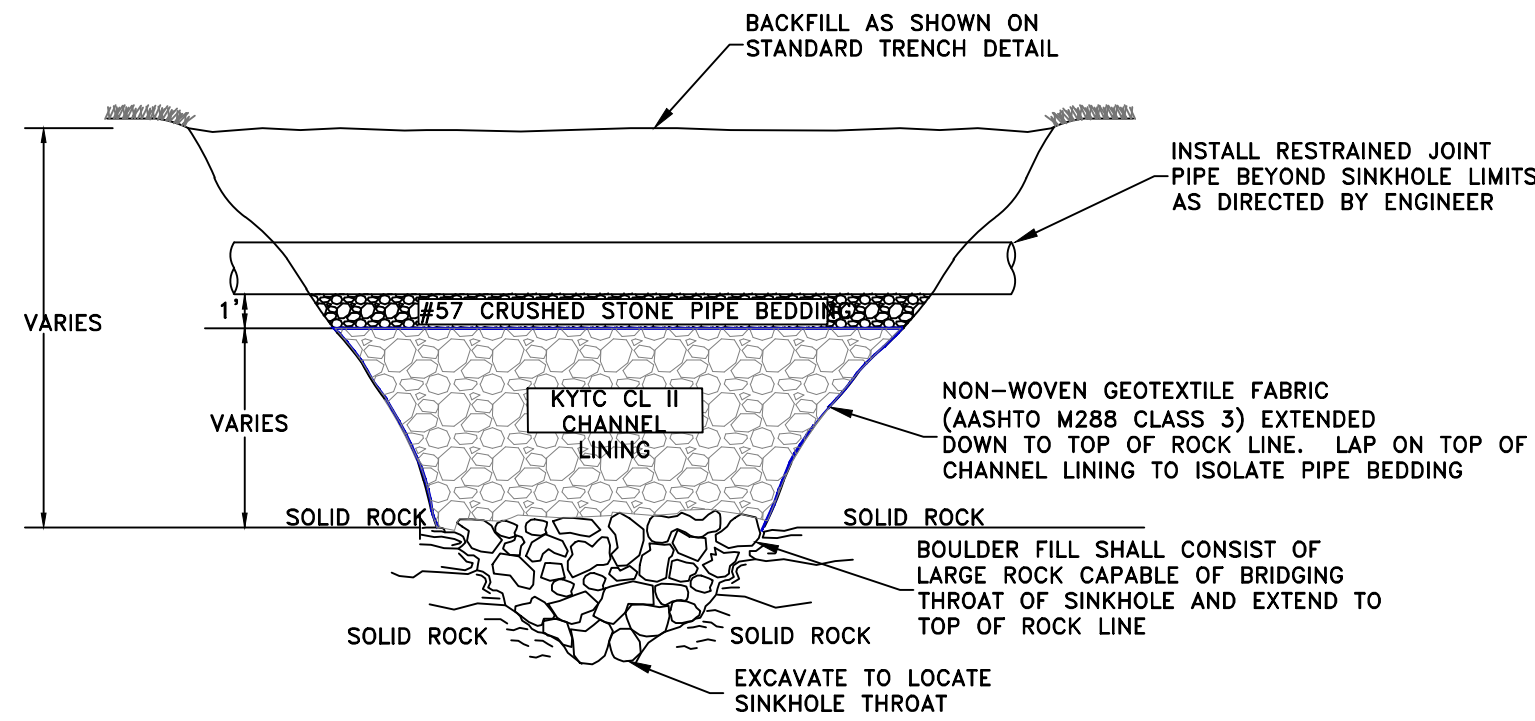
45° BENDS																
SIZE	2	4	6	8	10	12	14	16	18	20	24	30				
"D"	6	6	8	10	12	12	22	22	24	24	30	30				
"L"	14	18	18	22	24	24	51	51	60	60	72	90				
"W"	8	10	12	16	18	18	25	25	29	29	36	44				
"T"	10	12	16	18	18	18	38	38	40	40	44	52				

22 1/2" & 11 1/4" BENDS																
SIZE	2	4	6	8	10	12	14	16	18	20	24	30				
"D"	6	10	14	18	20	20	22	22	24	24	30	30				
"L"	20	24	28	28	28	28	36	36	42	42	54	66				
"W"	18	20	22	24	24	24	18	18	21	21	24	31				
"T"	12	14	16	18	18	18	38	38	40	40	44	52				

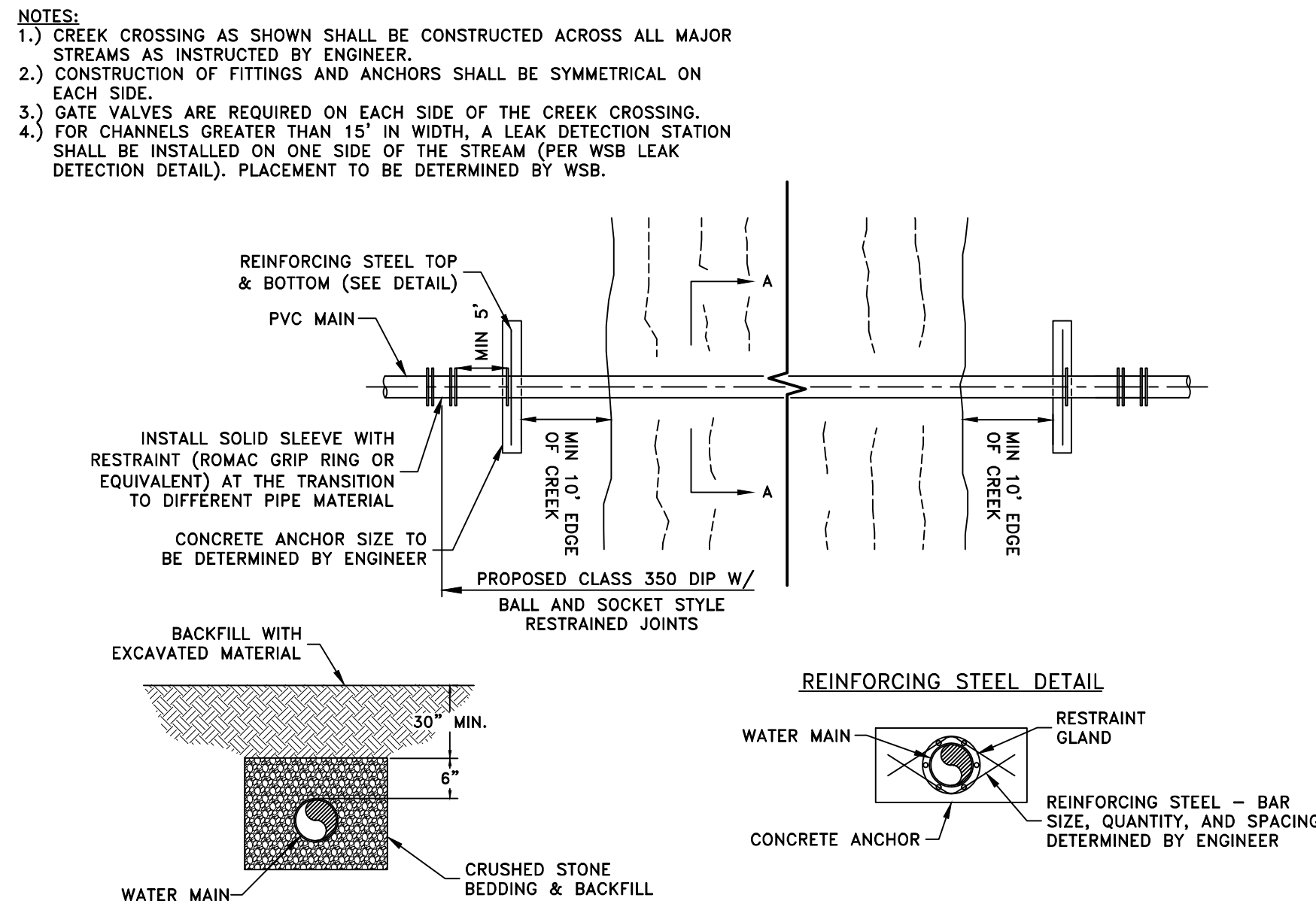
TEES, PLUGS & BLOWOFFS																
SIZE	2	4	6	8	10	12	14	16	18	20	24	30				
"D"	12	16	18	24	28	30	30	30	30	30	30	36				
"L"	12	16	18	24	28	30	60	60	72	72	84	102				
"W"	14	16	18	18	22	24	28	28	32	32	40	51				
"T"	10	10	12	12	12	12	38	38	40	40	44	52				

*ALL DIMENSIONS ARE IN INCHES

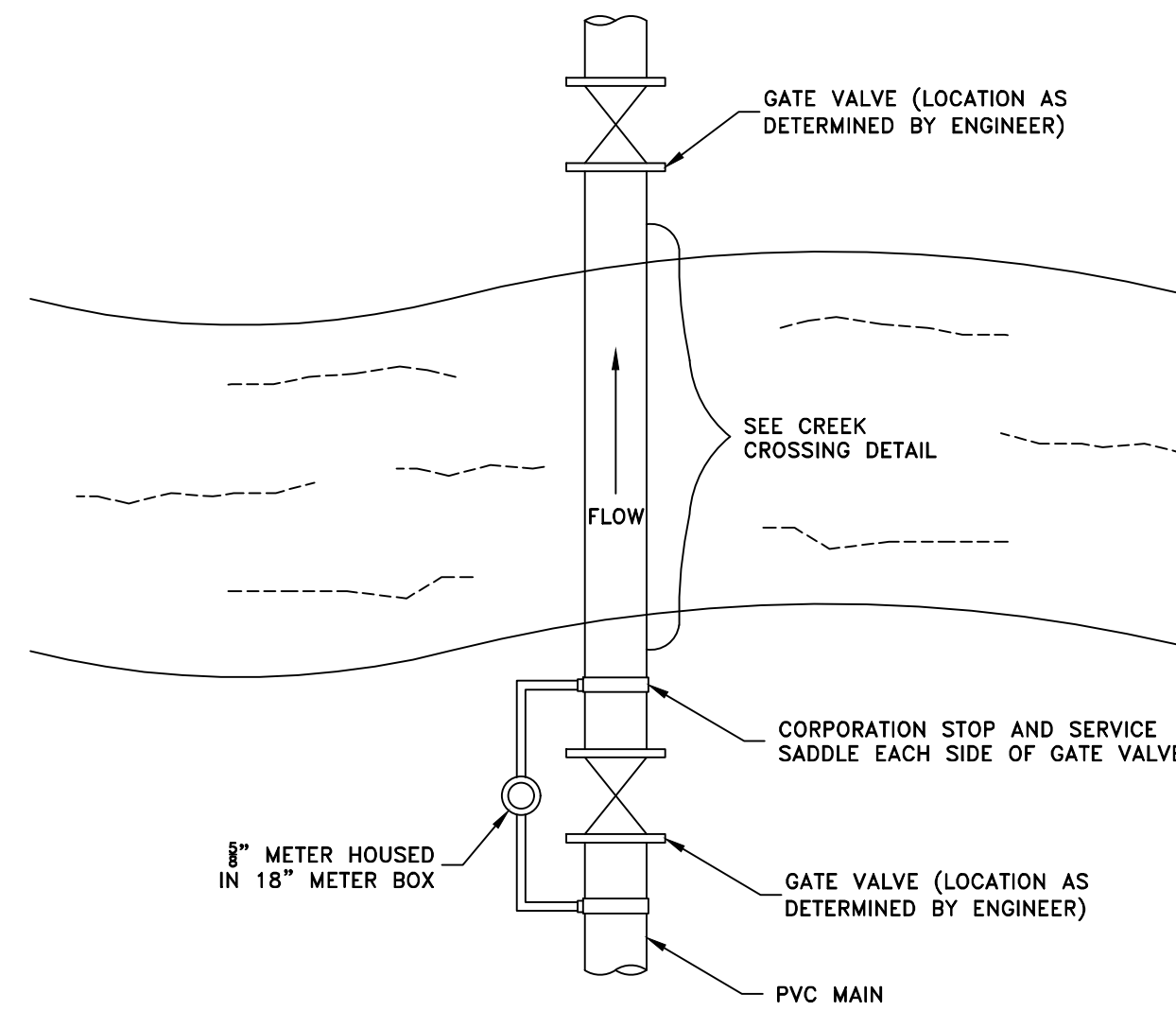
MINIMUM CONCRETE BLOCKING FOR PIPE & FITTINGS



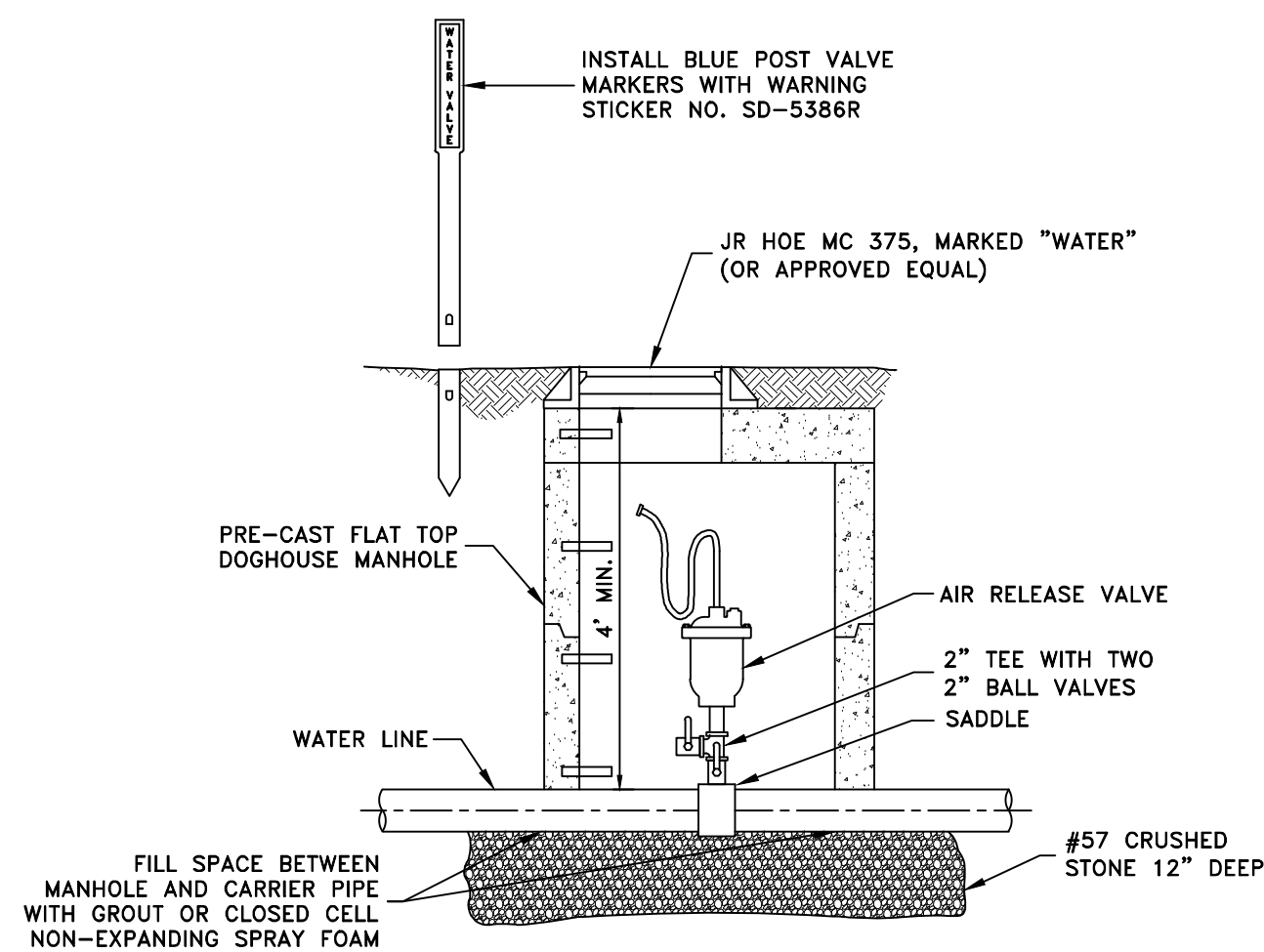
SINK HOLE REPAIR



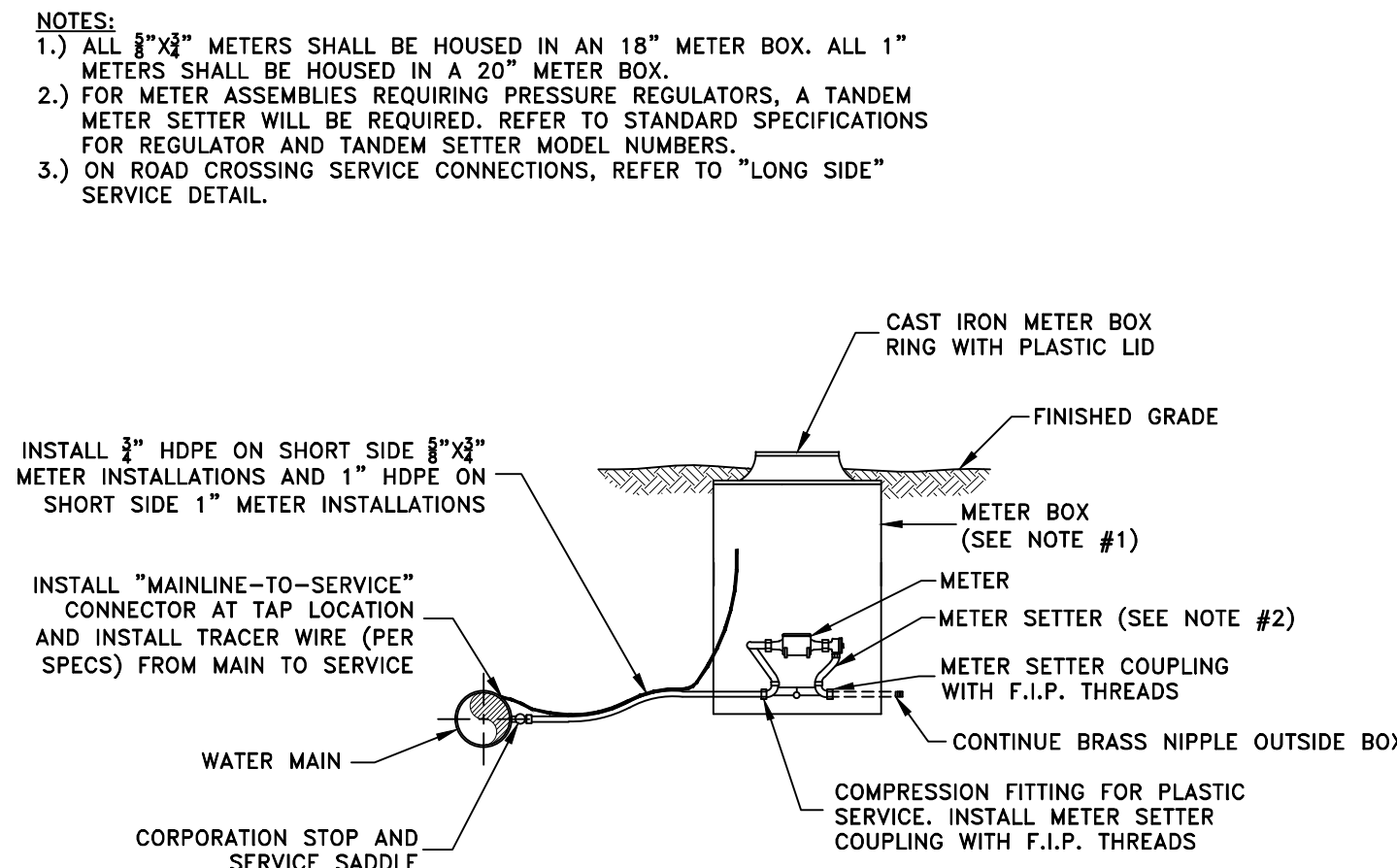
TYPICAL CREEK CROSSING



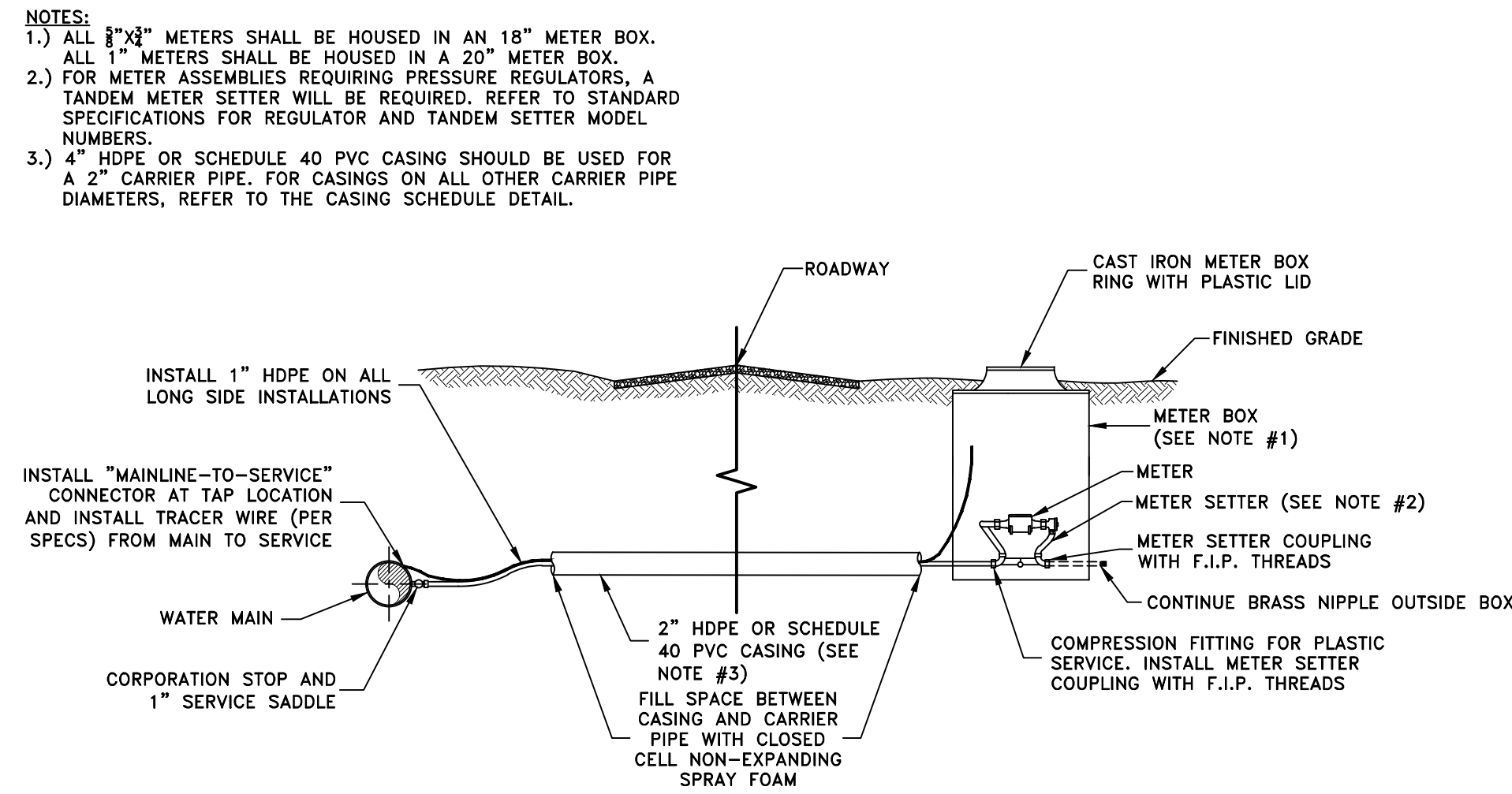
CREEK CROSSING LEAK DETECTION



STANDARD AIR RELEASE STATION - WATER

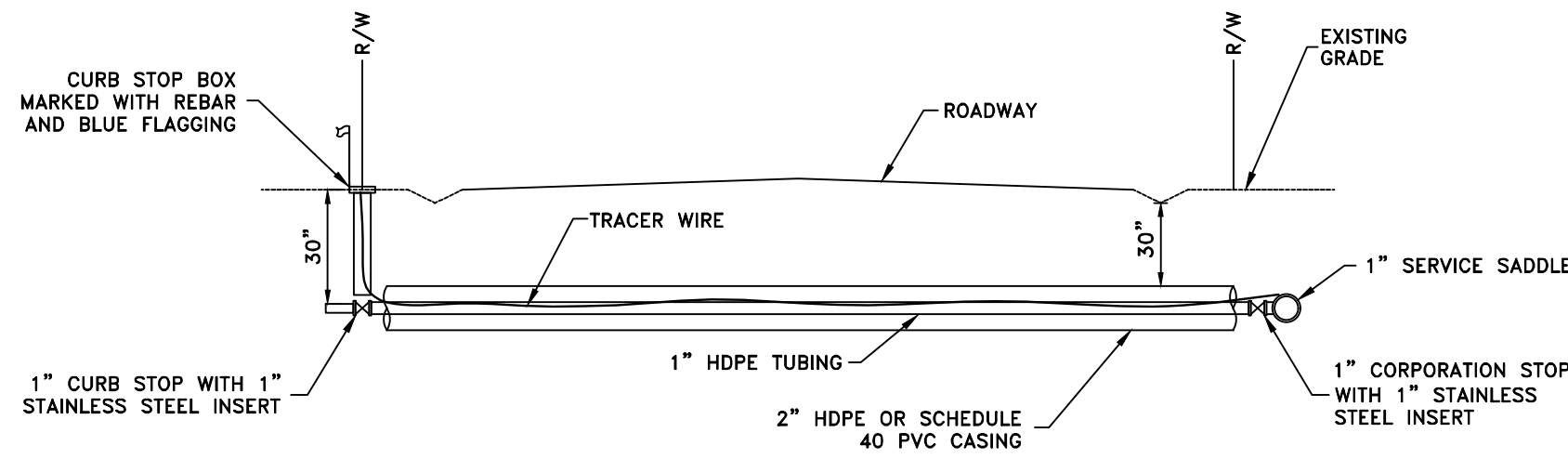


TYPICAL METER SETTING FOR "SHORT SIDE" 3/4" & 1" SERVICES



TYPICAL METER SETTING FOR "LONG SIDE" 3/4" & 1" SERVICES

- NOTES:
- 1.) NO TAPS SHALL BE MADE ON PRESSURIZED MAINS.
 - 2.) CURB STOP INSTALLED ON PROPERTY CORNERS AS DIRECTED BY WSB.
 - 3.) CASING SHALL EXTEND THE ENTIRE RIGHT OF WAY SHORTENED AS NEEDED FOR CURB STOP.
 - 4.) ALL CROSSINGS SHALL BE BACKFILLED WITH CRUSHED STONE.
 - 5.) IF MULTIPLE SERVICE CONNECTIONS ARE NEEDED, LARGER CASING MAY BE REQUIRED.
 - 6.) ALL FITTINGS SHALL BE INSTALLED WITH TEFLON TAPE OR JOINT COMPOUND.
 - 6.) ALL SHOWN MATERIAL SHALL BE SUPPLIED BY THE DEVELOPER.



SERVICE LINE CROSSING DETAIL FOR SUBDIVISION