

SECTION A-A VIEW OF VALVE BOX

TOP VIEW

SECTION VIEW OF VALVE BOX COVER

NOTES:

1. VALVE BOX EXTENSION SHALL BE 6" DIA. SOIL PIPE.
2. EXTENSION TO BE ONE SOLID PIECE OF PIPE UNLESS BURIAL DEPTH IS GREATER THAN STANDARD LENGTH OF PIPE.
3. TO BE USED IN PAVED OR NON-PAVED AREAS.
4. BOX SHALL BE AN EAST JORDAN IRON WORKS 8555 SERIES OR EQUAL CAST IRON VALVE BOX.

DATE: 3/1/14

CITY OF REIDSVILLE		
WATER VALVE BOX AND EXTENSION	STD. NO.	REV.
	102	

CLASS A CONCRETE ARCH

CLASS B GRANULAR FOUNDATION

CLASS C GRANULAR FOUNDATION

CLASS D FLAT SUBGRADE

LEGEND

Bc = OUTSIDE DIAMETER
 H = BACKFILL COVER ABOVE TOP OF PIPE
 D = INSIDE DIAMETER
 d = DEPTH OF BEDDING MATERIAL BELOW PIPE

NOTE: USE 467M OR A.R.E.M.A. (AMERICAN RAILWAY ENGINEERING ASSOCIATION) #4 STONE FOR 21" AND LARGER PIPE.

DATE: 3/1/14

CITY OF REIDSVILLE		
STANDARD TRENCH BEDDINGS FOR CIRCULAR PIPE	STD. NO.	REV.
	207	

THRUST BLOCK - MINIMUM 3,000 PSI CONCRETE CLASS A, NON-AIR ENTRAINED

RESTRAINING GLANDS SHALL BE WRAPPED WITH POLYETHYLENE AND SECURED PRIOR TO POURING CONCRETE.

2 OPPOSING RESTRAINING GLANDS BOLTED TOGETHER WITH STAINLESS STEEL BOLTS. GRIPPING WEDGES SHALL BE TORQUED TO MANUFACTURERS SPECIFICATIONS.

4 NO. 5 DIAGONALS (LOCATED AT EACH FACE)

3" MIN. COVER OVER ALL REBAR

NOTES:

1. THRUST BLOCK SHALL BE ORIENTED APPROXIMATELY CENTER OF PIPE JOINT.
2. *OPTIONAL* A WELDED COLLAR (INSTALLED BY PIPE MANUFACTURER) MAY BE USED IN LIEU OF RESTRAINING GLANDS. ALL OTHER DESIGN REQUIREMENTS SHALL APPLY AS SHOWN.
3. FOR PIPES LARGER THAN 12" DIAMETER, THE DEADMAN THRUST RESTRAINT WITH BLOCKING MUST BE DESIGNED AND SEALED BY A N.C. PROFESSIONAL ENGINEER.
4. ANY PROPOSED MODIFICATIONS TO THIS STANDARD BASED ON THE FIELD CONDITIONS MUST BE PRE-APPROVED BY THE CITY OF REIDSVILLE FIELD INSPECTOR AND/OR THE ENGINEER OF RECORD.
5. QUANTITIES SHOWN BELOW ARE TO THE NEAREST QUARTER YARD AND ARE BASED ON MINIMUM MASS WEIGHT REQUIREMENTS OF THE TEST PRESSURES SHOWN.

MINIMUM CUBIC YARDS OF CONCRETE REQUIRED			
PIPE DIAMETER	150 PSI TEST PRES.	200 PSI TEST PRES.	250 PSI TEST PRES.
6"	1.00	1.50	1.75
8"	2.00	2.50	3.25
10"	3.00	4.00	5.00
12"	4.25	5.50	7.00

DATE: 3/1/14

CITY OF REIDSVILLE		
DEADMAN THRUST RESTRAINT WITH MASS WEIGHT BLOCKING FOR DUCTILE IRON PIPE	STD. NO.	REV.
	118	

FORCE RESISTED BY A MASS OF CONCRETE AT 150 PSI

DATE: 3/1/14

PIPE DIA.	6" DROP		12" DROP		18" DROP		24" DROP		30" DROP		36" DROP	
	FORCE	CONC.	FORCE	CONC.	FORCE	CONC.	FORCE	CONC.	FORCE	CONC.	FORCE	CONC.
6"	908#	1/4 CY	1496#	1/2 CY	1861#	1/2 CY	2481#	3/4 CY	3102#	3/4 CY	3722#	1.0 CY
8"	1569#	1/2 CY	2528#	3/4 CY	3175#	3/4 CY	4233#	1-1/4 CY	5291#	1-1/2 CY		
10"	2355#	3/4 CY	3718#	1.0 CY	4608#	1-1/4 CY	6143#	1-1/2 CY				
12"	2992#	3/4 CY	4522#	1-1/4 CY	5450#	1-1/2 CY	7267#	1-3/4 CY				
16"	4306#	1-1/4 CY	7235#	1-3/4 CY	9355#	2-1/2 CY	12473#	3-1/4 CY				

NOTE: THE TABLE ABOVE SHOWS WEIGHT AND VOLUME OF CONCRETE NECESSARY TO HOLD DOWN OFFSET. WEIGHT OF OFFSET, WEIGHT OF PIPE, AND TRENCH LOADS ARE IGNORED IN CALCULATIONS.

DATE: 3/1/14

CITY OF REIDSVILLE		
STANDARD VERTICAL OFFSET ANCHORS	STD. NO.	REV.
	111	

CLASS B CONCRETE, 2,500 PSI

SUFFICIENT BEARING AREA TO SUPPORT CONCRETE

ACTUAL AMOUNT TO BE DETERMINED BY FIELD ENGINEER, 2 CY±

DATE: 3/1/14

CUBIC YARDS OF CONCRETE TO ANCHOR VERTICAL BEND						
PIPE DIA.	11-1/4" BEND		22-1/2" BEND		45" BEND	
	FORCE	CONC.	FORCE	CONC.	FORCE	CONC.
6"	812 #	1/2 CY	1653 #	1/2 CY	3247 #	1.0 CY
8"	1444 #	1/2 CY	2939 #	3/4 CY	5773 #	1.5 CY
12"	3248 #	1.0 CY	6612 #	1-3/4 CY	12988 #	3.5 CY
16"	5775 #	1-1/2 CY	11756 #	3.0 CY	23090 #	6.0 CY

DATE: 3/1/14

CITY OF REIDSVILLE		
STANDARD VERTICAL BEND ANCHORS	STD. NO.	REV.
	110	

Prepared in the Office of:

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UTILITY CONSTRUCTION

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