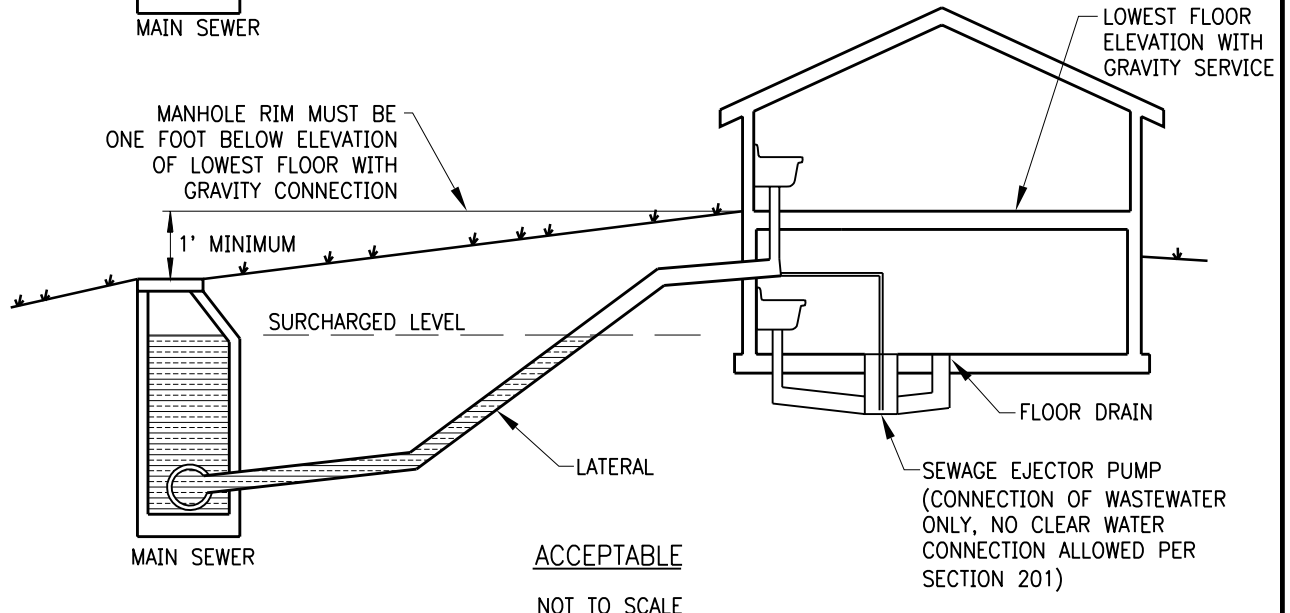
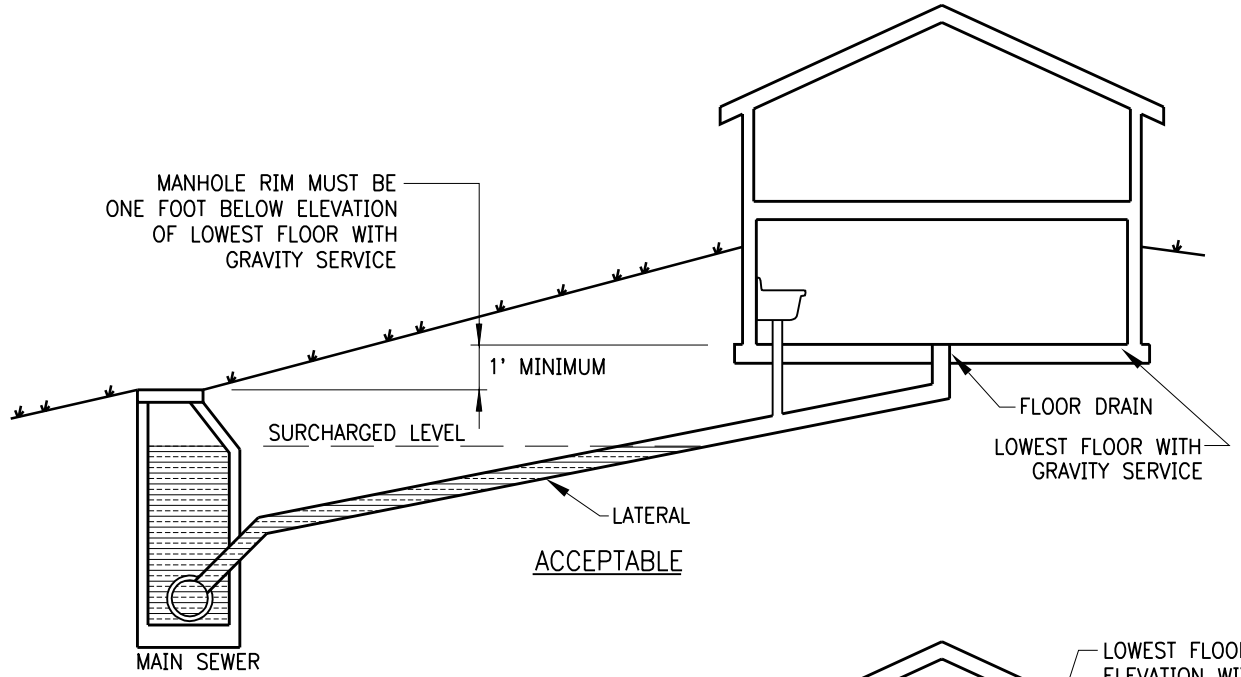
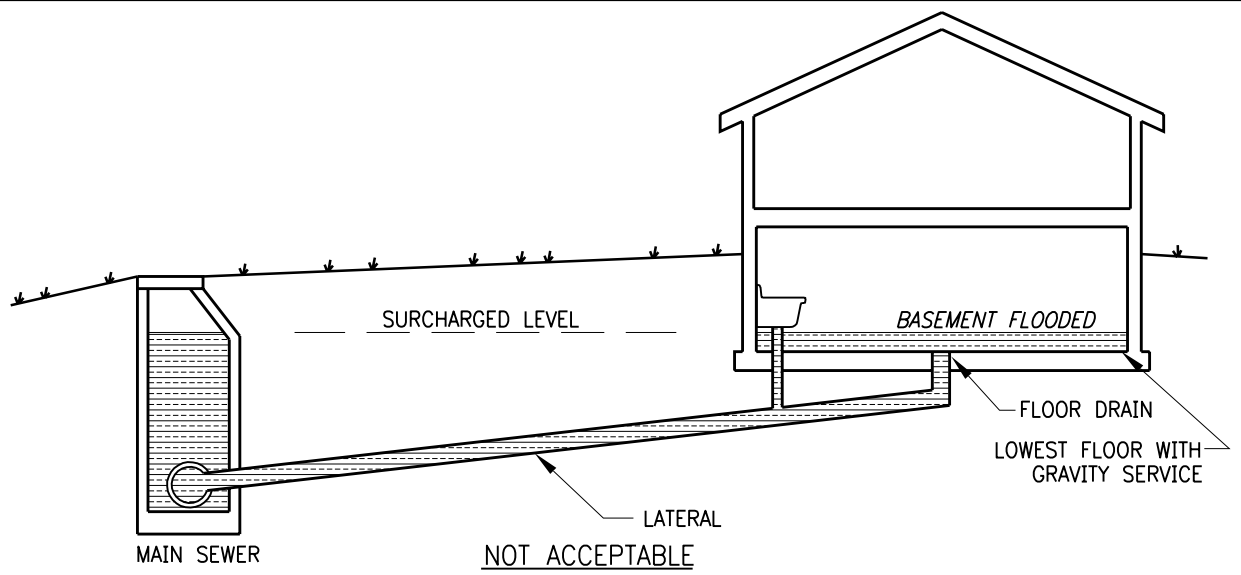


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TERMS USED IN TRENCH DETAILS

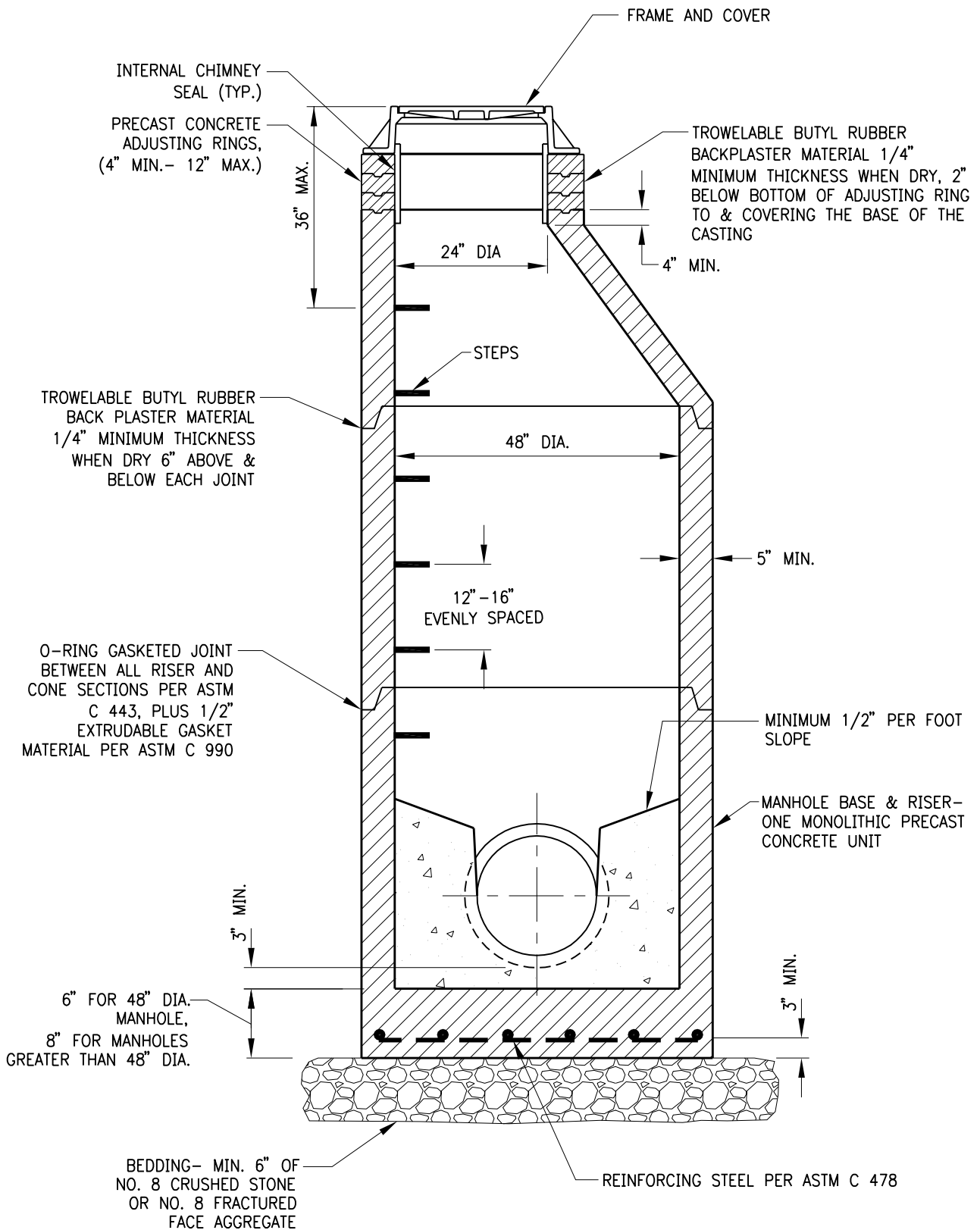
FIGURE 100.01



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 MINIMUM ELEVATIONS FOR GRAVITY CONNECTION

FIGURE 200.01



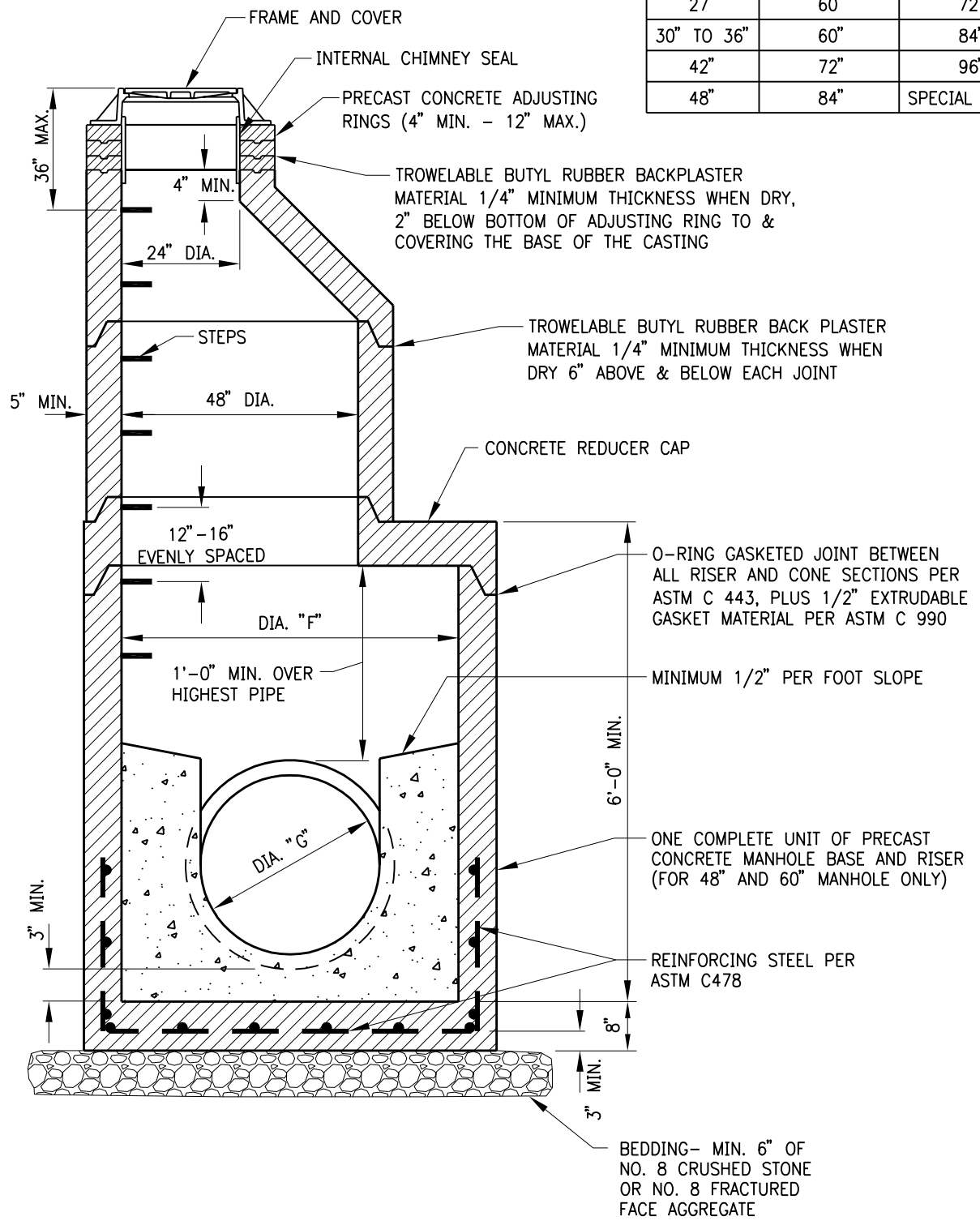
NOT TO SCALE

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STANDARD MANHOLE FOR PIPE SIZES 8" - 24" (STRAIGHT THROUGH)

FIGURE 300.01

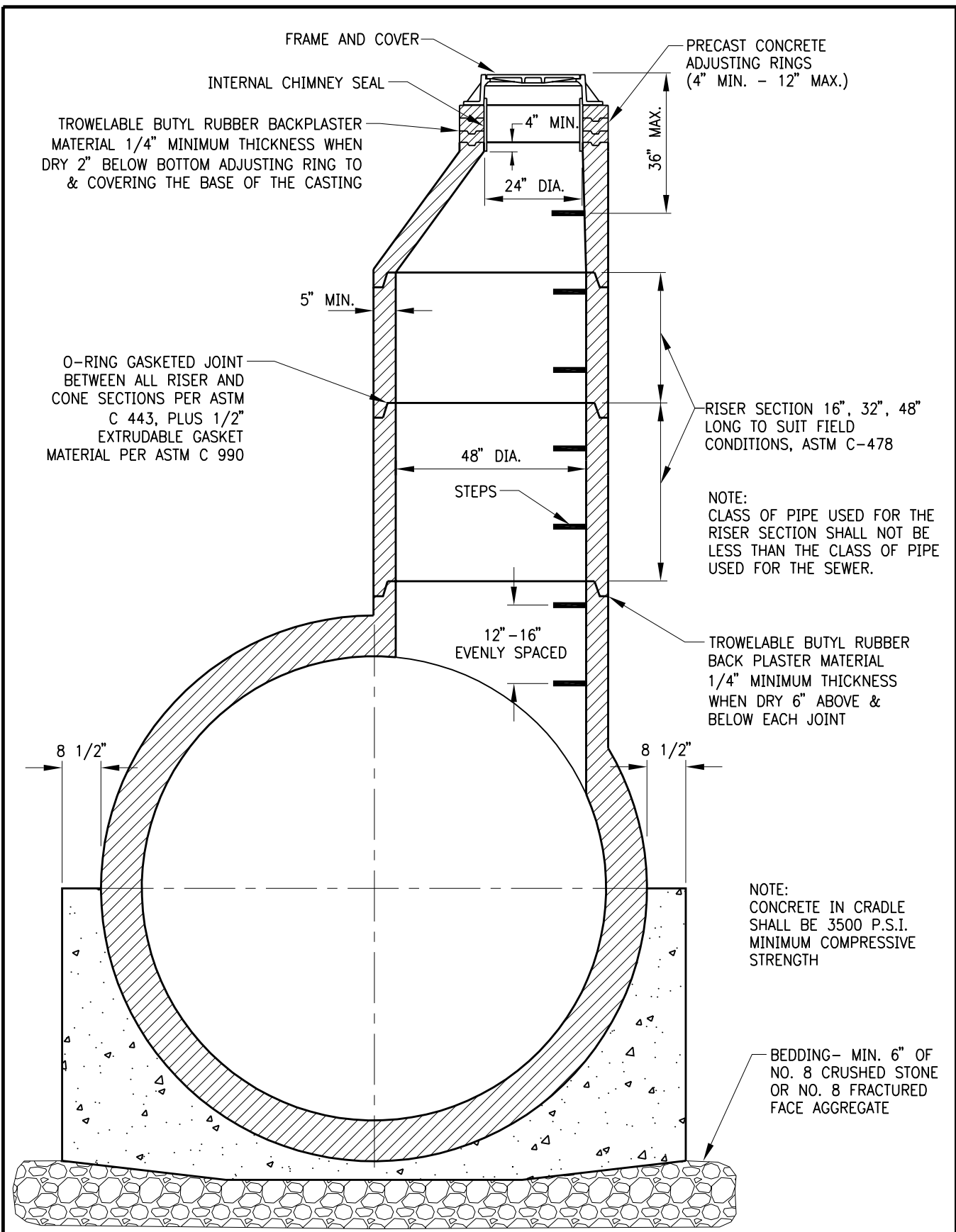
PIPE SIZE "G"	MINIMUM MANHOLE DIAMETERS	
	PIPES ENTERING OR LEAVING AT A 45° ANGLE	PIPES ENTERING OR LEAVING AT A 46° TO A 90° ANGLE
21" TO 24"	48"	60"
27"	60"	72"
30" TO 36"	60"	84"
42"	72"	96"
48"	84"	SPECIAL DESIGN



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 MANHOLE BASE, RISER & REDUCER CAP FOR PIPES 21"-48"

FIGURE 300.02



TROWELABLE BUTYL RUBBER BACKPLASTER MATERIAL 1/4" MINIMUM THICKNESS WHEN DRY 2" BELOW BOTTOM ADJUSTING RING TO & COVERING THE BASE OF THE CASTING

O-RING GASKETED JOINT BETWEEN ALL RISER AND CONE SECTIONS PER ASTM C 443, PLUS 1/2" EXTRUDABLE GASKET MATERIAL PER ASTM C 990

PRECAST CONCRETE ADJUSTING RINGS (4" MIN. - 12" MAX.)

NOTE: CLASS OF PIPE USED FOR THE RISER SECTION SHALL NOT BE LESS THAN THE CLASS OF PIPE USED FOR THE SEWER.

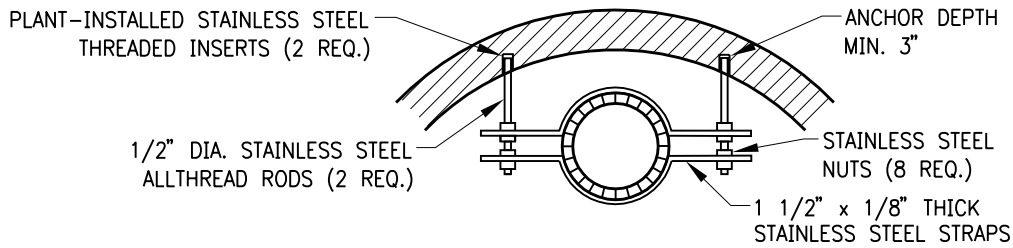
NOTE: CONCRETE IN CRADLE SHALL BE 3500 P.S.I. MINIMUM COMPRESSIVE STRENGTH

BEDDING- MIN. 6" OF NO. 8 CRUSHED STONE OR NO. 8 FRACTURED FACE AGGREGATE

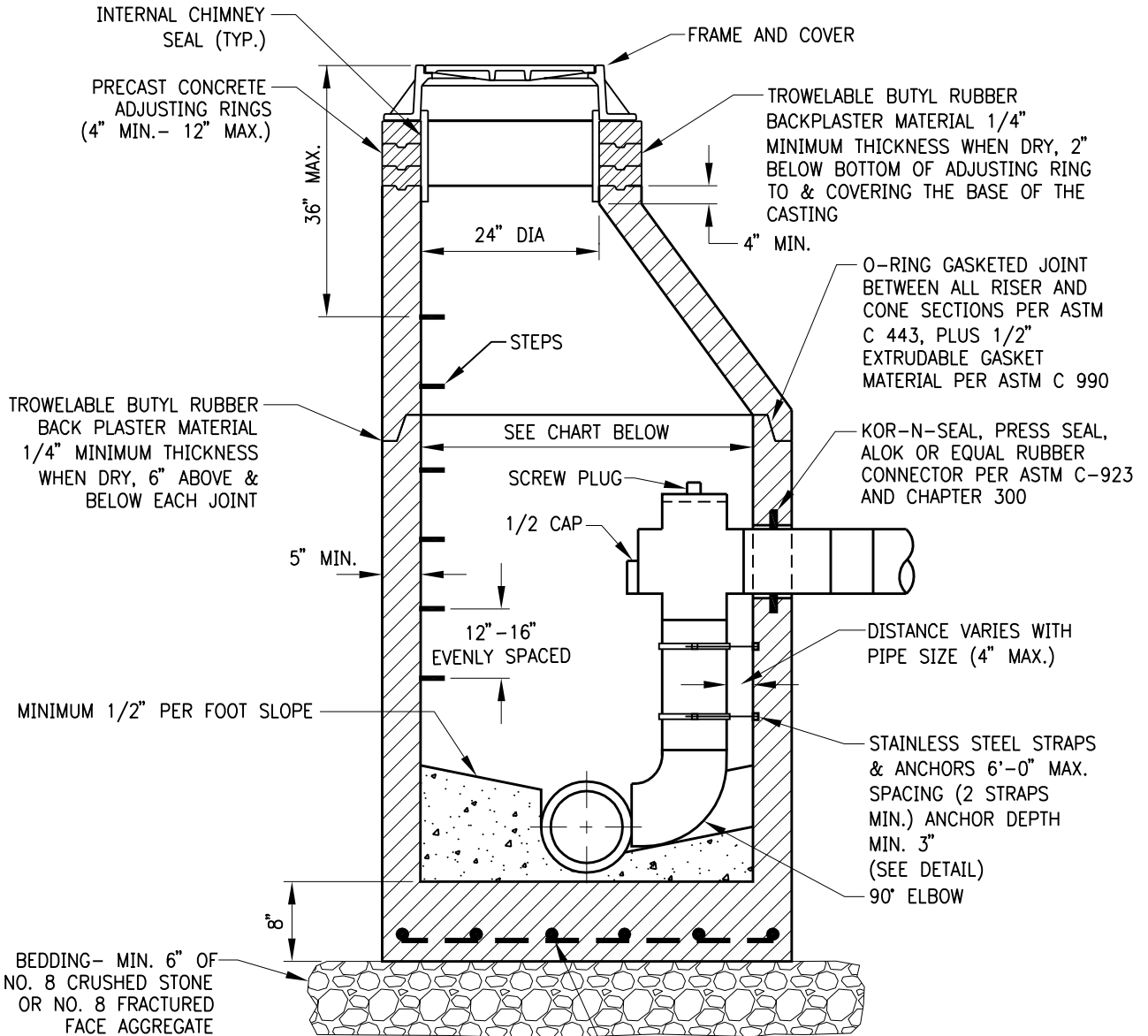
NOT TO SCALE

INDIANAPOLIS DEPARTMENT OF PUBLIC WORKS
SPECIAL MANHOLE, 48"-144" SEWERS

FIGURE 300.03



DROP PIPE ANCHOR DETAIL
TOP VIEW

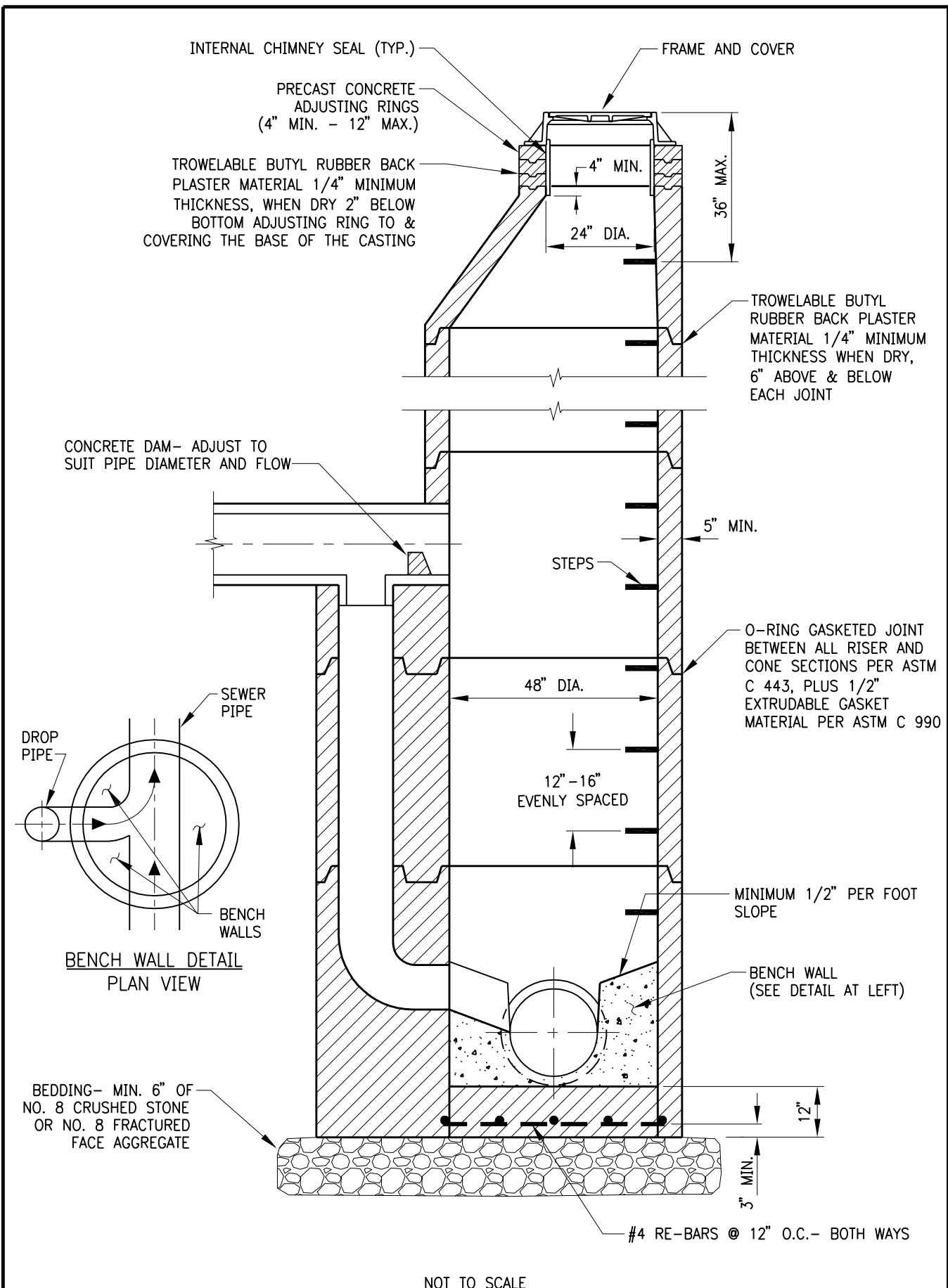


MANHOLE INSIDE DIAMETER		
TOTAL NUMBER OF DROP LINES	PIPE SIZE	INSIDE MANHOLE DIAMETER
1	8"-12"	60"
2 OR 3	8"-12"	72"

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INTERNAL DROP MANHOLE

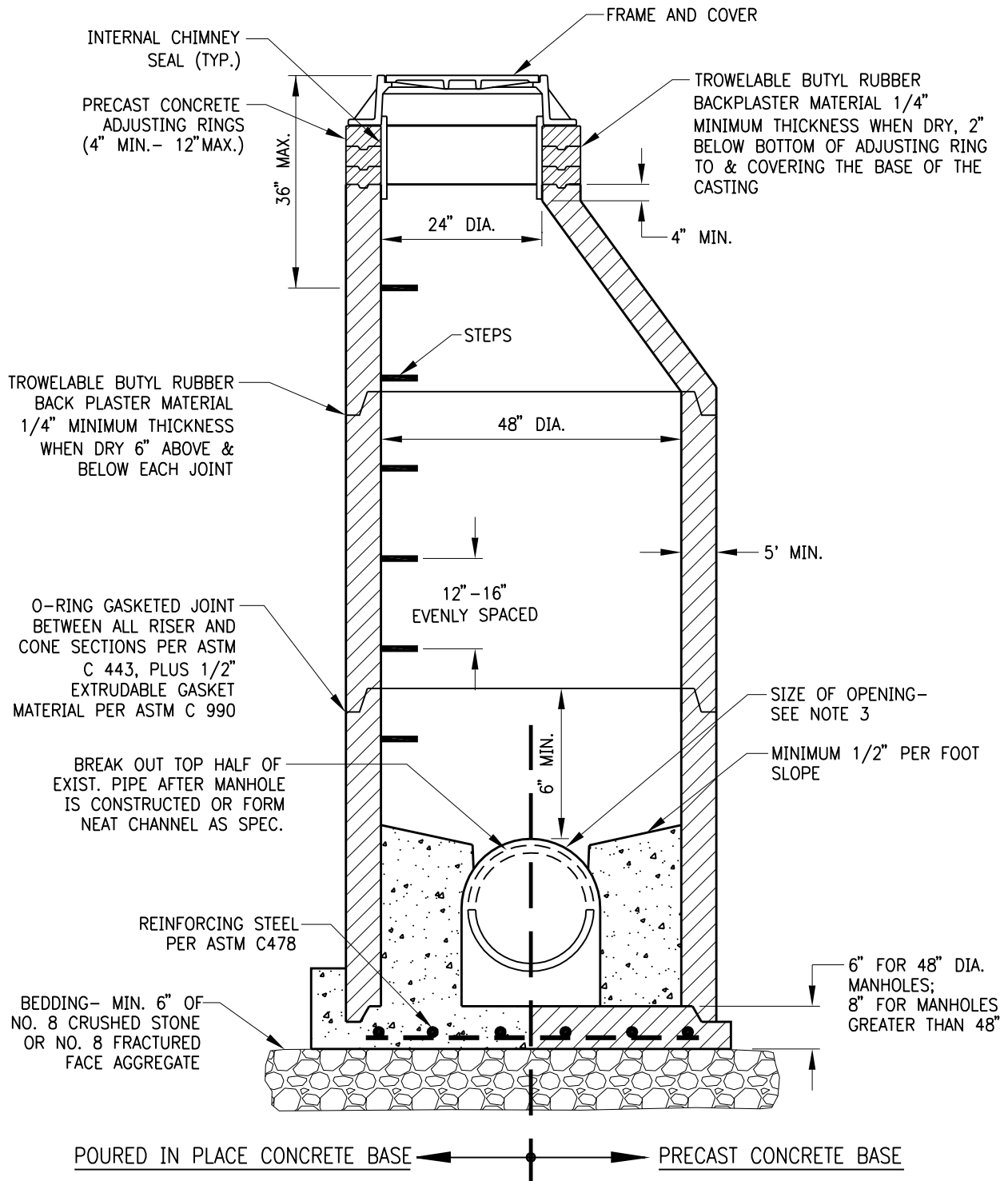
FIGURE 300.04



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INDIANAPOLIS DEPARTMENT OF PUBLIC WORKS
 PRECAST DROP MANHOLE

FIGURE 300.05



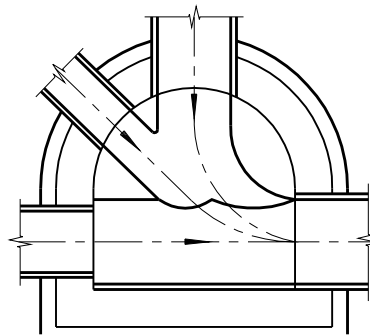
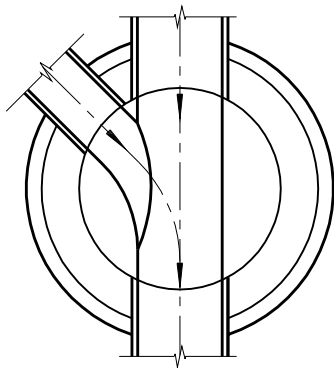
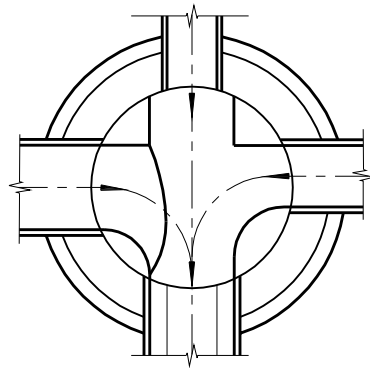
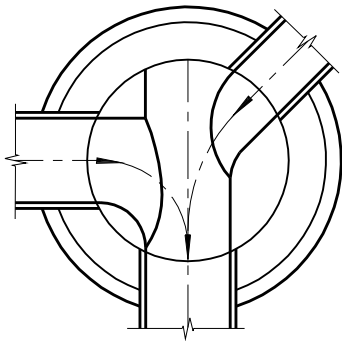
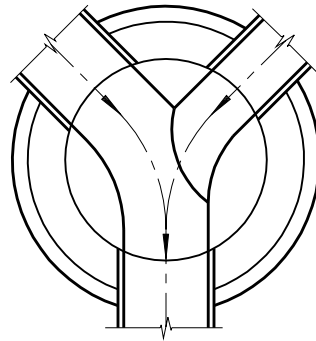
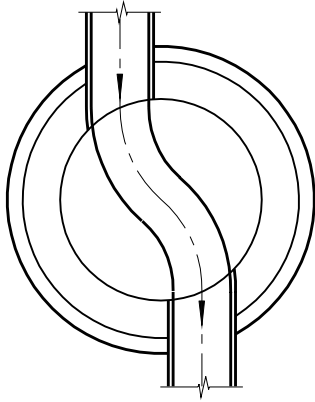
NOTES

1. DOGHOUSE OPENING MAY ONLY BE USED WHEN PLACING A NEW MANHOLE OVER AN EXISTING LINE; OTHERWISE, THE OPENING MUST BE CAST. SIZE, LOCATION AND ANGLE OF ENTRY SHOULD BE AS REQUIRED BY THE PLANS.
2. OPENINGS IN PRECAST UNITS ARE TO BE 4" MINIMUM TO 8" MAXIMUM LARGER THAN THE OUTSIDE DIAMETER OF THE PROPOSED PIPE.
3. INVERT SHAPING TO CONFORM TO FIGURE 300.07.

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INDIANAPOLIS DEPARTMENT OF PUBLIC WORKS
SANITARY SEWER DOGHOUSE MANHOLE

FIGURE 300.06



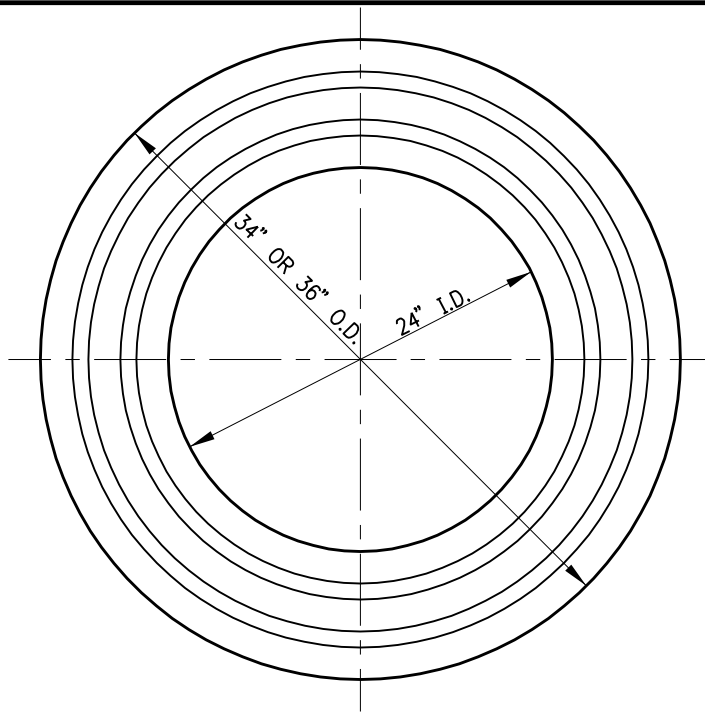
SANITARY SEWER
 BENCH SLOPE: 1/2" PER FOOT

NOT TO SCALE

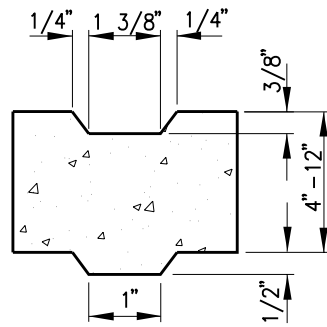
INDIANAPOLIS DEPARTMENT OF PUBLIC WORKS

STANDARD MANHOLE BENCHES

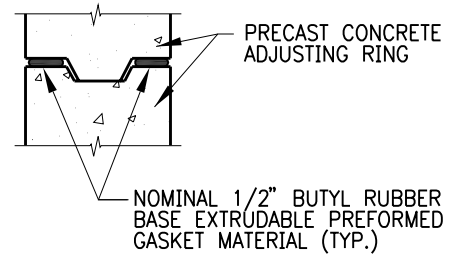
FIGURE 300.07



PLAN VIEW



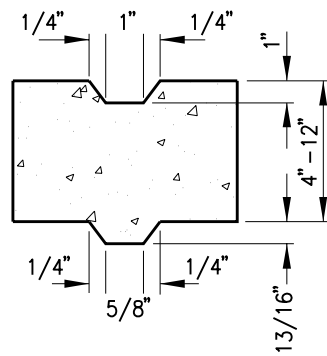
SECTION



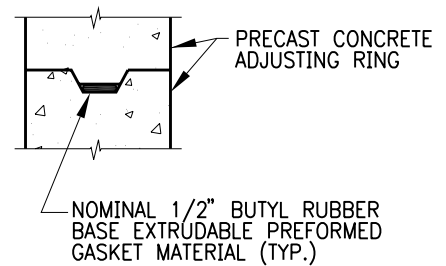
GASKET DETAIL

- OR -

- OR -



SECTION



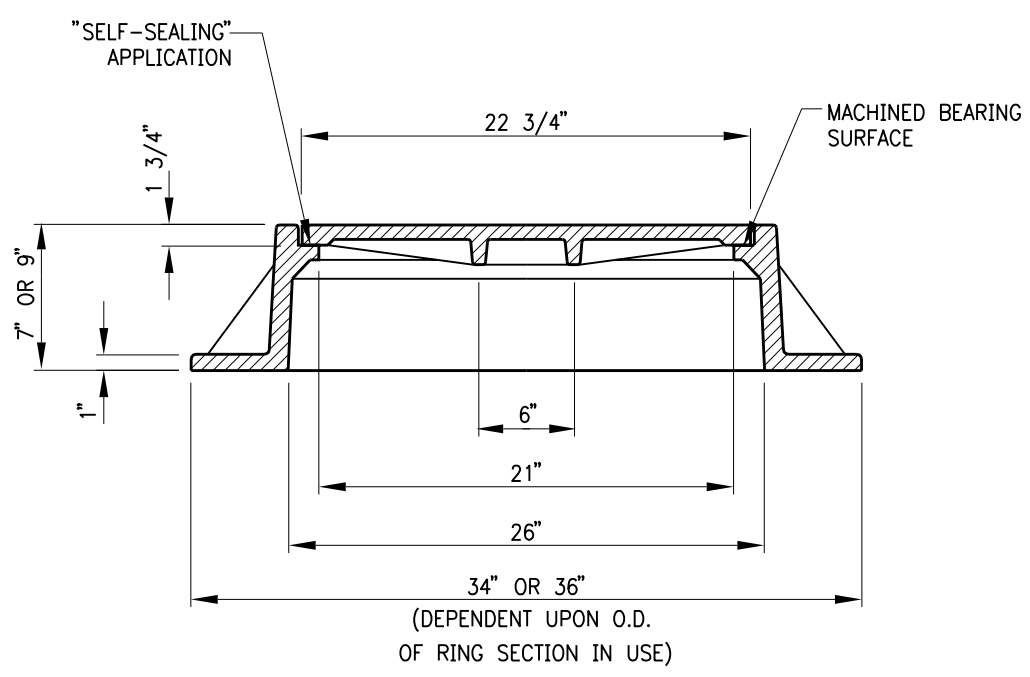
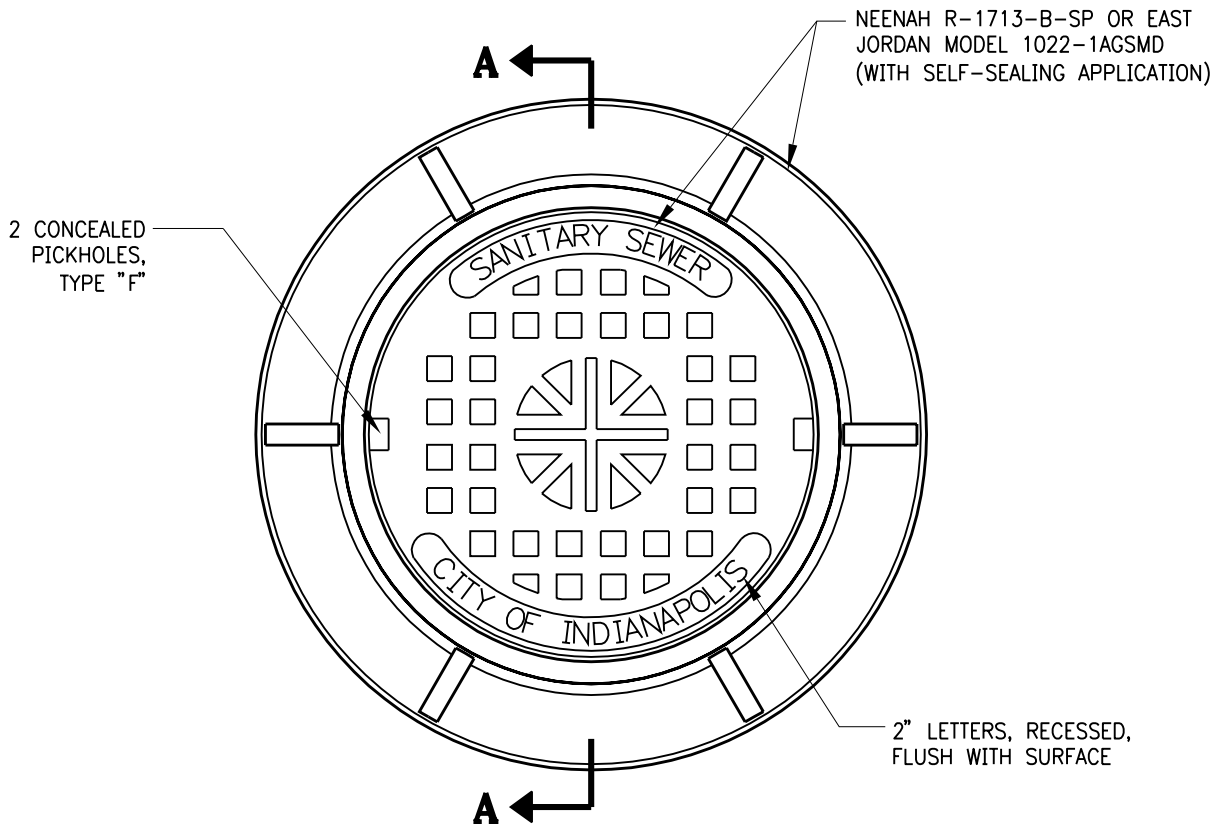
GASKET DETAIL

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ADJUSTING RING

FIGURE 300.08

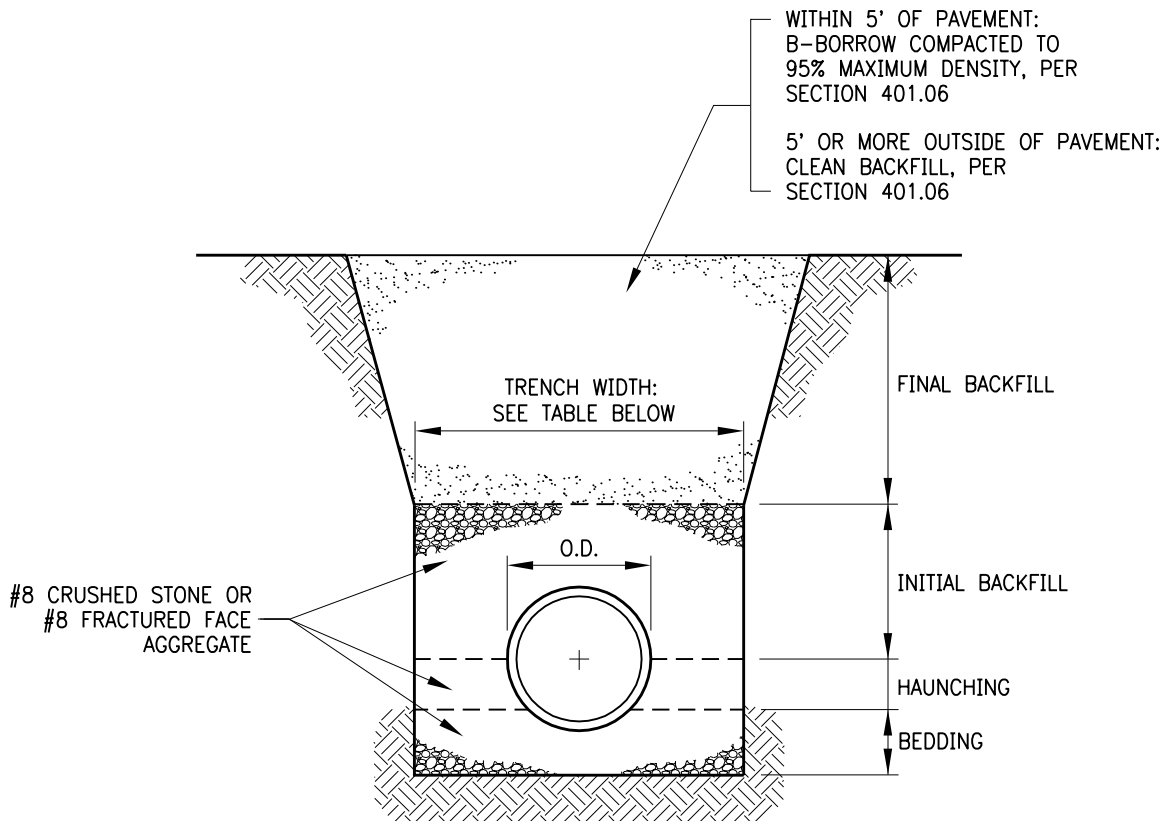


SECTION "A-A"

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INDIANAPOLIS DEPARTMENT OF PUBLIC WORKS
 SANITARY SEWER MANHOLE FRAME AND COVER— STANDARD MANHOLE

FIGURE 300.09



MINIMUM BEDDING, HAUNCHING, AND INITIAL BACKFILL DEPTHS		
PIPE SIZE	BEDDING (BELOW PIPE BARREL)	HAUNCHING AND INITIAL BACKFILL (ABOVE TOP OF PIPE)
UNDER 8"	4" MIN.	4" MIN.
8" TO 15"	4" MIN.	12" MIN.
18" & OVER	8" MIN.	12" MIN.

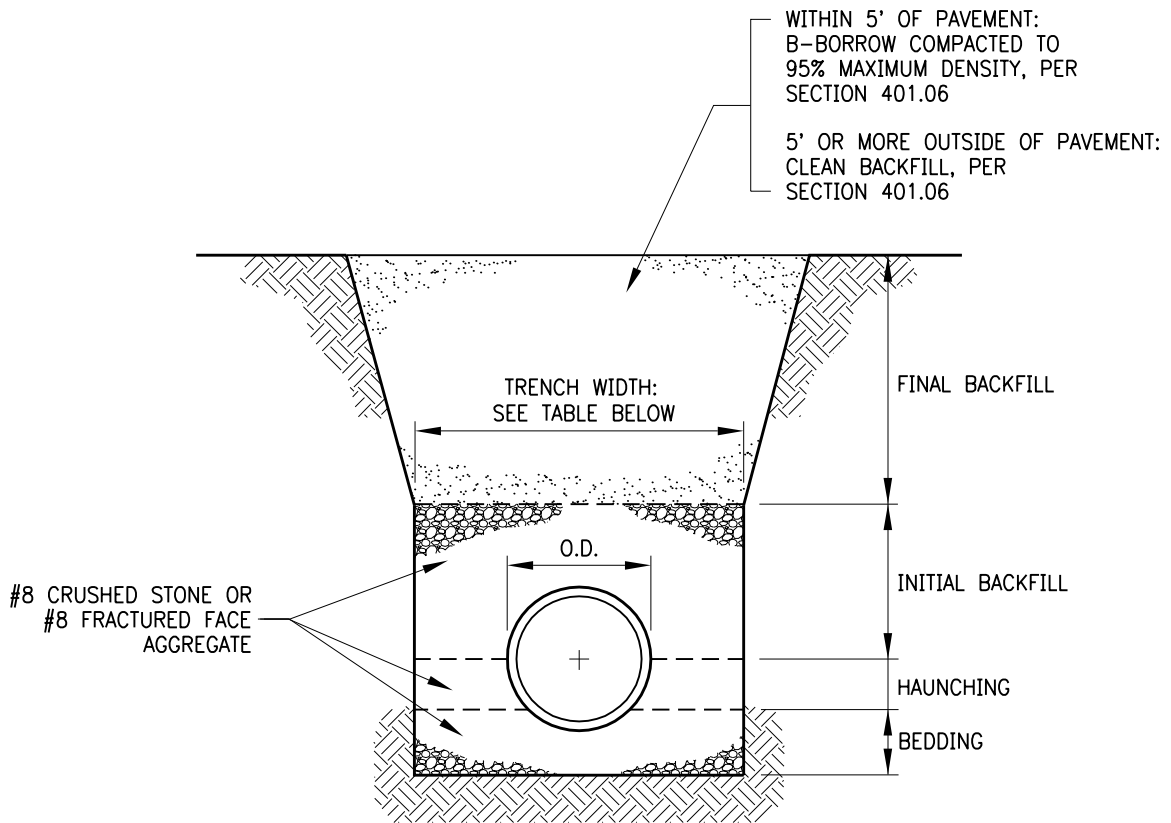
MINIMUM TRENCH WIDTHS	
PIPE SIZE	MINIMUM WIDTH
UP TO 18"	O.D. + 16"
18" & OVER	(O.D. x 1.25) + 12"

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FLEXIBLE PIPE BEDDING & BACKFILL REQUIREMENTS

FIGURE 400.01



MINIMUM BEDDING, HAUNCHING, AND INITIAL BACKFILL DEPTHS		
PIPE SIZE	BEDDING (BELOW PIPE BARREL)	HAUNCHING AND INITIAL BACKFILL (ABOVE TOP OF PIPE)
8" TO 15"	4" MIN.	6" MIN.
18" & OVER	8" MIN.	6" MIN.

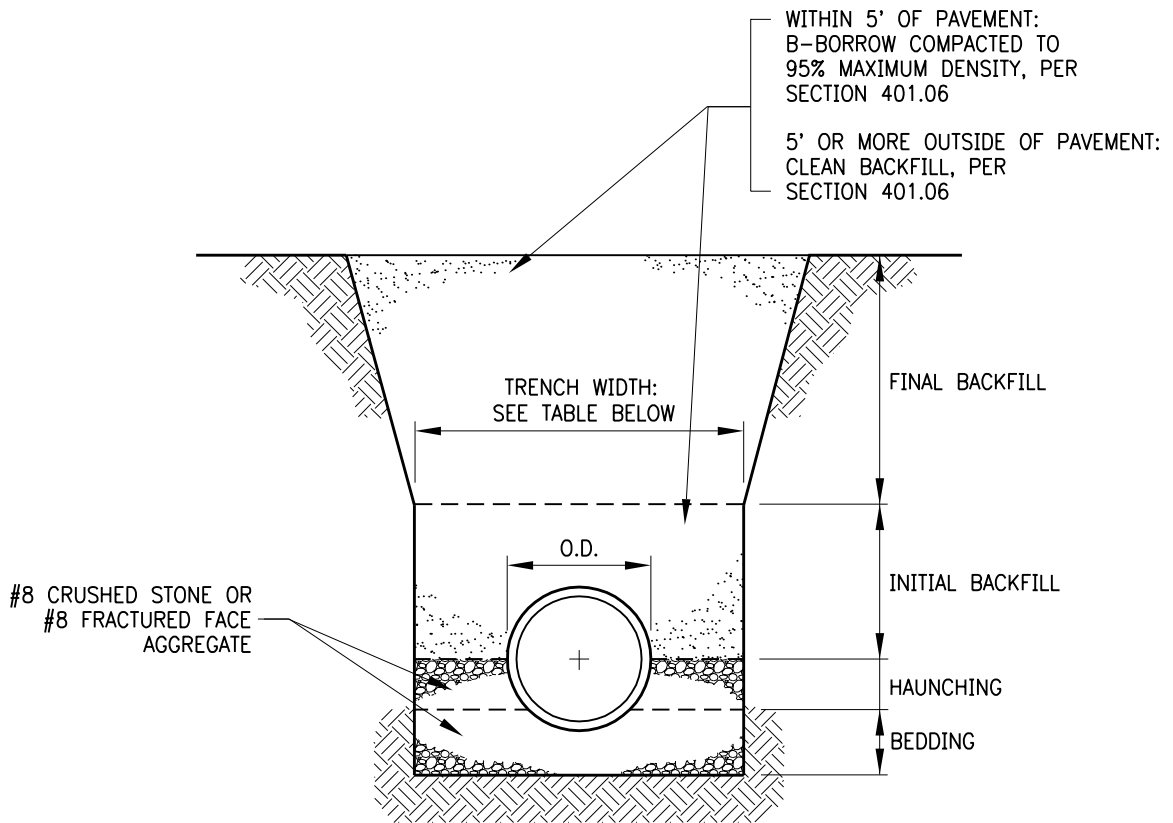
MINIMUM TRENCH WIDTHS	
PIPE SIZE	MINIMUM WIDTH
UP TO 18"	O.D. + 16"
18" & OVER	(O.D. x 1.25) + 12"

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SEMI-RIGID PIPE BEDDING AND BACKFILL REQUIREMENTS

FIGURE 400.02



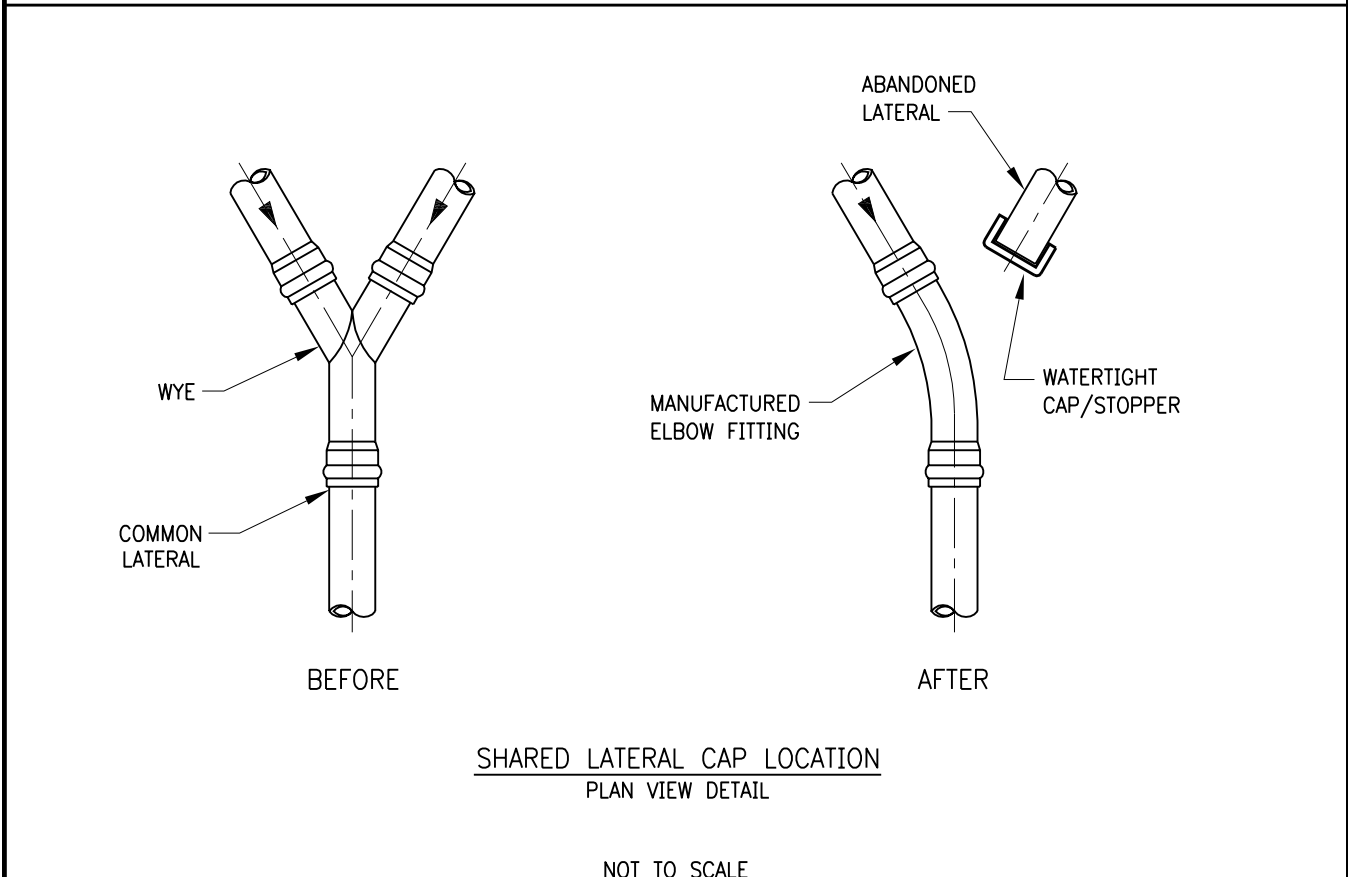
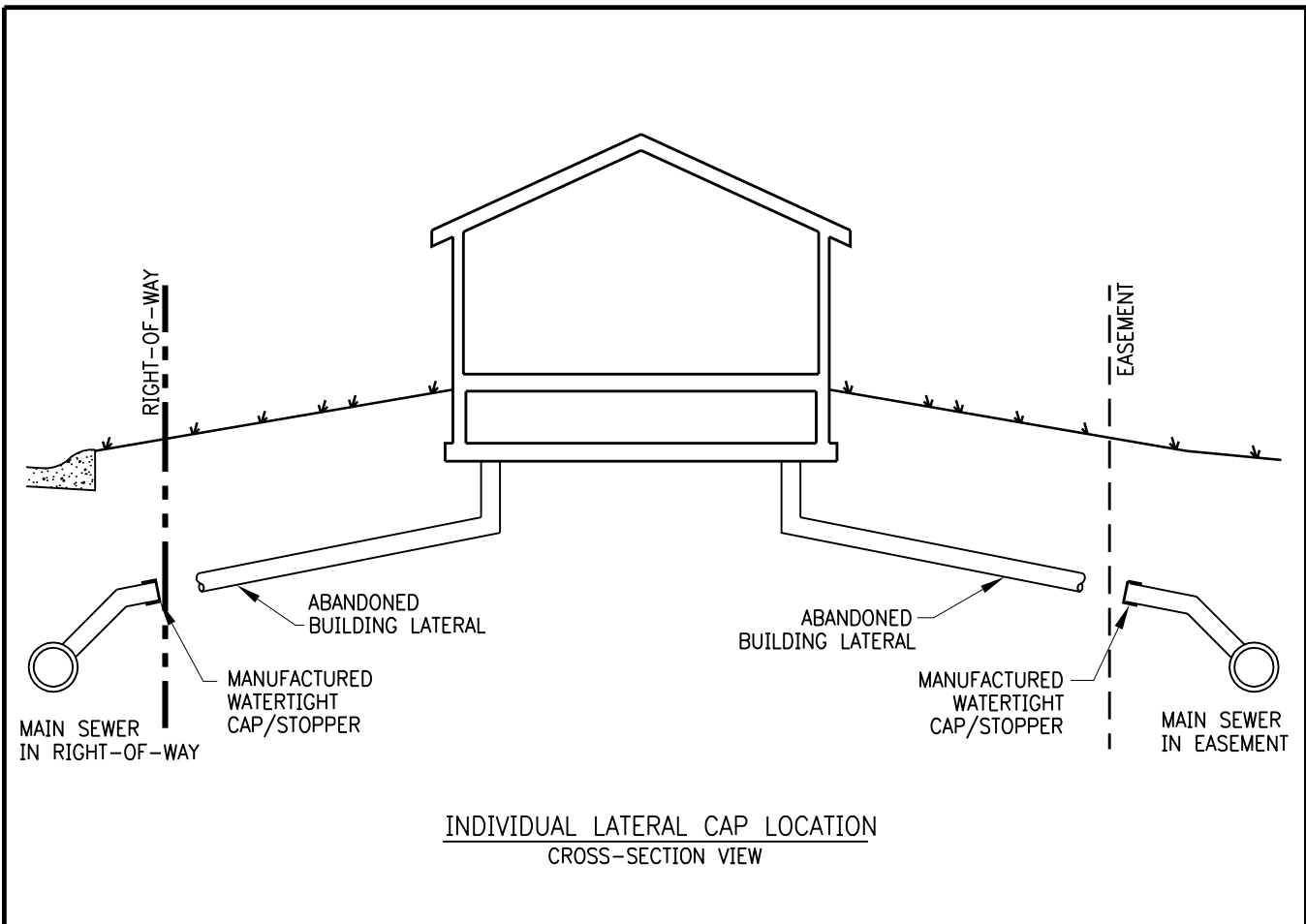
MINIMUM BEDDING, HAUNCHING, AND INITIAL BACKFILL DEPTHS		
PIPE SIZE	BEDDING (BELOW PIPE BARREL)	HAUNCHING AND INITIAL BACKFILL (ABOVE TOP OF PIPE)
24" & GREATER	8" MIN.	1/2 OD. MIN.

MINIMUM TRENCH WIDTHS	
PIPE SIZE	MINIMUM WIDTH
24" AND GREATER	(O.D. X 1.25) + 12"

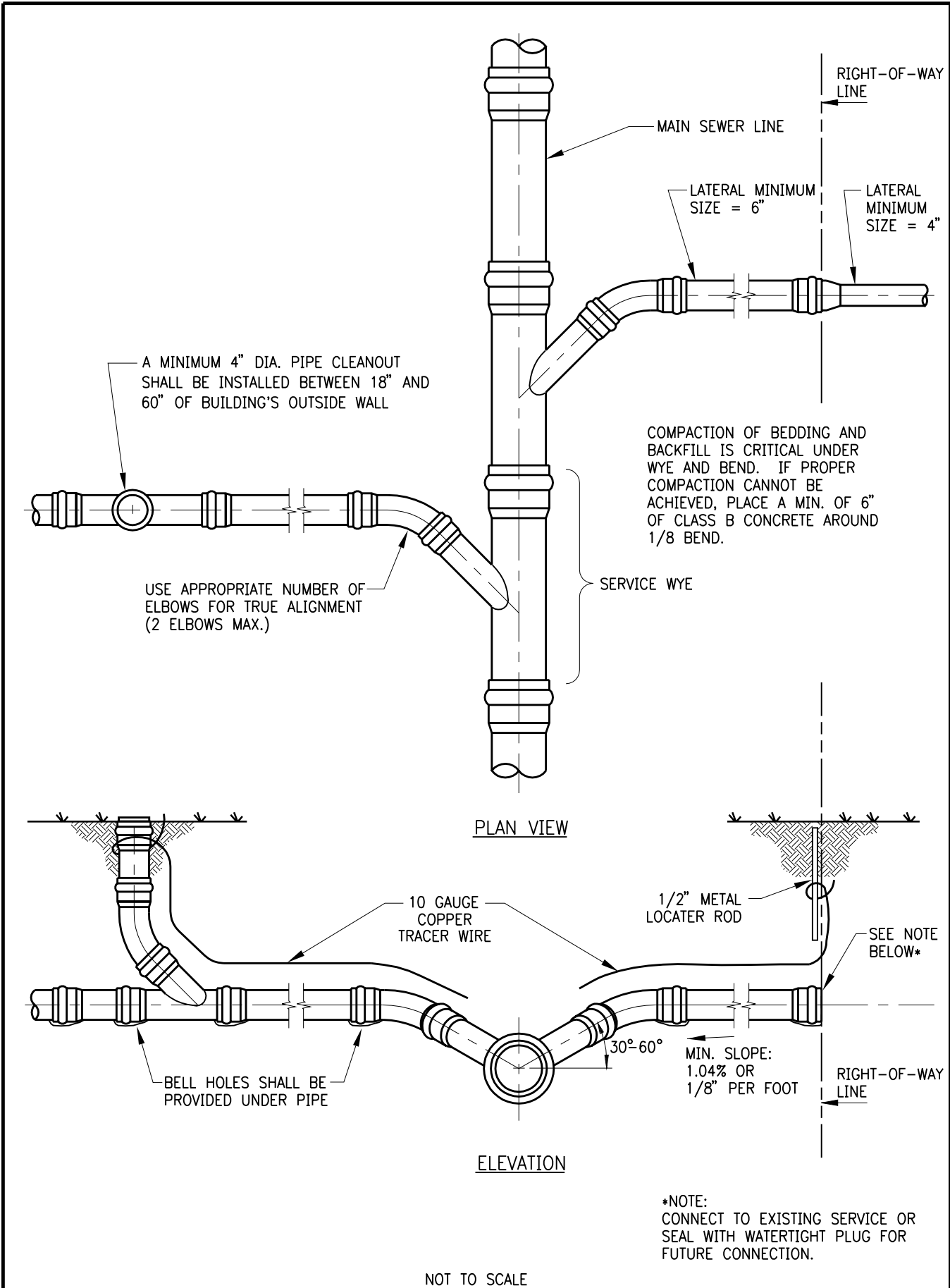
NOT TO SCALE

INDIANAPOLIS DEPARTMENT OF PUBLIC WORKS
RIGID PIPE BEDDING & BACKFILL REQUIREMENTS

FIGURE 400.03



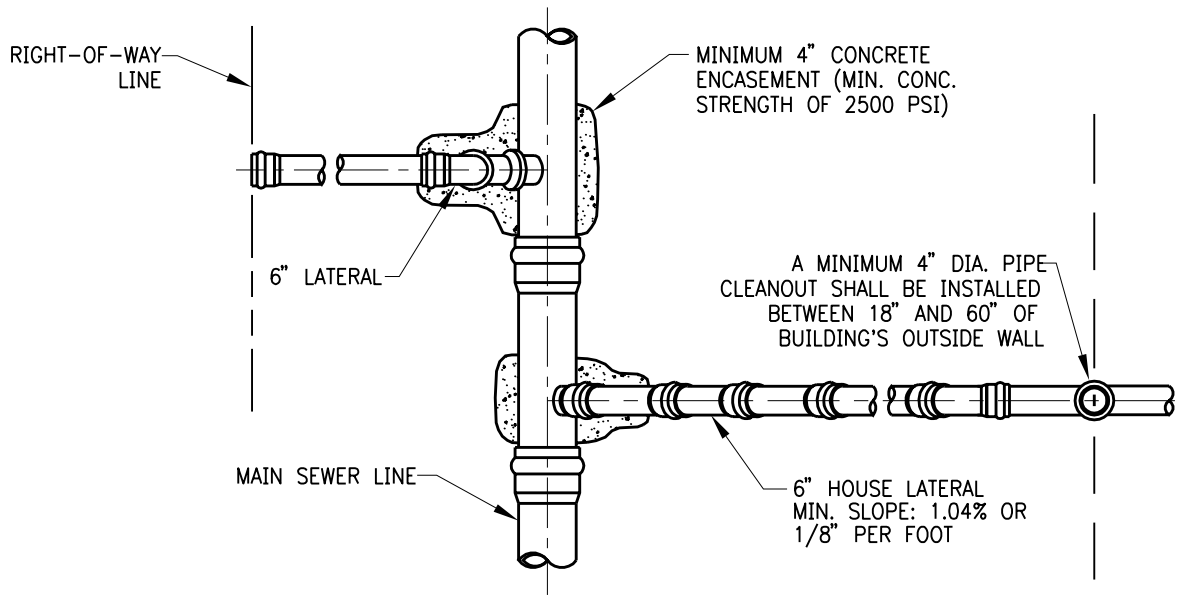
INDIANAPOLIS DEPARTMENT OF PUBLIC WORKS
ACCEPTED METHODS OF CAPPING AN ABANDONED SEWER LATERAL
FIGURE 400.04



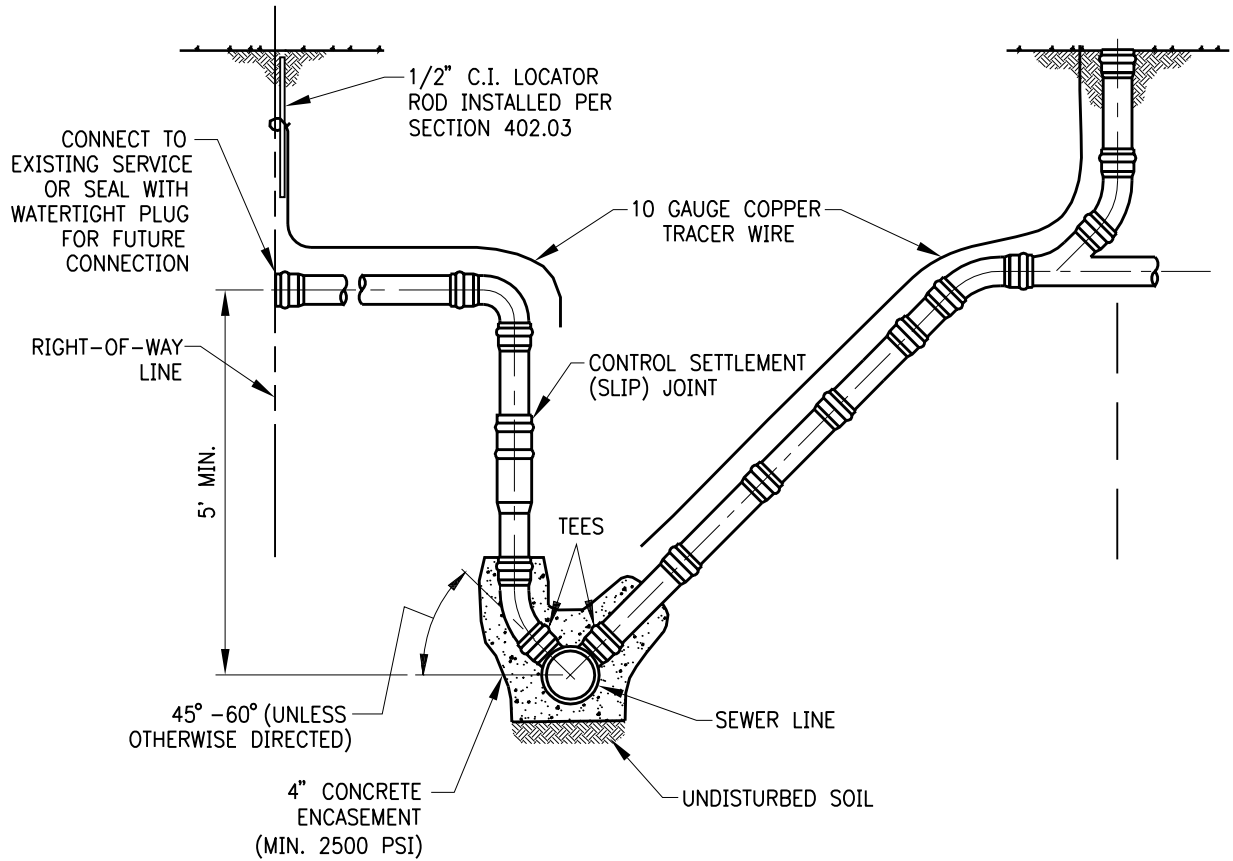
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INDIANAPOLIS DEPARTMENT OF PUBLIC WORKS
 SERVICE CONNECTION FOR SHALLOW SEWERS (Less than 15' deep)

FIGURE 400.05



PLAN

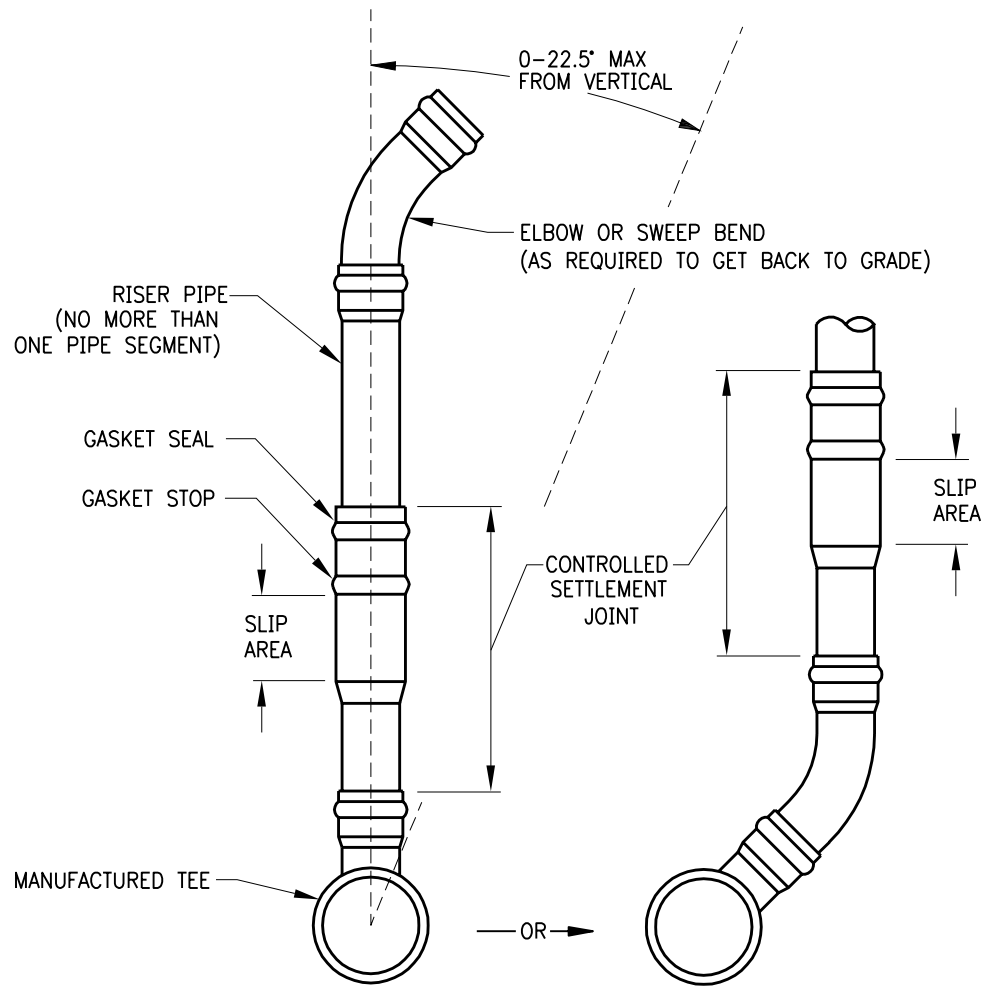


ELEVATION

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 SERVICE CONNECTION FOR DEEP SEWERS (15' deep and over)

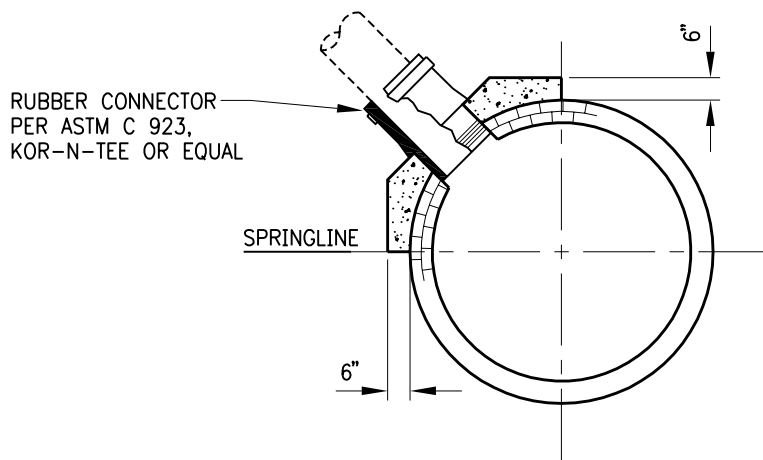
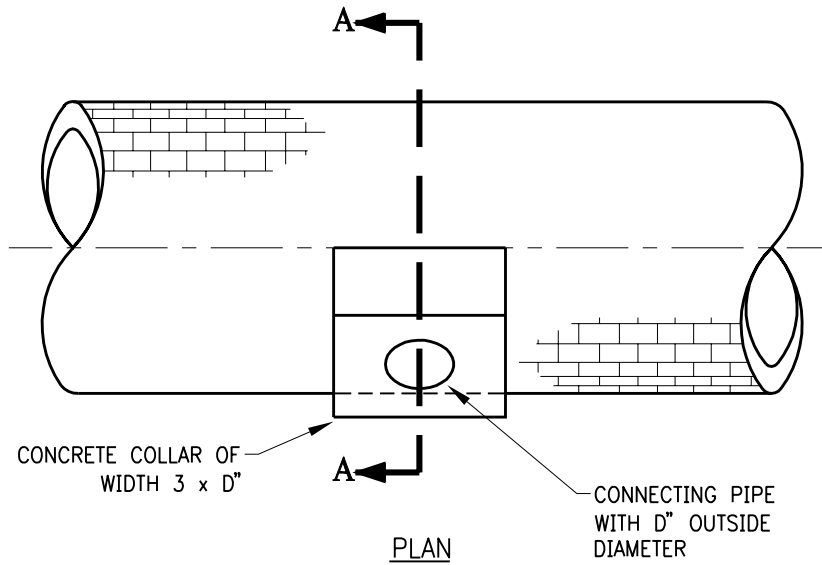
FIGURE 400.06



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 CONTROLLED SETTLEMENT JOINT INSTALLATION

FIGURE 400.07



SECTION "A-A"

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CONCRETE COLLAR DETAIL

FIGURE 400.08