

**SECTION IV**  
**WATER MAINS**

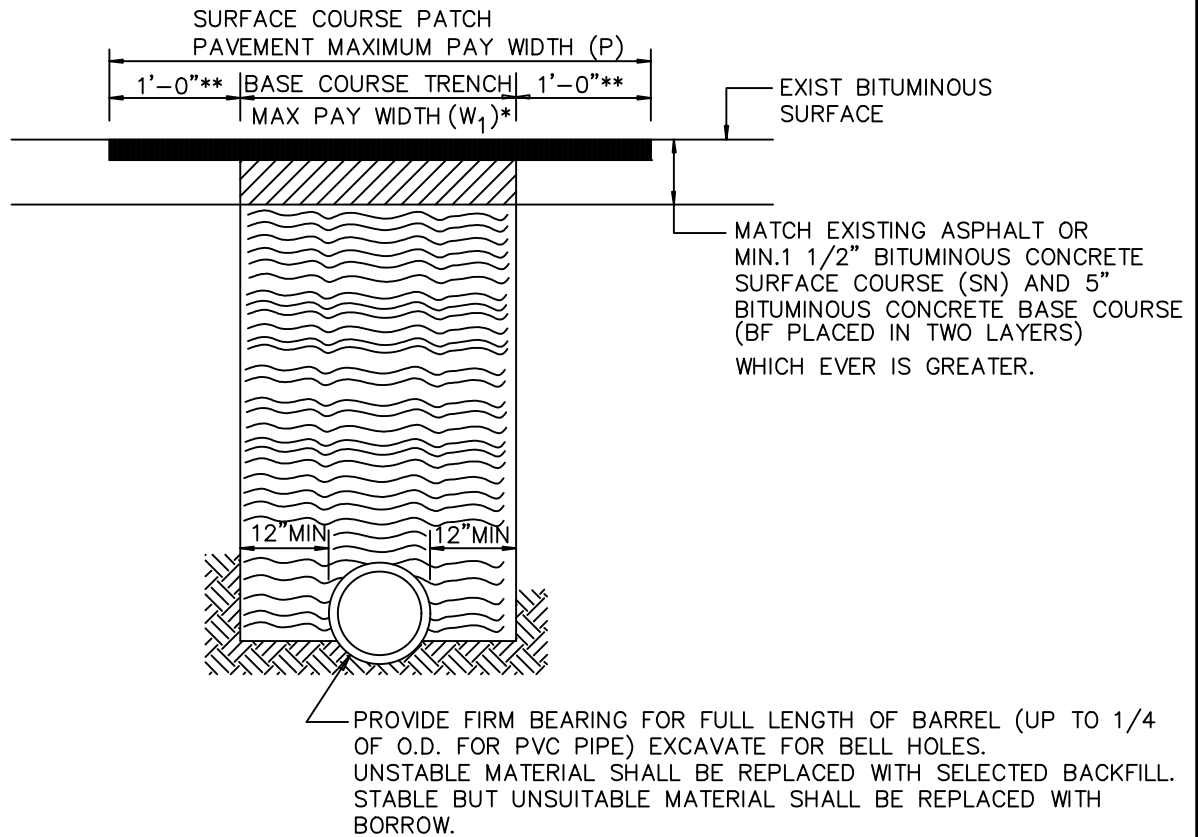
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### STANDARD WATER DETAILS

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DETAIL OF CUTTING & REPLACING PAVEMENT IN ROADWAYS OTHER THAN STATE ROADS  
(BITUMINOUS CONCRETE FOR SURFACE COURSE AND BASE COURSE IN LBS. PER LINEAR FOOT  
PER INCH ARE FOR ESTIMATING ONLY)

PIPE DIAMETER	MAXIMUM TRENCH PAY WIDTH	PATCH PAVEMENT PAY QUANTITIES			
		BIT. CONC SURFACE COURSE		BIT. CONC. BASE COURSE	
		SQ. YDS./L.F.	LBS./L.F./INCH-DEPTH *	SQ. YDS./L.F.	LBS./L.F./INCH-DEPTH *
UNDER 21"	60"	0.78	88 LBS.	0.56	63 LBS.
21" - 24"	66"	0.83	94 LBS.	0.61	69 LBS.
27" - 30"	72"	0.89	100 LBS.	0.67	75 LBS.
33" - 36"	78"	0.94	106 LBS.	0.72	81 LBS.

\* BASED ON  
150 LBS/FT

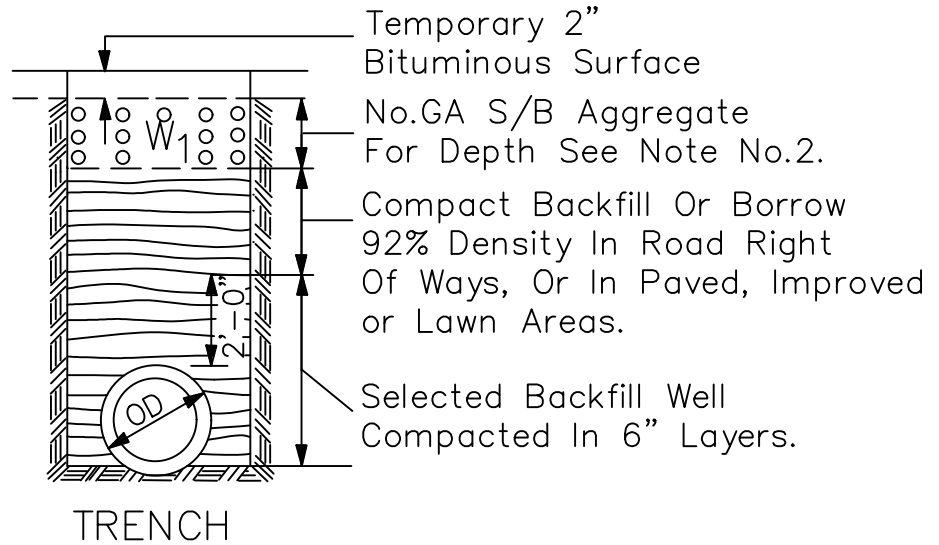
NOTES:

1. TEMPORARY SURFACE (EITHER GRADED AGGREGATE OR BITUMINOUS CONCRETE TO BE INSTALLED AND MAINTAINED AT THE CONTRACTORS EXPENSE.
2. CONTRACTOR RESPONSIBLE FOR TRENCH SUPPORT.
3. AGGREGATE SUBBASE SHALL BE CLEANED AND THOROUGHLY COMPACTED PRIOR TO PLACING PERMANENT PAVEMENT MATERIAL.
4. TRENCH SUPPORT MATERIAL TO BE REMOVED IN SUCH A MANNER THAT BACKFILL MATERIAL FOR FIRST TWO FEET ABOVE PIPE WILL BE COMPACTED AGAINST UNDISTURBED EARTH.
5. NOTED PAY WIDTHS ARE TO BE USED FOR MEASUREMENT REGARDLESS OF METHOD USED TO SUPPORT TRENCH.
6. CONTRACTOR RESPONSIBLE FOR MAINTAINING TEMPORARY TRENCH SURFACE PRIOR TO PLACING PERMANENT PAVING.
- \* 7. FOR COMPACTION AND AGGREGATE DETAILS AND TRENCH PAY WIDTHS QUANTITIES SEE STD. PLATES W/1B.
- \*\* 8. AREA TO BE MILLED TO A DEPTH OF 1 1/2" TO ACCOMMODATE PLACEMENT OF THE BITUMINOUS CONCRETE SURFACE COURSE.
9. SURFACE COURSE PATCH PAVING SHALL EXTEND A MINIMUM DISTANCE OF 1'-0" BEYOND ANY DISTURBED SURFACE PAVEMENT INDEPENDENT OF THE SURFACE COURSE PATCH PAVEMENT MAXIMUM PAY WIDTH.
10. REQUIRED THAT CONTROLLED LOW STRENGTH MATERIAL (CLSM), FLOWABLE FILL BE USED IN TRENCHES IN ROADS CLASSIFIED AS ARTERIAL OR ANY ROAD WHOSE PAVEMENT IS CUT WITHIN FIVE (5) YEARS OF THE ROAD BEING CONSTRUCTED OR RESURFACED SEE PLATE W1/B.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD WATER DETAILS REPAVING TRENCHES AND PAYMENT QUANTITIES	REVISED 04/2024	W 1
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	

**NOTES:**

1. TEMPORARY SURFACE TO BE MAINTAINED AT CONTRACTORS EXPENSE.
2. AGGREGATE QUANTITIES ARE BASED ON: DEPTH-6"FOR DIRT ROADS, SHOULDERS, DRIVEWAYS, SIDEWALKS,ETC. 12" FOR PAVED ROADS AND SHOULDERS. WEIGHT-130 LBS. PER CUBIC FOOT.
3. SEE DETAIL W/1 FOR METHOD OF CUTTING & REPAIRING OPENINGS IN COUNTY ROADWAYS.



TRENCHES IN ROADS OTHER THAN STATE ROADS

CIRCULAR			
PIPE DIAMETER	MINIMUM TRENCH PAY WIDTH (W1)	GA S/B	
		SQ.YDS./L.F	LBS./L.F./INCH-DEPTH*
UNDER 21"	60"	0.56	54 LBS.
21"- 24"	66"	0.61	60 LBS.
27"- 30"	72"	0.67	65 LBS.
33"- 36"	78"	0.72	70 LBS.

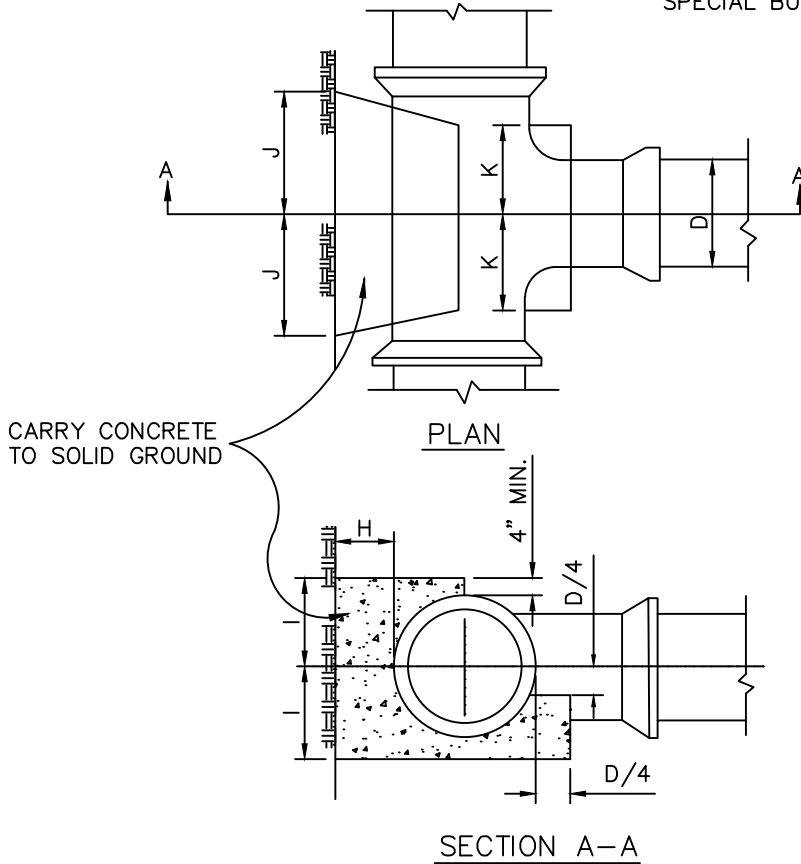
\* BASED ON 130 LBS./FT.<sup>3</sup>

GA S/B =Graded Aggregate for Subbase in LBS. per Linear Foot per inch-depth,For Estimating only.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD PAVING DETAILS TEMPORARY PAVEMENT, TRENCH DETAILS & PIPE BEDDING PAYMENT QUANTITIES	REVISED	$\frac{W}{1A}$
	_____		04/2024	
	CHIEF ENGINEER			
	_____			
	DESIGN ENGINEER			
	DATE:			

NOTES:

1. ALL CONCRETE SHALL BE MIX NO. 1
2. BUTTRESS DIMENSIONS SHOWN ARE MINIMUM. DIMENSIONS ARE BASED UPON SOIL BEARING PRESSURE OF 3000 P.S.F. AND STATIC WATER PRESSURE OF 150 P.S.I. WHERE PRESSURE EXCEEDS 150 P.S.I. OR WHERE SOIL BEARING PRESSURE IS LESS THAN 3000 P.S.F. SPECIAL BUTTRESS DESIGN IS REQUIRED.



BUTTRESS FOR TEES									
SIZE OF BRANCH									
D	6"	8"	10"	12"	16"	20"	24"	30"	36"
H	8"	9"	10"	1'-0"	1'-2"	1'-4"	1'-6"	1'-9"	2'-0"
I	8"	10"	1'-0"	1'-3"	1'-8"	2'-1"	2'-6"	3'-1"	3'-9"
J	7"	9"	1'-0"	1'-2"	1'-6"	1'-11"	2'-4"	2'-10"	3'-5"
K	6"	8"	8"	8"	10"	1'-2"	1'-4"	1'-6"	1'-10"
K*	5"	5"	5"	5"					

K\* FOR COMPACT FITTINGS

BUTTRESS FOR TEES

ANNE ARUNDEL  
COUNTY  
DEPARTMENT OF  
PUBLIC WORKS

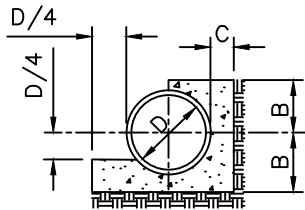
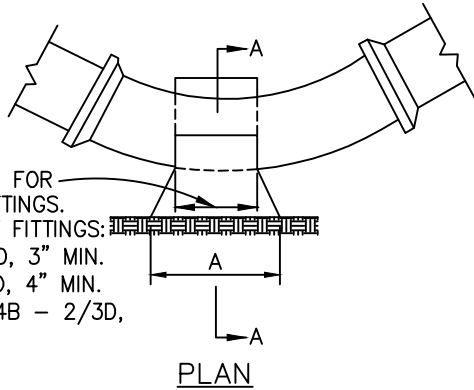
APPROVED  
\_\_\_\_\_  
CHIEF ENGINEER  
\_\_\_\_\_  
DESIGN ENGINEER  
DATE:

STANDARD WATER DETAILS  
BUTTRESS FOR TEES

REVISED  
04/2024

W  
2

2/3D, 8" MIN. FOR  
STANDARD FITTINGS.  
FOR COMPACT FITTINGS:  
1/32B - 1/3D, 3" MIN.  
1/16B - 1/2D, 4" MIN.  
1/8B AND 1/4B - 2/3D,  
6" MIN.



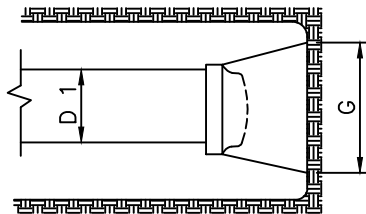
SECTION A-A

BUTTRESS FOR HORIZONTAL BENDS										
BEND		6"	8"	10"	12"	16"	20"	24"	30"	36"
1/64	A						1'-8"	2'-0"	2'-6"	3'-0"
	B						10"	1'-0"	1'-3"	1'-6"
	C						10"	1'-0"	1'-1"	1'-2"
1/32	A	6"	6"	10"	1'-0"	1'-4"	1'-8"	2'-0"	2'-6"	3'-0"
	B	7"	8"	9"	10"	1'-0"	1'-2"	1'-4"	1'-7"	1'-11"
	C	7"	7"	8"	8"	9"	10"	1'-0"	1'-1"	1'-2"
1/16	A	9"	1'-0"	1'-6"	1'-9"	2'-3"	3'-0"	3'-6"	4'-2"	5'-4"
	B	7"	8"	9"	10"	1'-0"	1'-2"	1'-4"	1'-7"	2'-0"
	C	8"	9"	10"	11"	1'-2"	1'-4"	1'-6"	1'-9"	2'-0"
1/8	A	1'-3"	1'-8"	2'-1"	2'-6"	3'-4"	4'-2"	5'-0"	6'-3"	7'-6"
	B	7"	8"	9"	11"	1'-3"	1'-6"	1'-8"	2'-0"	2'-6"
	C	8"	9"	10"	11"	1'-2"	1'-4"	1'-9"	2'-3"	2'-8"
1/4	A	2'-0"	2'-6"	3'-0"	3'-6"	5'-0"	SPECIAL DESIGN			
	B	0'-6"	0'-9"	1'-0"	1'-3"	1'-6"				
	C	1'-10"	1'-9"	1'-8"	1'-7"	1'-5"				

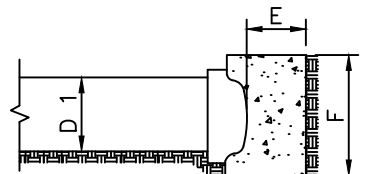
BUTTRESS FOR HORIZONTAL BENDS

NOTES:

- ALL CONCRETE SHALL BE MIX NO. 1.
- BUTTRESS DIMENSIONS SHOWN ARE MINIMUM. DIMENSIONS ARE BASED UPON SOIL BEARING PRESSURE OF 3000 P.S.F. AND STATIC WATER PRESSURE OF 150 P.S.I. WHERE PRESSURE EXCEEDS 150 P.S.I. OR WHERE SOIL BEARING PRESSURE IS LESS THAN 3000 P.S.I. SPECIAL BUTTRESS DESIGN IS REQUIRED.



PLAN



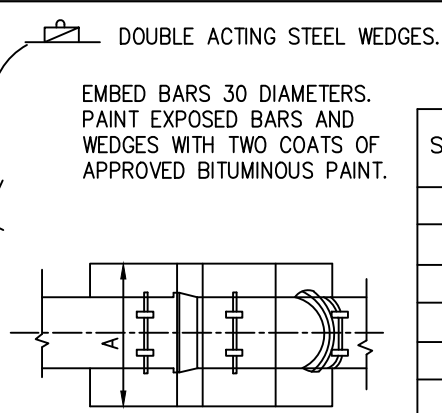
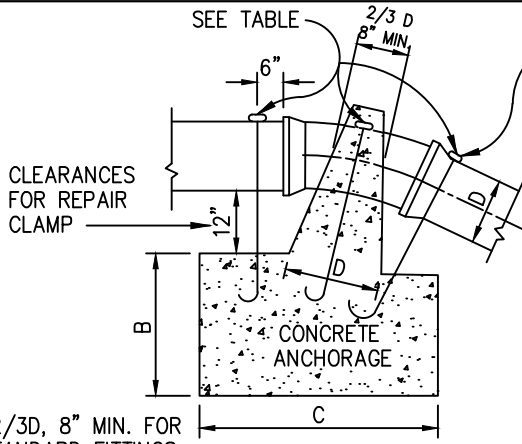
SECTION

CARRY CONCRETE TO SOLID GROUND

BUTTRESS FOR CAPS									
D 1	6"	8"	10"	12"	16"	20"	24"	30"	36"
E	6"	8"	8"	10"	1'-0"	1'-4"	1'-8"	2'-0"	2'-0"
F	1'-0"	1'-4"	1'-6"	2'-0"	2'-8"	3'-3"	4'-0"	4'-9"	5'-9"
G	1'-5"	1'-11"	2'-5"	2'-10"	3'-9"	4'-9"	5'-8"	7'-6"	8'-10"

BUTTRESS FOR CAPS AND PLUGS

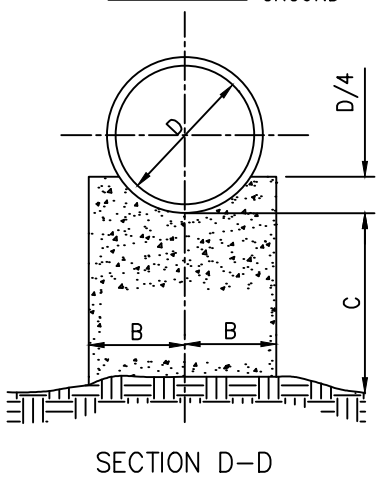
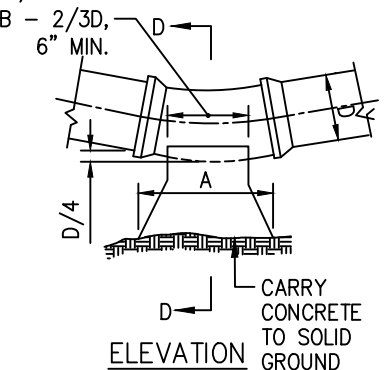
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD WATER DETAILS BUTTRESS FOR CAPS AND HORIZONTAL BENDS	REVISED	W 3
	_____		04/2024	
	CHIEF ENGINEER			
	DESIGN ENGINEER			
	DATE:			



SIZE	NUMBER AND SIZE REINFORCING BARS			
	1/64	1/32	1/16	1/8
6"		3-#6	3-#6	3-#6
8"		3-#6	3-#6	3-#6
10"		3-#6	3-#6	3-#6
12"		3-#6	3-#6	3-#6
16"		3-#6	3-#6	3-#6
20"	3-#6	3-#6	3-#6	4-#6
24"	3-#6	3-#6	3-#6	5-#6
30"	3-#6	3-#6	5-#6	5-#7
36"	3-#6	4-#6	5-#7	6-#7

2/3D, 8" MIN. FOR STANDARD FITTINGS.  
 FOR COMPACT FITTINGS:  
 1/32B - 1/3D, 3" MIN.  
 1/16B - 1/2D, 4" MIN.  
 1/8B AND 1/4B - 2/3D, 6" MIN.

ELEVATION PLAN  
 ANCHORAGE FOR VERTICAL BENDS



BEND		SIZE								
		6"	8"	10"	12"	16"	20"	24"	30"	36"
1/64	A						1'-8"	2'-0"	2'-6"	3'-0"
	B						10"	1'-0"	2'-3"	1'-6"
	C						10"	1'-0"	1'-1"	1'-2"
1/32	A	6"	8"	10"	1'-0"	1'-4"	1'-8"	2'-0"	2'-6"	3'-0"
	B	7"	8"	9"	10"	1'-0"	1'-2"	1'-4"	1'-7"	1'-10"
	C	7"	7"	8"	8"	9"	10"	1'-0"	1'-1"	1'-2"
1/16	A	9"	1'-0"	1'-6"	1'-9"	2'-3"	3'-0"	3'-6"	4'-2"	5'-4"
	B	7"	7"	8"	10"	1'-0"	1'-2"	1'-4"	1'-7"	2'-0"
	C	7"	7"	8"	8"	9"	10"	1'-0"	1'-7"	1'-2"
1/8	A	1'-3"	1'-8"	2'-1"	2'-6"	2'-6"	4'-2"	5'-0"	6'-3"	7'-6"
	B	7"	8"	9"	11"	1'-3"	1'-6"	1'-9"	2'-3"	2'-6"
	C	7"	8"	10"	11"	1'-3"	1'-6"	1'-9"	2'-3"	2'-8"

BEND		SIZE								
		6"	8"	10"	12"	16"	20"	24"	30"	36"
1/64	A						2'-2"	2'-6"	3'-6"	3'-6"
	B						2'-0"	2'-6"	2'-6"	3'-0"
	C						4'-6"	4'-6"	5'-0"	5'-0"
1/32	A	1'-6"	1'-6"	1'-5"	3'-0"	3'-6"	4'-0"	4'-3"	4'-6"	5'-0"
	B	1'-3"	1'-9"	1'-3"	2'-0"	2'-0"	2'-6"	2'-6"	2'-8"	4'-0"
	C	2'-0"	2'-6"	2'-9"	3'-0"	4'-0"	5'-0"	5'-9"	6'-6"	7'-0"
1/16	A	2'-0"	3'-4"	3'-8"	4'-0"	4'-6"	4'-8"	5'-0"	5'-4"	6'-0"
	B	1'-9"	2'-3"	2'-6"	2'-6"	2'-6"	2'-8"	3'-8"	4'-6"	5'-6"
	C	2'-6"	2'-8"	3'-10"	4'-0"	5'-6"	7'-6"	8'-6"	8'-6"	10'-0"
1/8	A	2'-6"	3'-0"	4'-0"	4'-6"	5'-2"	5'-6"	6'-0"	6'-6"	7'-6"
	B	2'-6"	2'-9"	3'-0"	3'-6"	4'-0"	4'-6"	5'-6"	6'-0"	6'-6"
	C	3'-0"	4'-0"	4'-6"	4'-9"	6'-6"	8'-0"	9'-6"	11'-0"	11'-6"

BUTRESSES FOR VERTICAL BENDS

NOTES:

- ALL CONCRETE SHALL BE MIX NO. 1
- BUTRESS DIMENSIONS SHOWN ARE MINIMUM. DIMENSION ARE BASED UPON SOIL BEARING PRESSURE OF 3000 P.S.F. AND STATIC WATER PRESSURE OF 150 P.S.I. WHERE PRESSURE EXCEEDS 150 P.S.I. OR WHERE SOIL BEARING PRESSURE IS LESS THAN 3000 P.S.F. SPECIAL BUTRESS DESIGN IS REQUIRED.

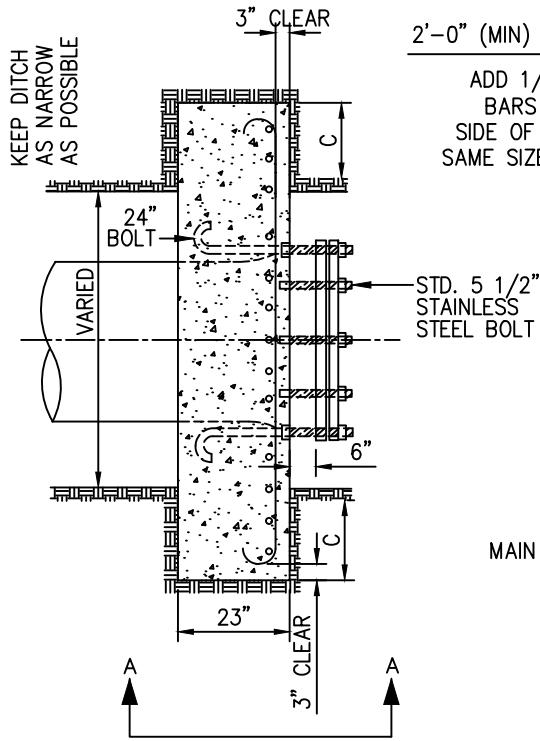
ANNE ARUNDEL COUNTY  
 DEPARTMENT OF PUBLIC WORKS

APPROVED  
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 CHIEF ENGINEER  
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 DESIGN ENGINEER  
 DATE: \_\_\_\_\_

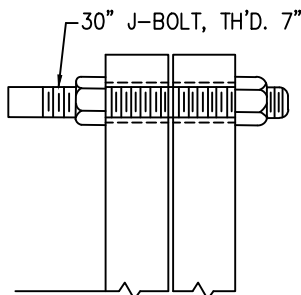
STANDARD WATER DETAILS  
 BUTRESS AND ANCHORAGES FOR  
 FOR VERTICAL BENDS

REVISED  
 04/2024  
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PLAN



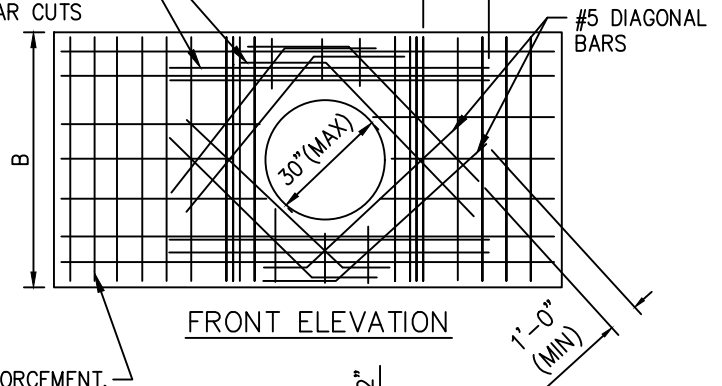
DETAIL OF LONG BOLT THROUGH BELL AND PLUG

DIMENSION SCHEDULE

PLUG SIZE	A	B	C	SPECIAL BOLTS SIZE AND NUMBER REQUIRED	
12"	1'-0"	3'-1"	1'-0"	3/4"	4
14"	1'-0"	3'-3"	1'-4"	3/4"	5
16"	1'-0"	3'-6"	1'-6"	3/4"	6
18"	1'-0"	3'-8"	1'-9"	3/4"	6
20"	1'-0"	3'-10"	2'-2"	3/4"	7
24"	1'-2"	4'-6"	2'-8"	3/4"	8
30"	1'-2"	5'-0"	3'-0"	1"	10

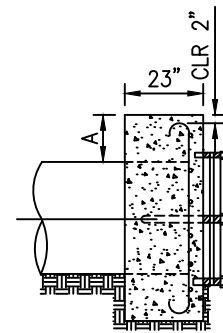
2'-0" (MIN) OR LENGTH REQUIRED TO LAP WITH BAR CUT

ADD 1/2 NUMBER OF BARS CUT TO EACH SIDE OF OPENING. USE SAME SIZE REINFORCING AS BAR CUTS



FRONT ELEVATION

MAIN REINFORCEMENT, SEE NOTE 8



SECTION A

NOTES:

1. ALL CONCRETE SHALL BE MIX NO. 3.
2. ALL BEARING SURFACES TO BE CARRIED TO UNDISTURBED EARTH.
3. ALL BACKFILL IN FRONT OF THE ANCHOR SHALL BE CAREFULLY COMPACTED.
4. ANCHOR DIMENSIONS SHOWN ARE MINIMUM DIMENSIONS ARE BASED UPON SOIL BEARING PRESSURE OF 3000 P.S.F. AND WATER PRESSURE OF 150 P.S.I. WHERE PRESSURE EXCEEDS 150 P.S.I. OR WHERE SOIL BEARING PRESSURE IS LESS THAN 3000 P.S.F. SPECIAL ANCHOR DESIGN IS REQUIRED.
5. SPECIAL BOLTS ARE 30" INCHES LONG, THREADED 7" WITH 2" HOOK AND EQUIPPED WITH 2 STANDARD NUTS.
6. ALL HARDWARE SHALL BE 316 SS.
7. REINFORCEMENT BARS SHALL BE NEW BILLET STEEL CONFORMING TO ASTM A615, GRADE 60, DEFORMED.
8. ENGINEER TO DETERMINE APPROPRIATE MAIN REINFORCING SIZE AND SPACING BASED ON THRUST FORCES.
9. CARE SHALL BE TAKEN TO ENSURE THE 316 S.S. HARDWARE AND DUCTILE IRON PIPE ARE NOT IN CONTACT WITH THE CARBON STEEL REBAR.
10. COAT S.S. HARDWARE IN CONTACT WITH CONCRETE WITH A BITUMINOUS COATING.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS

APPROVED  
 \_\_\_\_\_  
 CHIEF ENGINEER  
 \_\_\_\_\_  
 DESIGN ENGINEER  
 DATE:

STANDARD WATER DETAILS  
 ANCHOR FOR 12"  
 AND LARGER PLUGS

REVISED  
 04/2024

W  
 5

PIPE SIZE	MAXIMUM DESIGN DEFLECTION (1)	OFFSET (INCHES)		MINIMUM RADIUS (FEET)	
		12	18	12	18
4	4.3°	10.7	16.1	161.7	242.6
6	4.3°	10.7	16.1	161.7	242.6
8	4.3°	10.7	16.1	161.7	242.6
10	4.3°	10.7	16.1	161.7	242.6
12	4.3°	10.7	16.1	161.7	242.6
16	4.3°	10.7	16.1	161.7	242.6
18	4.3°	10.7	16.1	161.7	242.6
20	4.3°	10.7	16.1	161.7	242.6
24	4.3°	10.7	16.1	161.7	242.6

PUSH-ON JOINTS

PIPE SIZE	MAXIMUM DESIGN DEFLECTION (1)	OFFSET (INCHES)		MINIMUM RADIUS (FEET)	
		12	18	12	18
4	4.3°	10.7	16.1	161.7	242.6
6	4.3°	10.7	16.1	161.7	242.6
8	4.3°	10.7	16.1	161.7	242.6
10	4.3°	10.7	16.1	161.7	242.6
12	4.3°	10.7	16.1	161.7	242.6
16	2.6°	6.4	9.6	269.6	404.4
18	2.6°	6.4	9.6	269.6	404.4
20	2.1°	5.3	8.0	323.5	485.3
24	2.1°	5.3	8.0	323.5	485.3

PUSH-ON JOINTS WITH WEDGE-ACTION RESTRAINING GASKETS (2)

PIPE SIZE	MAXIMUM DESIGN DEFLECTION (1)	OFFSET (INCHES)		MINIMUM RADIUS (FEET)	
		12	18	12	18
4	7.1°	17.8	26.7	97.3	146.0
6	6.0°	15.3	22.9	113.6	170.3
8	4.5°	11.5	17.2	151.1	226.7
10	4.5°	11.5	17.2	151.1	226.7
12	4.5°	11.5	17.2	151.1	226.7
16	3.0°	7.7	11.5	-	-
18	2.6°	6.4	9.6	-	-
20	2.6°	6.4	9.6	-	-
24	2.6°	5.1	7.6	-	-

MECHANICAL JOINTS (3)

- NOTES:
- ALLOWABLE JOINT DEFLECTION FOR DESIGN SHALL BE 85% OF MANUFACTURER'S RECOMMENDED MAXIMUM DEFLECTION.
  - FAST-GRIP B AMERICAN PIPE, FIELD-LOK BY US PIPE. FOR 16" TO 24" DEFLECTION LIMIT IS BASED ON MOST RESTRICTIVE MANUFACTURER.
  - MECHANICAL JOINT PIPE ONLY AVAILABLE THROUGH 12"; MJ FITTINGS AND VALVES AVAILABLE THROUGH 24".

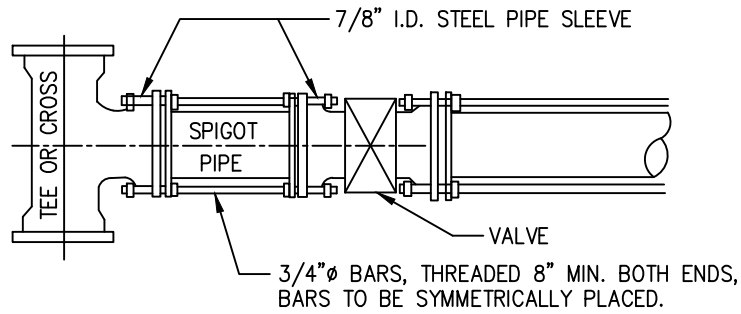
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD WATER DETAILS CURVATURE OF DUCTILE IRON PIPE WATER MAINS	REVISED	W 6
	_____		04/2024	
	CHIEF ENGINEER		_____	
	_____		_____	
	DESIGN ENGINEER			
	DATE:			

PIPE SIZE	MINIMUM RADIUS – FEET ( NO JOINT DEFLECTIONS ) 20 FT. LENGTH DR-14
4	100 FT.
6	144 FT.
8	189 FT.
10	231 FT.
12	275 FT.

NOTES:

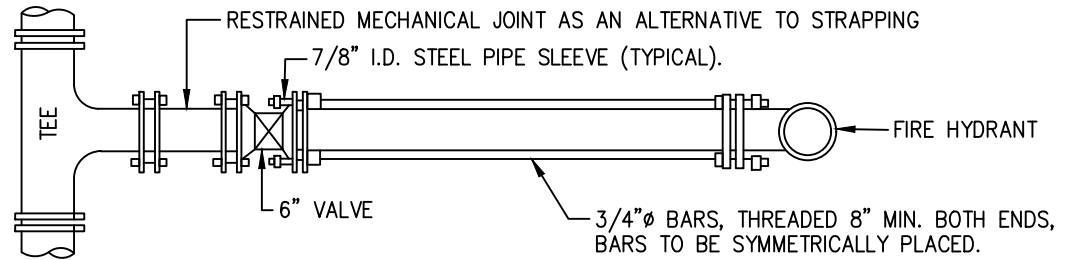
1. JOINT DEFLECTION IS NOT PERMITTED IN CONJUNCTION WITH BENDING OF PVC PIPE.
2. ALLOWABLE JOINT DEFLECTION FOR DESIGN SHALL BE NO MORE THAN 85% OF MANUFACTURER'S RECOMMENDED MAXIMUM DEFLECTION, WITHOUT ANY BENDING OF THE PIPE.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD WATER DETAILS CURVATURE OF POLYVINYL CHLORIDE PIPE WATER MAIN	REVISED	W 7
	_____		04/2024	
	CHIEF ENGINEER		_____	
	_____		_____	
	DESIGN ENGINEER			
	DATE:			

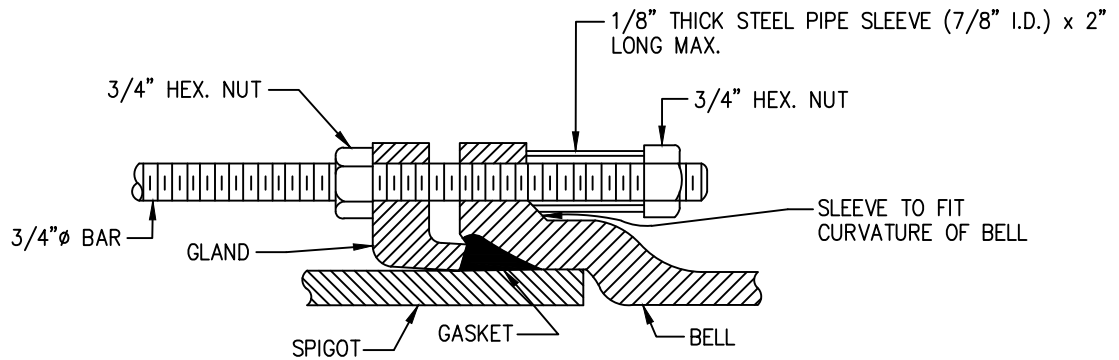


NOTE:  
IF VALVE AT END OF STUB USE MECHANICAL JOINT PLUG.

VALVE STRAPPING



PLAN



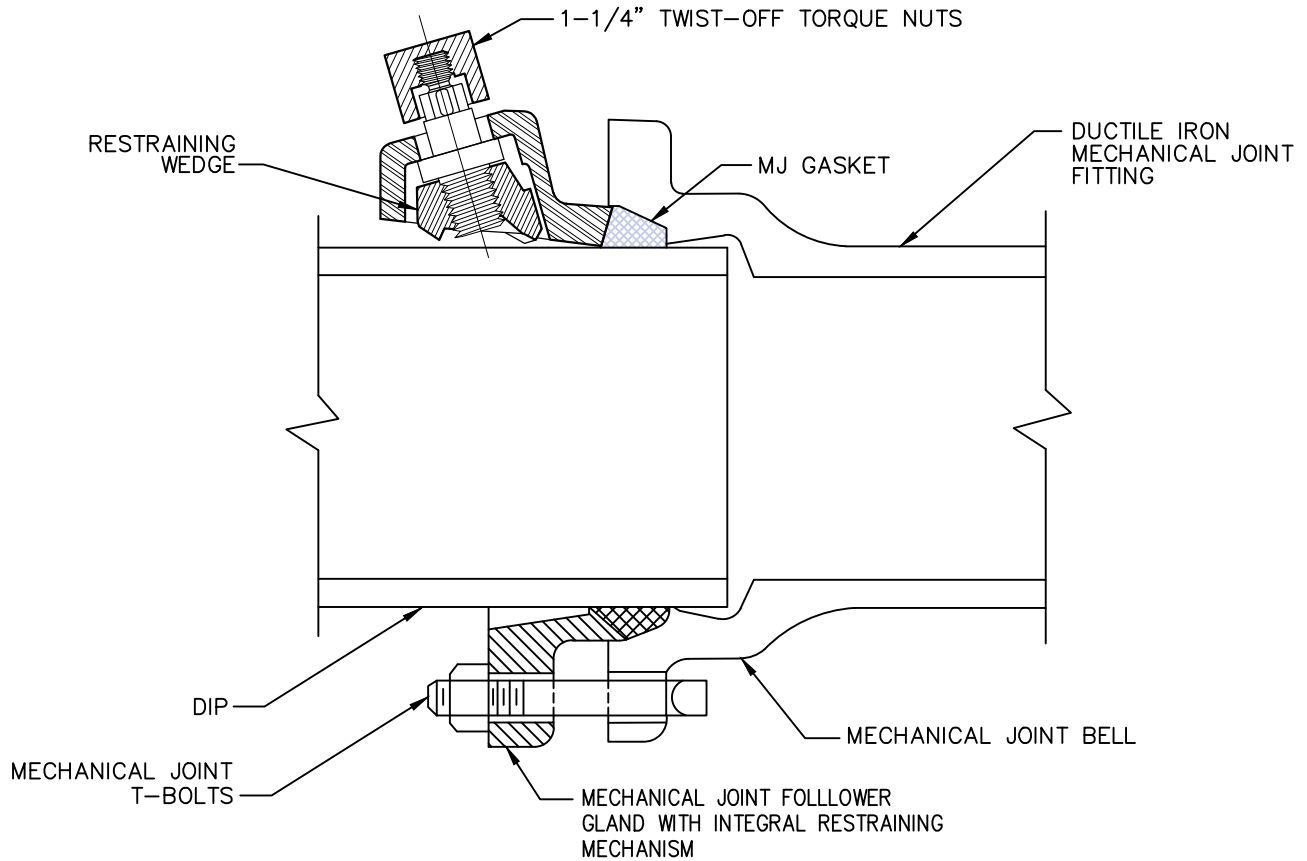
CROSS SECTION  
SLEEVE AND BAR ASSEMBLY

BRANCH SIZE	NUMBER OF 3/4" $\phi$ BARS REQUIRED
3" THRU 8"	2
10"	4
12"	6
16"	8
20"	12
24"	16
30"	20

NOTES:

1. USE MECHANICAL JOINT D.I. FITTINGS ONLY.
2. APPLY TWO COATS OF BITUMINOUS COATING TO ALL STEEL.
3. FIRE HYDRANT TEE AND/OR RESTRAINED MECHANICAL JOINTS MAY BE USED AS AN ALTERNATE TO STRAPPING.
4. HYDRANT STRAPPING SHALL ONLY BE PERMITTED IF CONCRETE BUTTRESS CANNOT BE INSTALLED, AS APPROVED BY COUNTY.
5. ALL BOLTS SHALL BE 316 STAINLESS STEEL.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD WATER DETAILS METHOD OF STRAPPING PIPELINES	REVISED	W 8
	_____		04/2024	
	CHIEF ENGINEER		_____	
	DESIGN ENGINEER		_____	
	DATE:			

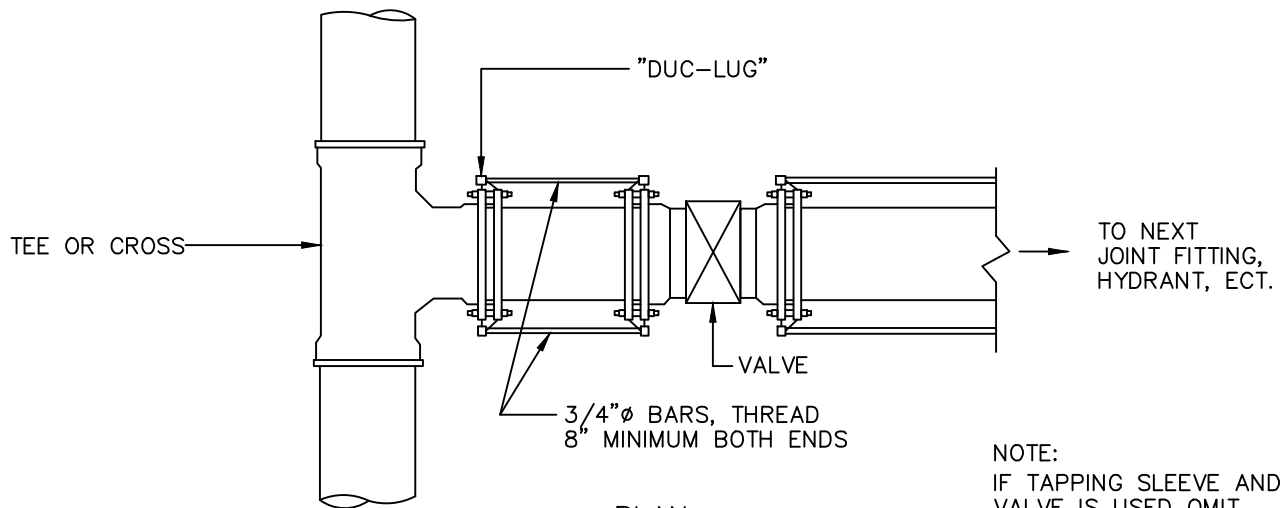


SIZE INCHES	NO. OF SET WEDGES	PRESSURE RATING IN PSI
3"	2	350 PSI
4"	2	350 PSI
6"	3	350 PSI
8"	4	350 PSI
10"	6	*
12"	8	*
16"	12	*
20"	14	*
24"	16	*
30"	20	*

NOTES:

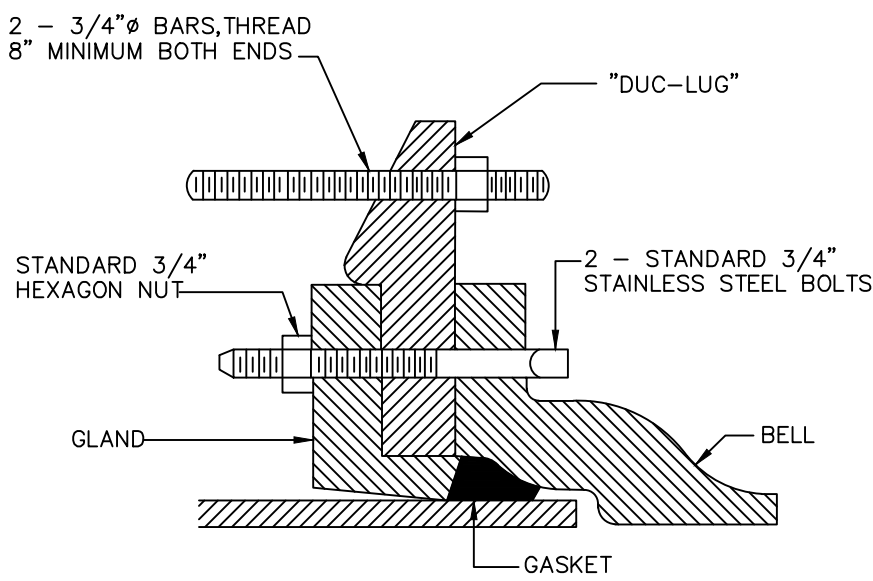
- FOLLOW AWWA C600 FOR INSTALLATION OF MECHANICAL JOINT GASKET AND T-BOLTS. GASKET AND GLAND SHALL BE COMPATIBLE WITH REQUIREMENTS OF AWWA C111 MECHANICAL JOINTS.
- T-BOLTS AND NUTS SHALL BE TYPE 316 STAINLESS STEEL. BOLT THREADS TO BE COATED WITH ANTI-GALL MATERIAL.
- HAND TIGHTEN JOINT RESTRAINT NUTS TO ENGAGE. TIGHTEN RESTRAINT NUTS ONE-HALF TURN IN ALTERNATING STAR PATTERN UNTIL NUTS HAVE BEEN TWISTED OFF.
- INSTALL ON MECHANICAL JOINT D.I. PIPE AND FITTINGS ONLY.
- PRESSURE IN 3 RD. COLUMN IS TOTAL PRESSURE (OPERATING PLUS SURGE).  
\* MAXIMUM RATED PRESSURE VARIES BY MANUFACTURER. DO NOT EXCEED MANUFACTURER'S STATED PRESSURE RATING.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD WATER DETAILS MECHANICAL JOINT WEDGE STYLE GLAND ON DUCTILE IRON PIPE	REVISED	W 9
	_____		04/2024	
	CHIEF ENGINEER		_____	
	DESIGN ENGINEER		_____	
DATE:				



PLAN

NOTE:  
IF TAPPING SLEEVE AND VALVE IS USED OMIT STRAPPING AND SPIGOT PIPE.

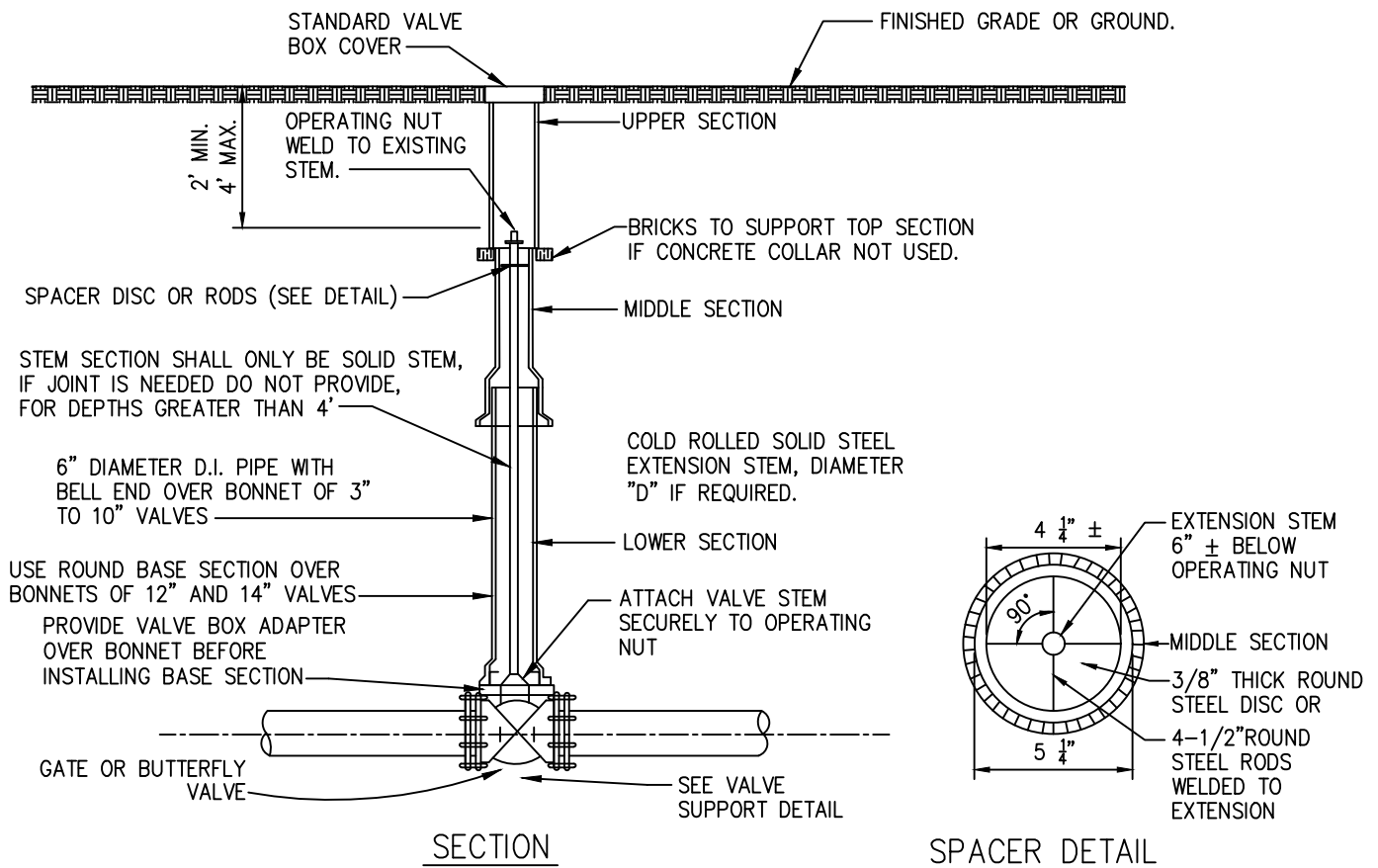


CROSS SECTION  
LUG ASSEMBLY

BRANCH SIZE	NUMBER OF 3/4" $\phi$ BARS AND BOLTS REQUIRED
3" THRU 8"	2
10"	4
12"	6
16"	8
20"	12
24"	16
30"	20

- NOTE:
1. USE MECHANICAL JOINT D.I. FITTINGS ONLY.
  2. APPLY TWO COATS OF BITUMINOUS COATING TO ALL STEEL.
  3. FIRE HYDRANT TEE AND/OR RESTRAINED MECHANICAL JOINTS MAY BE USED AS AN ALTERNATE TO STRAPPING WHEN APPROVED BY THE COUNTY.
  4. HYDRANT STRAPPING SHALL ONLY BE PERMITTED IF CONCRETE BUTTRESS CANNOT BE INSTALLED, AS APPROVED BY COUNTY.
  5. 3/4" BARS, NUTS, AND WASHERS TO BE 316 SS.
  6. MJ T-BOLTS AND NUTS TO BE TYPE 316 SS BOLT THREAD TO HAVE ANTI-GALL COATING.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD WATER DETAILS ALTERNATE METHOD OF STRAPPING WITH "DUC-LUGS"	REVISED	W 10
	_____		04/2024	
	CHIEF ENGINEER		_____	
	DESIGN ENGINEER		_____	
	DATE:			



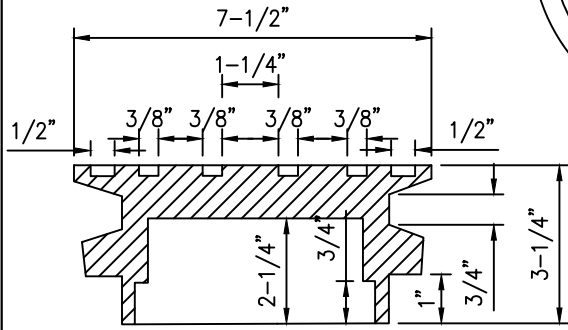
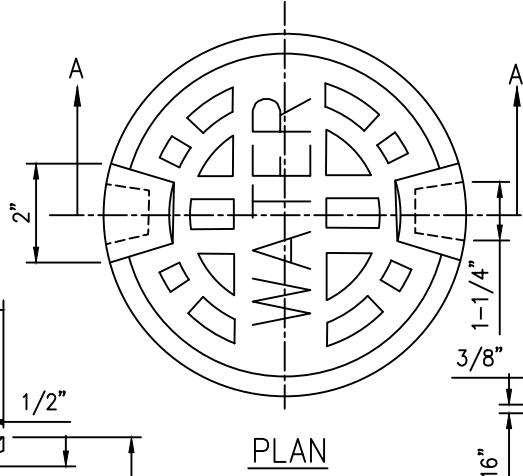
EXTENSION STEM DIAMETER "D"	VALVE SIZE				
	3"	4"	6"	8"	10"
	7/8"	7/8"	1"	1-1/8"	1-1/4"
	VALVE SIZE				
	12"	14"	16"	20"	24"
	1-1/4"	1-3/8"	1-1/2"	1-3/4"	1-3/4"
	VALVE SIZE				
12"	36"	42"	48"		
1-3/4"	1-3/4"	2"	2"		

NOTES:

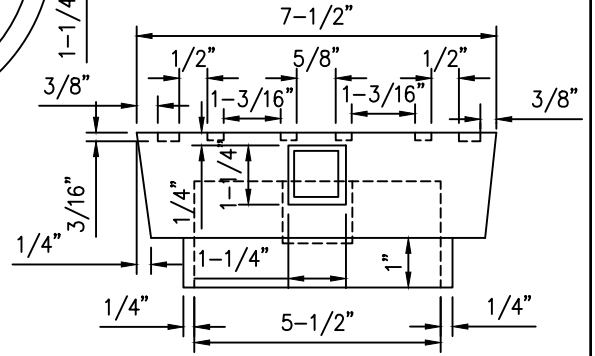
1. LENGTH OF STEM TO BE SUCH THAT OPERATING NUT WILL BE LOCATED AS PRESCRIBED ABOVE.
2. WELD 4-1/2" ROUND STEEL RODS OR 3/8" THICK ROUND STEEL PLATE TO EXTENSION STEM TO ENSURE OPERATING NUT IS CENTRALLY LOCATED WITHIN VALVE BOX.
3. APPLY 2-COATS OF BITUMINOUS COATING TO ALL STEEL.
4. THIS STANDARD DETAIL IS TO BE USED WHEN DISTANCE FROM TOP OF OPERATING NUT OF VALVE TO FINISHED GRADE OR GROUND EXCEEDS 4'-0".
5. VAULTS SHALL BE USED FOR ALL GATE VALVES LARGER THAN 20 INCHES.
6. ALL CONSTRUCTION TO BE PLUMB.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD WATER DETAILS EXTENSION STEMS AND VALVE BOXES FOR DEEP SETTINGS	REVISED	W 11
	_____		04/2024	
	CHIEF ENGINEER			
	DESIGN ENGINEER			
	DATE:			

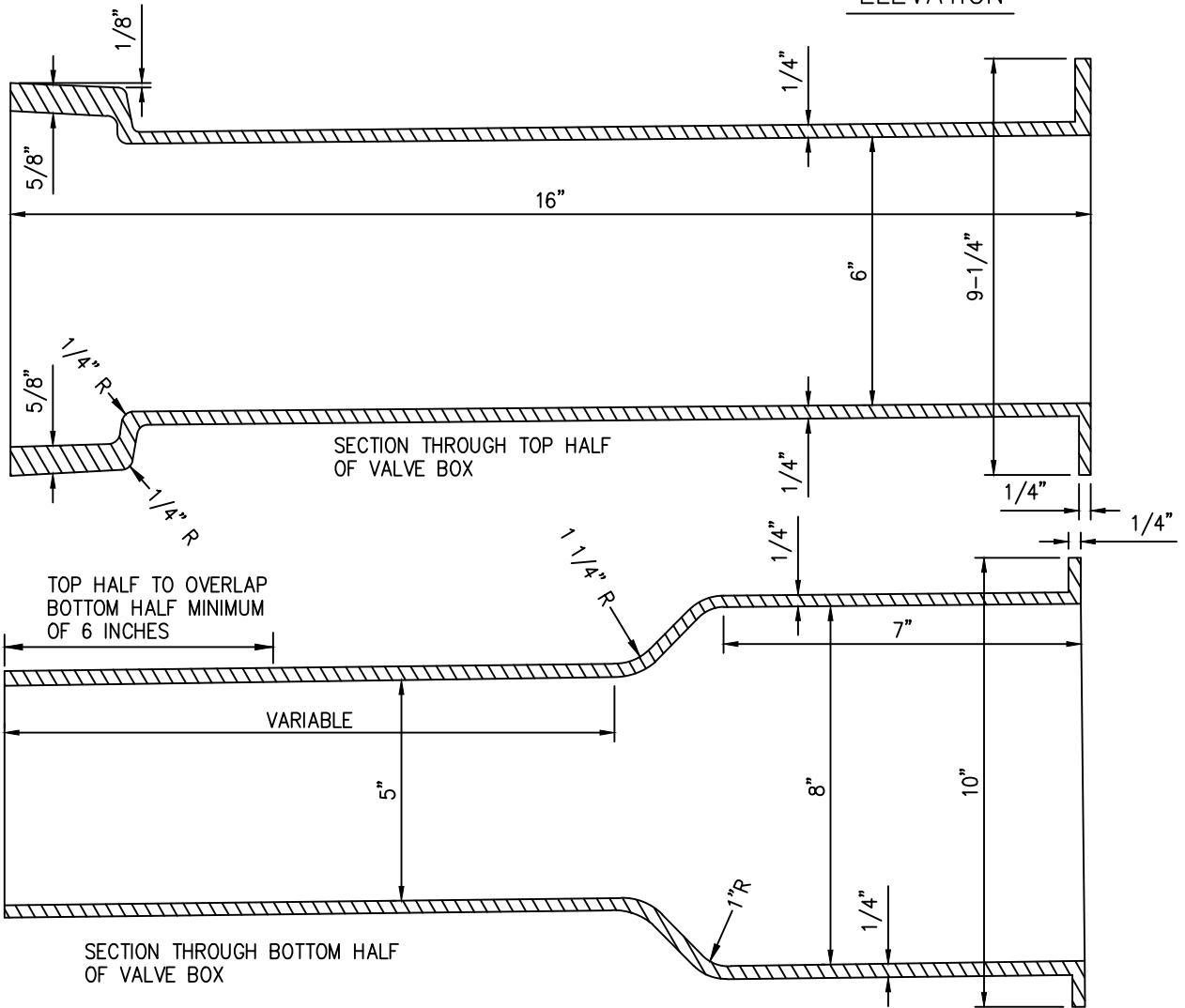
BOXES ADJUSTABLE 23" TO 34"  
 TOP SECTION 16"  
 BOTTOM SECTION 18"  
 BOXES ADJUSTABLE 34" TO 46"  
 TOP SECTION 16"  
 BOTTOM SECTION 30"  
 MIN. WT. PER BOX 100 LBS.



SECTION "A-A"



ELEVATION



ANNE ARUNDEL  
 COUNTY  
 DEPARTMENT OF  
 PUBLIC WORKS

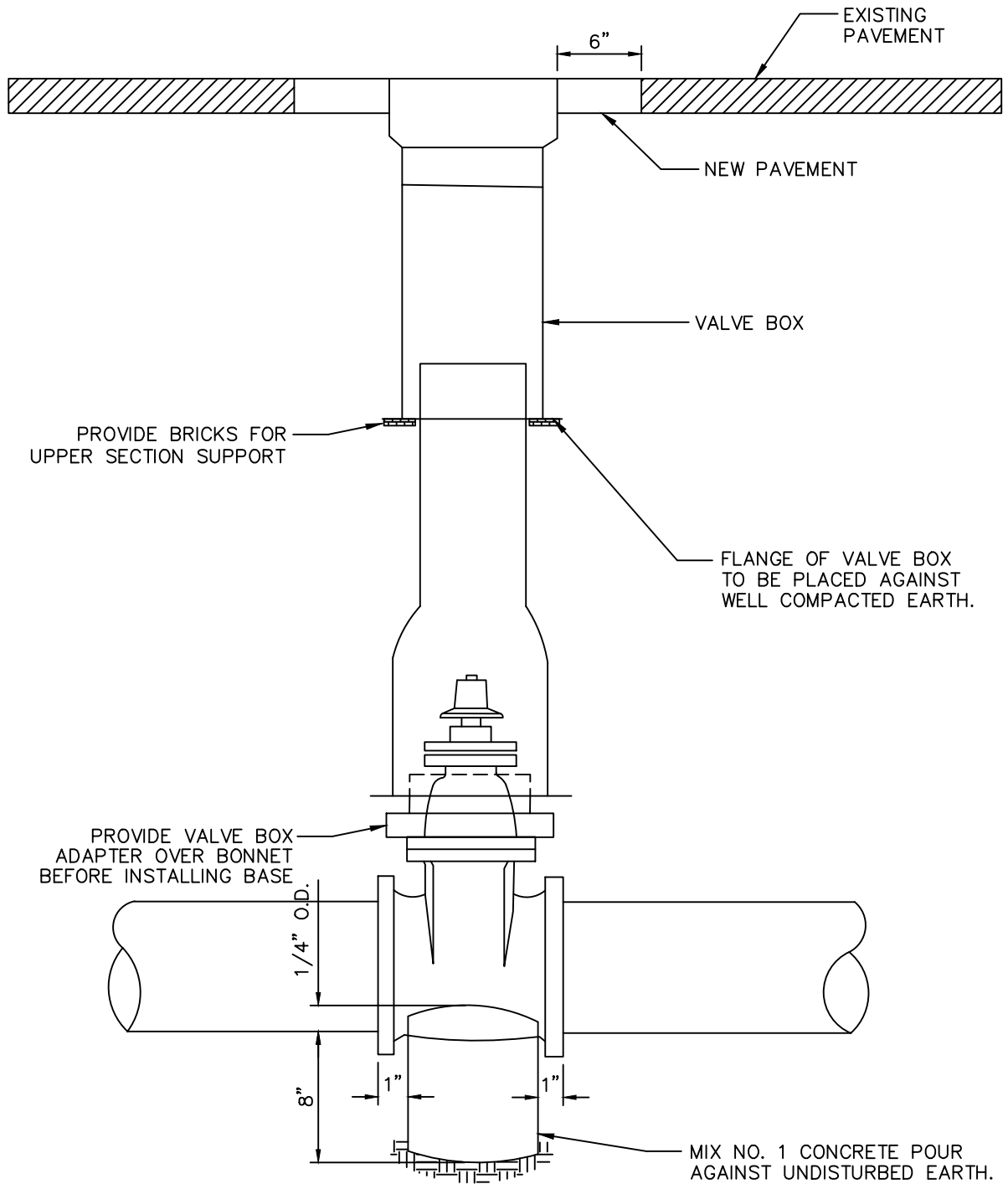
APPROVED  
 \_\_\_\_\_  
 CHIEF ENGINEER  
 \_\_\_\_\_  
 DESIGN ENGINEER  
 DATE: \_\_\_\_\_

STANDARD WATER DETAILS  
 STANDARD VALVE BOX  
 AND COVER

REVISED  
 04/2024

W  
 12





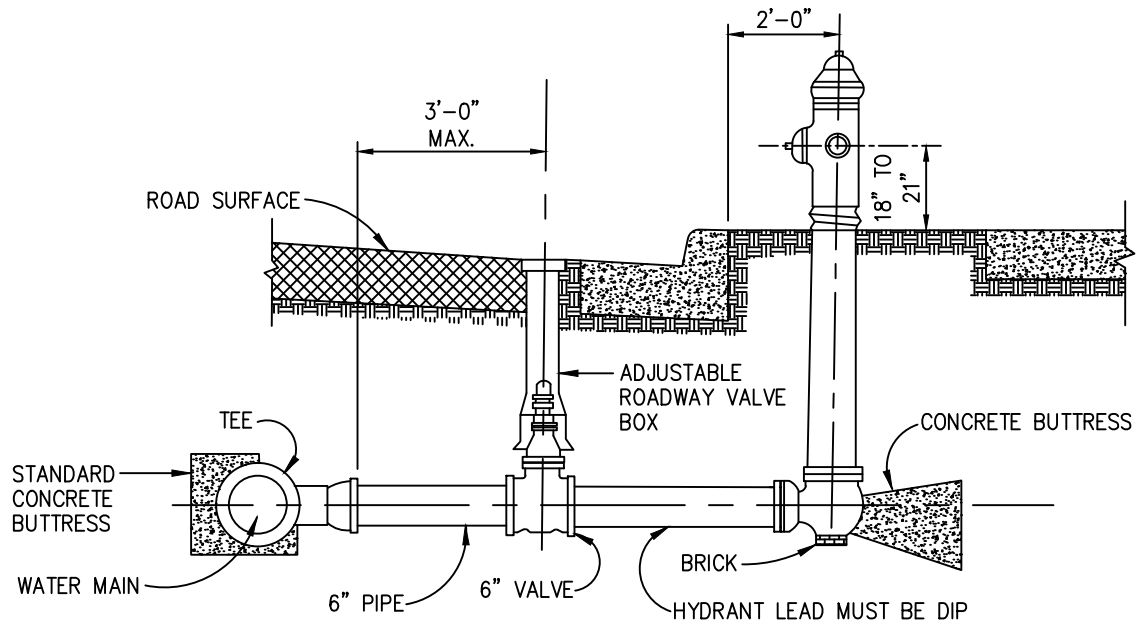
ANNE ARUNDEL  
COUNTY  
DEPARTMENT OF  
PUBLIC WORKS

APPROVED  
\_\_\_\_\_  
CHIEF ENGINEER  
\_\_\_\_\_  
DESIGN ENGINEER  
DATE:

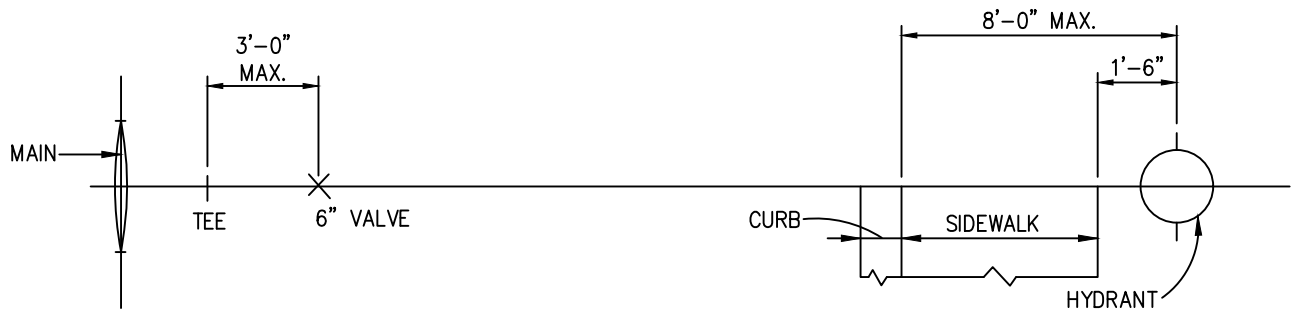
STANDARD WATER DETAILS  
CONCRETE FOR VALVE  
SUPPORT

REVISED  
04/2024

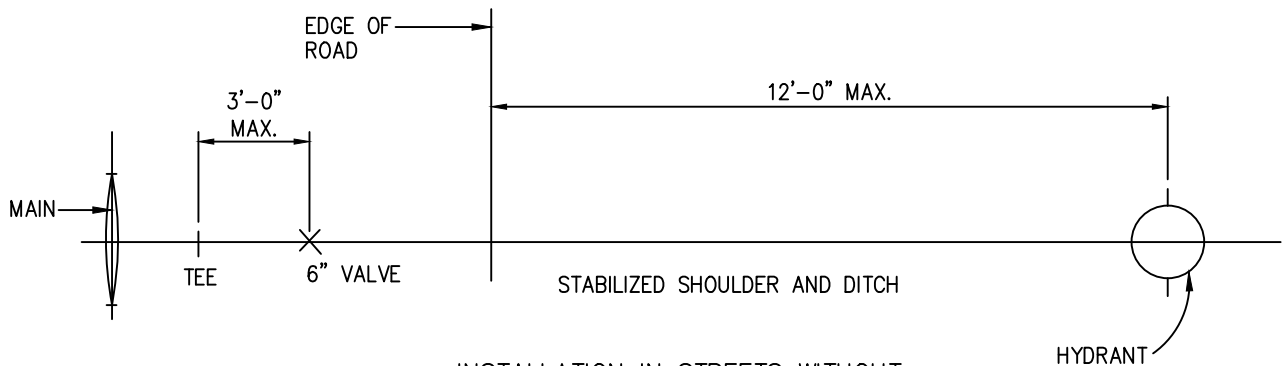
W  
13



INSTALLATION IN NEW DEVELOPMENT  
WITH CURB AND GUTTER

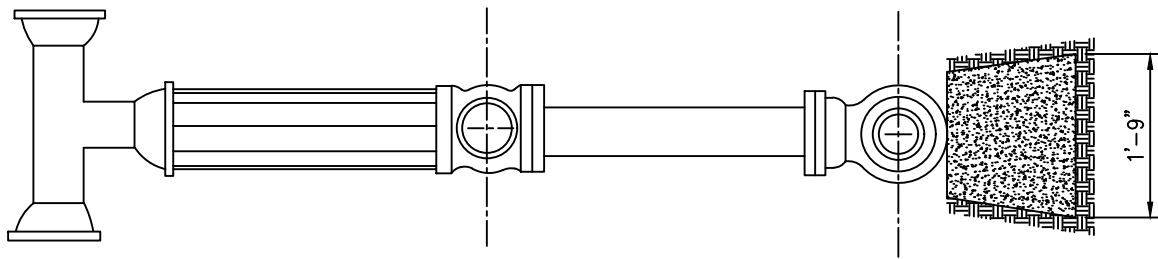


INSTALLATION IN EXISTING STREETS  
SIDEWALK ADJACENT TO CURB



INSTALLATION IN STREETS WITHOUT  
CURB AND GUTTER

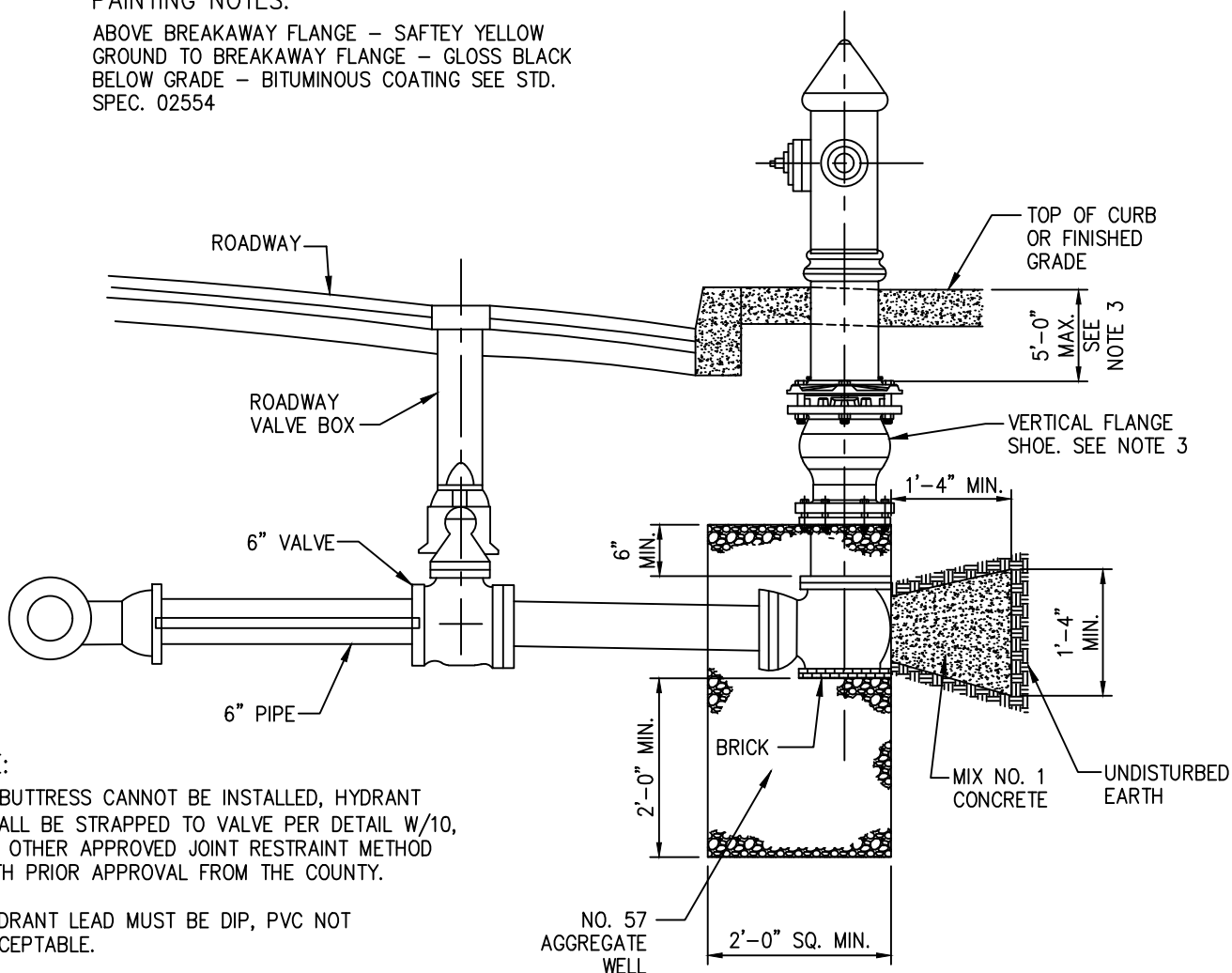
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD WATER DETAILS FIRE HYDRANT SETTINGS	REVISED	W 14
	_____		04/2024	
	CHIEF ENGINEER		_____	
	DESIGN ENGINEER		_____	
	DATE:			



PLAN

PAINTING NOTES:

ABOVE BREAKAWAY FLANGE - SAFTEY YELLOW  
 GROUND TO BREAKAWAY FLANGE - GLOSS BLACK  
 BELOW GRADE - BITUMINOUS COATING SEE STD.  
 SPEC. 02554

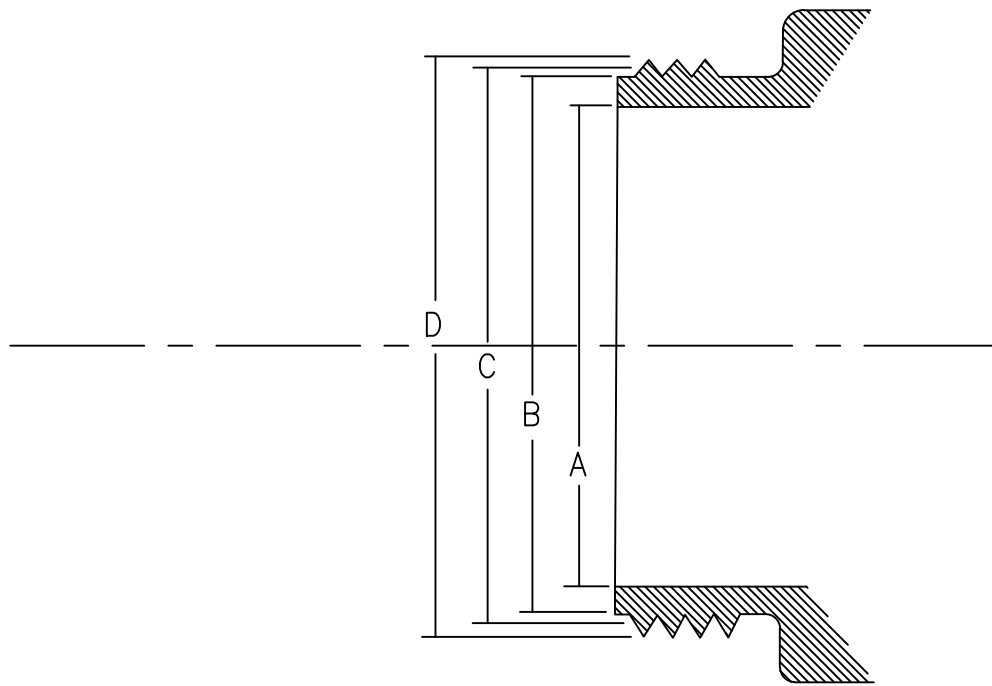


NOTE:

1. IF BUTTRESS CANNOT BE INSTALLED, HYDRANT SHALL BE STRAPPED TO VALVE PER DETAIL W/10, OR OTHER APPROVED JOINT RESTRAINT METHOD WITH PRIOR APPROVAL FROM THE COUNTY.
2. HYDRANT LEAD MUST BE DIP, PVC NOT ACCEPTABLE.
3. FIRE HYDRANTS WITH A DEPTH OF MORE THAN 5 FEET SHALL HAVE A VERTICAL FLANGE SHOE INSTALLED AT MAXIMUM 5 FT DEPTH.

SECTION

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD WATER DETAILS STANDARD INSTALLATION OF FIRE HYDRANTS	REVISED 04/2024	W 15
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	



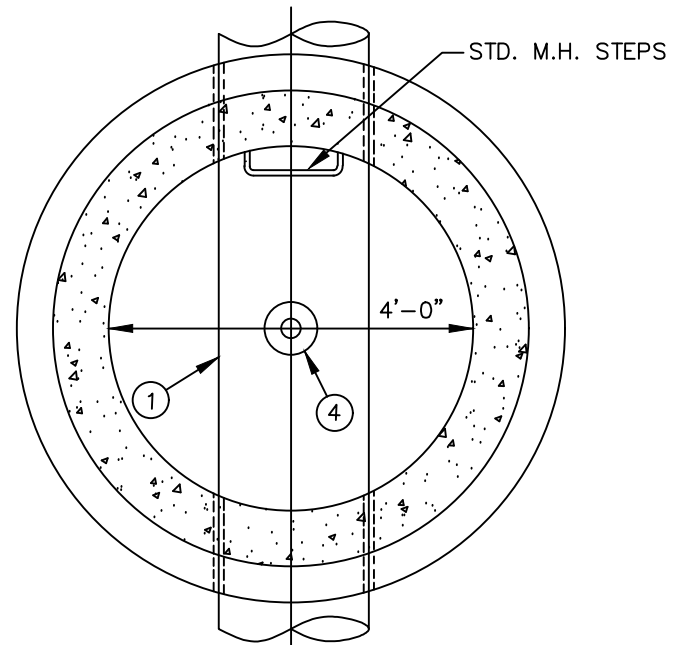
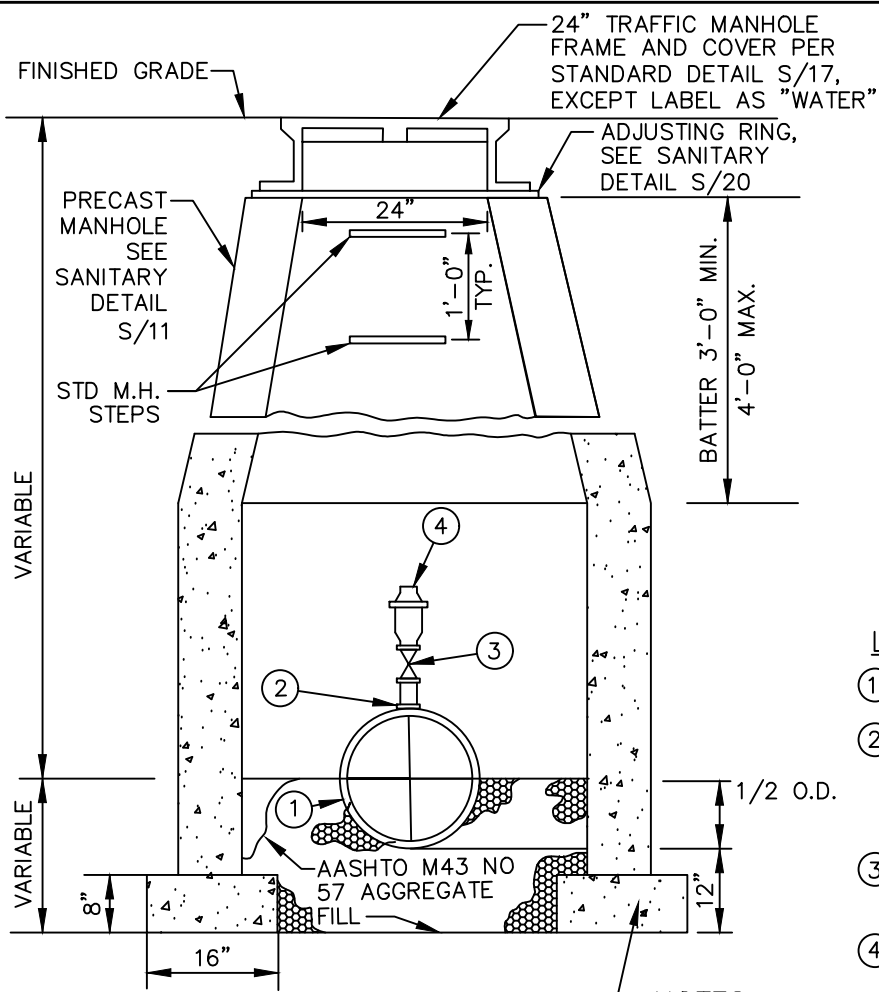
MALE

A	B	C	D
COUPLING I.D.	MAJOR DIA.	PITCH DIA.	MINOR DIA.
2 1/2" (7.5 T.P.I.)	2.8954 (MAX.)	$\frac{2.9820}{2.9660}$	$\frac{3.0686}{3.0366}$
4 1/2" (4 T.P.I.)	$\frac{5.5044}{5.034}$	$\frac{5.260}{5.255}$	$\frac{5.477}{5.467}$

NOTE:

- 2 1/2" HYDRANT CONNECTION – NATIONAL STANDARD FIRE – HOSE COUPLING SCREW THREADS. ( DIMENSIONS SHOWN ABOVE ).
- 4 1/2" HYDRANT CONNECTION – ANNE ARUNDEL COUNTY, MD. 4 1/2" THREAD SPECIFICATION. ( DIMENSIONS SHOWN ABOVE ).

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD WATER DETAILS FIRE HYDRANT THREAD DETAILS	REVISED	W 15A
	_____		04/2024	
	CHIEF ENGINEER		_____	
	_____		_____	
	DESIGN ENGINEER			
	DATE:			



**LEGEND**

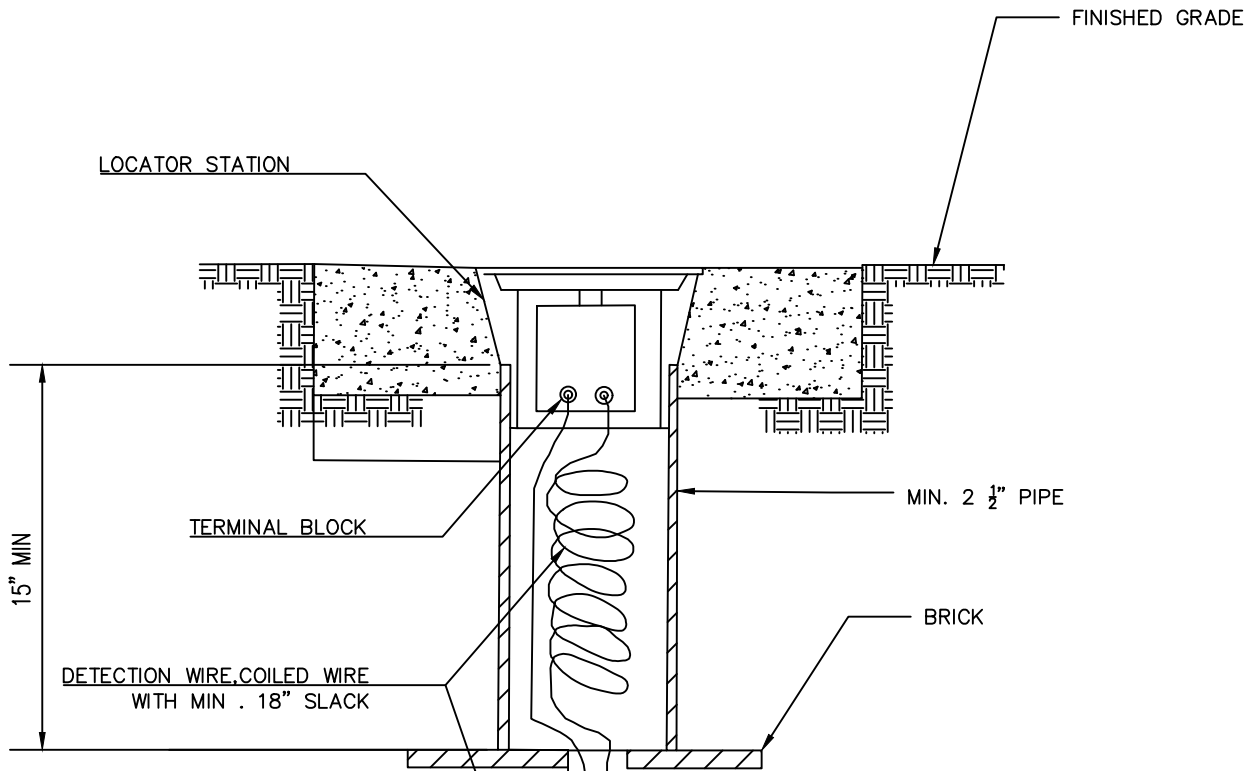
- ① WATER MAIN SIZE (VARIES).
- ② THREADED TAP FOR 8" AND LARGER D.I.P. ONLY. FOR 3" TO 6" DIP AND C900 PVC USE DRESSER STYLE 80 SLEEVE OR EQUAL. FOR I.P.S. PVC AND C900 PVC LARGER THAN 6" USE ROMAC STYLE 202BS TAPPING SADDLE, OR EQUAL.
- ③ SHUT-OFF VALVE, BRASS BALL VALVE BODY WITH SST COMPONENT, BRONZE MOUNTED.
- ④ APCO AIR RELEASE & VACUUM COMBINATION VALVE OR EQUAL. (TYPE AND SIZE AS NOTED ON CONTRACT DOCUMENTS).

MIX NO.3 CONCRETE  
SECTION

**NOTES**

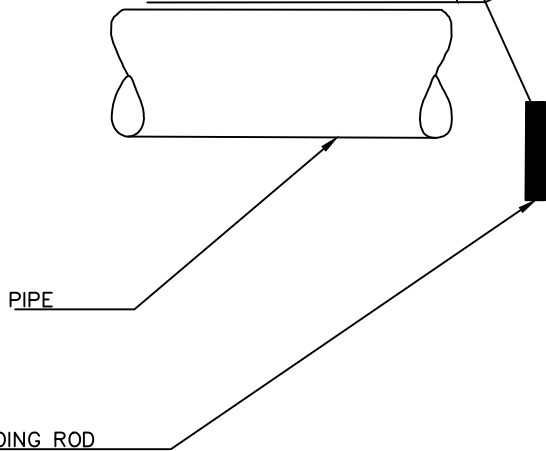
- 1. ALL FITTINGS SHALL BE HEAVY DUTY, UNPOLISHED BRASS UNLESS INDICATED OTHERWISE.
- 2. TAP, PIPE, AND VALVES SHALL BE SAME SIZE AS AIR RELEASE & VACUUM NOTED ON PLANS.
- 3. ARRANGEMENT OF FITTINGS AND VALVES SHALL BE THE SAME FOR 3/4", 1", 2" & 3" AIR RELEASE & VACUUM VALVES. FOR 4" AND LARGER SEE PLANS. SHUT-OFF ISOLATION VALVE SHALL BE A QUARTER-TURN VALVE.
- 4. IF ELEVATION OF GROUND WATER IS ABOVE BOTTOM OF VAULT, VAULT SHALL HAVE A SOLID CONCRETE BOTTOM SIMILAR TO THAT SHOWN IN PLATE S/24.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD PAVING DETAILS AIR RELEASE AND VACUUM VALVE IN MANHOLE	REVISED 04/2024	W 17
	_____ DESIGN ENGINEER			
	DATE:			



**NOTES:**

1. TEST STATIONS SHALL BE LOCATED OUTSIDE OF EXISTING OR PROPOSED PAVEMENT WITHIN COUNTY RIGHT OF WAY.
2. TEST STATIONS SHALL BE LOCATED WITH A MAXIMUM SPACING OF 500 FT.
3. TEST STATION ACCESS BOXES SHALL BE FROM COPPERHEAD INDUSTRIES,LLC-SNAKEPIT,BINGHAM&TAYLOR-BUFFALO BOX OR APPROVED EQUAL.
4. TEST STATION SHALL BE LABELLED AACO TEST STATION-WATER OR SEWER. LID COLORS SHALL BE BLUE FOR WATER AND GREEN FOR SEWER.



ANNE ARUNDEL  
COUNTY  
DEPARTMENT OF  
PUBLIC WORKS

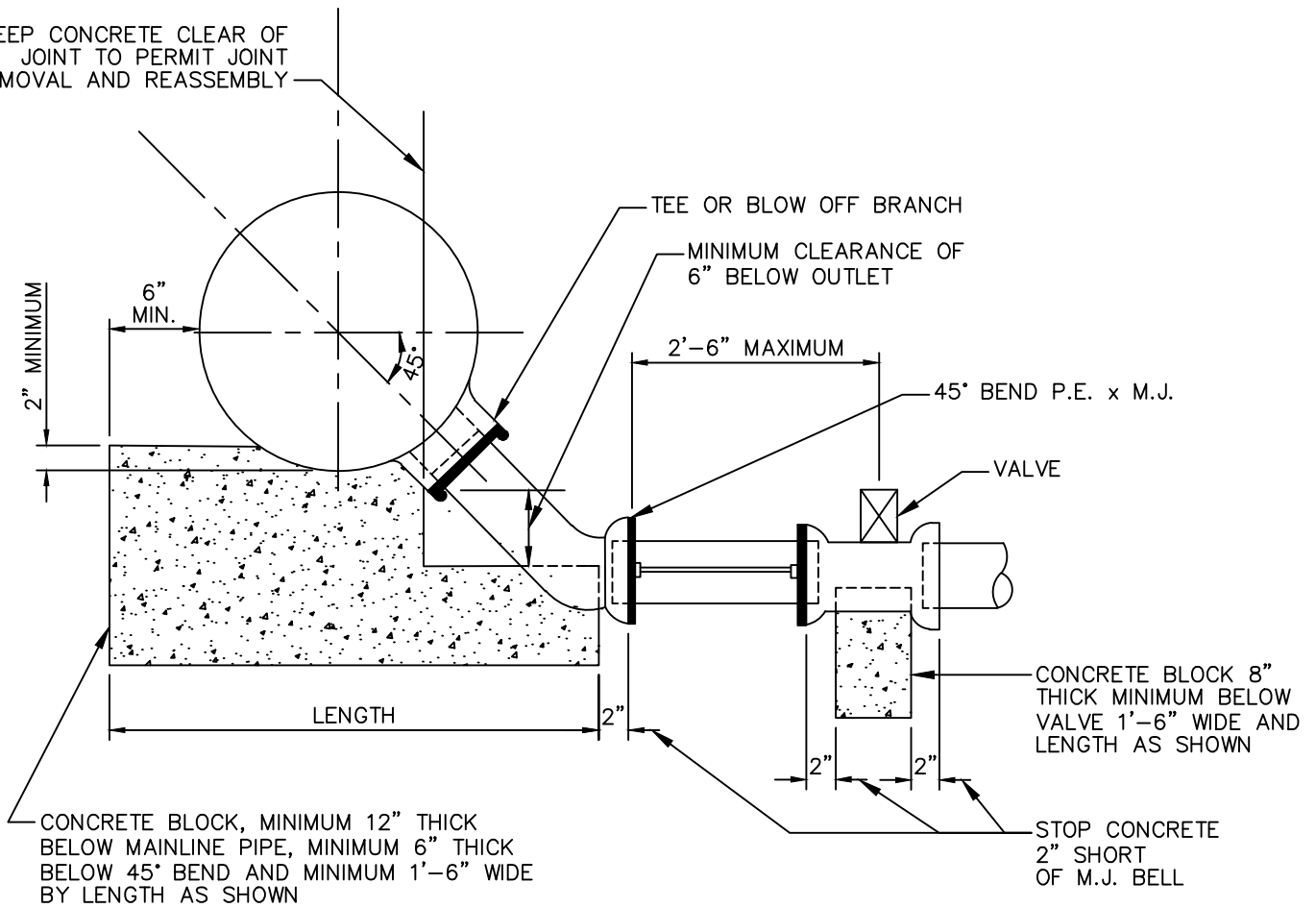
APPROVED  
\_\_\_\_\_  
CHIEF ENGINEER  
\_\_\_\_\_  
DESIGN ENGINEER  
DATE:

STANDARD WATER DETAILS  
CONTINUITY TEST STATION

REVISED  
04/2024

W  
18

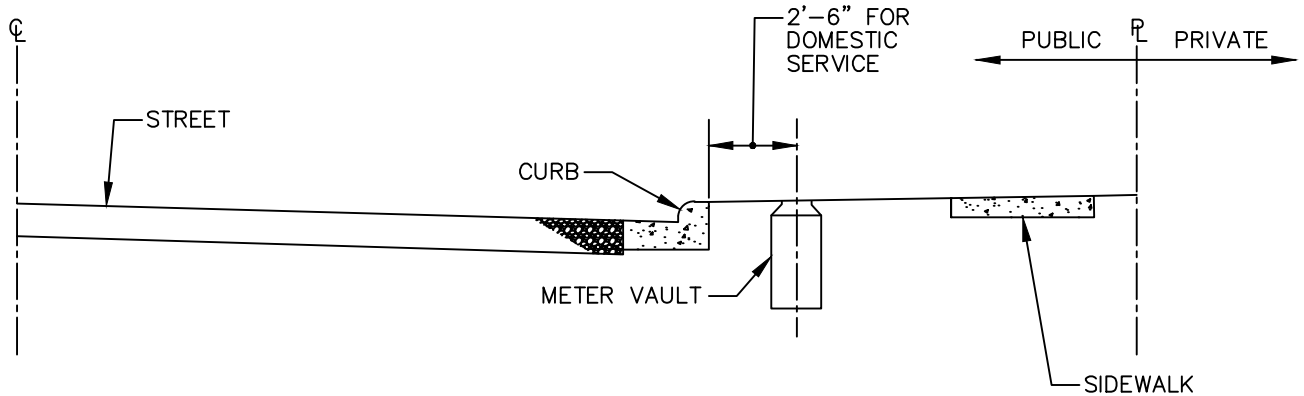
KEEP CONCRETE CLEAR OF JOINT TO PERMIT JOINT REMOVAL AND REASSEMBLY



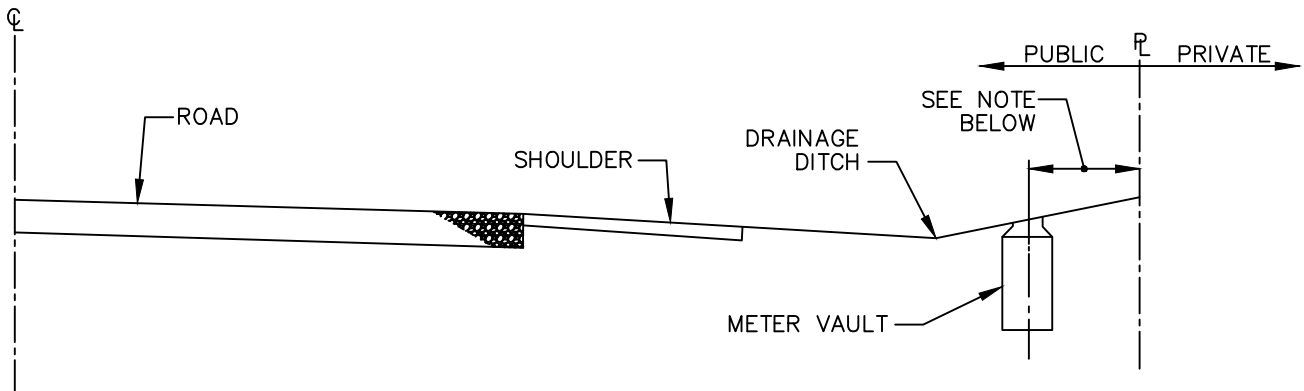
NOTES

1. DO NOT ATTACH PIPE OR FITTINGS TO TEE UNTIL MAINLINE PIPE IS IN TRENCH.
2. SUPPORT ALL PIPING IMMEDIATELY AFTER INSTALLATION TO MINIMUM LOADS TRANSMITTED TO FITTING.
3. PROVIDE RETAINER GLAND BETWEEN TEE AND 45° BEND AND PROVIDE STRAPS OR RETAINER GLANDS BETWEEN 45° BEND AND VALVE. CONTRACTOR MAY AT HIS OPTION USE ANCHOR COUPLINGS BETWEEN 45° BEND AND VALVE.
4. ALL CONCRETE TO BE MIX NO. 1 AND BEAR ON FIRM SUBGRADE.
5. USE MECHANICAL JOINT FITTING ONLY.
6. APPLY TWO COATS OF BITUMINOUS COATING TO ALL STEEL.
7. THIS DETAIL TO BE USED ONLY WITH APPROVAL FROM DPW.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD WATER DETAILS DEWATERING BLOWOFF	REVISED	W 19
	_____		04/2024	
	CHIEF ENGINEER		_____	
	DESIGN ENGINEER		_____	
	DATE:			



STREET – CURB & GUTTER



ROAD – NO CURB & GUTTER

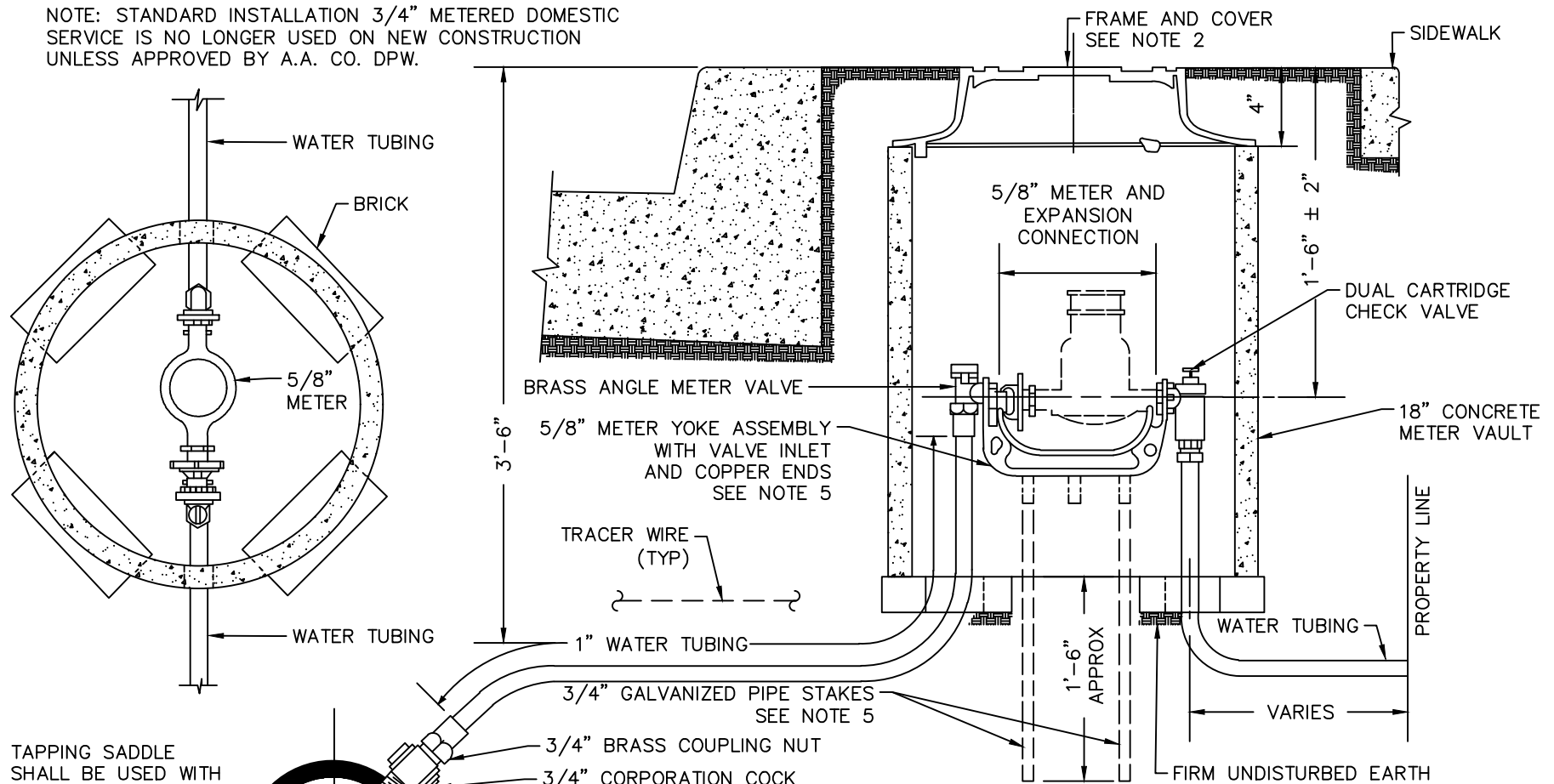
NOTE: METER VAULT SHALL BE SET AS CLOSE AS PRACTICABLE TO THE R/W WITH THE FOLLOWING RESTRICTIONS:

1. VAULT SHALL BE CONTAINED ENTIRELY WITHIN THE ROAD R/W.
2. VAULT SHALL NOT BE POSITIONED SUCH THAT IT IS THE INVERT OF SIDE DRAINAGE DITCH
3. VAULT SHALL NOT BE PLACED IN SIDEWALK.

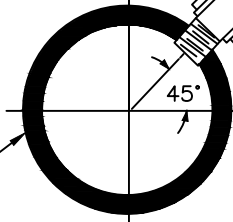
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD WATER DETAILS WATER METER LOCATION	REVISED	W 20
	_____		04/2024	
	CHIEF ENGINEER		_____	
	DESIGN ENGINEER		_____	
	DATE:			



NOTE: STANDARD INSTALLATION 3/4" METERED DOMESTIC SERVICE IS NO LONGER USED ON NEW CONSTRUCTION UNLESS APPROVED BY A.A. CO. DPW.



TAPPING SADDLE SHALL BE USED WITH PVC WATER MAINS

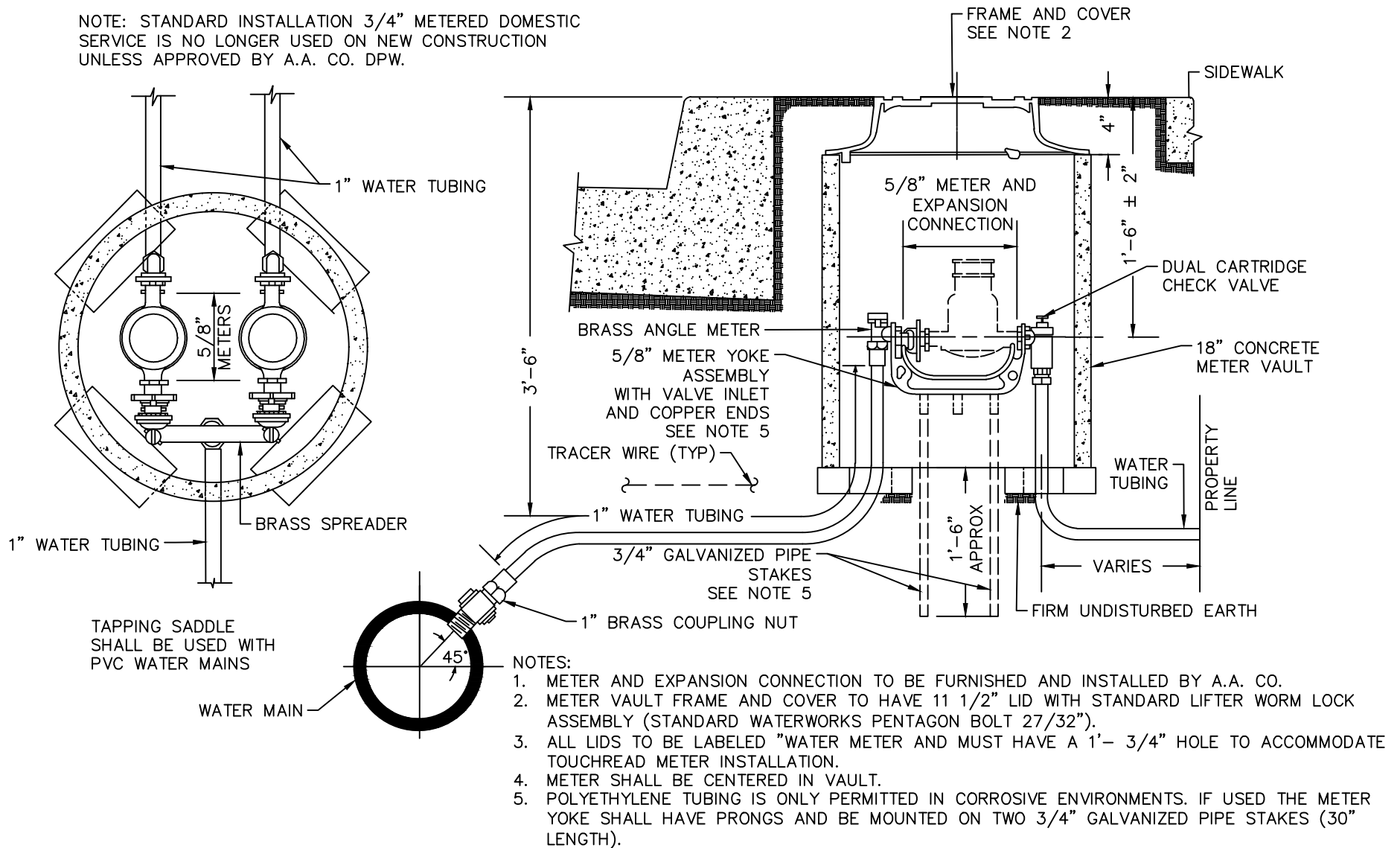


NOTES:

1. METER AND EXPANSION CONNECTION TO BE FURNISHED AND INSTALLED BY A.A. CO.
2. METER VAULT FRAME AND COVER TO HAVE 1 1/2" LID WITH STANDARD LIFTER WORM LOCK ASSEMBLY (STANDARD WATERWORKS PENTAGON BOLT 27/32").
3. ALL LIDS TO BE LABELED "WATER METER AND MUST HAVE A 1'- 3/4" HOLE TO ACCOMMODATE TOUCHREAD METER INSTALLATION.
4. METER SHALL BE CENTERED IN VAULT.
5. POLYETHYLENE TUBING IS ONLY PERMITTED IN CORROSIVE ENVIRONMENTS. IF USED THE METER YOKE SHALL HAVE PRONGS AND BE MOUNTED ON TWO 3/4" GALVANIZED PIPE STAKES (30" LENGTH).

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD WATER DETAILS STANDARD INSTALLATION 3/4" METERED DOMESTIC SERVICE (SINGLE SETTING)	REVISED 04/2024	W 21
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	
	_____		_____	

NOTE: STANDARD INSTALLATION 3/4" METERED DOMESTIC SERVICE IS NO LONGER USED ON NEW CONSTRUCTION UNLESS APPROVED BY A.A. CO. DPW.



ANNE ARUNDEL  
COUNTY  
DEPARTMENT OF  
PUBLIC WORKS

APPROVED

\_\_\_\_\_  
CHIEF ENGINEER

\_\_\_\_\_  
DESIGN ENGINEER

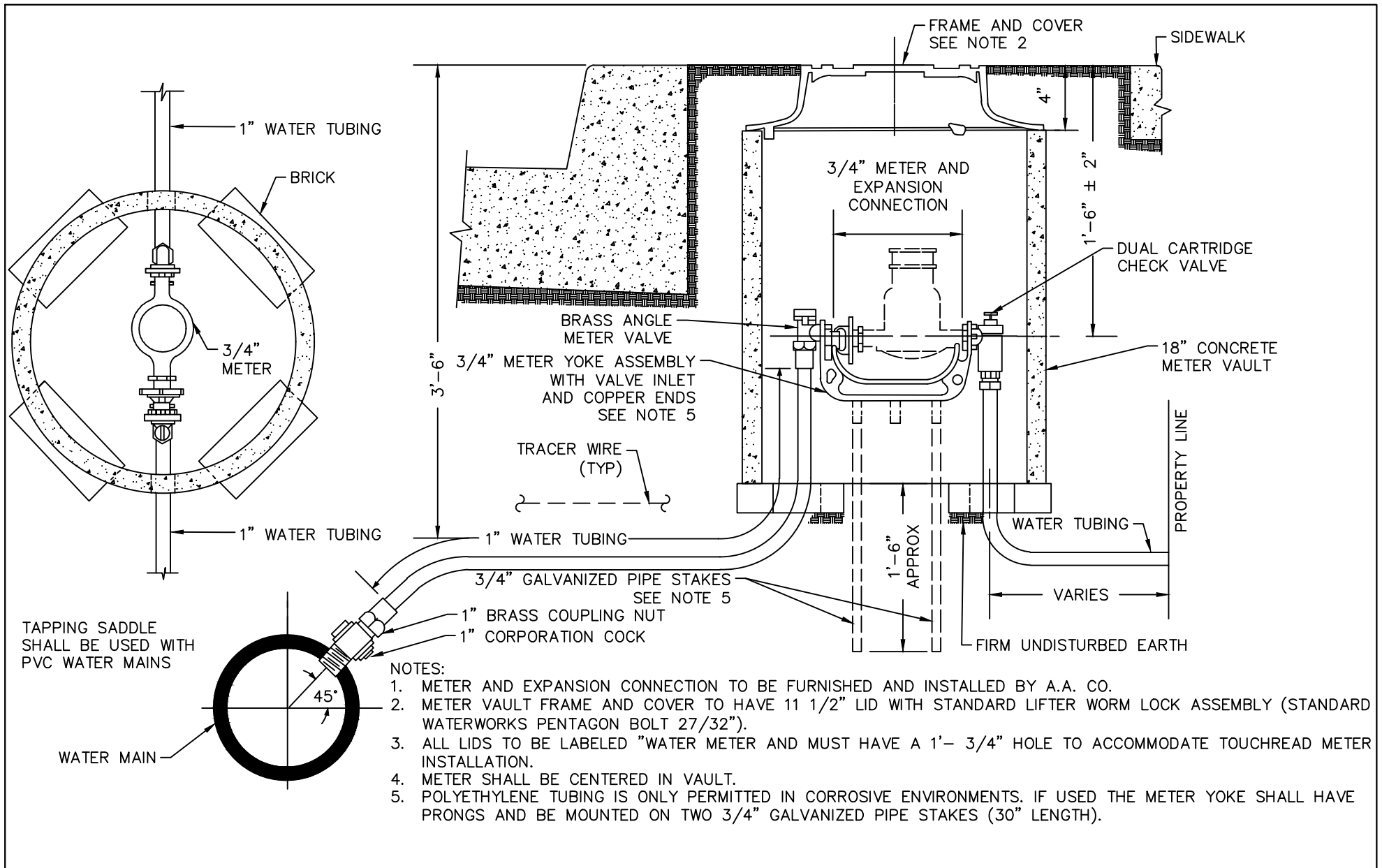
DATE:

STANDARD WATER DETAILS  
STANDARD INSTALLATION 3/4" METERED  
DOMESTIC SERVICE (TWIN SETTING)

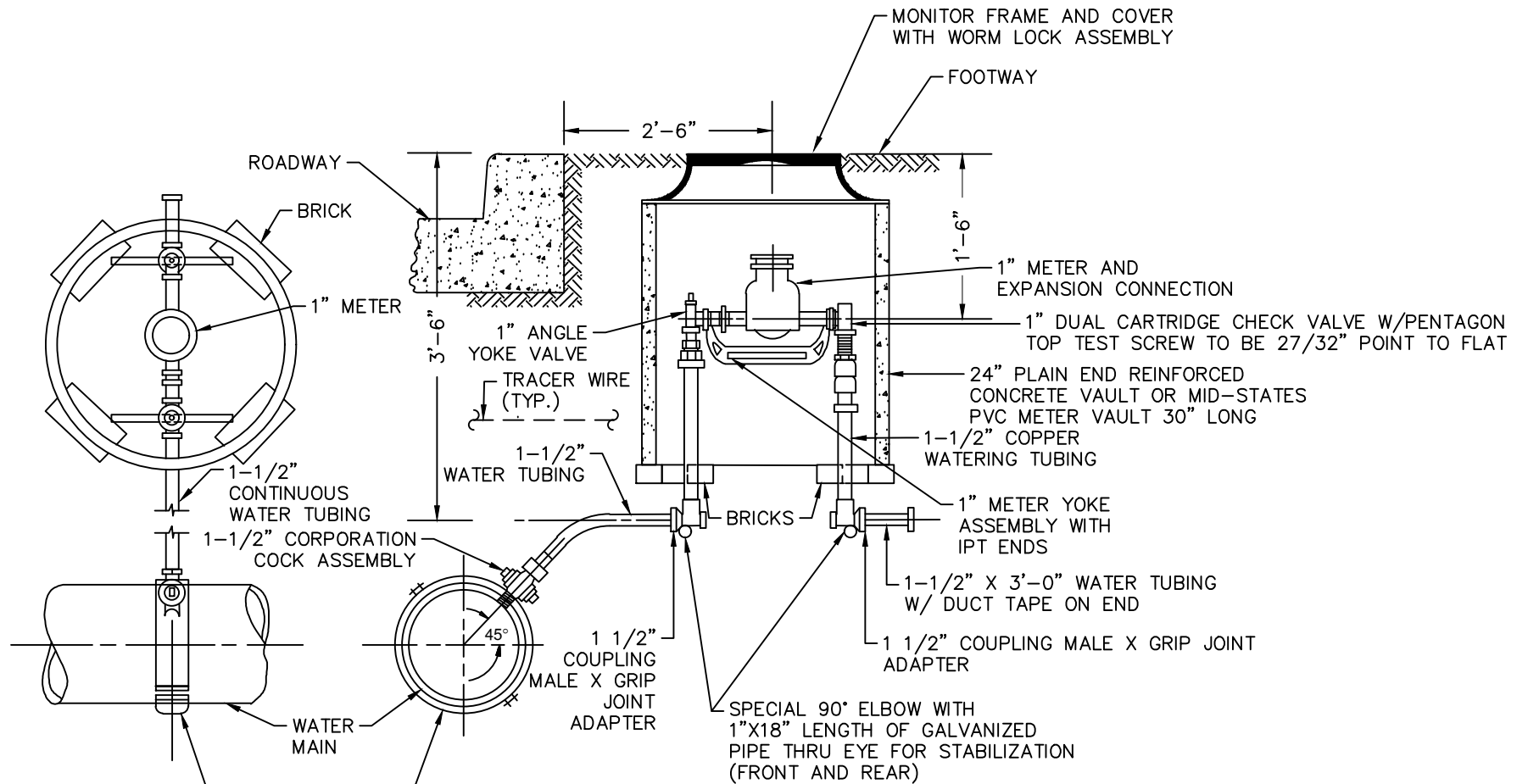
REVISED

04/2024

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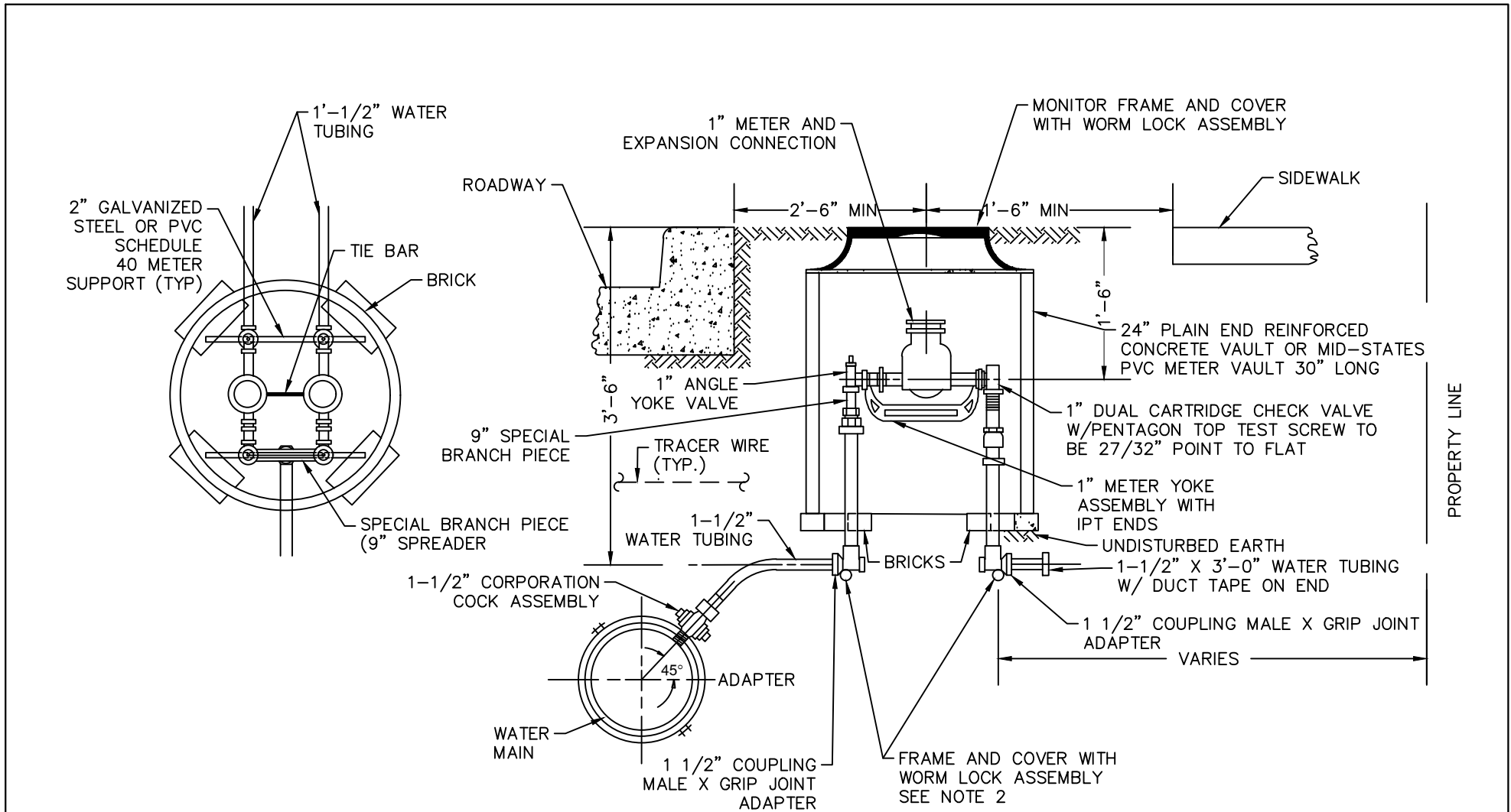
ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD WATER DETAILS STANDARD INSTALLATION OF 1" METERED DOMESTIC SERVICE	REVISED	W 23
	_____		04/2024	
	CHIEF ENGINEER			
	DESIGN ENGINEER			
DATE:				



NOTES:

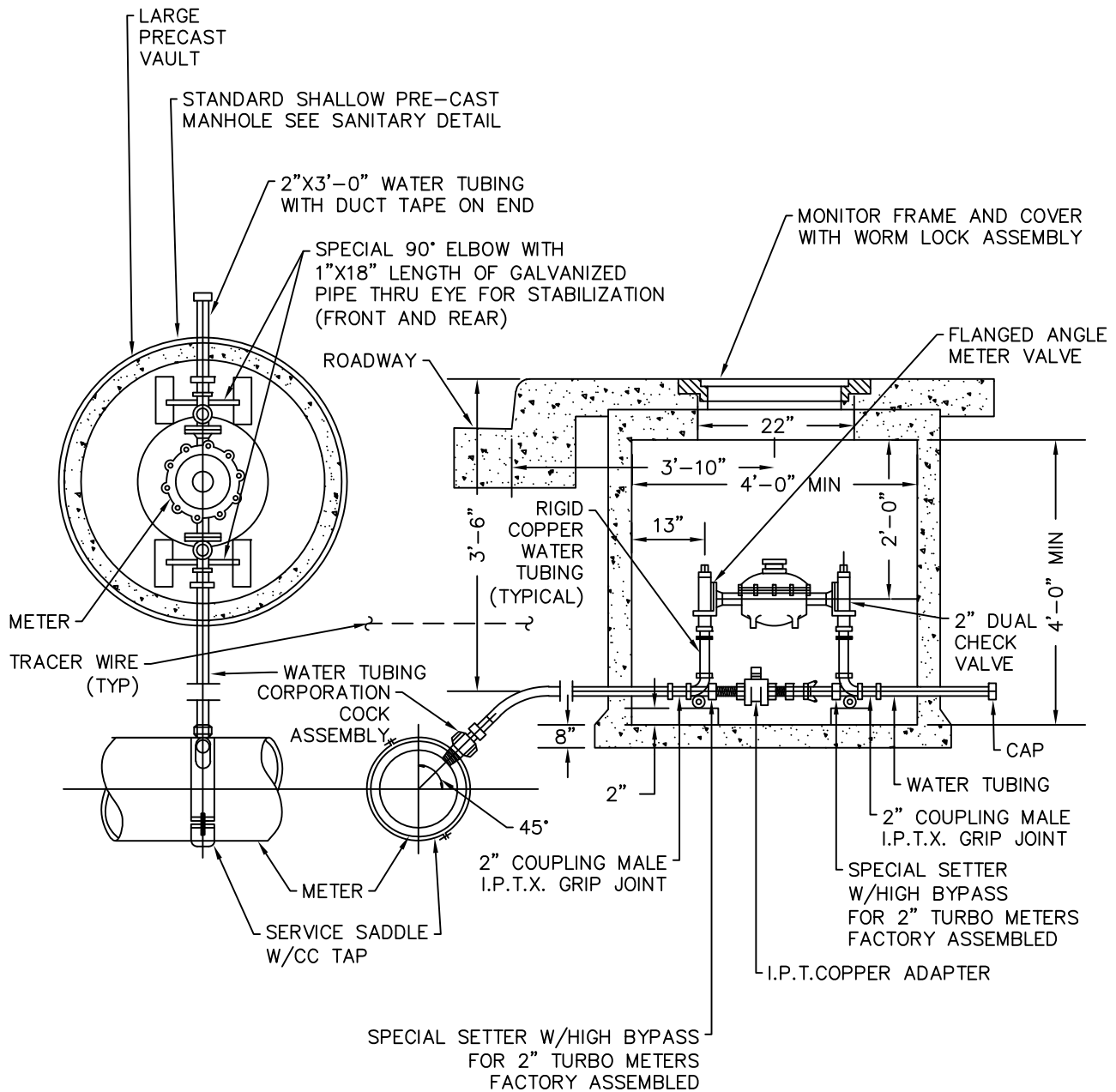
1. METER AND EXPANSION CONNECTION SHALL BE FURNISHED AND INSTALLED BY A.A. COUNTY.
2. ALL LIDS TO BE LABELED WATER METER AND MUST HAVE A 1-3/4" HOLE TO ACCOMMODATE TOUCHREAD METER INSTALLATION.
3. PLACE 1/2" PREMOLDED BITUMINOUS JOINT FILLER BETWEEN CONCRETE AND METER FRAME.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD WATER DETAILS STANDARD INSTALLATION OF 1-1/2" METERED WATER SUPPLY SERVICE (SINGLE SETTING, 1" METER)	REVISED 04/2024	W 25
	_____ DESIGN ENGINEER			
	DATE:			



- NOTES:
- METER AND EXPANSION CONNECTION SHALL BE FURNISHED AND INSTALLED BY A.A. COUNTY.
  - ALL LIDS TO BE LABELED WATER METER AND MUST HAVE A 1-3/4" HOLE TO ACCOMMODATE TOUCHREAD METER INSTALLATION.
  - PLACE 1/2" PREMOLDED BITUMINOUS JOINT FILLER BETWEEN CONCRETE AND METER FRAME.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER  _____ DESIGN ENGINEER DATE:	STANDARD WATER DETAILS STANDARD INSTALLATION OF 1-1/2" METERED WATER SUPPLY SERVICE (TWIN SETTING, 1" METER)	REVISED 04/2024	W 25A
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NOTES:

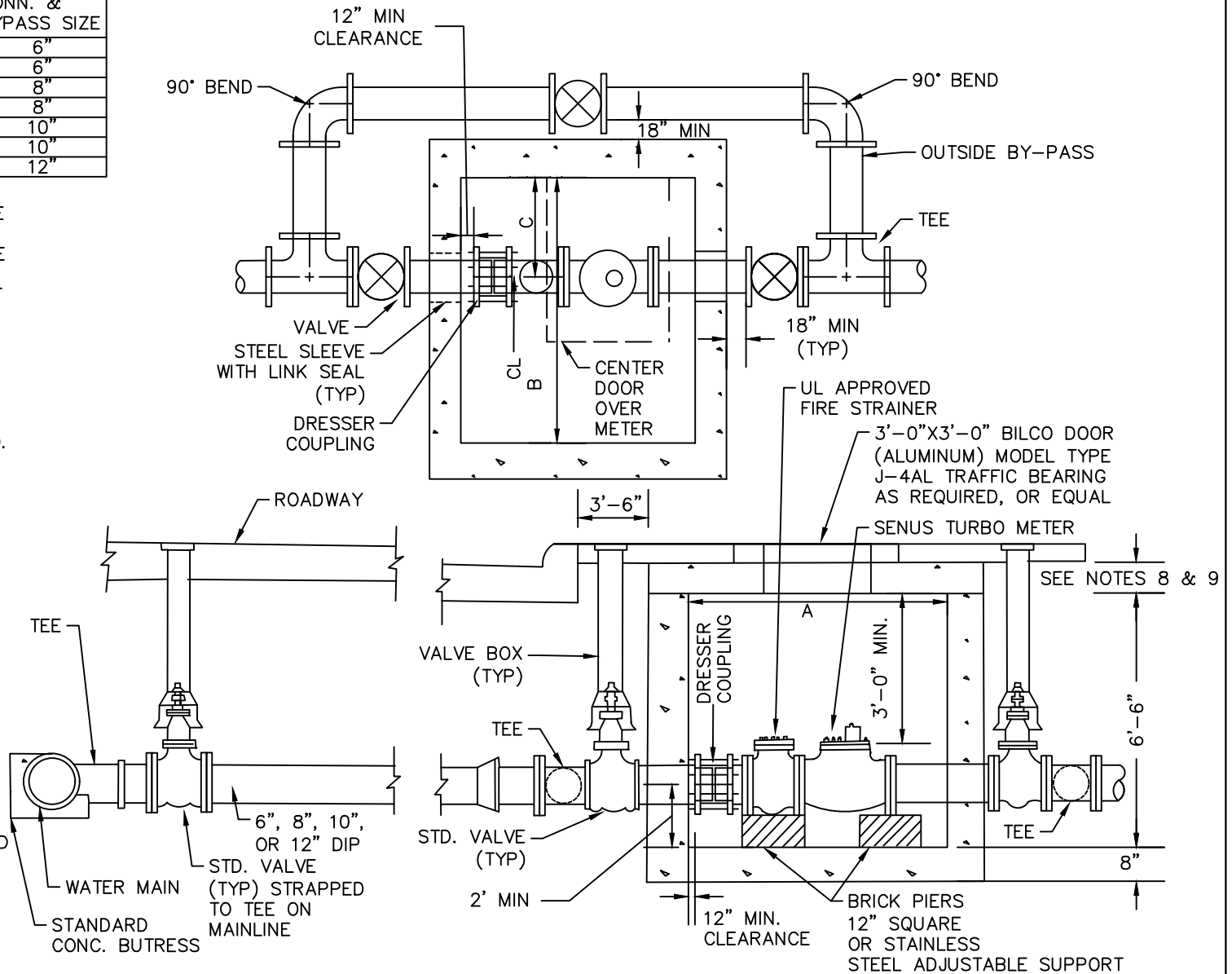
1. ALL LIDS TO BE LABELED WATER METER AND MUST HAVE A 1-3/4" HOLE TO ACCOMMODATE TOUCHREAD METER INSTALLATION.
2. PLACE 1/2" PREMOLDED BITUMINOUS JOINT FILLER BETWEEN CONCRETE AND METER FRAME.
3. METER SHALL BE FURNISHED AND INSTALLED BY A.A. COUNTY.
4. FLANGED ANGLE METER SHALL HAVE METER SUPPORT BRACKETS.
5. ACQUIRE AND INSTALL METER CASING FROM A.A.A COUNTY METER SECTION BEFORE ASSEMBLING CUSTOM SETTER.
6. 3" LONG METER ADAPTER REQUIRED FOR 2" METER MUST BE FACTORY ASSEMBLED.
7. FLANGED ANGLE METER VALVE AND DUAL CHECK TO BE DRILLED FOR 2" METER.

ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED	STANDARD WATER DETAILS STANDARD INSTALLATION OF 2" METERED WATER SUPPLY SERVICE (2" METER)	REVISED	W 26
	_____		04/2024	
	CHIEF ENGINEER		_____	
	_____		_____	
	DATE:			

METER SIZE	DIMENSION			CONN. & BYPASS SIZE
	A	B	C	
4"	7'0"	5'0"	2'0"	6"
6"	8'0"	5'0"	2'0"	6"
6"	8'0"	5'0"	2'0"	8"
8"	9'0"	5'0"	2'0"	8"
8"	9'0"	5'0"	2'0"	10"
10"	9'0"	5'0"	2'0"	10"
10"	9'0"	7'0"	2'0"	12"

NOTES:

1. PRECAST VAULT SHALL MEET THE REQUIREMENTS OF ASTM C913.
2. ALL PIPE AND FITTINGS SHALL BE D.I. CLASS 53, MECHANICAL JOINT, EXCEPT WITHIN THE VAULT WHICH SHALL BE FLANGED UNLESS OTHERWISE STATED.
3. CONSTRUCTED VAULT WALLS SHALL BE 8" CONCRETE BLOCK, 12" CONCRETE BLOCK IF TRAFFIC BEARING.
4. ALL CONCRETE SHALL BE MIX NO. 3.
5. ALL VALVES SHALL HAVE STANDARD VALVE BOX.
6. METER TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
7. APPLY DAMPROOFING TO EXTERIOR SURFACES OF VAULT. SEE SECTION 07100 OF SPECIFICATIONS.
8. STANDARD TOP SHALL BE REINFORCED CONCRETE 6" THICK WITH 5/8" BARS EACH WAY 6" O.C. 2" FROM BOTTOM.
9. TRAFFIC BEARING TOP SHALL BE REINFORCED CONCRETE 8" THICK WITH 3/4" BARS EACH WAY 6" O.C. 3" FROM BOTTOM.
10. ALL PIPE JOINTS, FITTINGS, AND CONNECTIONS MUST BE INSTALLED MINIMUM 12" FROM VAULT INSIDE WALL TO FACILITATE REPAIRS.

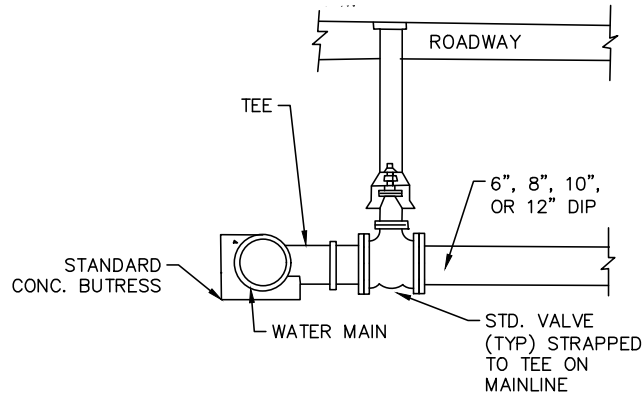


ANNE ARUNDEL COUNTY DEPARTMENT OF PUBLIC WORKS	APPROVED _____ CHIEF ENGINEER	STANDARD WATER DETAILS STANDARD INSTALLATION 4" OR LARGER DOMESTIC OR FIRE SUPPLY SERVICE	REVISED 04/2024	W 28
	_____ DESIGN ENGINEER		_____	
	DATE:		_____	
	_____		_____	
	_____		_____	

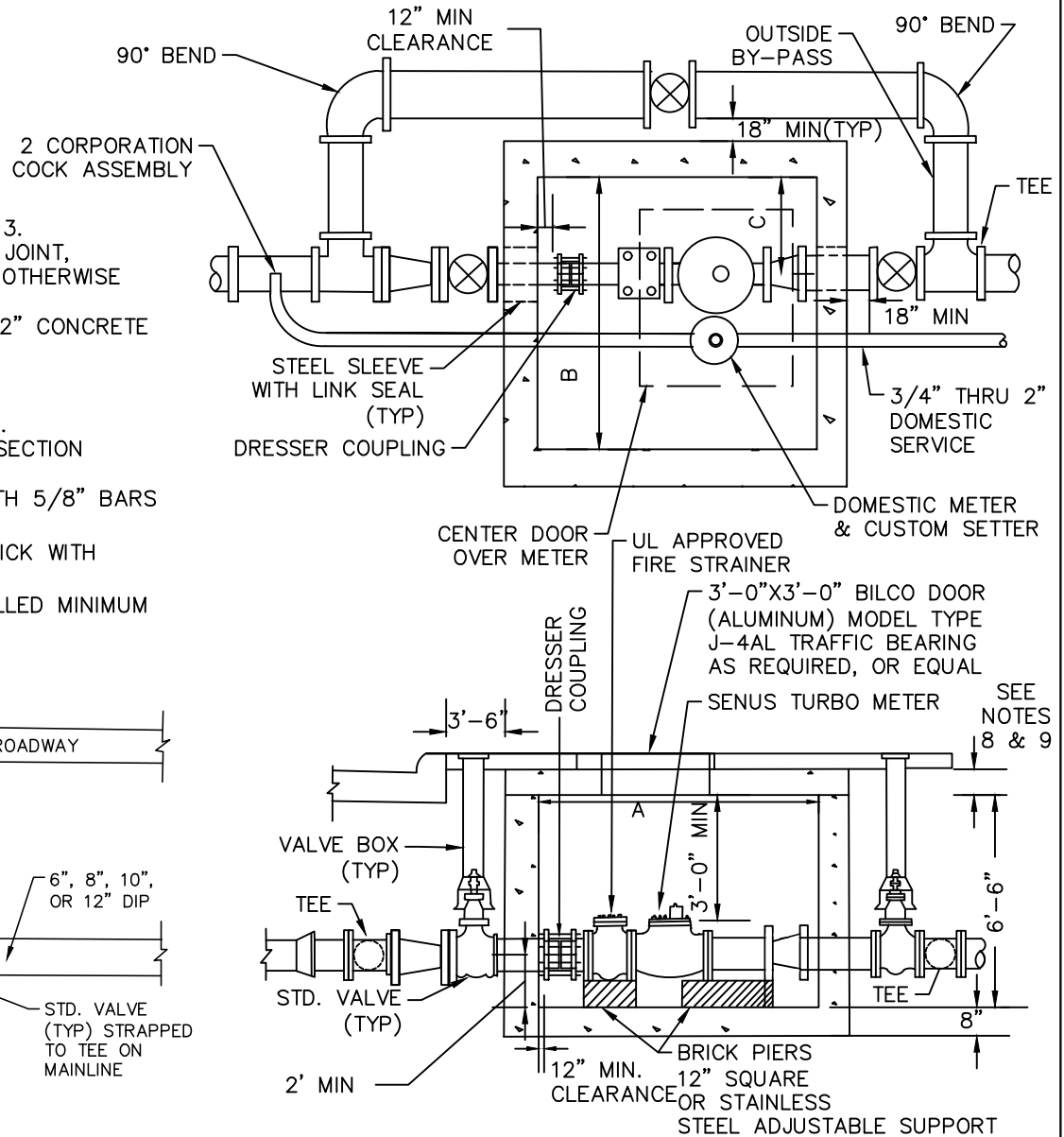
METER SIZE	DIMENSION			CONN. & BYPASS SIZE
	A	B	C	
4"	7'0"	5'0"	2'0"	6"
6"	8'0"	5'0"	2'0"	6"
6"	8'0"	5'0"	2'0"	8"
8"	9'0"	5'0"	2'0"	8"
8"	9'0"	5'0"	2'0"	10"
10"	9'0"	5'0"	2'0"	10"
10"	9'0"	7'0"	2'0"	12"

NOTES:

1. PRECAST VAULT SHALL MEET THE REQUIREMENTS OF ASTM C913.
2. ALL PIPE AND FITTINGS SHALL BE D.I. CLASS 53, MECHANICAL JOINT, EXPECT WITHIN THE VAULT WHICH SHALL BE FLANGED UNLESS OTHERWISE STATED.
3. CONSTRUCTED VAULT WALLS SHALL BE 8" CONCRETE BLOCK, 12" CONCRETE BLOCK IF TRAFFIC BEARING.
4. ALL CONCRETE SHALL BE MIX NO. 3.
5. ALL VALVES SHALL HAVE STANDARD VALVE BOX.
6. METER TO BE FURNISHED AND INSTALLED BY THE CONTRACTOR.
7. APPLY DAMPROOFING TO EXTERIOR SURFACES OF VAULT. SEE SECTION 07100 OF SPECIFICATIONS.
8. STANDARD TOP SHALL BE REINFORCED CONCRETE 6" THICK WITH 5/8" BARS EACH WAY 6" O.C. 2" FROM BOTTOM.
9. TRAFFIC BEARING TOP SHALL BE REINFORCED CONCRETE 8" THICK WITH 3/4" BARS EACH WAY 6" O.C. 3" FROM BOTTOM.
10. ALL PIPE JOINTS, FITTINGS, AND CONNECTIONS MUST BE INSTALLED MINIMUM 12" FROM VAULT INSIDE WALL TO FACILITATE REPAIRS.
11. DOMESTIC METER SHALL HAVE PRIOR APPROVAL FROM DPW.



NOTE:  
DOMESTIC LINE NOT SHOWN IN ELEVATION



ANNE ARUNDEL  
COUNTY  
DEPARTMENT OF  
PUBLIC WORKS

APPROVED

\_\_\_\_\_  
CHIEF ENGINEER

\_\_\_\_\_  
DESIGN ENGINEER

DATE:

STANDARD WATER DETAILS  
STANDARD INSTALLATION 3/4" METERED  
DOMESTIC SERVICE (TWIN SETTING)

REVISED

04/2024

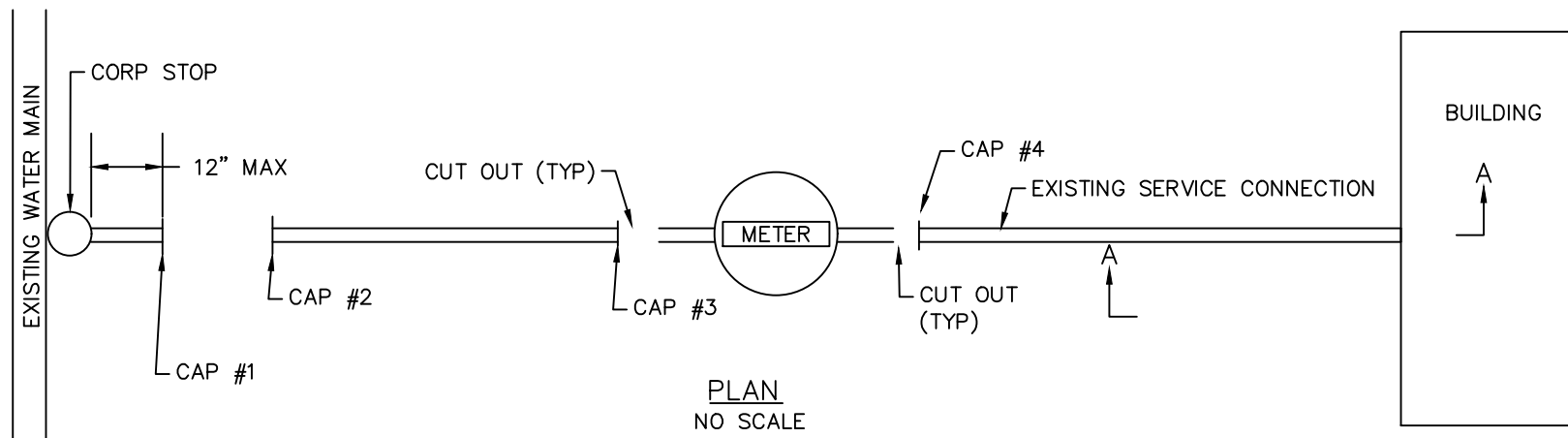
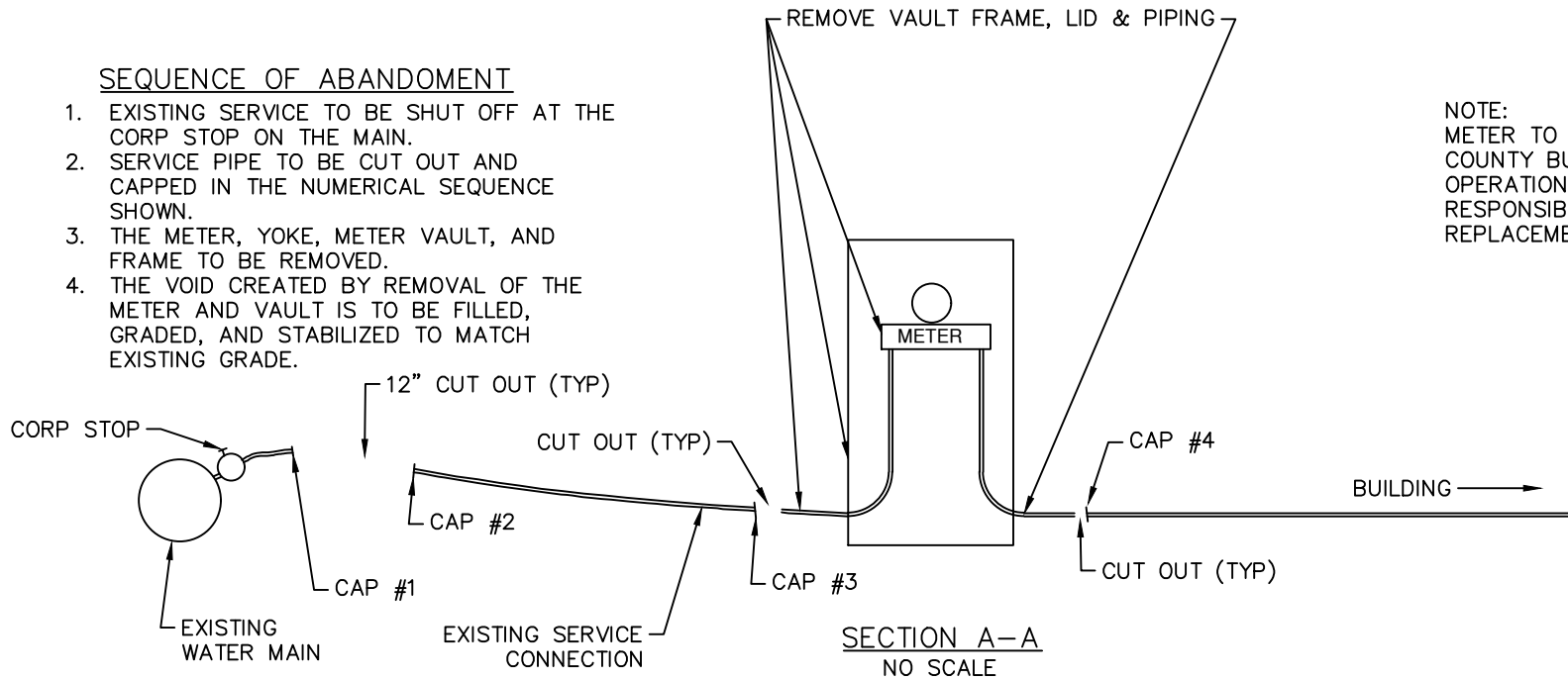
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SEQUENCE OF ABANDONMENT

1. EXISTING SERVICE TO BE SHUT OFF AT THE CORP STOP ON THE MAIN.
2. SERVICE PIPE TO BE CUT OUT AND CAPPED IN THE NUMERICAL SEQUENCE SHOWN.
3. THE METER, YOKE, METER VAULT, AND FRAME TO BE REMOVED.
4. THE VOID CREATED BY REMOVAL OF THE METER AND VAULT IS TO BE FILLED, GRADED, AND STABILIZED TO MATCH EXISTING GRADE.

NOTE:  
METER TO BE SALVAGED TO A.A. COUNTY BUREAU OF UTILITY OPERATIONS. CONTRACTOR IS RESPONSIBLE FOR METER REPLACEMENT IF DAMAGED.



ANNE ARUNDEL  
COUNTY  
DEPARTMENT OF  
PUBLIC WORKS

APPROVED  
\_\_\_\_\_  
CHIEF ENGINEER  
\_\_\_\_\_  
DESIGN ENGINEER  
DATE:

STANDARD WATER DETAILS  
ABANDONMENT OF EXISTING  
WATER SERVICE CONNECTION

REVISED  
04/2024  
\_\_\_\_\_  
\_\_\_\_\_

W  
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