

DRY TAP METHOD
 CONNECTING NEW MAIN TO EXISTING MAIN



Water Services
 Joint Operating Board

CONSTRUCTION DETAIL: **DRY TAP METHOD**

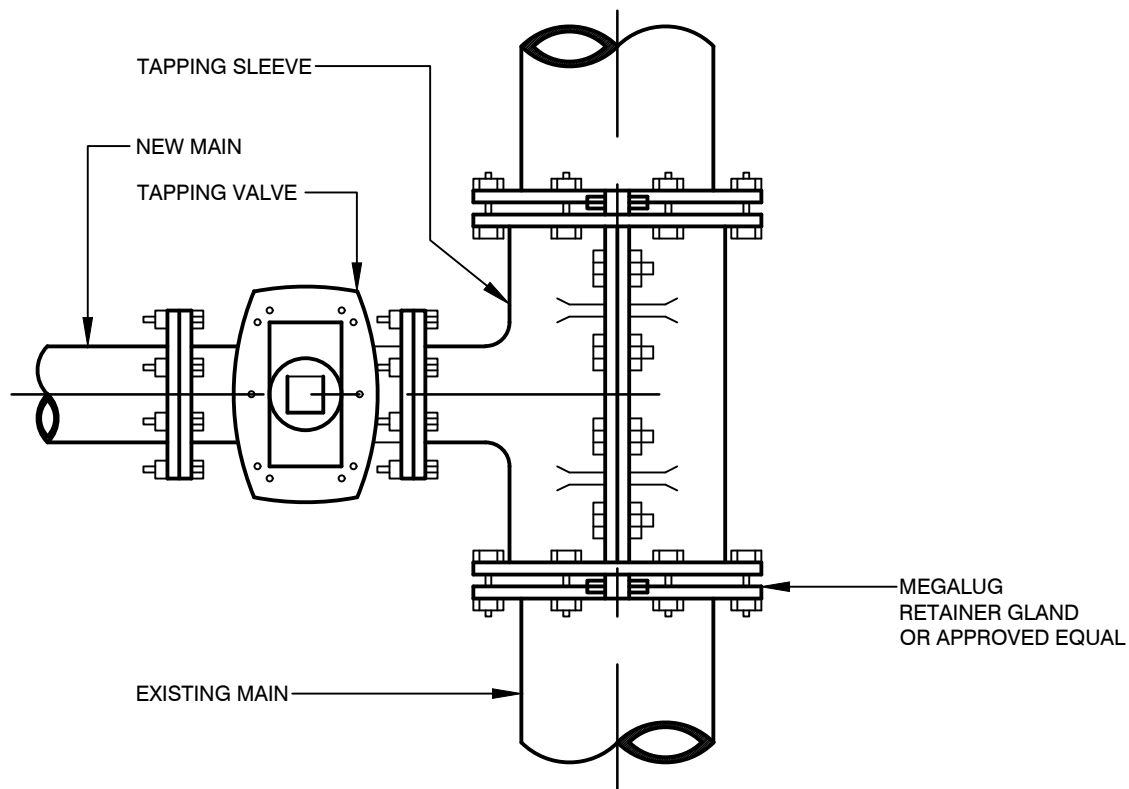
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 700 BROAD STREET
 ST. JOSEPH, MI 49085

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SCALE:
 NOT TO SCALE

DATE:
 JUNE, 2018

CD - 1



WET TAP METHOD
(UNDER PRESSURE)
CONNECTING NEW MAIN TO EXISTING MAIN



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CONSTRUCTION DETAIL:

WET TAP METHOD

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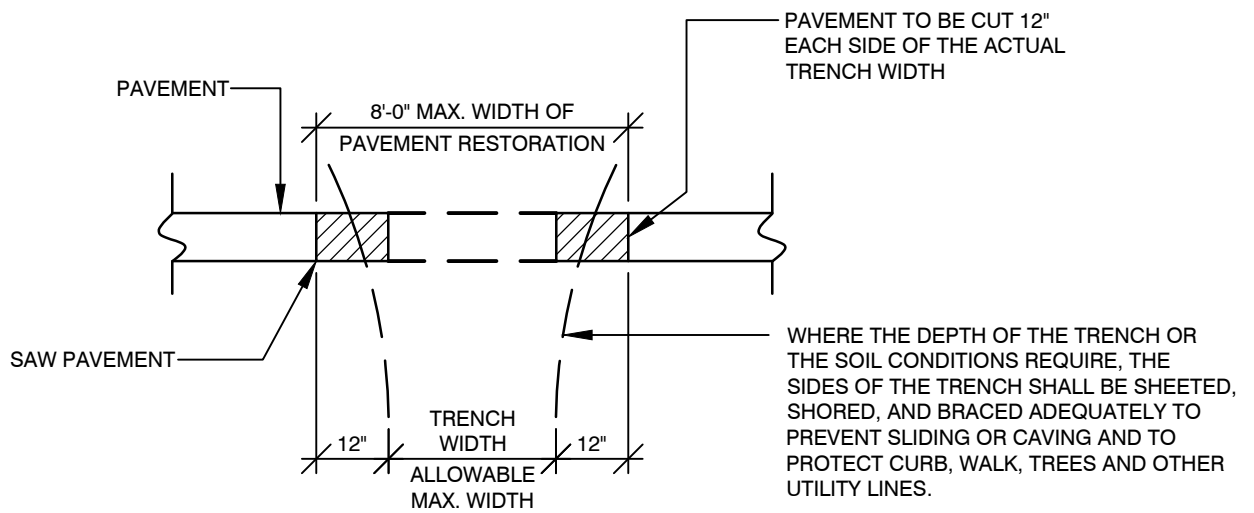
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TYPICAL DETAIL PAVEMENT CUTTING & RESTORATION



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CONSTRUCTION DETAIL:

TYPICAL DETAIL PAVEMENT
CUTTING & RESTORATION

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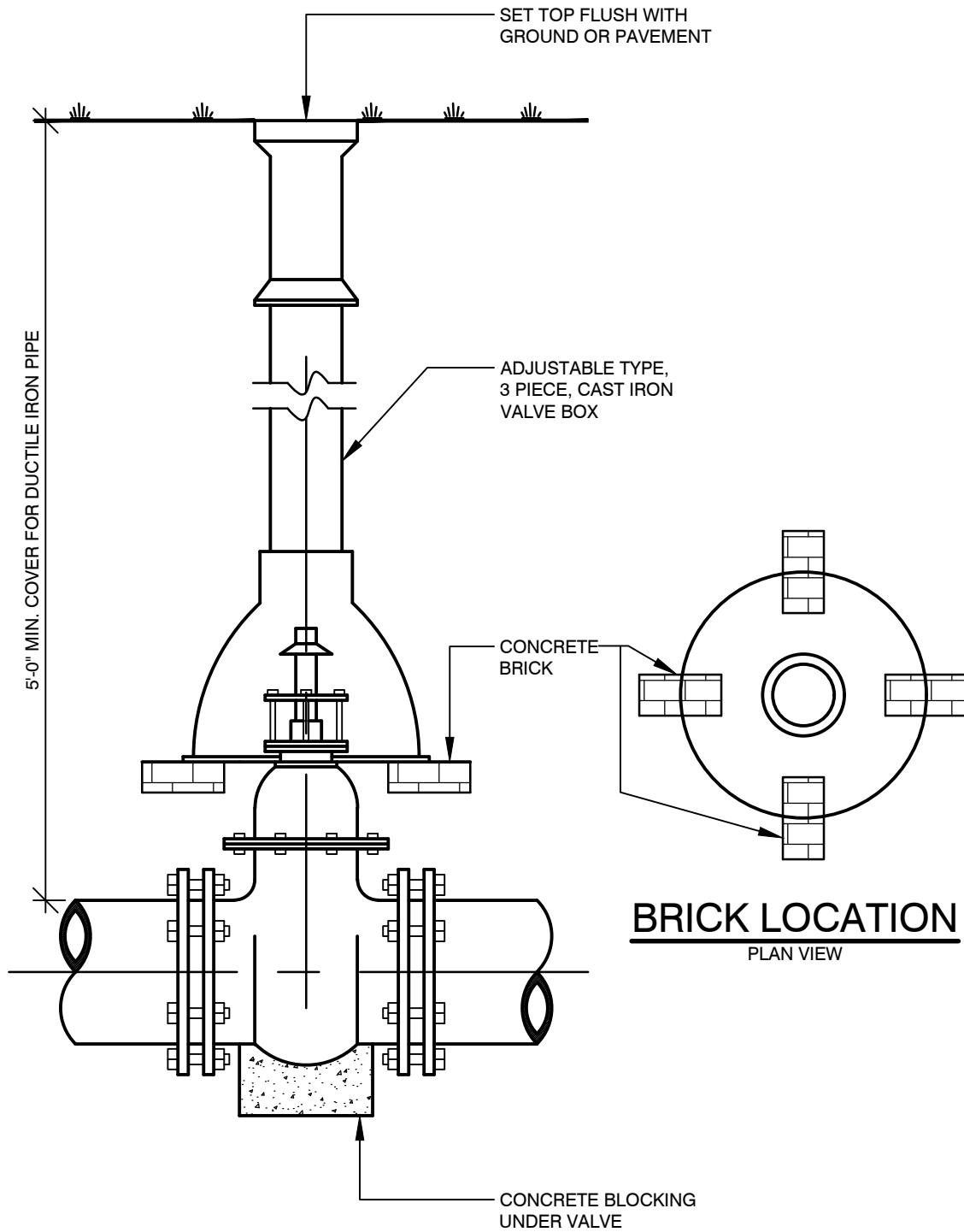
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CD - 3



TYPICAL GATE VALVE & VALVE BOX

FOR USE WITH MAIN LINE VALVES 4" & UNDER OR FIRE
HYDRANT AUXILIARY VALVES.



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TYPICAL GATE VALVE & VALVE BOX

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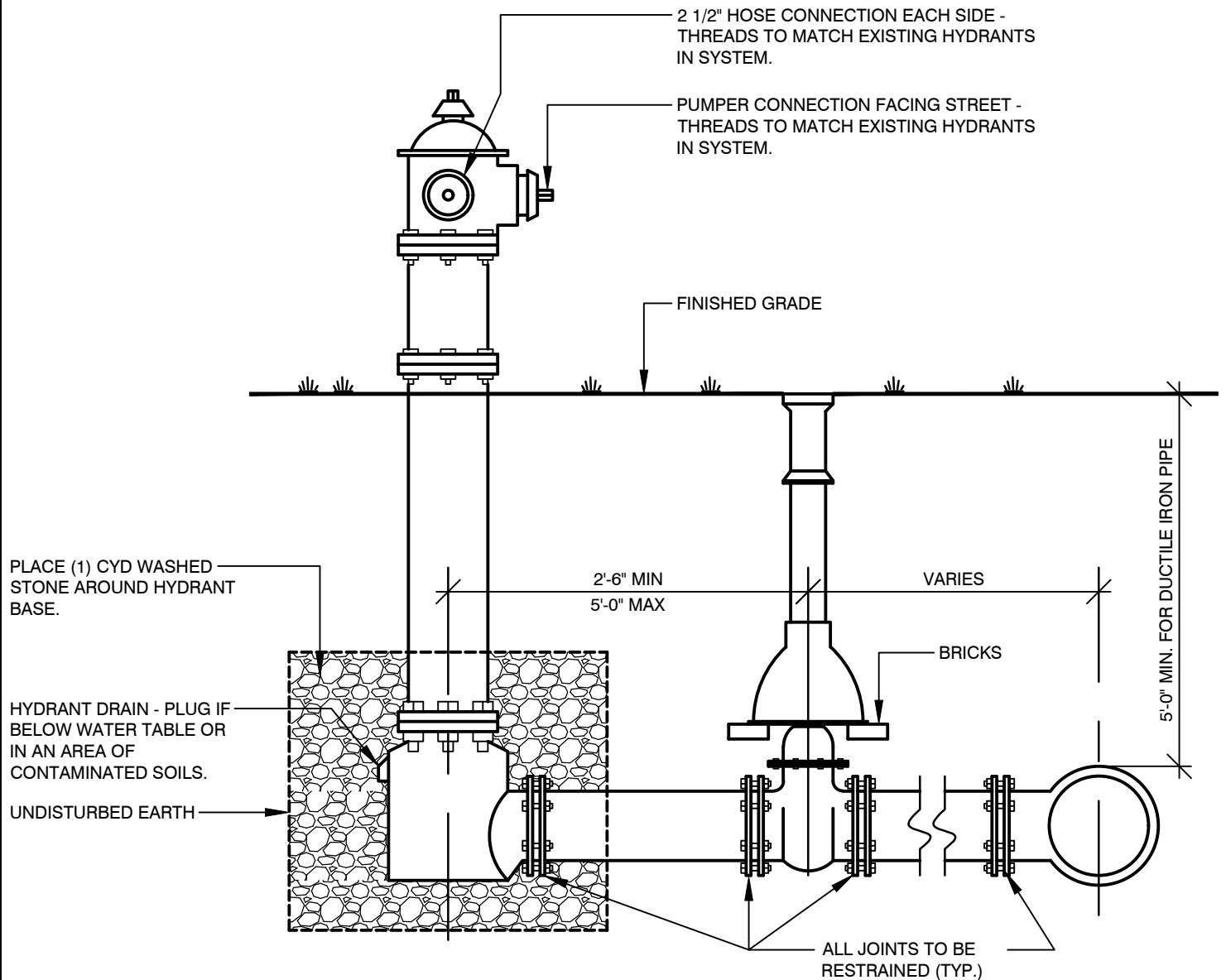
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TYPICAL HYDRANT ASSEMBLY

MODELS

EJ #5CD250
 WATEROUS PACER WB67

PAINT COLOR

CITY OF ST. JOSEPH - YELLOW
 SMRSS & WA - RED



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TYPICAL HYDRANT ASSEMBLY

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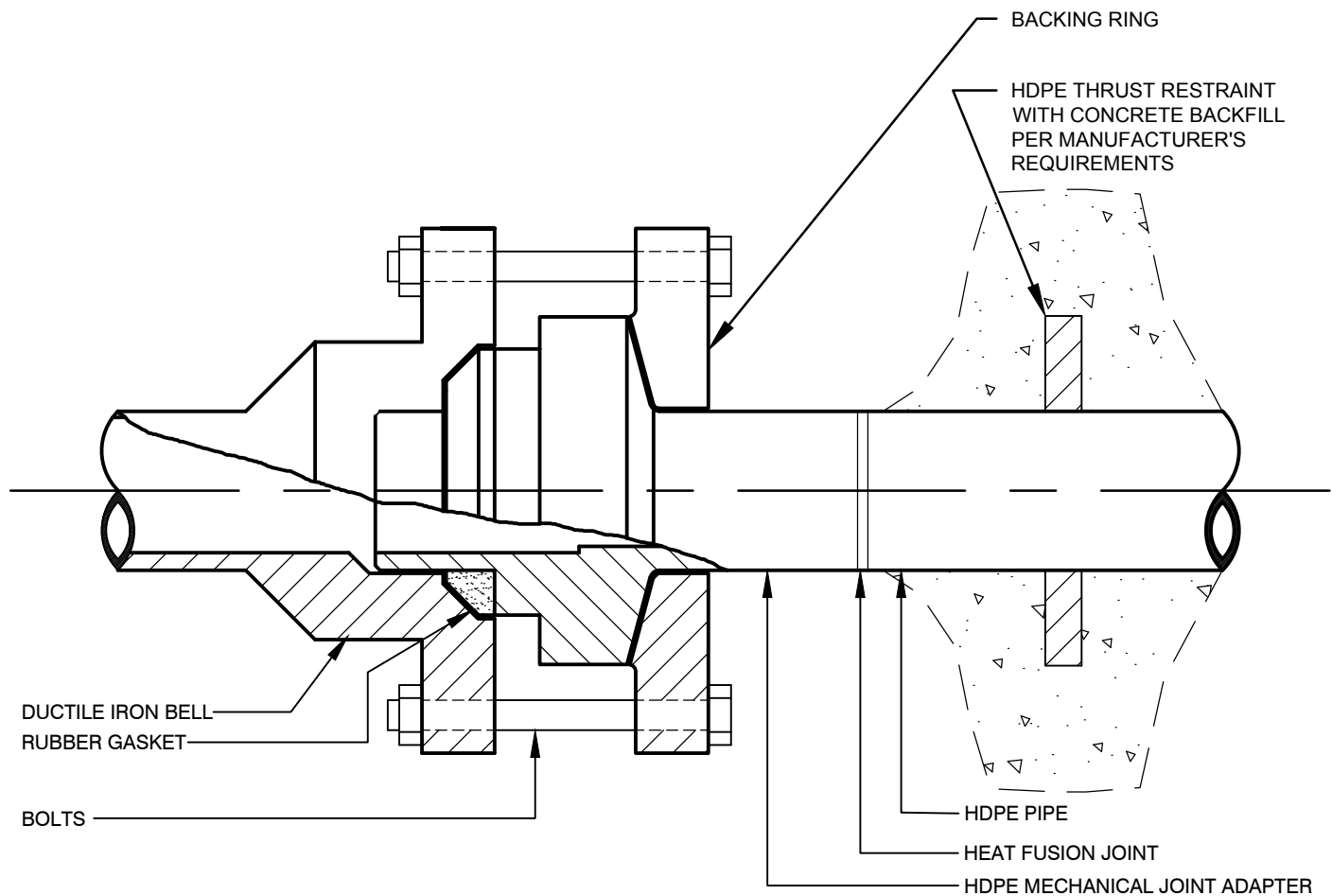
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CD - 5



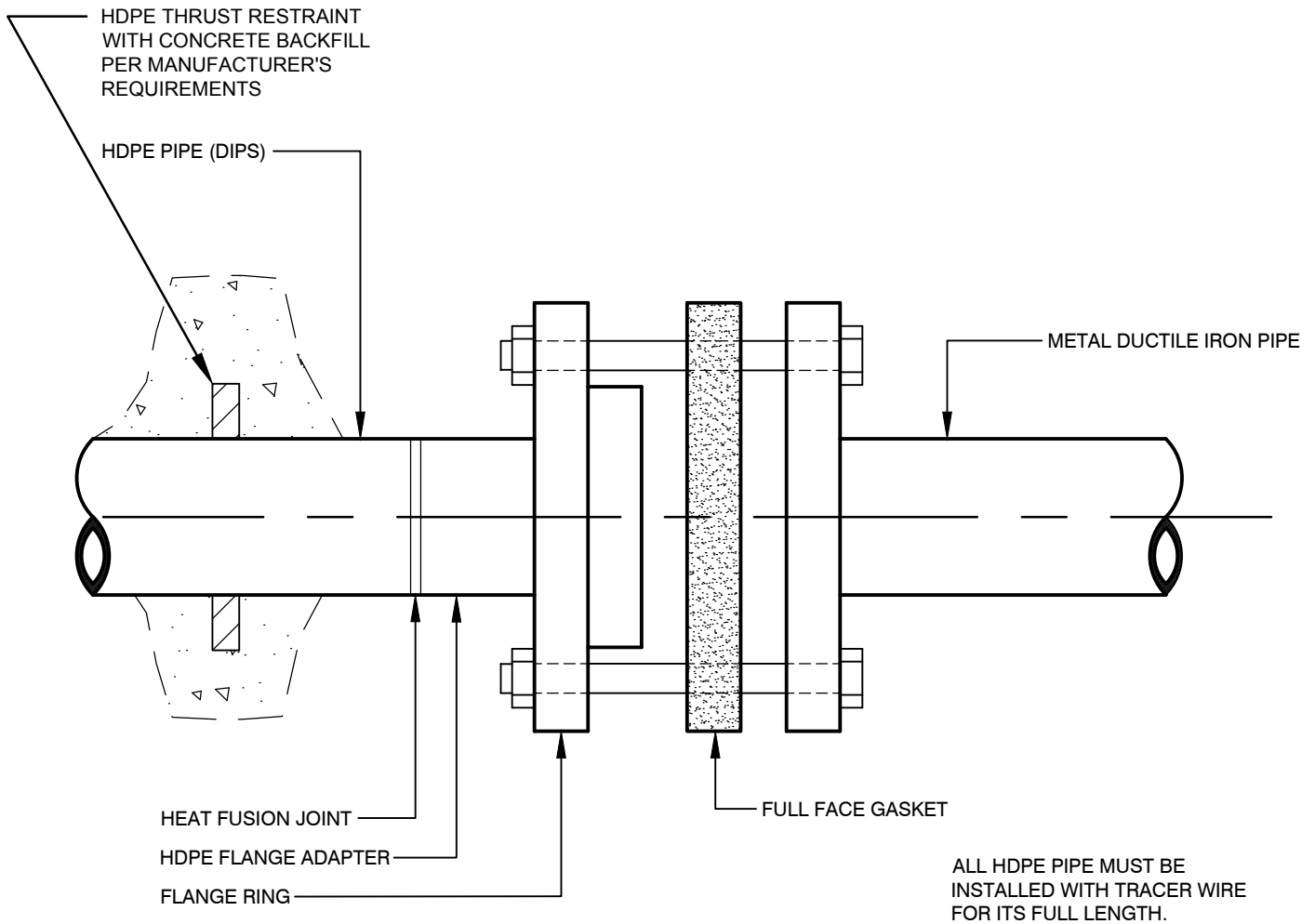
ALL HDPE PIPE MUST BE
 INSTALLED WITH TRACER WIRE
 FOR ITS FULL LENGTH.

HDPE TO DUCTILE IRON MECHANICAL JOINT



CONSTRUCTION DETAIL:	HDPE TO DUCTILE IRON MECHANICAL JOINT
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FLANGED JOINT



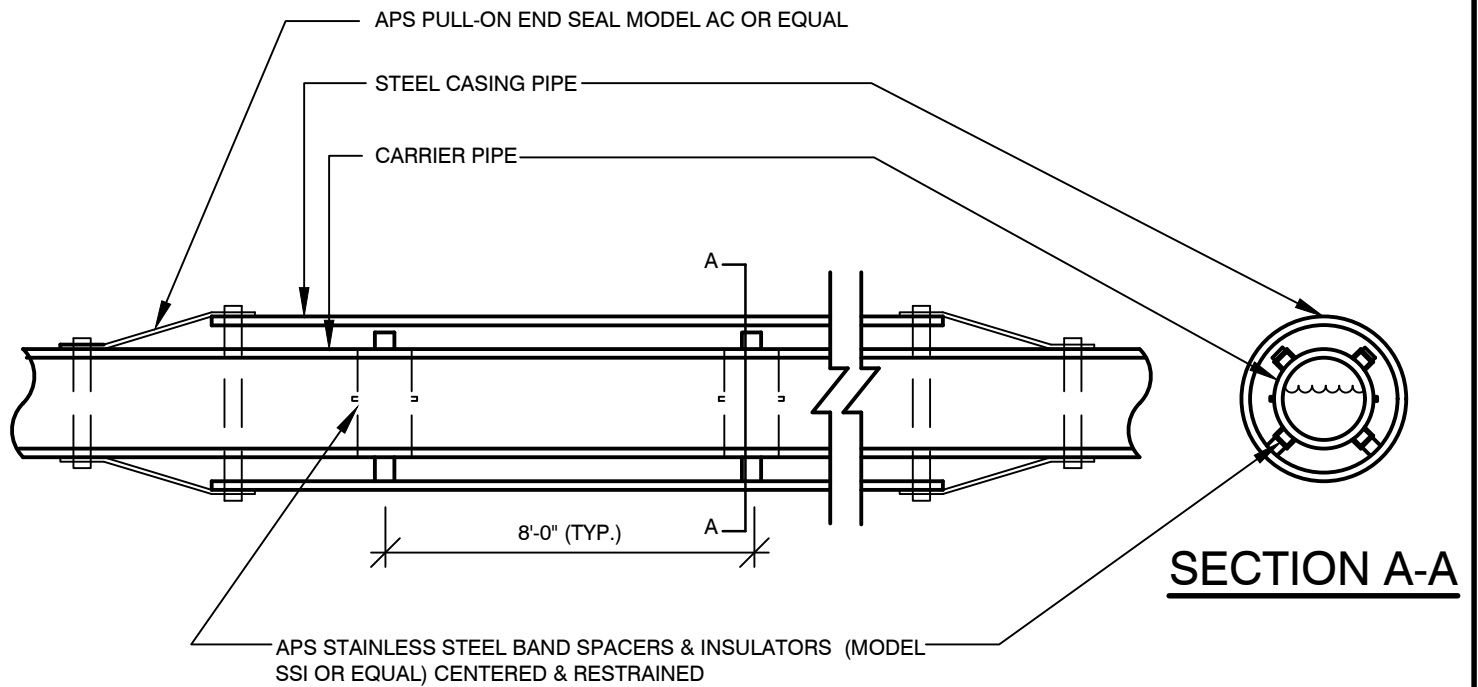
CONSTRUCTION DETAIL: FLANGED JOINT

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CD - 7



CASING CARRIER PIPE DETAIL

SIZE CASING AND CARRIER PIPES PER PLAN AND SPECIFICATIONS



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CONSTRUCTION DETAIL:

CASING CARRIER PIPE DETAIL

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CD - 8

MASONRY ADJUSTING PERMITTED IF NECESSARY

CAST IRON FRAME & COVER PER LOCAL MUNICIPALITY SPECIFICATIONS

FINISHED GRADE

SLAB TOP REINFORCING #4 BARS 6" O.C. EACH WAY WITH EXTRA BARS AROUND OPENING

5'-0" MIN. FOR D.I.P.

24"

6"

PRECAST CONCRETE

WATER MAIN

12"

VALVE PIER - CONCRETE, BRICK, OR BLOCK

5'-0" MIN.

DIA.

PROVIDE SOLID CONCRETE BASE IN LIEU OF BASE RING WHEN PLACING STRUCTURE IN WET SOIL LOCATION.

6"

PEA GRAVEL

12" MIN.

PLACE ADDITIONAL PEA GRAVEL BELOW BASE WHEN LOCATED IN CLAYEY SOIL

STANDARD VALVE MANHOLE

PROVIDE WHEN CALLED FOR ON PLANS

NOTE:

MANHOLE BASE & VALVE PIER TO BE PLACED ON COMPACTED MATERIAL.

FOR USE WITH MAIN LINE VALVES 6" & LARGER THAT WILL PASS THROUGH COVER OPENING. LARGER VALVES OR MULTIPLE VALVES SHOULD BE PLACED IN A CONCRETE VAULT WITH HATCHES.



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CONSTRUCTION DETAIL:

STANDARD VALVE MANHOLE

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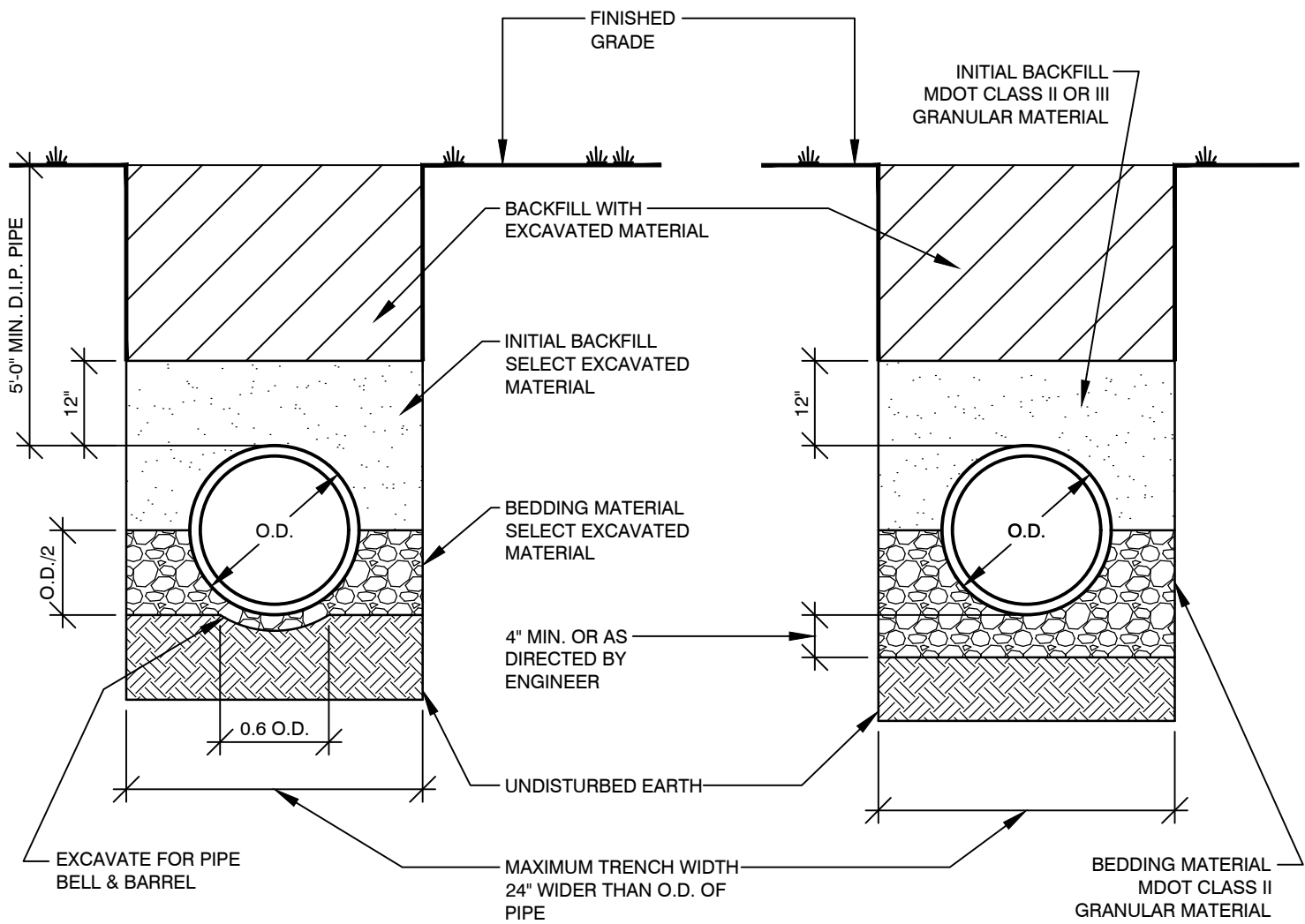
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CD - 9



**TRENCH DETAIL
IN SUITABLE SOIL**

**TRENCH DETAIL
IN UNSUITABLE SOIL**

WHERE THE DEPTH OF THE TRENCH OR THE SOIL CONDITIONS REQUIRE, THE SIDES OF THE TRENCH SHALL BE SHEETED, SHORED, AND BRACED ADEQUATELY TO PREVENT SLIDING OR CAVING AND TO PROTECT CURB, WALK, TREES AND OTHER UTILITY LINES.



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CONSTRUCTION DETAIL:

TRENCH DETAIL

SCALE:

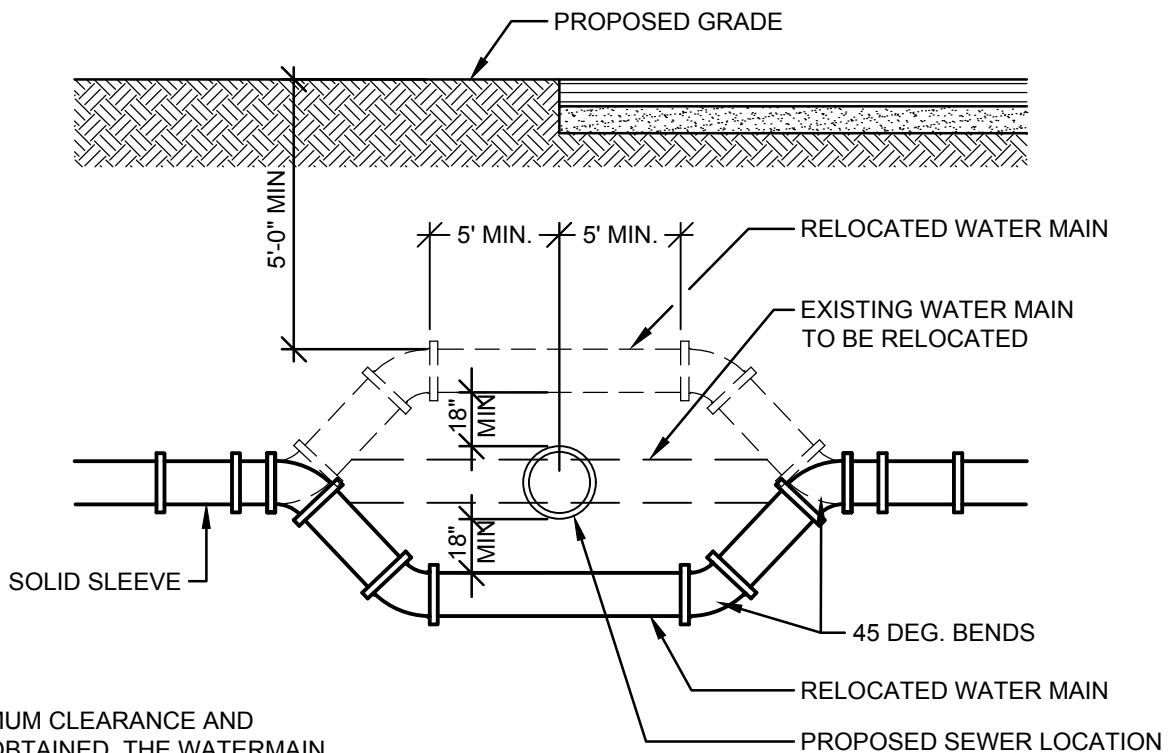
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CD - 10



NOTE:
 WHEN THE MINIMUM CLEARANCE AND COVER CAN BE OBTAINED, THE WATERMAIN IS TO BE RELOCATED ABOVE THE SEWER. RESTRAINED JOINTS ARE REQUIRED.

INSUFFICIENT CLEARANCE WATER MAIN CROSSING SEWER



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INSUFFICIENT CLEARANCE
 WATER MAIN CROSSING SEWER

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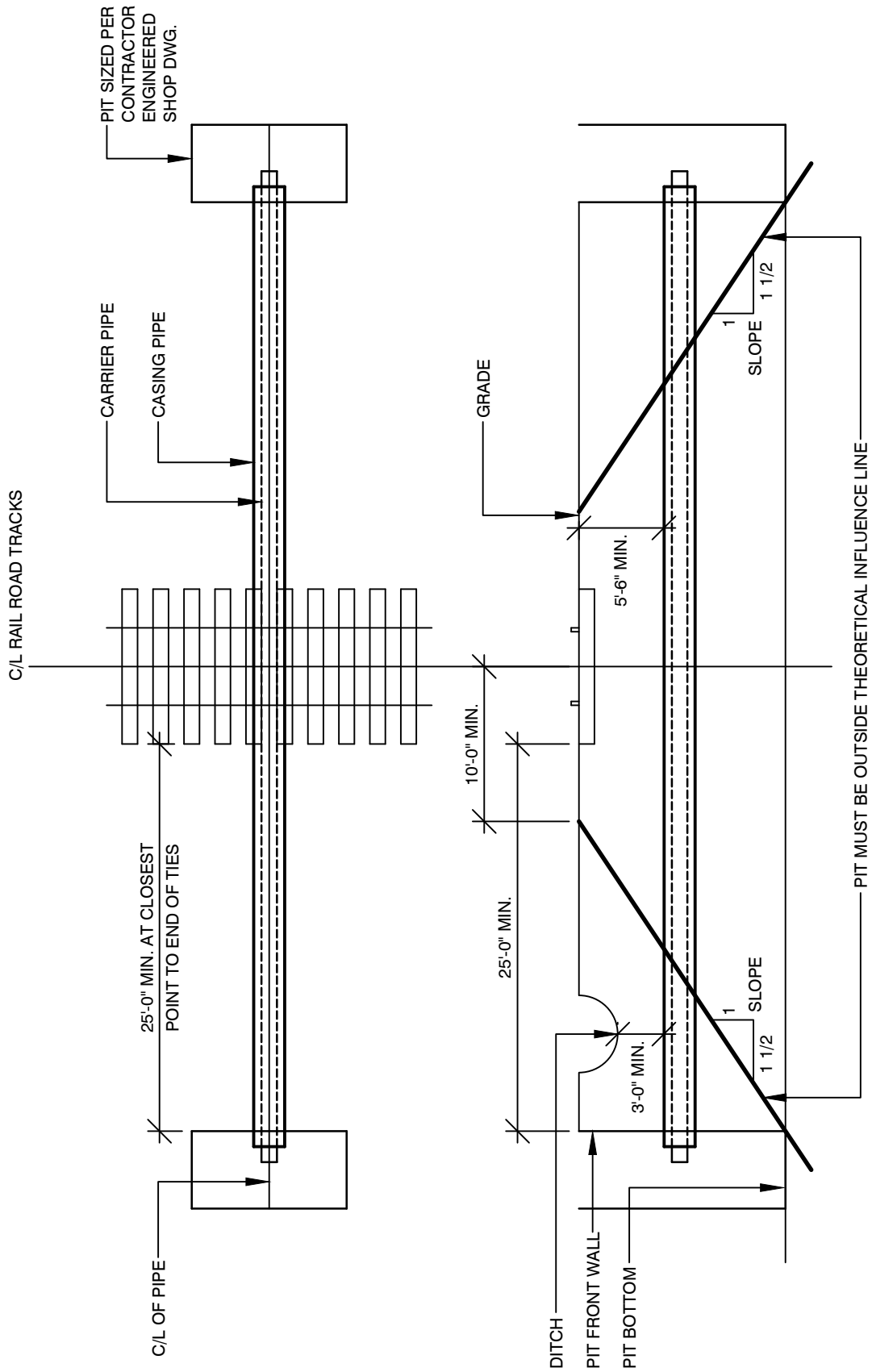
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CD - 11



BORE & JACK RAIL ROAD



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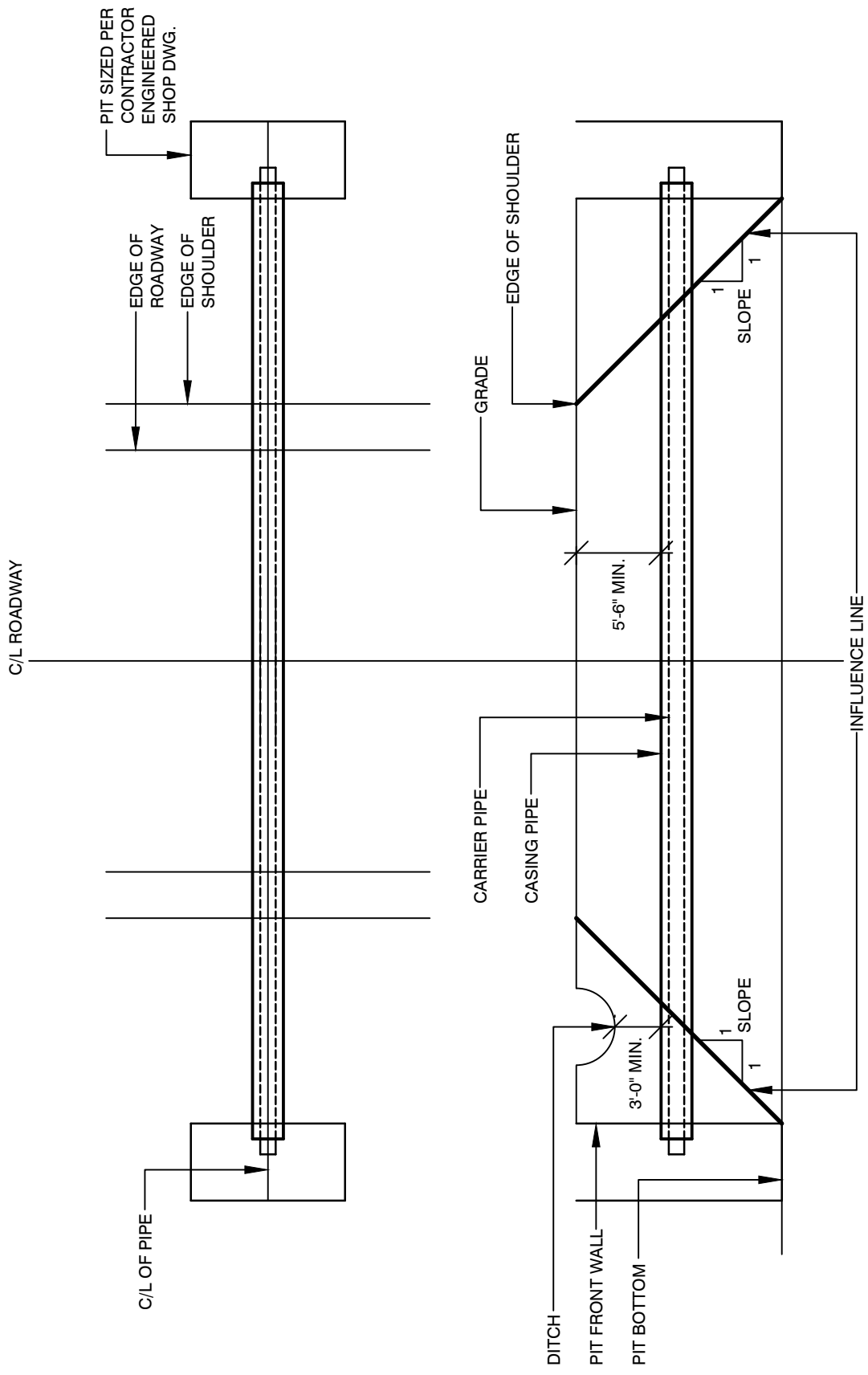
CONSTRUCTION DETAIL: **BORE & JACK RAIL ROAD**

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CD - 12



BORE & JACK ROADWAY



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CONSTRUCTION DETAIL: **BORE & JACK ROADWAY**

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CD - 13

Casing Pipe			
Nominal		Min	
Size	O.D.	Wall	I.D.
inches	inches	inches	inches
12.00	12.750	0.188	12.374
14.00	14.000	0.250	13.500
16.00	16.000	0.250	15.500
18.00	18.000	0.250	17.500
20.00	20.000	0.250	19.500
24.00	24.000	0.250	23.500
30.00	30.000	0.312	29.376
36.00	36.000	0.312	35.376
42.00	42.000	0.438	41.124
48.00	48.000	0.500	47.000
54.00	54.000	0.563	52.874

Note casing pipe must be a minimum of 6 inches larger in diameter than nominal diameter of carrier pipe as well as large enough to accommodate all joints and attachments to the pipe.



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CASING PIPE

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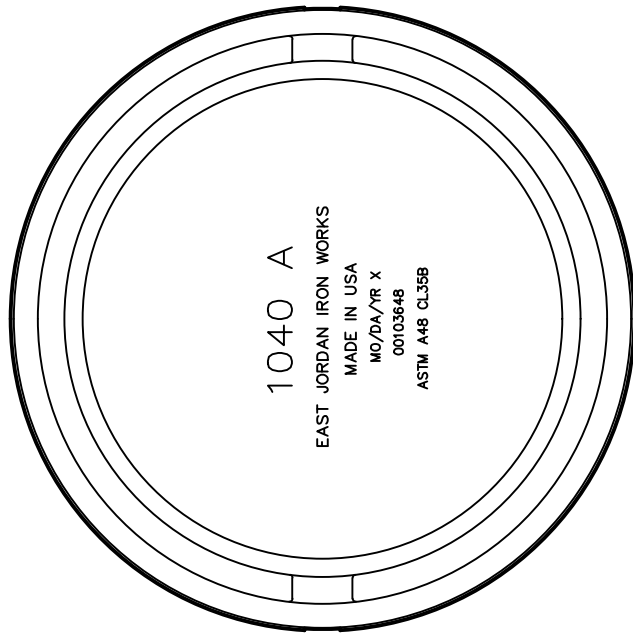
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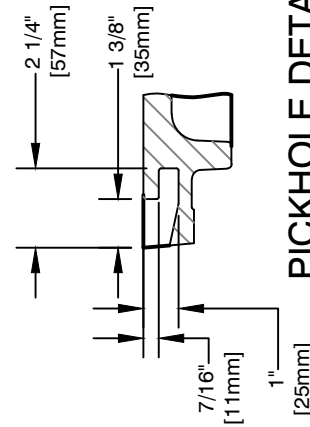
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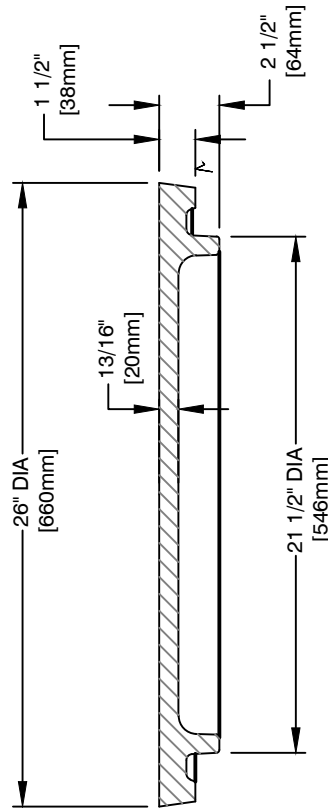
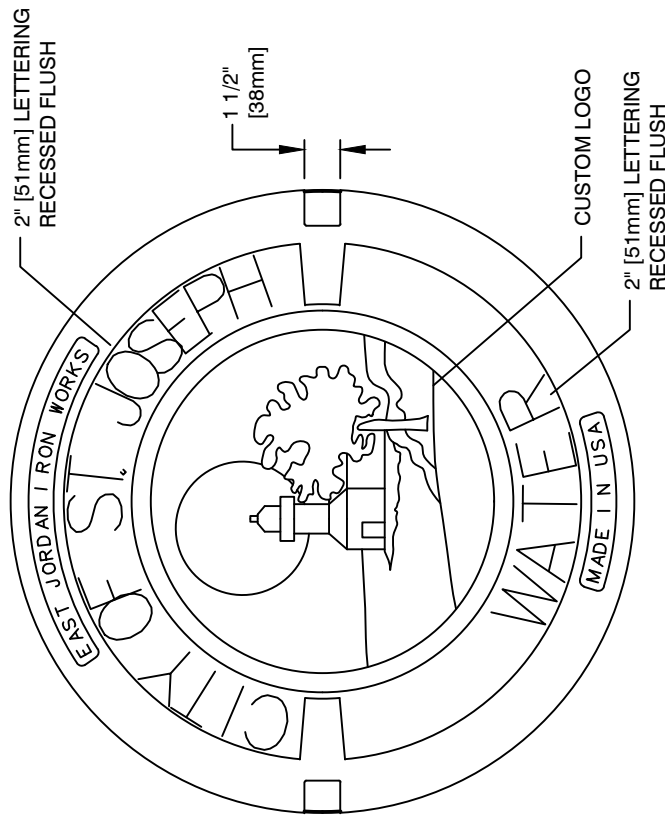
CD - 14



BOTTOM VIEW OF COVER



PICKHOLE DETAIL



COVER SECTION

**1040A LOGO
MANHOLE COVER**

LOGO COVERS SHALL BE USED ON ALL VALVE MANHOLES WITHIN/OWNED BY THE CITY OF ST. JOSEPH. COVERS IN THE REMAINING JURISDICTIONS SHALL BE LABELED WATER IN ACCORDANCE WITH THE SPECIFICATIONS



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1040A LOGO
MANHOLE COVER

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CD - 15