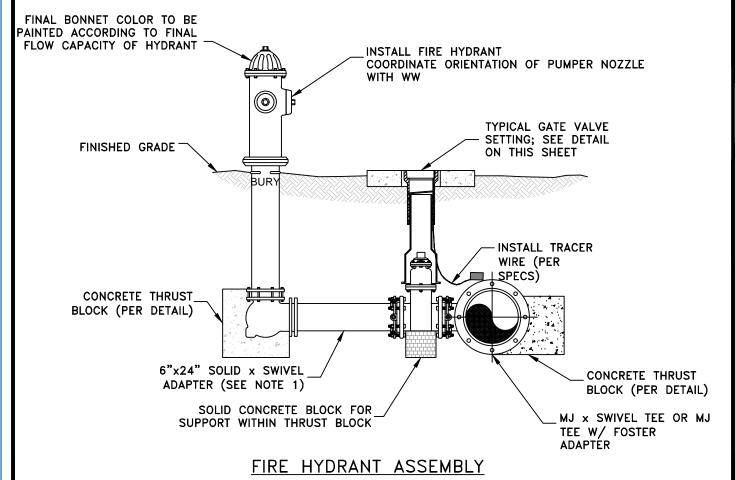
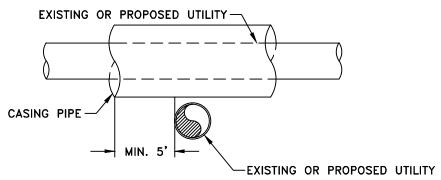
TYPICAL IN-LINE VALVE **INSTALLATION**

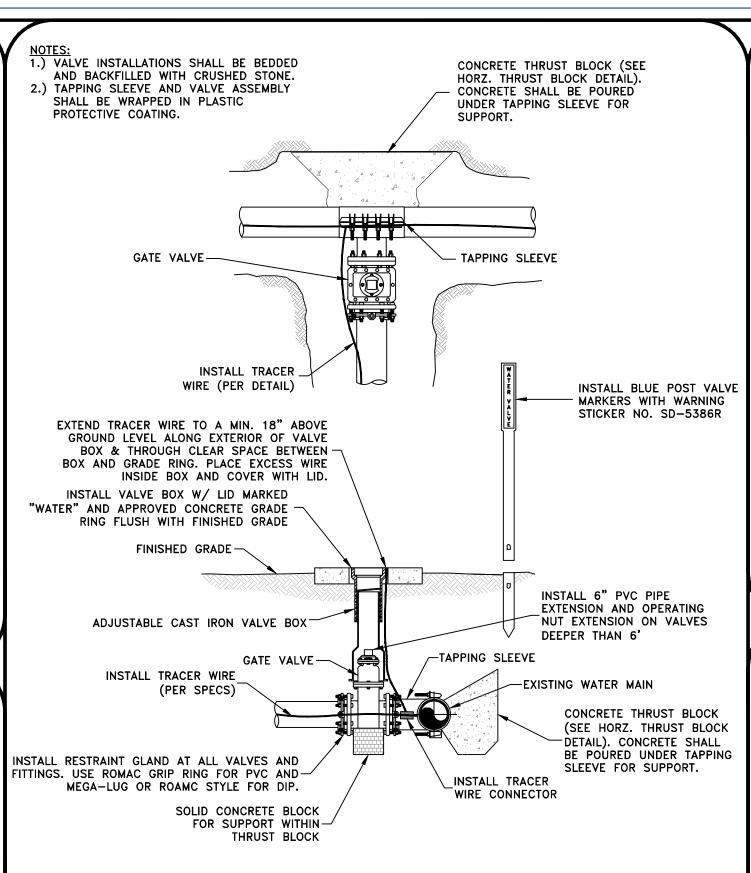
- NOTES:
 1.) HYDRANT ASSEMBLY SHALL BE BEDDED AND BACKFILLED WITH
- CRUSHED STONE. 2.) TEE OR TAPPING SLEEVE AND VALVE ASSEMBLY SHALL BE
- WRAPPED IN PLASTIC PROTECTIVE COATING. 3.) FOR INSTALLATIONS REQUIRING A LONGER HYDRANT LEAD, SOLID x SWIVEL ADAPTER WILL BE REPLACED WITH DIP (LENGTH AS REQUIRED) AND RESTRAINED WITH MEGALUG OR ROMAC GRIP



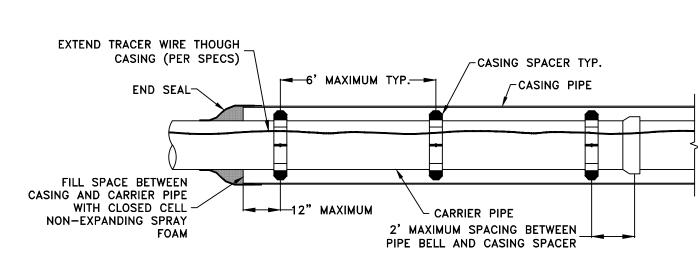
1.) IF A VERTICAL SEPARATION OF 18" CANNOT BE ACHIEVED BETWEEN ANY TWO UTILITY CROSSINGS DUE TO SITE CONSTRAINTS, STEEL OR PVC CASING SHALL BE UTILIZED DOWN TO A MINIMUM SEPARATION OF 6". THE LENGTH OF CASING SHALL BE ADEQUATE TO SPAN THE TRENCH OF THE UTILITY BEING CROSSED. SPACERS AND END CAPS ARE NOT NECESSARY, BUT THE ENDS OF THE CASING SHOULD BE SEALED WITH SPRAY FOAM.



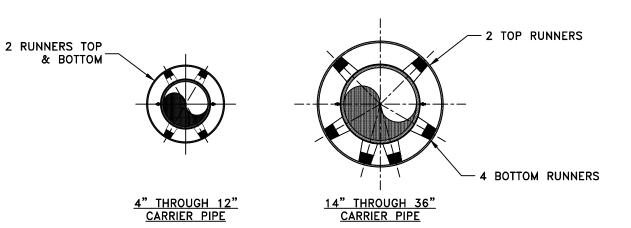
TYPICAL UTILITY CROSSING







CASING SIDE VIEW DETAIL



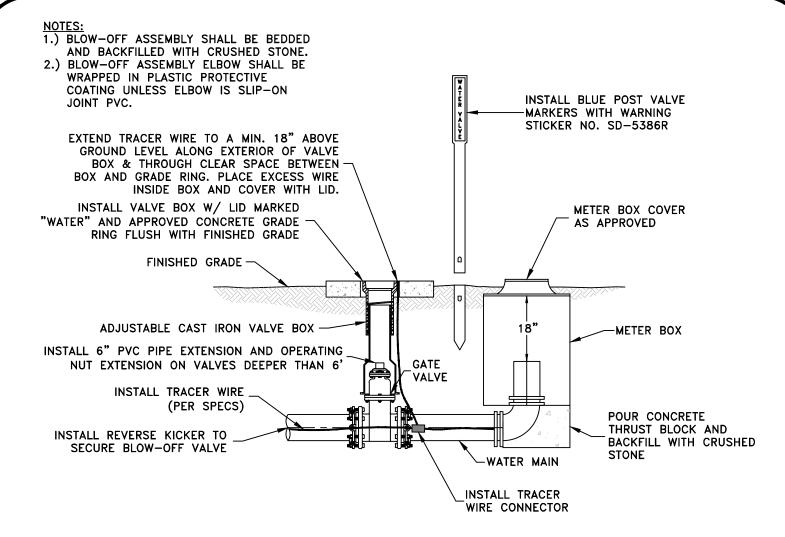
CASING END VIEW DETAIL

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		

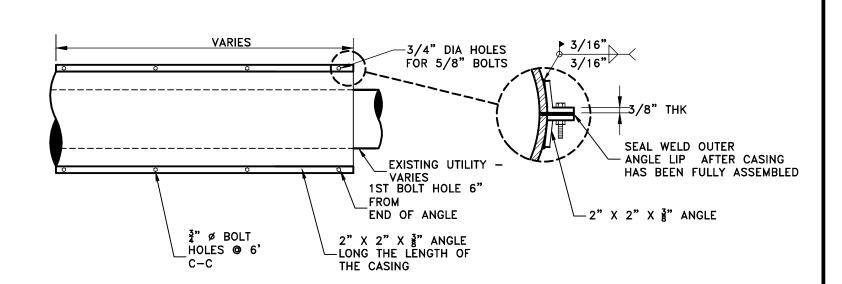
CASING SCHEDULE

- 1. CASING SIZES ARE BASED ON A TYPICAL TYTON JOINT WITH RESTRAINED JOINT GASKETS. IF A TRADITIONAL RESTRAINED JOINT SIMILAR TO TR FLEX OR EQUIVALLENT IS UTILIZED, COORDINATE WITH WSB TO ENSURE SUFFICIENT CASING SIZE IS PROVIDED.
- 2. 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.
- 3. ALL CASINGS SHALL EXTEND THROUGH RIGHT OF WAY.
- 4. 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.
- 5. FOR CASINGS 50 FEET IN LENGTH OR LONGER, ALL CARRIER PIPE SHALL BE DUCTILE IRON PIPE AND HAVE MECHANICAL RESTRAINED JOINTS.
- 6. STAINLESS STEEL SPACERS SHALL BE USED FOR ALL DUCTILE IRON PIPE OR ANY PIPE 12" IN DIAMETER AND LARGER.
- 7. 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



BLOW-OFF ASSEMBLY INSTALLATION

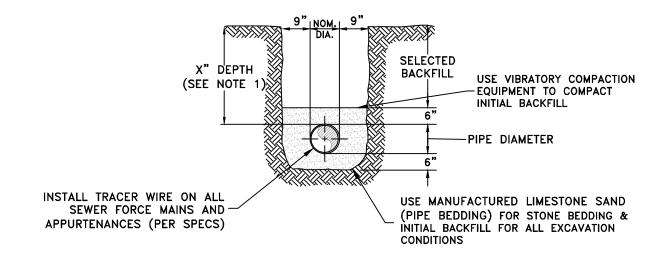


- 1. SPLIT CASINGS ARE INTENDED FOR OPEN CUT INSTALLATIONS ONLY AND
- PRIMARILY FOR PROTECTING EXISTING UTILITIES. 2. SPLIT CASING WILL NOT BE ACCEPTABLE FOR BORE AND JACK
- INSTALLATIONS. 3. CASING SPACERS SHALL BE PROVIDED AS SPECIFIED FOR TYPICAL CASING
- INSTALLATIONS. 4. SIZING AND SPACER CONFIGURATION PER TYPICAL CASING DETAIL.

TYPICAL SPLIT CASING DETAIL

NOTES:

1.) FOR PIPE DIAMETERS LESS THAN OR EQUAL TO 10", 30" OF COVER IS REQUIRED. FOR PIPE DIAMETERS GREATER THAN OR EQUAL TO 12", 48" OF COVER IS REQUIRED. NO PIPE SHALL HAVE MORE THAN 48" OF COVER AT FINISHED GRADE UNLESS APPROVED BY WSB.

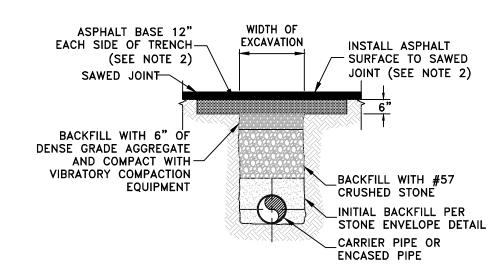


TYPICAL STONE ENVELOPE - WATER

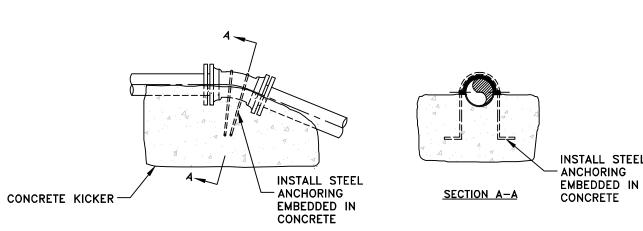
NOTES:

1.) FOR BOTH CONCRETE AND ASPHALT PAVEMENT REPAIR, REFERENCE BOWLING GREEN PUBLIC WORKS STREET REPAIR METHOD DETAIL OR COORDINATE WITH GOVERNING ROAD AGENCY. 2.) FOR CONCRETE PAVEMENT, REPLACE WITH A CONTINUOUS SLAB

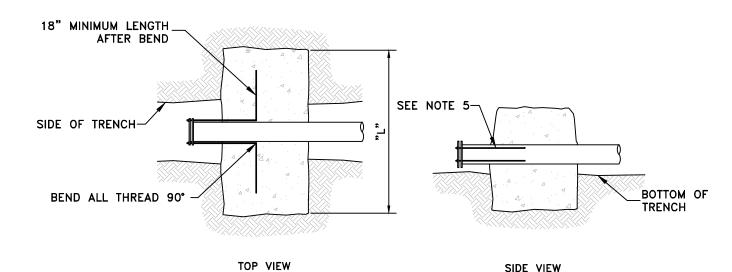
FROM SUB-BASE TO SURFACE



SURFACE RESTORATION (FOR CROSSING OF ALL STREETS & HIGHWAYS)

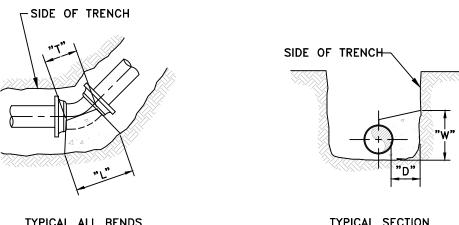


VERTICAL BEND PIPE ANCHOR DETAIL

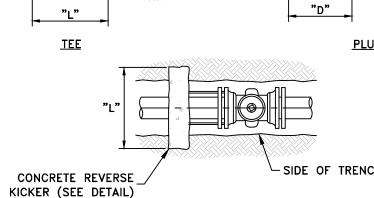


CONCRETE REVERSE KICKER (DEADMAN) DETAIL

SIDE VIEW



TYPICAL ALL BENDS TYPICAL SECTION - SIDE OF TRENCH - SIDE OF TRENCH



VALVES AT END OF LINE

1.) ALL FITTINGS SHALL INCLUDE RESTRAINT GLANDS: USE ROMAC RESTRAINT FOR PVC. USE ROMAC OR MEGALUG

- 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
- 5.) RODDING FOR A CONCRETE REVERSE KICKER SHALL BE AS FOLLOWS: 4" USE 2 RODS, 6"-10" USE 4 RODS &

REQUIRED PER WSB INSPECTOR.

12" PER ENGINEER. 6.) FITTINGS SHALL BE INSTALLED AS

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

90° BENDS

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

0 0 B E

STANDARD ERWORKS DE

SCALE: NOT TO SCALE DATE: 06-09-2025 DWG NO.: WD1 DESIGNED: WCWD BCP DRAWN: CHECKED: CRH **REVISIONS:**

DATE:

DRAWING:

0 0 9



DETAIL STANDARD ERWORKS DE

SCALE: NOT TO SCALE DATE: 06-09-2025 DWG NO.: WD2 DESIGNED: WCWD DRAWN: BCP

CHECKED: CRH **REVISIONS:**

DATE:

NO.:

DRAWING: