

NOTES:

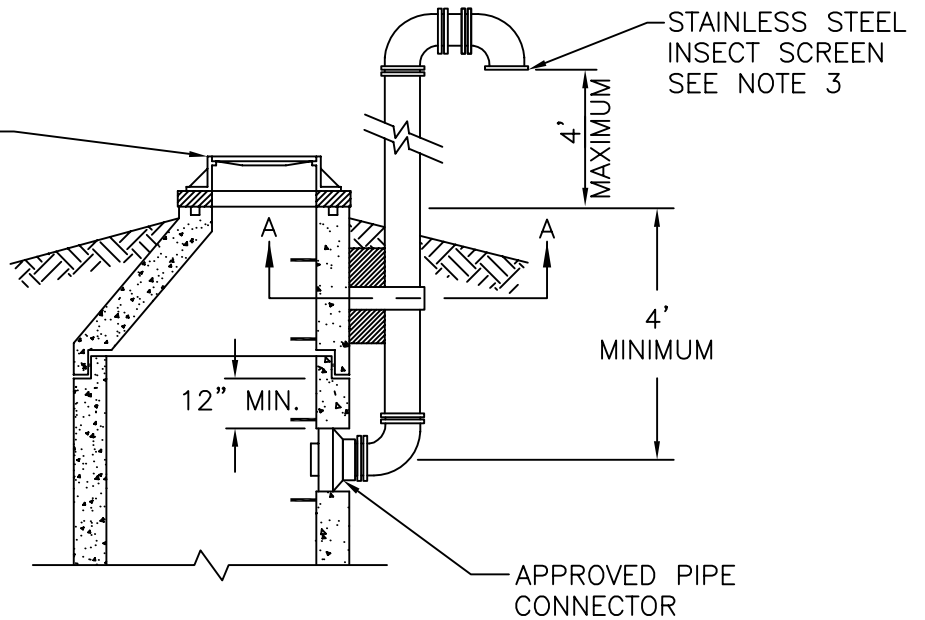
1. INSTALL MANHOLE ON COMPETENT SUBGRADE AND BEDDING MATERIAL PER FIGURE G-6.
2. CHANNEL TO BE CLASS B2 CONCRETE OR BETTER PER LOUDOUN WATER'S APPROVED MATERIALS LIST. DEPTH OF CHANNEL SHALL BE 70% OF THE PIPELINE'S DIAMETER. SLOPE BENCH TO CHANNEL AT 1" PER 1'. APPLY HARD TROWEL FINISH TO CHANNEL AND BRUSH FINISH TO BENCH.
3. MAXIMUM ADJUSTMENT BY GRADE RINGS IS 12" IN PAVEMENT AND 6" ELSEWHERE.
4. WHERE WATERTIGHT COVER IS SPECIFIED, PROVIDE APPROVED CHIMNEY SEAL.
5. OUTSIDE PAVEMENT BOLT FRAME TO CONE.
6. A MINIMUM 6" SEPARATION IS REQUIRED BETWEEN PIPE PENETRATIONS (CORES). CORES MUST BE AT LEAST 6" FROM MANHOLE JOINTS.
7. COMPONENTS SHALL BE REINFORCED TO MEET ASTM 478/AASHTO M199.
8. JOINTS TO BE GASKETED IN ACCORDANCE WITH ASTM C443. APPLY PROPER LUBRICANT FOR ASSEMBLY.
9. APPROVED SHOP DRAWINGS ARE REQUIRED FOR STRUCTURES CONTAINING A REDUCING SLAB.
10. ALL COMPONENTS TO BE PER LOUDOUN WATER'S APPROVED MATERIALS LIST.

APR.
2017

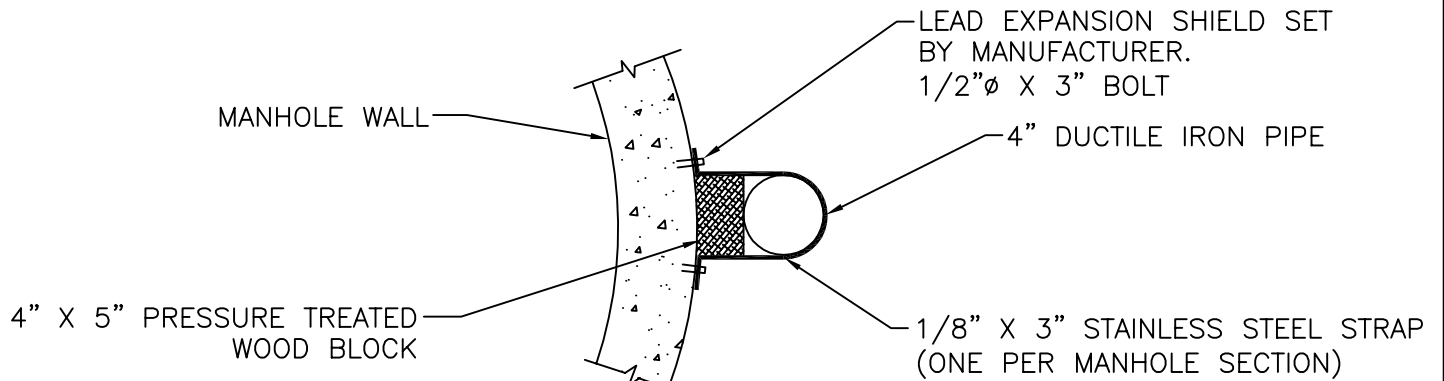
MANHOLE

S-1

WATERTIGHT FRAME AND COVER,
ANCHORED TO CONE.
SET TOP 1' ABOVE GRADE WITH
POSITIVE DRAINAGE.



ELEVATION



SECTION A-A

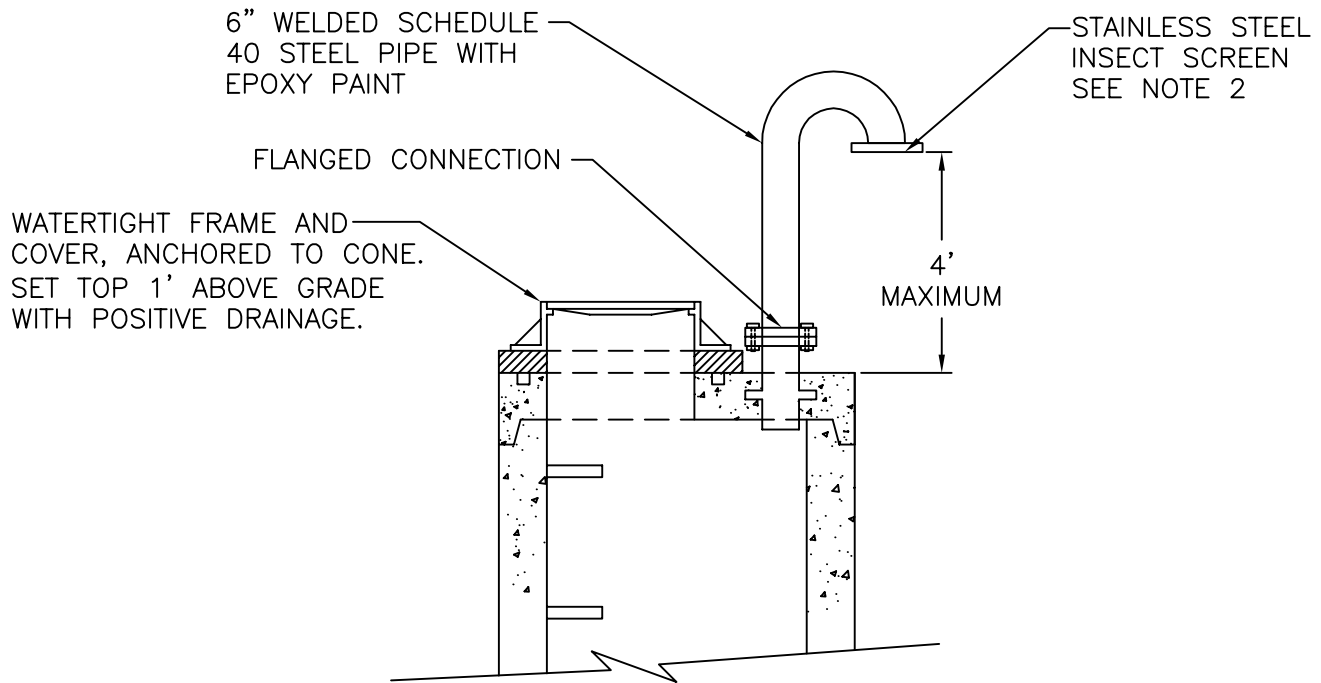
NOTES:

1. CORE TO BE 12" MINIMUM FROM MANHOLE JOINT.
2. PIPE TO BE 4" DUCTILE IRON WITH FLANGED FITTINGS. ABOVE GRADE APPLY EPOXY PAINT TO VENT PIPING.
3. WHERE VENT IS BELOW THE 100-YEAR FLOOD ELEVATION, INSTALL APPROVED BALL FLOAT CHECK VALVE.
4. ALL COMPONENTS TO BE IN ACCORDANCE WITH LOUDOUN WATER'S APPROVED MATERIALS LIST.

APR.
2010

SIDE VENT FOR MANHOLE

S-2



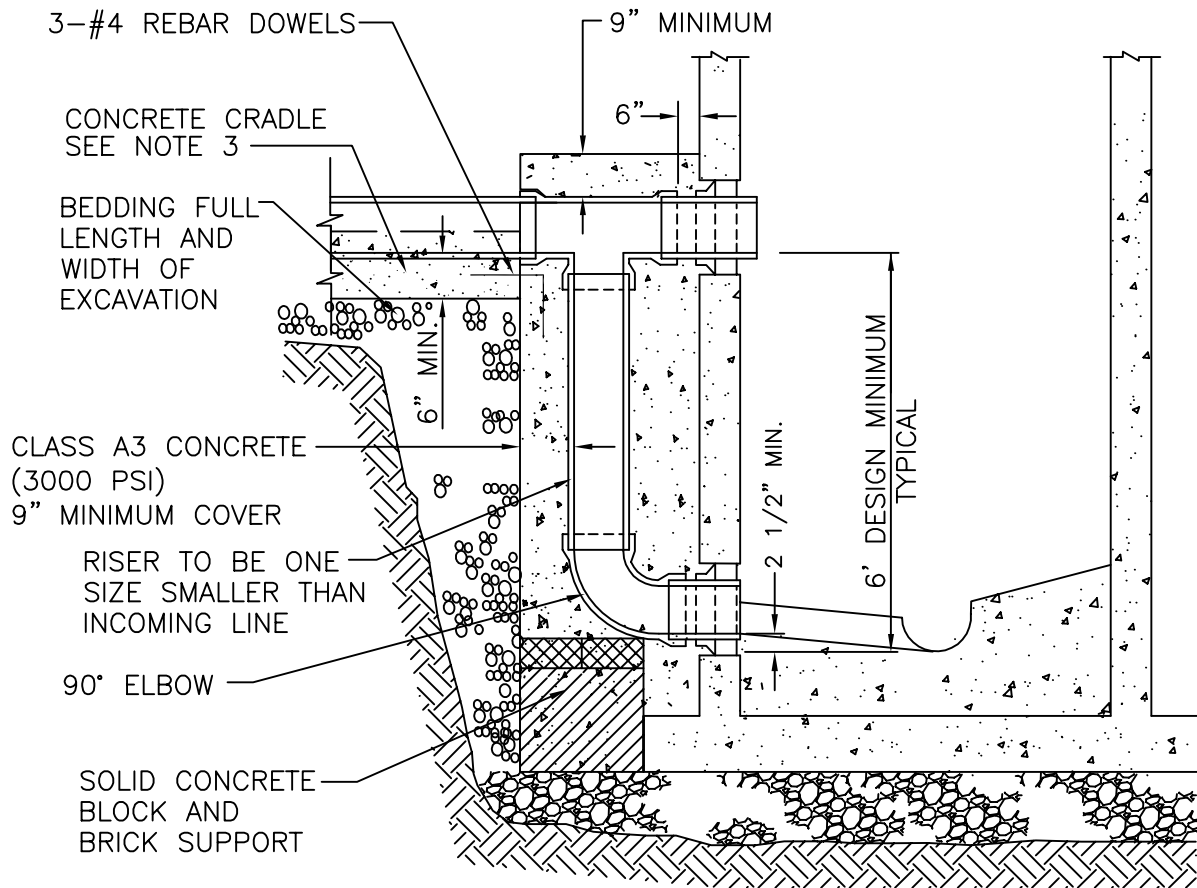
NOTES:

1. PROVIDE FLANGE X PLAIN END 6" STEEL WALL PIPE, CAST INTO MANHOLE TOP.
2. WHERE VENT PIPE IS BELOW THE 100-YEAR FLOOD ELEVATION, INSTALL APPROVED BALL FLOAT CHECK VALVE.
3. ALL COMPONENTS TO BE IN ACCORDANCE WITH LOUDOUN WATER'S APPROVED MATERIALS LIST.

APR.
2010

TOP VENT FOR MANHOLE

S-3



NOTES:

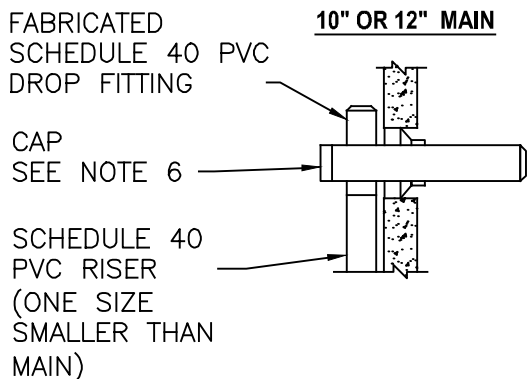
1. INCOMING LINE TO HAVE 2.0% MAXIMUM SLOPE.
2. MANHOLE PENETRATIONS TO BE BY CORE AND APPROVED PIPE CONNECTOR. CORE IS TO BE AT LEAST ONE FOOT CLEAR OF MANHOLE JOINT.
3. EXTEND CONCRETE CRADLE A MINIMUM OF 4' ONTO UNDISTURBED TRENCH BOTTOM.
4. ALL COMPONENTS TO BE IN ACCORDANCE WITH LOUDOUN WATER'S APPROVED MATERIALS LIST.

APR.
2010

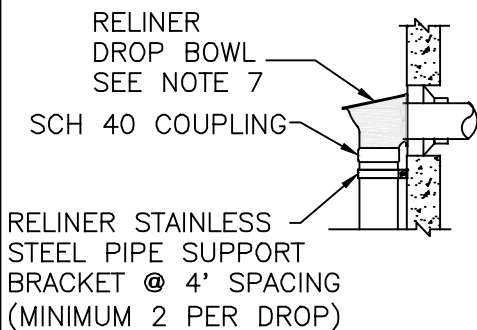
OUTSIDE DROP CONNECTION

S-4

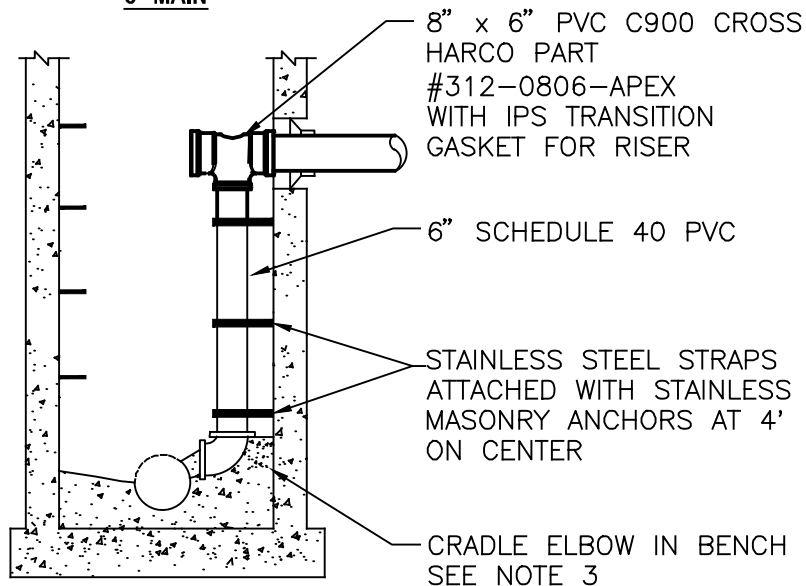
10" OR 12" MAIN



4" OR 6" SERVICE



8" MAIN



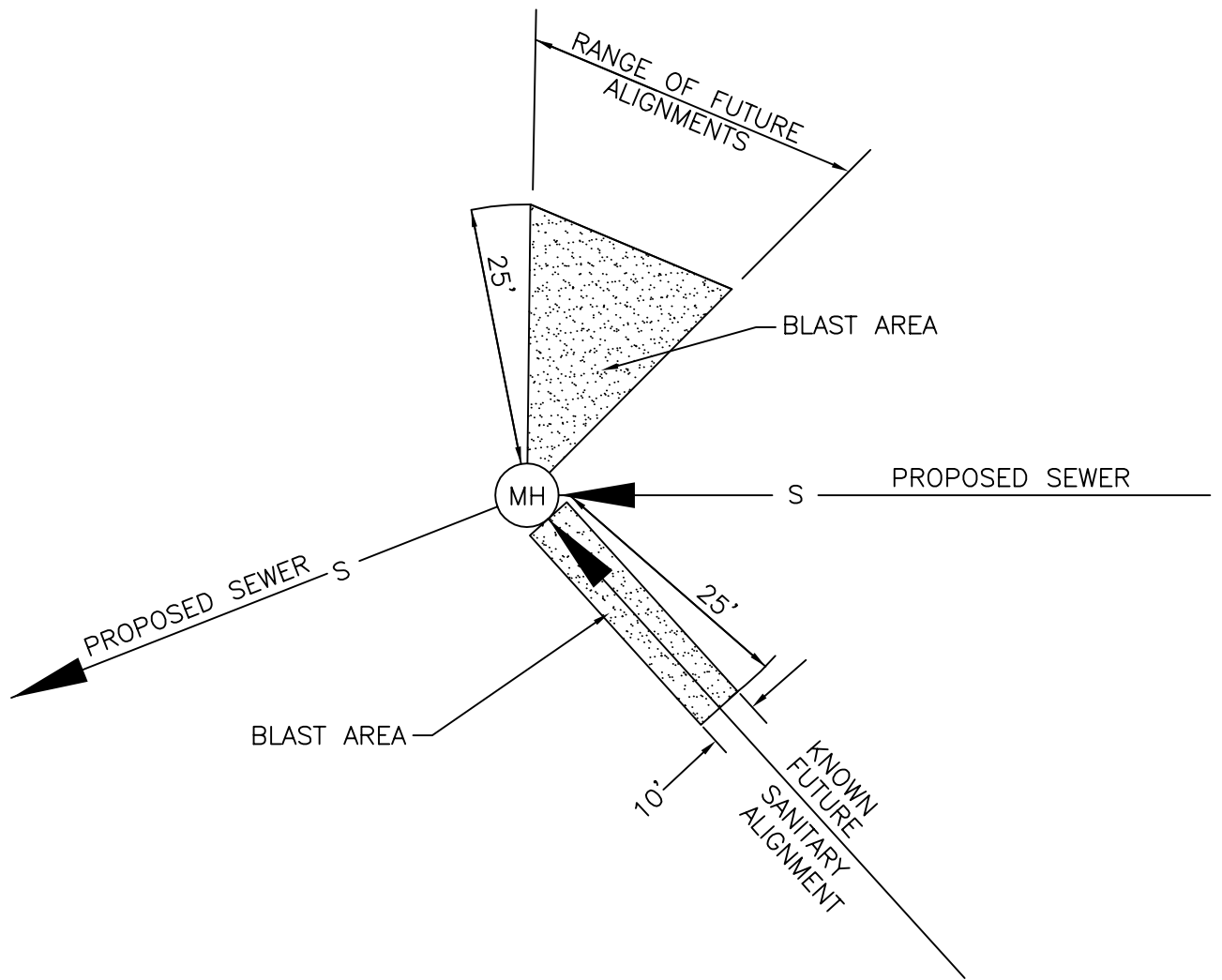
NOTES:

1. INSIDE DROP CONNECTION SHALL NOT BE USED, EXCEPT WHERE APPROVED BY LOUDOUN WATER FOR THE SPECIFIC APPLICATION.
2. MAXIMUM SLOPE OF INCOMING LINE IS 2.0%.
3. THE ELBOW AT THE BOTTOM OF THE STACK MAY BE EITHER A 45 OR 90-DEGREE BEND, TURNED IN THE DIRECTION OF FLOW. CONSTRUCT CHANNEL TO CONFORM TO THE MANHOLE BENCH.
4. MANHOLE PENETRATIONS TO BE BY CORE BORE AND APPROVED PIPE CONNECTOR. CORE IS TO BE AT LEAST 1' CLEAR OF MANHOLE JOINT.
5. ALL COMPONENTS TO BE IN ACCORDANCE WITH LOUDOUN WATER'S APPROVED MATERIALS LIST.
6. THE CAP SHALL BE SECURED TO THE DROP CONNECTION FITTING WITH 2' OF STAINLESS STEEL CHAIN, SECURED WITH STAINLESS MACHINE SCREWS, NUTS, AND WASHERS. THE PIPE SHALL BE BEVELED TO ACCEPT THE CAP.
7. WHERE INCOMING LINE IS TO BE UNDER PRESSURE INSTALL OPTIONAL HOOD FROM RELINER.

NOV.
2017

INSIDE DROP CONNECTION

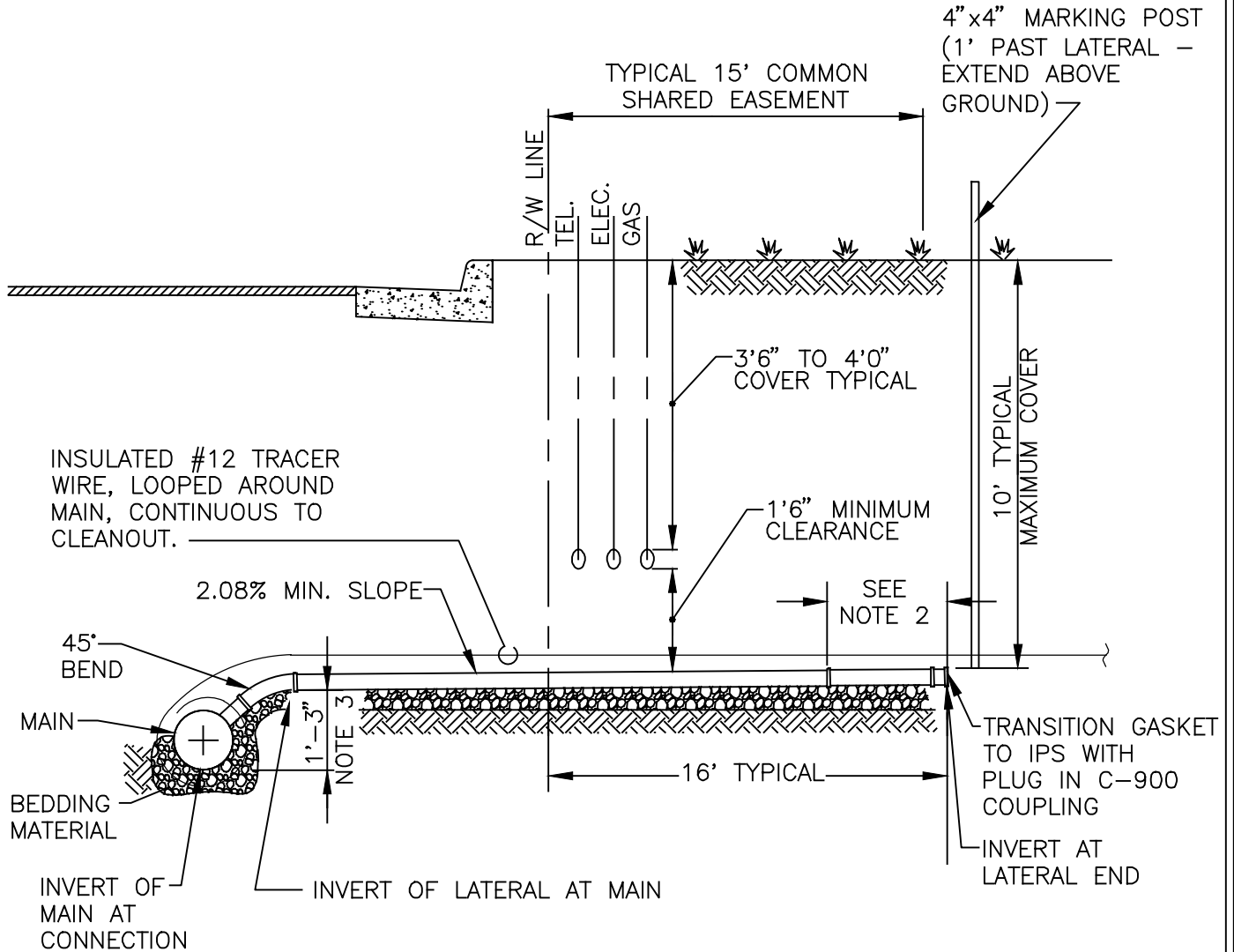
S-5



APR.
2010

ADVANCE BLASTING

S-7



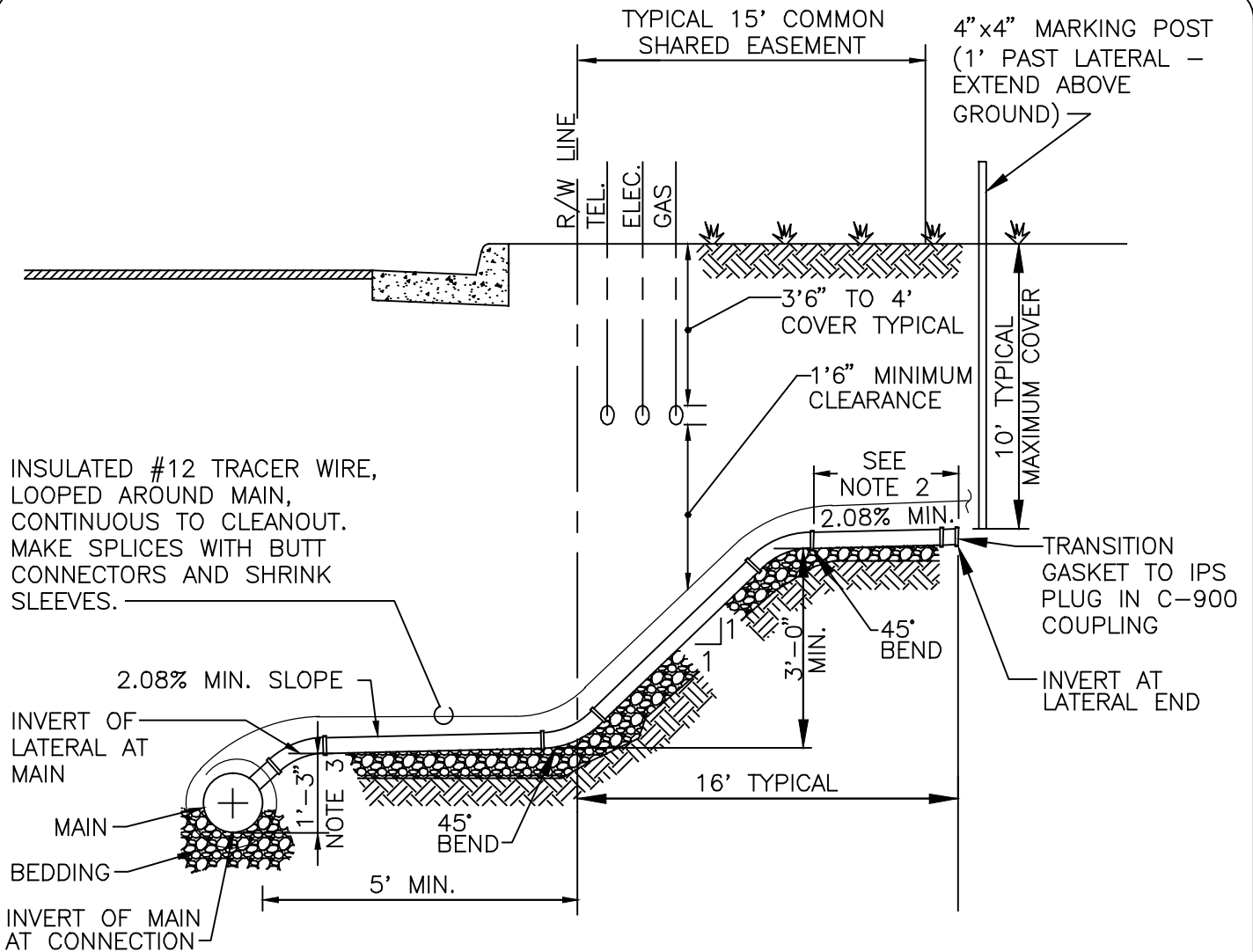
NOTES:

1. LATERAL MUST RECEIVE INSPECTION AND APPROVAL FROM LOUDOUN WATER PRIOR TO BACKFILL.
2. COUPLING TO BE A MINIMUM OF 5' FROM LAST PIPE JOINT.
3. DIMENSION BASED ON 8" DIAMETER MAIN. ADD FOR LARGER MAINS.
4. ALL MATERIALS MUST CONFORM TO LOUDOUN WATER'S APPROVED MATERIALS LIST.

OCT.
2016

LATERAL

S-10



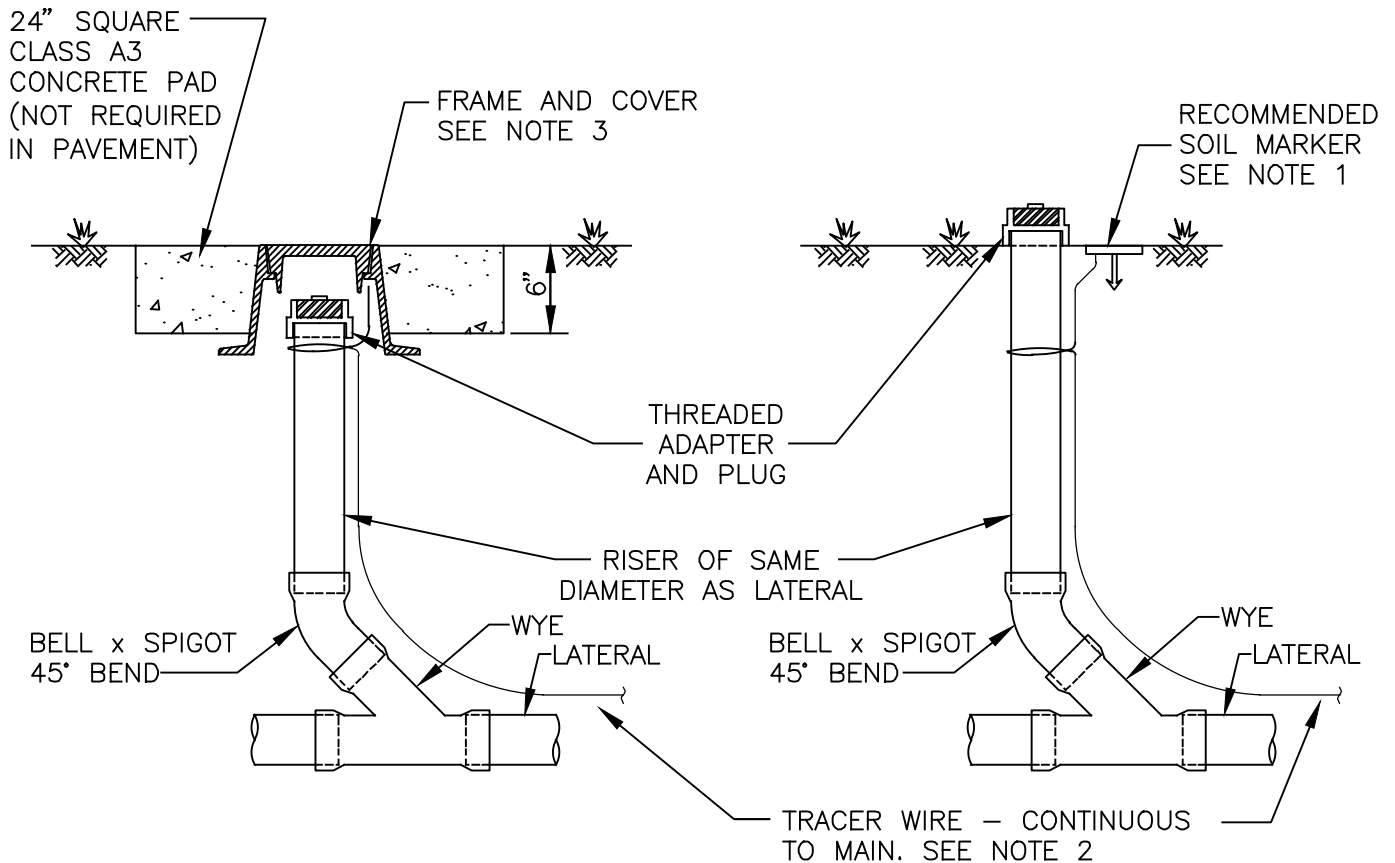
NOTES:

1. ALL LATERAL MUST RECEIVE INSPECTION AND APPROVAL FROM LOUDOUN WATER PRIOR TO BACKFILL.
2. COUPLING TO BE A MINIMUM OF 5' FROM LAST PIPE JOINT.
3. DIMENSION BASED ON 8" DIAMETER MAIN. ADD FOR LARGER MAINS.
4. ALL MATERIALS MUST CONFORM TO LOUDOUN WATER'S APPROVED MATERIALS LIST.

OCT.
2016

LATERAL WITH VERTICAL BENDS

S-11



COMMERCIAL AND MULTIFAMILY APPLICATIONS OR WITHIN PAVEMENT

SINGLE FAMILY RESIDENTIAL APPLICATIONS NOT WITHIN PAVEMENT

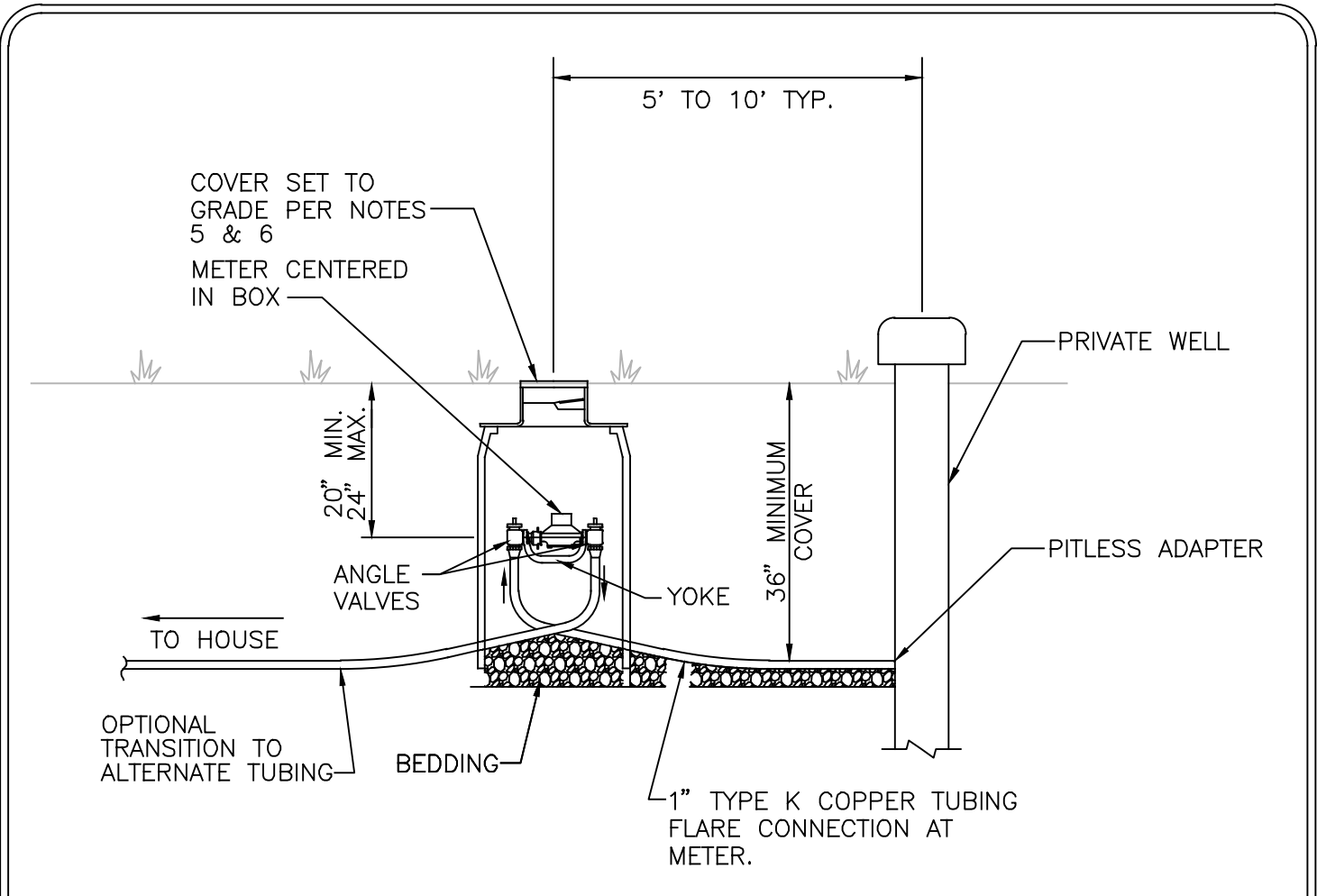
NOTES:

1. TERMINATE TRACER WIRE WITH CLEANOUT THAT IS WITHIN 5' OF BUILDING'S EXTERIOR. TERMINATE TRACER WIRE ABOVE GRADE IN AN ACCESSIBLE LOCATION, WHERE PROTECTED FROM DAMAGE. IF NOT USING IRON FRAME AND COVER, LOUDOUN WATER RECOMMENDS GREEN SOILMARKER™ BY RHINO MARKING AND PROTECTION SYSTEMS OR TRACER WIRE ACCESS BOX BY DRAINAGE AND WATER SOLUTIONS.
2. TRACER WIRE TO BE #12 AWG SOLID COPPER WITH 45 MIL POLYETHYLENE INSULATION. AT TEMPORARY TERMINATION OF LATERAL BY UTILITY CONTRACTOR, MAKE SPLICE WITH BUTT CONNECTOR AND SHRINK SLEEVE. NO OTHER SPLICES PERMITTED.
3. ALL MATERIALS MUST CONFORM TO LOUDOUN WATER'S APPROVED MATERIALS LIST.

OCT.
2016

SANITARY CLEANOUT

S-12



NOTES:

1. THIS STANDARD DETAIL FOR USE ON ALL NEW HOME CONSTRUCTION. LOCATE METER AS APPROVED BY LOUDOUN WATER. FOR COMMERCIAL INSTALLATIONS, METER MAY BE LOCATED INDOORS OR OUTDOORS.
2. METER MUST BE INSTALLED BEFORE SANITARY LATERAL IS CONNECTED TO SEWER MAIN.
3. METER FURNISHED AND INSTALLED BY LOUDOUN WATER.
4. LOUDOUN WATER WILL MAINTAIN THE METER ONLY. PIPING FOR MAINTENANCE BY PROPERTY OWNER.
5. AT INITIAL INSTALLATION, ROTATIONAL (ADJUSTABLE) FRAME TO BE IN CENTER OF HEIGHT RANGE.
6. IN SLOPE, PROVIDE TIMBER RETAINING WALL 3' FROM COVER.
7. METER BOX, FRAME & COVER, ANGLE VALVES, AND YOKE MUST CONFORM TO LOUDOUN WATER'S APPROVED MATERIALS LIST. ANGLE VALVES TO HAVE FLARED INLET.

<p>OCT. 2016</p>	<p>WATER METER SETTING – SEWER ONLY ACCOUNTS</p>	<p>S-13</p>
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SANITARY SEWER

ALLOWABLE LEAKAGE PER TWO HOUR TEST		
LENGTH OF PIPE (FT)	DIAMETER OF PIPE (IN)	ALLOWABLE LEAKAGE (GAL/2 HR)
1	4	0.006
1	6	0.009
1	8	0.013
1	10	0.016
1	12	0.019
1	14	0.022
1	16	0.025
1	18	0.028
1	20	0.032
1	24	0.038
1	30	0.047
1	36	0.057
1	42	0.066
1	48	0.076
1	54	0.085
1	60	0.095
1	66	0.104
1	72	0.114

THE ALLOWABLE LEAKAGES LISTED ABOVE ARE FOR GRAVITY SYSTEMS (PIPE AND MANHOLES). FOR PRESSURIZED WASTEWATER LINES, TEST PER W-8.