STANDARD CONSTRUCTION DETAILS

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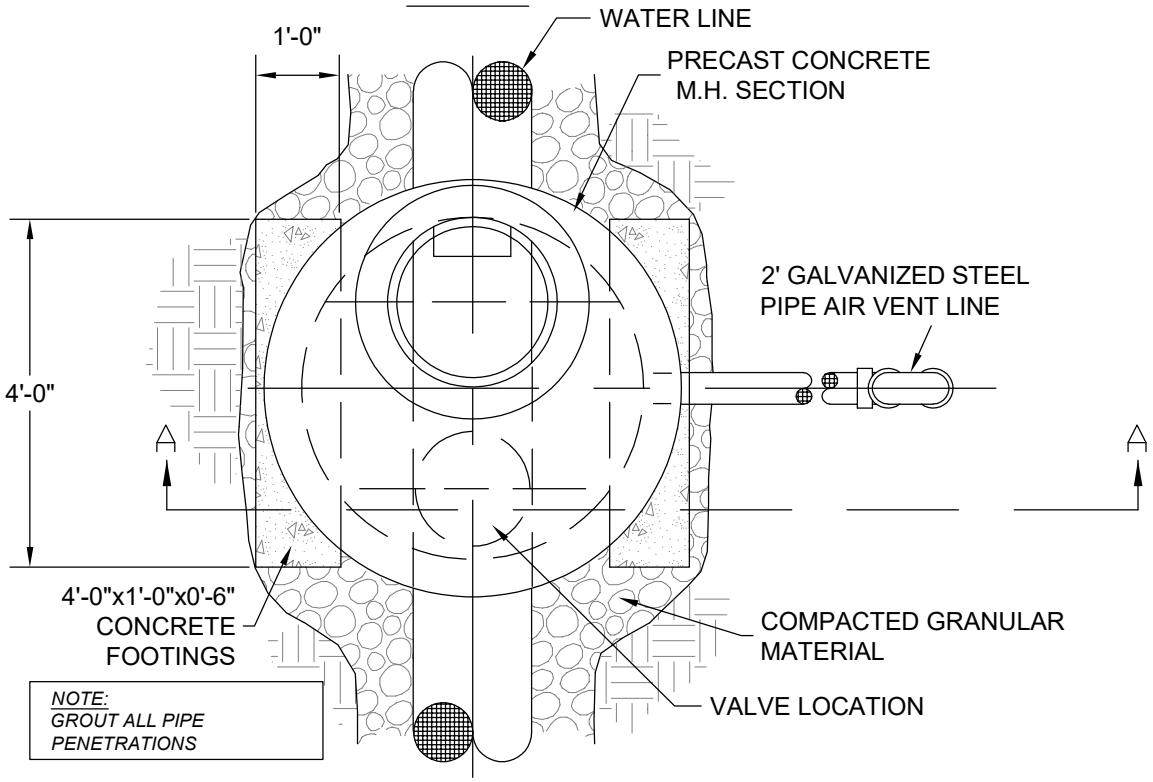
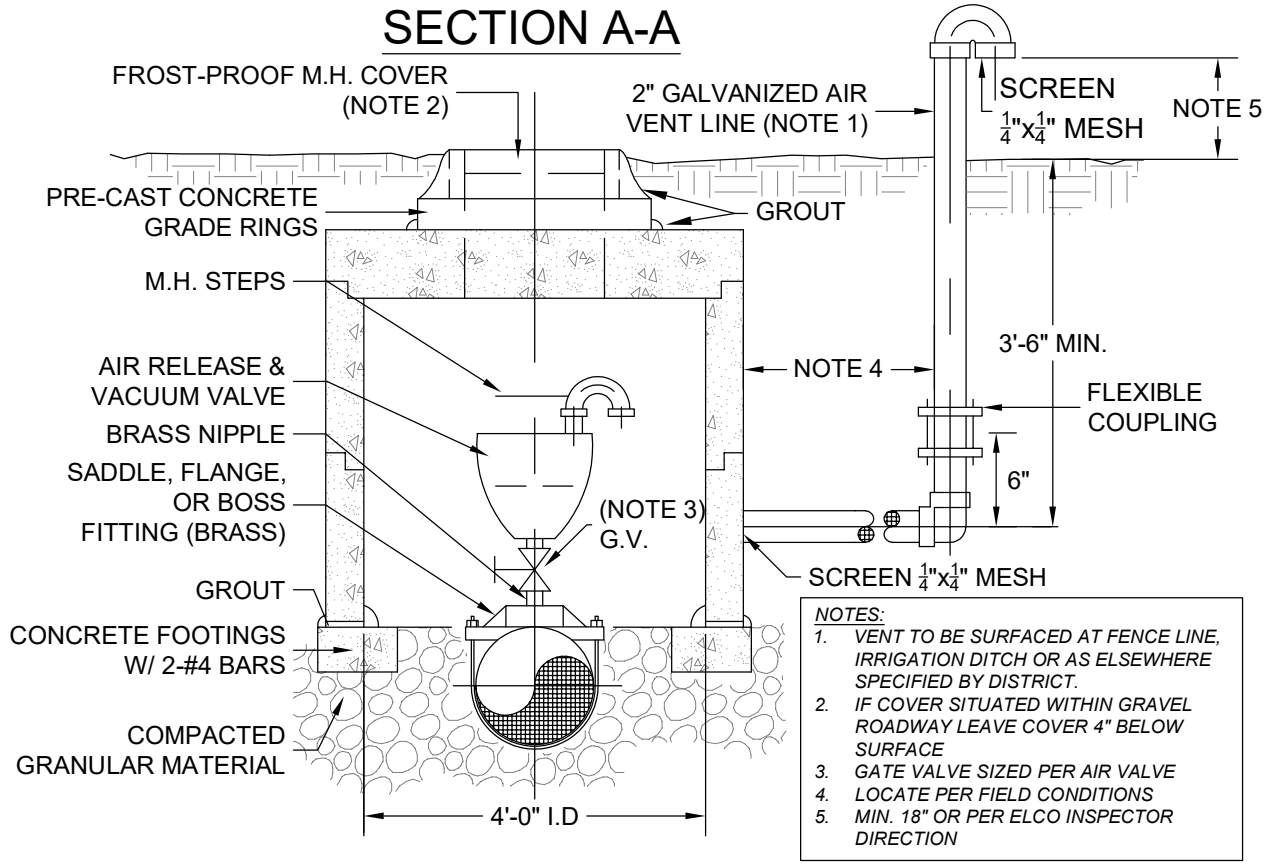
PLAN



NOTE:
GROUT ALL PIPE PENETRATIONS

SECTION A-A

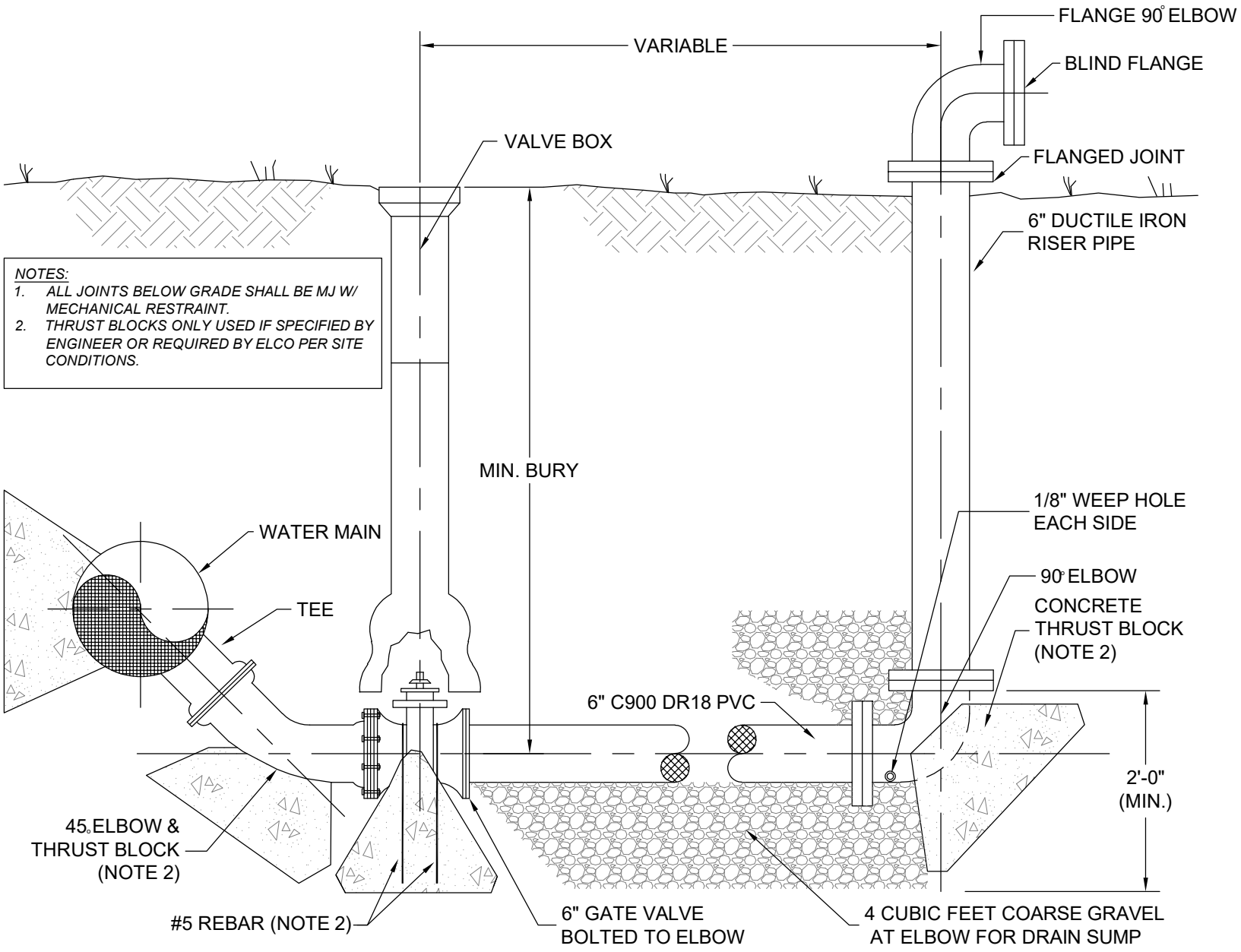


NOTES:
1. *VENT TO BE SURFACED AT FENCE LINE, IRRIGATION DITCH OR AS ELSEWHERE SPECIFIED BY DISTRICT.*
2. *IF COVER SITUATED WITHIN GRAVEL ROADWAY LEAVE COVER 4" BELOW SURFACE*
3. *GATE VALVE SIZED PER AIR VALVE*
4. *LOCATE PER FIELD CONDITIONS*
5. *MIN. 18" OR PER ELCO INSPECTOR DIRECTION*

EAST LARIMER COUNTY WATER DISTRICT

AIR RELIEF / VACUUM VALVE WITH VAULT

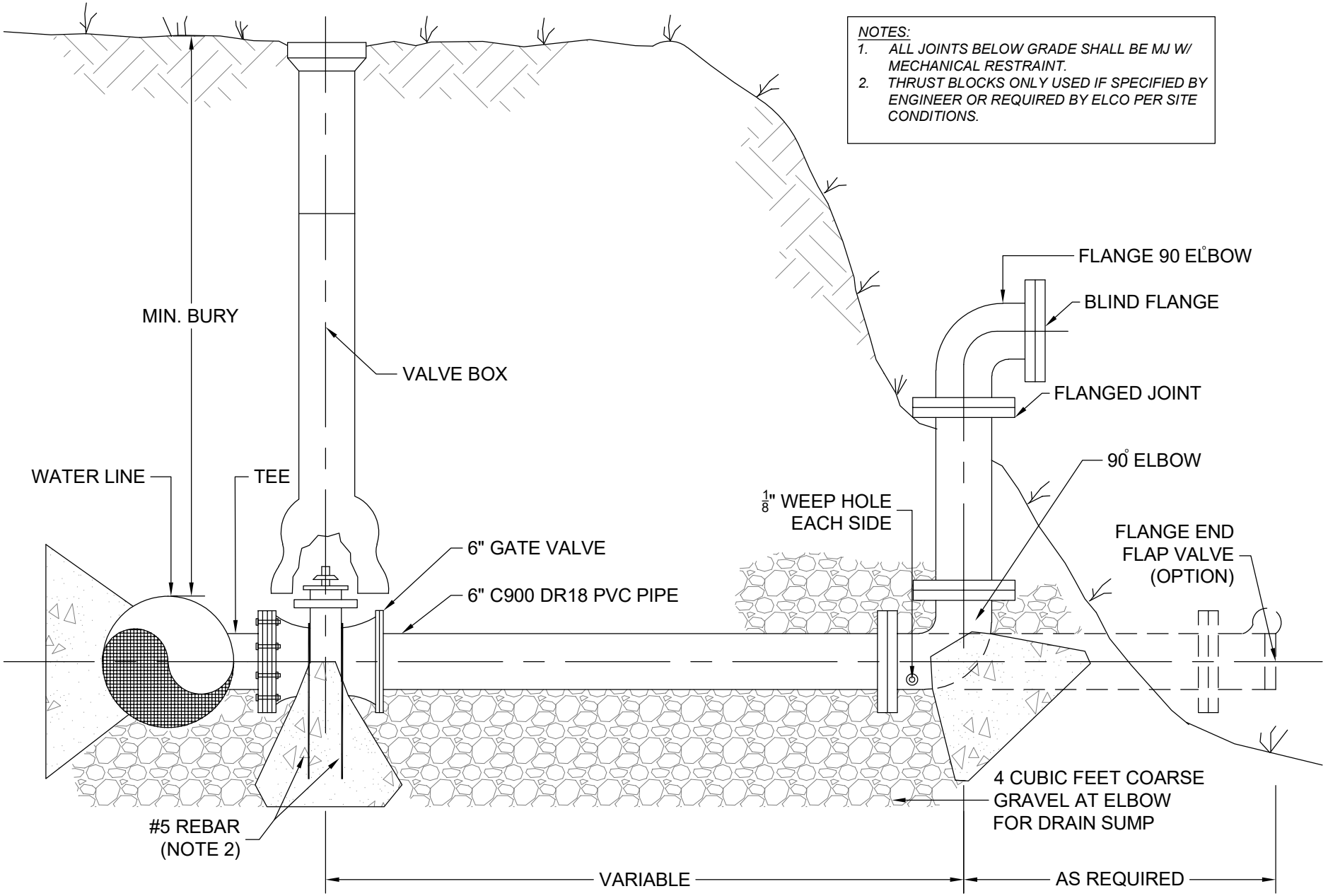
		Date	File No.
Designed	N/A	N/A	esd001_airvac
Drawn	RKB	08/91	Drawing No.
Revised	EJV	11/21	001
Approved	RS	8/21	NOT TO SCALE
			Sheet 01 of 01



EAST LARIMER COUNTY WATER DISTRICT

BLOWOFF ASSEMBLY - TYPE (A)

		Date	
Designed	N/A	N/A	File No. esd002_blowoff_a
Drawn	RKB	08/01/91	Drawing No. 002
Revised	EJV	8/21	NOT TO SCALE
Approved	RS	8/21	Sheet 01 of 02

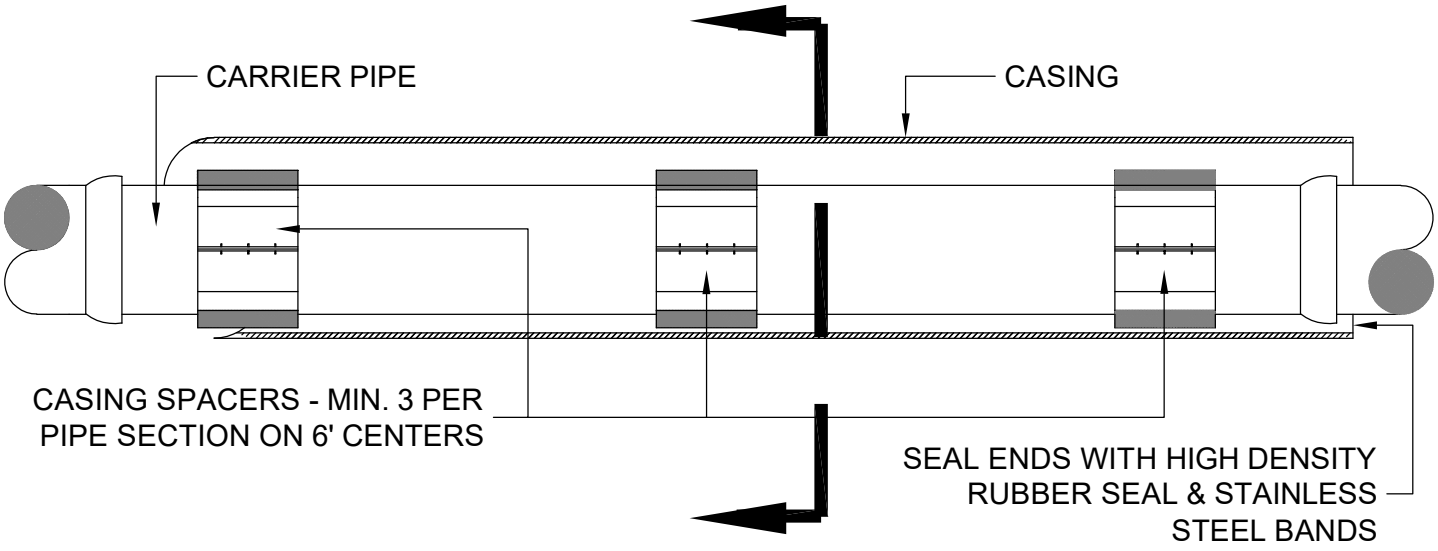


EAST LARIMER COUNTY WATER DISTRICT

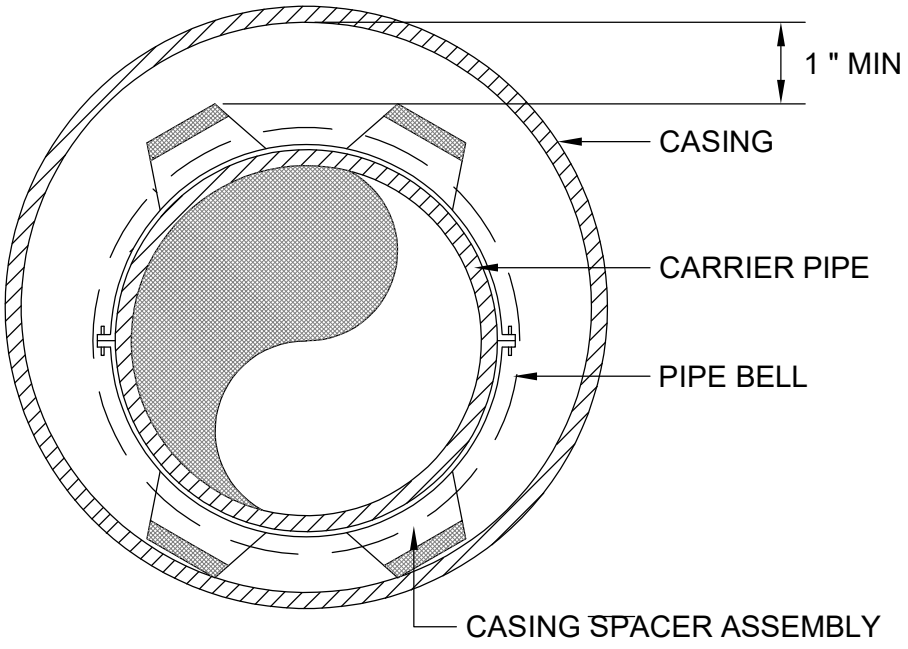
BLOWOFF ASSEMBLY - TYPE (B)

		Date	
Designed	N/A	N/A	File No. esd003_blowoff_b
Drawn	RKB	08/01/91	Drawing No. 003
Revised	EJV	8/21	NOT TO SCALE
Approved	RS	8/21	Sheet 02 of 02

CENTERLINE SECTION



END SECTION

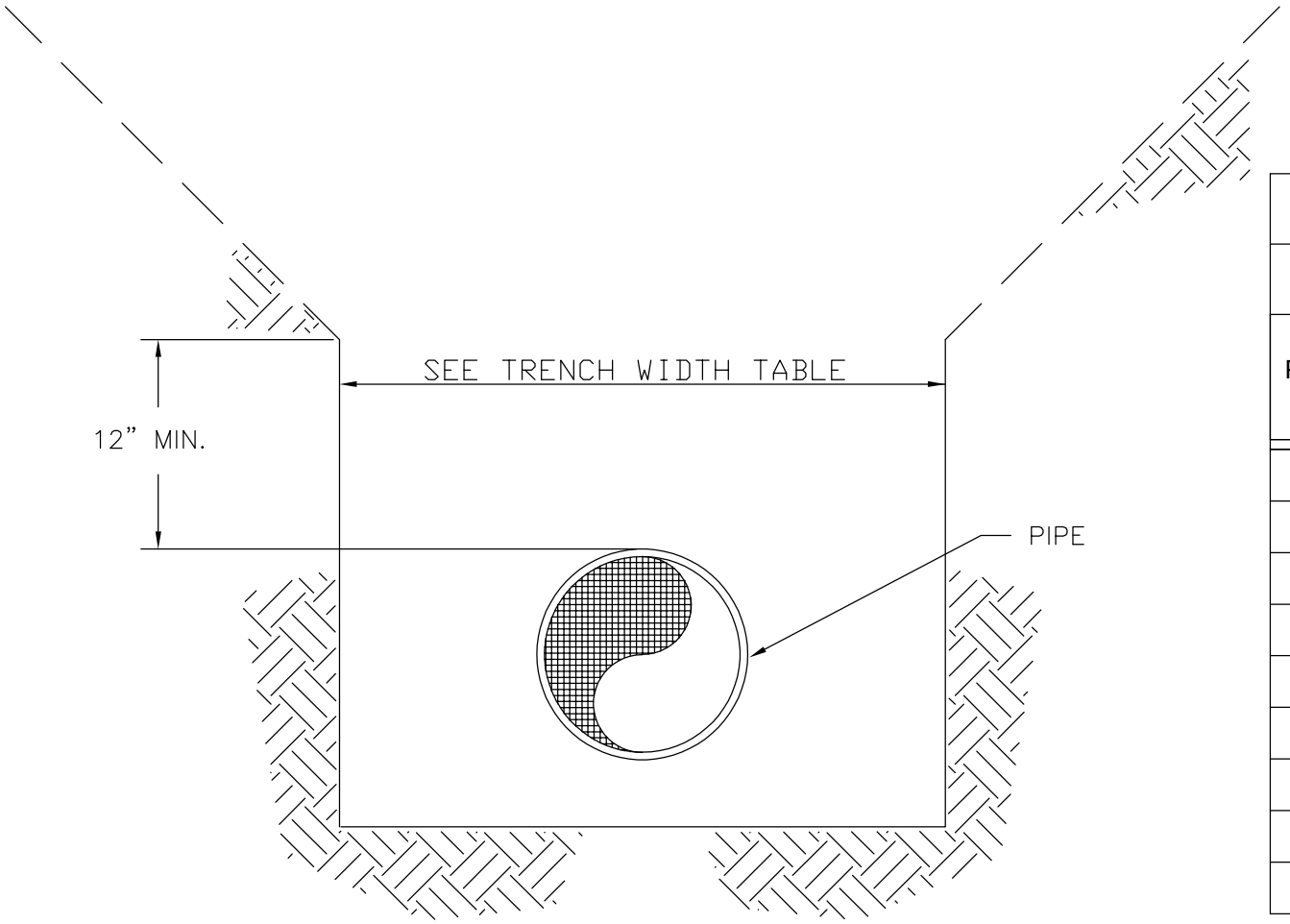


NOTE:
SEE SPECIFICATIONS FOR ACCEPTED CASING SPACER AND END SEAL MANUFACTURERS AND MODELS.

EAST LARIMER COUNTY WATER DISTRICT

BURIED CASING DETAIL

		Date	
Designed	N/A	N/A	File No. esd004_buried_casing
Drawn	RKB	12/93	Drawing No. 004
Revised	EJV	8/20	NOT TO SCALE
Approved	RS	8/20	Sheet 01 of 01



TRENCH WIDTH TABLE

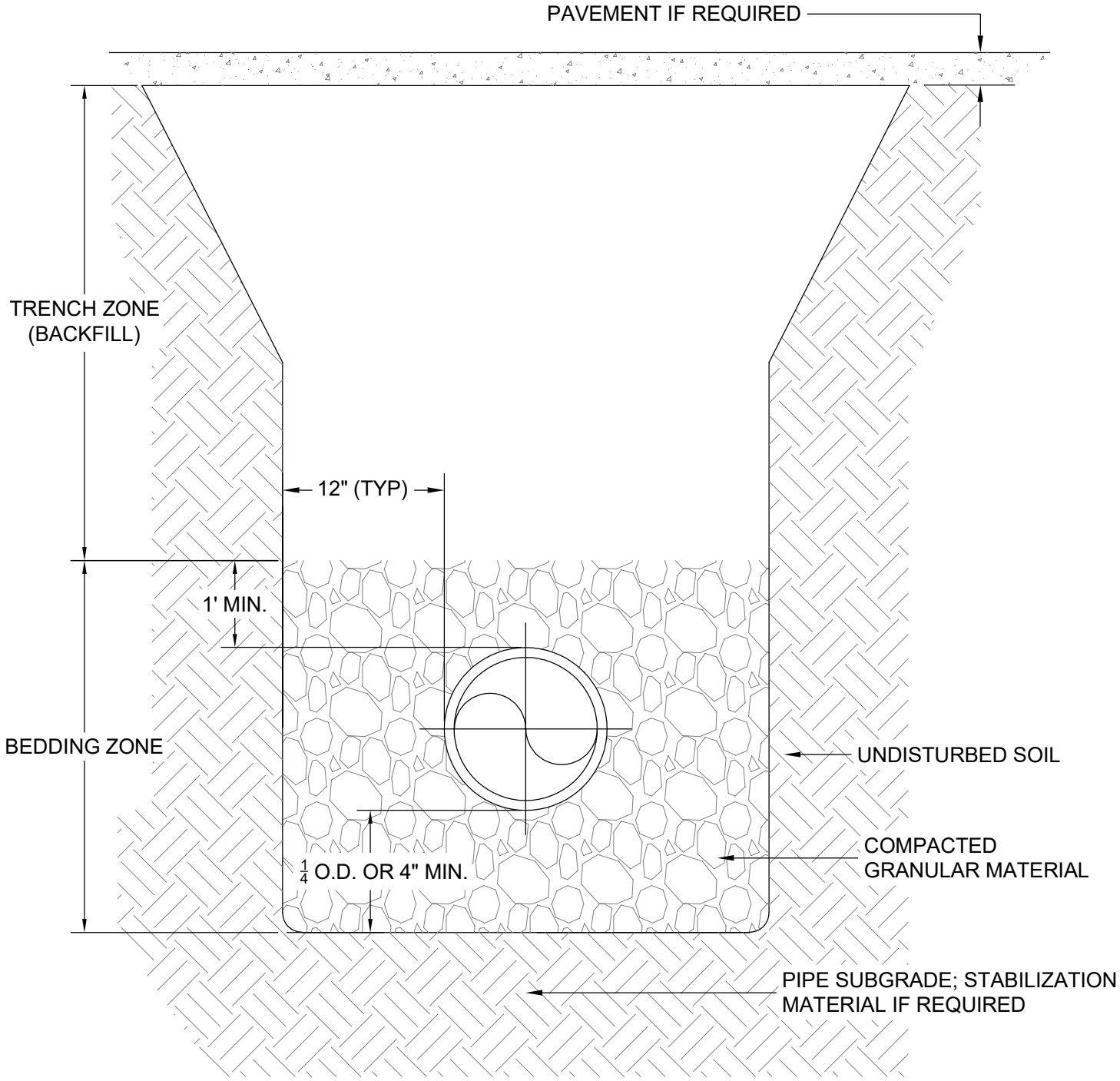
PVC OR DUCTILE IRON PIPE

PIPE DIAMETER (INCHES)	MAXIMUM TRENCH WIDTH (INCHES)
4	28
6	30
8	32
10	34
12	36
14	38
16	40
18	42
24	46

EAST LARIMER COUNTY WATER DISTRICT

TRENCH DETAIL

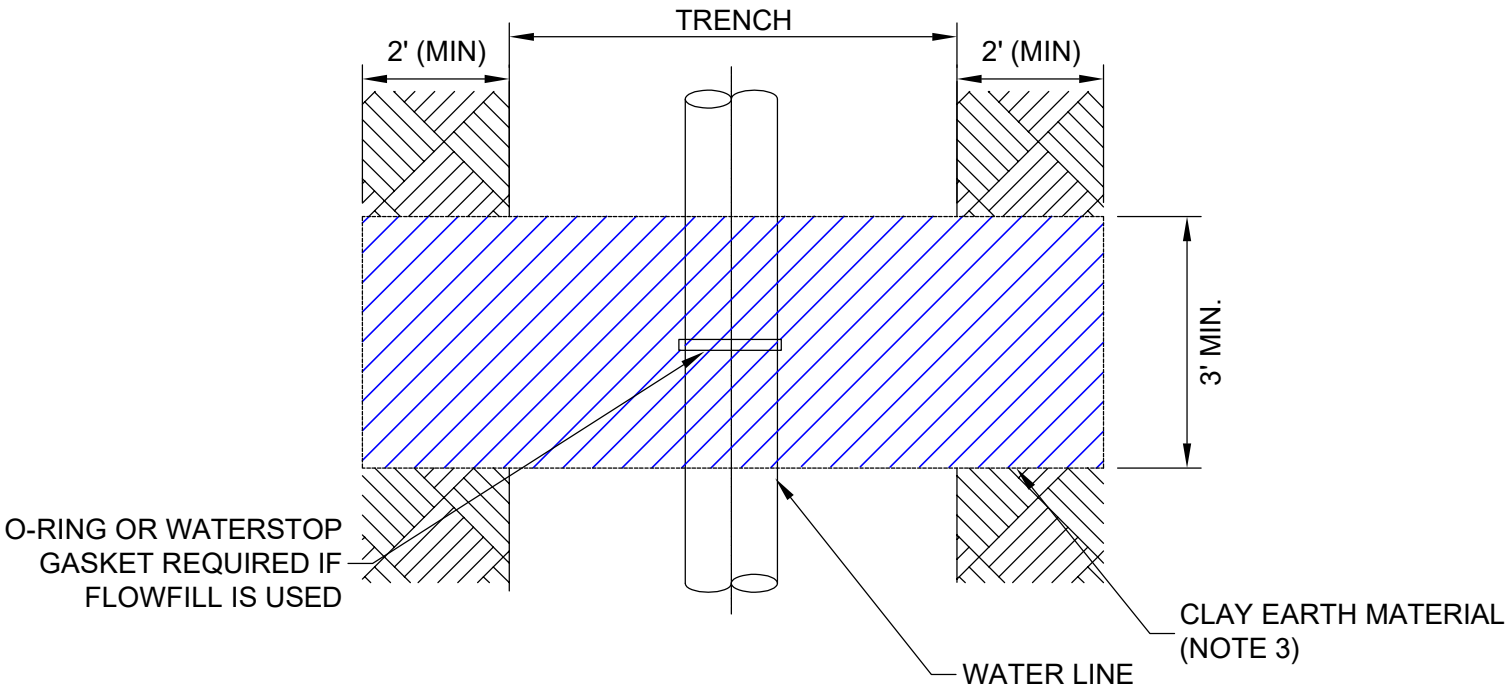
		Date	
Designed	N/A	N/A	File No. esd023_trench_detail
Drawn	RKB	10/91	Drawing No. 005
Revised	EJV	8/20	NOT TO SCALE
Approved	RS	8/20	Sheet 01 of 01

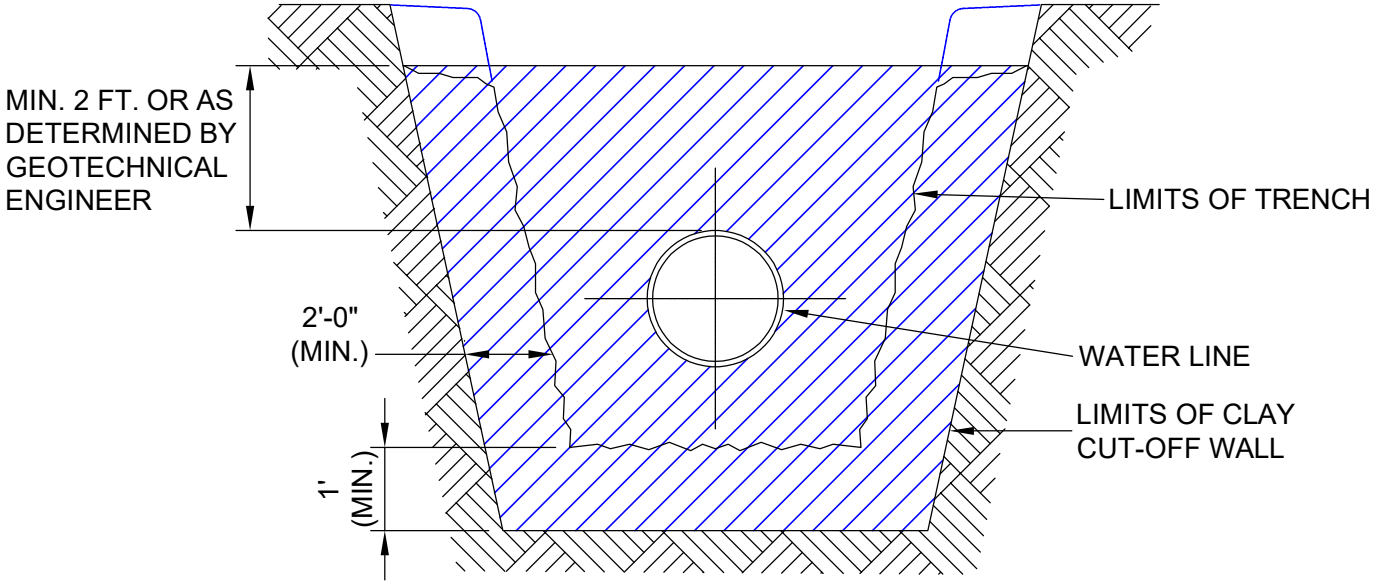


EAST LARIMER COUNTY WATER DISTRICT

TRENCH AND BEDDING DETAIL

		Date	
Designed	N/A	N/A	File No. esd006_bedding_class
Drawn	EJV	08/20	Drawing No. 006
Revised	EJV	10/21	NOT TO SCALE
Approved	RS	8/21	Sheet 01 of 01





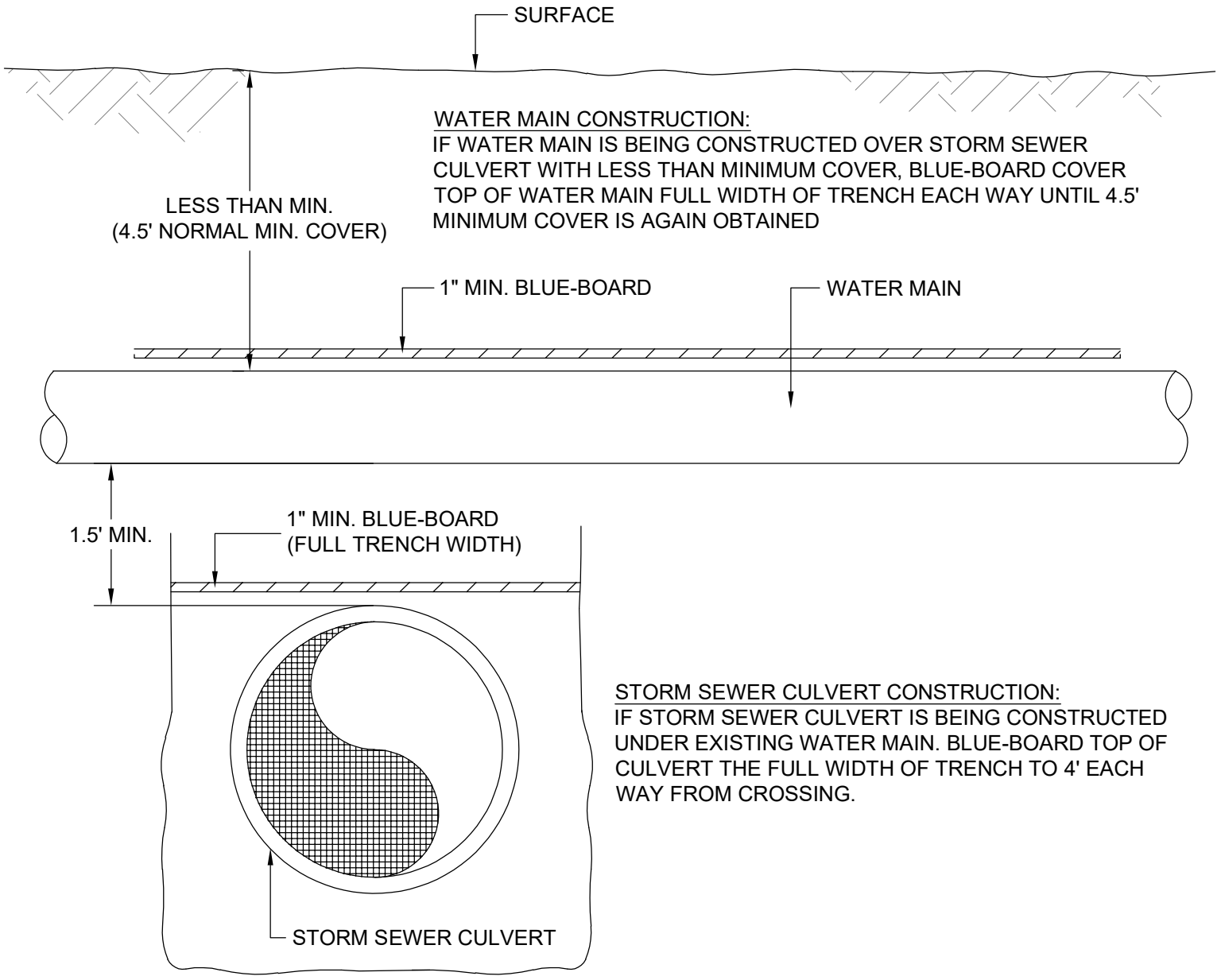
NOTES:

1. CLAY SHALL BE COMPACTED TO 95% MAXIMUM DENSITY.
2. CLAY MATERIAL TO BE CLASSIFIED AS SC, CL OR ML-CL.
3. FLOWFILL MAY BE USED INSTEAD OF CLAY MATERIAL IF APPROVED BY DISTRICT.

EAST LARIMER COUNTY WATER DISTRICT

CUT-OFF WALL

		Date	
Designed	N/A	N/A	File No. esd007_cut_off_wall
Drawn	RKB	10/01/91	Drawing No. 007
Revised	EJV	8/21	NOT TO SCALE
Approved	RS	8/21	Sheet 01 of 01



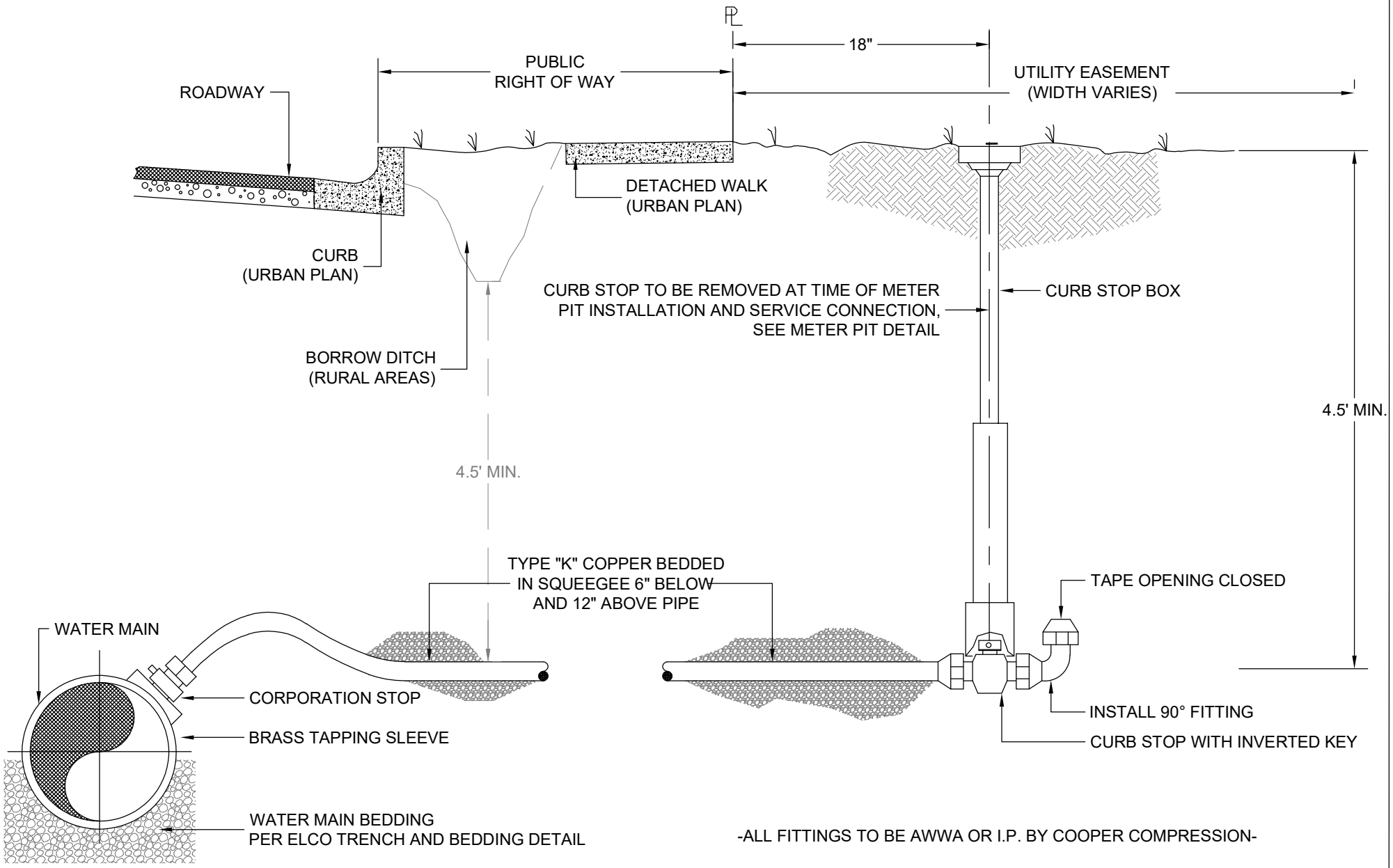
WATER MAIN CONSTRUCTION:
IF WATER MAIN IS BEING CONSTRUCTED OVER STORM SEWER CULVERT WITH LESS THAN MINIMUM COVER, BLUE-BOARD COVER TOP OF WATER MAIN FULL WIDTH OF TRENCH EACH WAY UNTIL 4.5' MINIMUM COVER IS AGAIN OBTAINED

STORM SEWER CULVERT CONSTRUCTION:
IF STORM SEWER CULVERT IS BEING CONSTRUCTED UNDER EXISTING WATER MAIN. BLUE-BOARD TOP OF CULVERT THE FULL WIDTH OF TRENCH TO 4' EACH WAY FROM CROSSING.

EAST LARIMER COUNTY WATER DISTRICT

INSULATED WATER MAIN AT STORM SEWER OR CULVERT CROSSING

		Date	
Designed	N/A	N/A	File No. esd008_crossing_culvert
Drawn	RKB	05/03	Drawing No. 008
Revised	EJV	8/21	NOT TO SCALE
Approved	RS	8/21	Sheet 01 of 02

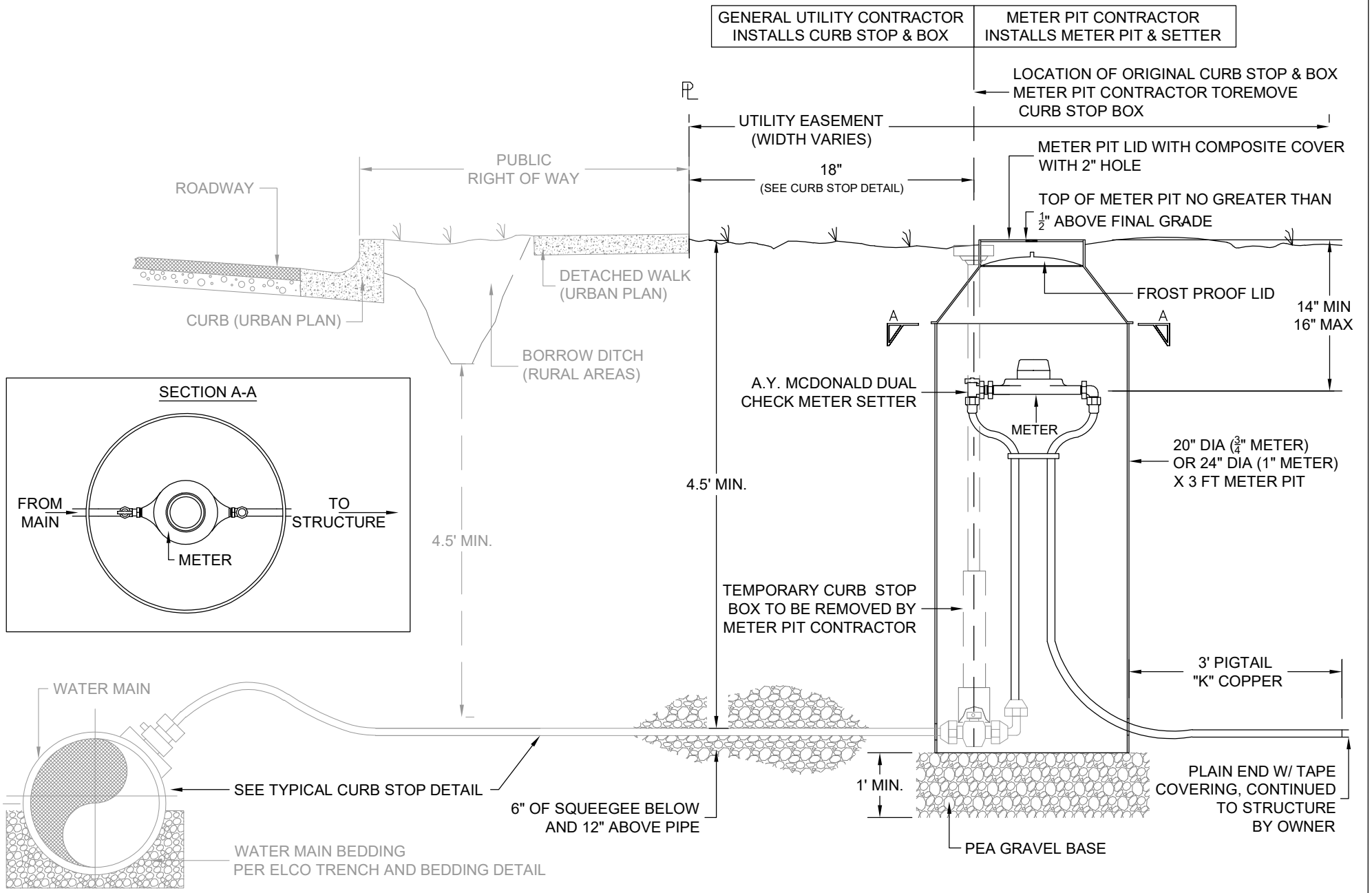


-ALL FITTINGS TO BE AWWA OR I.P. BY COOPER COMPRESSION-

EAST LARIMER COUNTY WATER DISTRICT

TYPICAL $\frac{3}{4}$" & 1" CURB STOP DETAIL

		Date	
Designed	N/A	N/A	File No. esd009_curbstop_typical
Drawn	RKB	05/03	Drawing No. 009
Revised	EJV	2/24	NOT TO SCALE
Approved	RS	2/24	Sheet 01 of 02

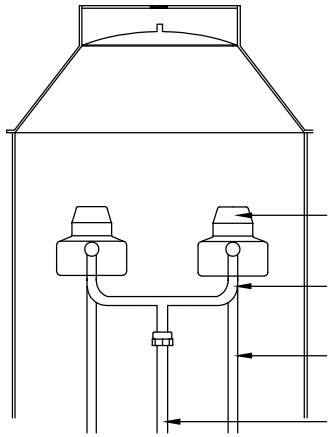


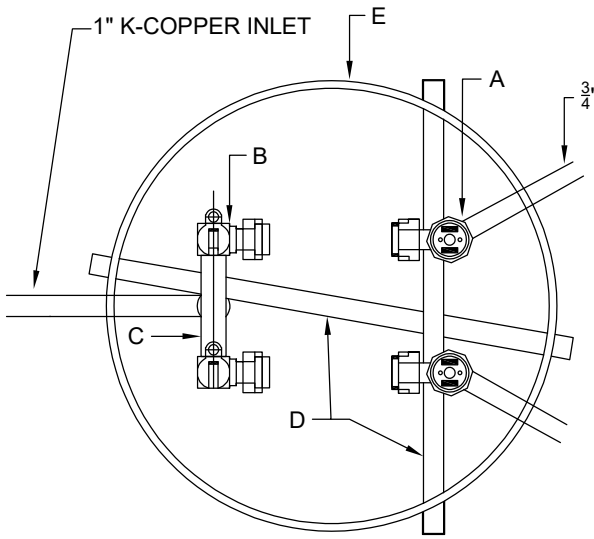
EAST LARIMER COUNTY WATER DISTRICT

TYPICAL ¾" & 1" METER PIT DETAIL

		Date	
Designed	N/A	N/A	File No. esd010_service_typical
Drawn	RKB	10/91	Drawing No. 010
Revised	EJV	2/24	NOT TO SCALE
Approved	RS	2/24	Sheet 01 of 02

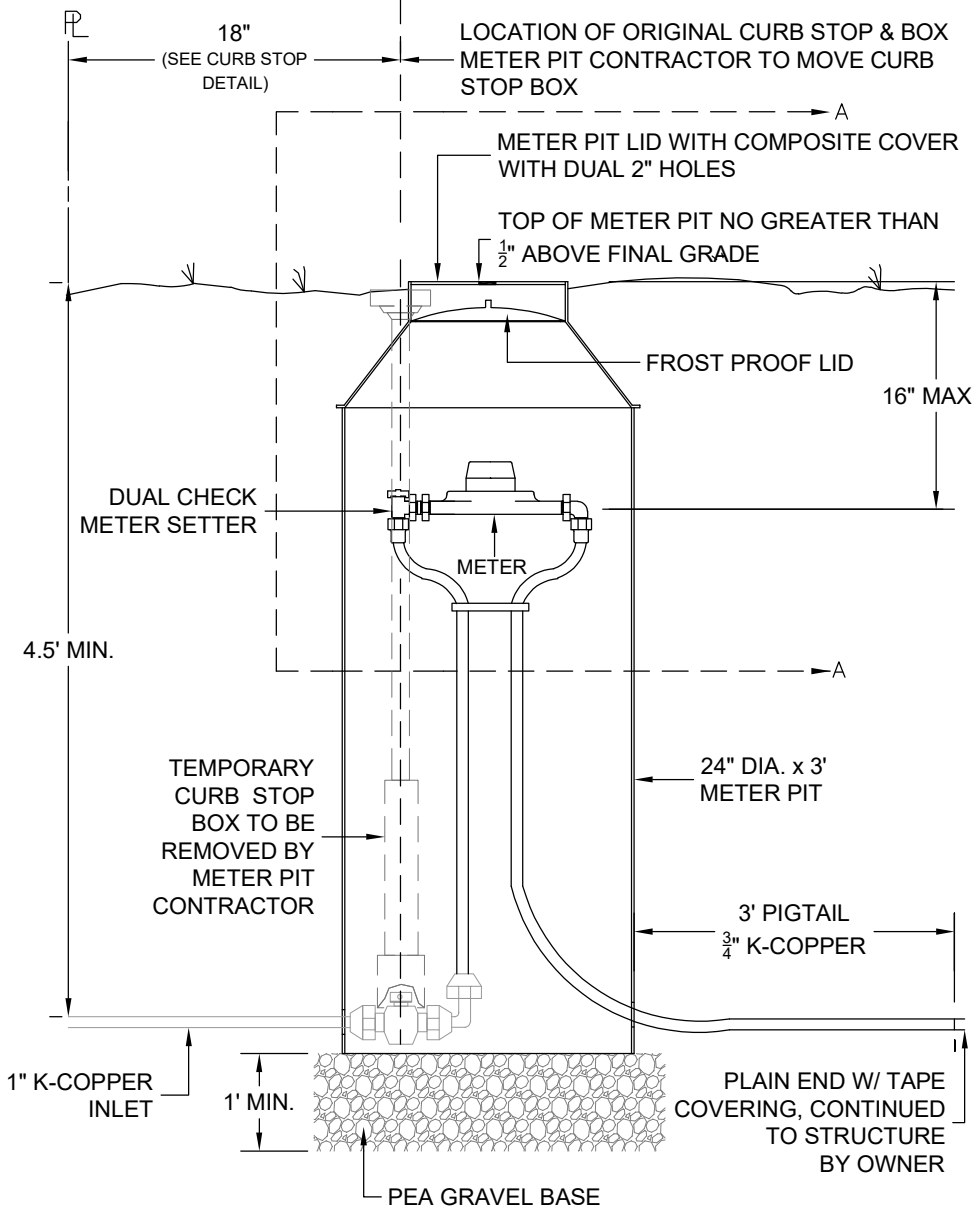
SECTION A-A





ITEM	NAME
A	ANGLE DUAL CHECK VALVE
B	ANGLE BELL VALVE
C	"U" BRANCH YOKE
D	METER IDLER SUPPORTS
E	METER PIT

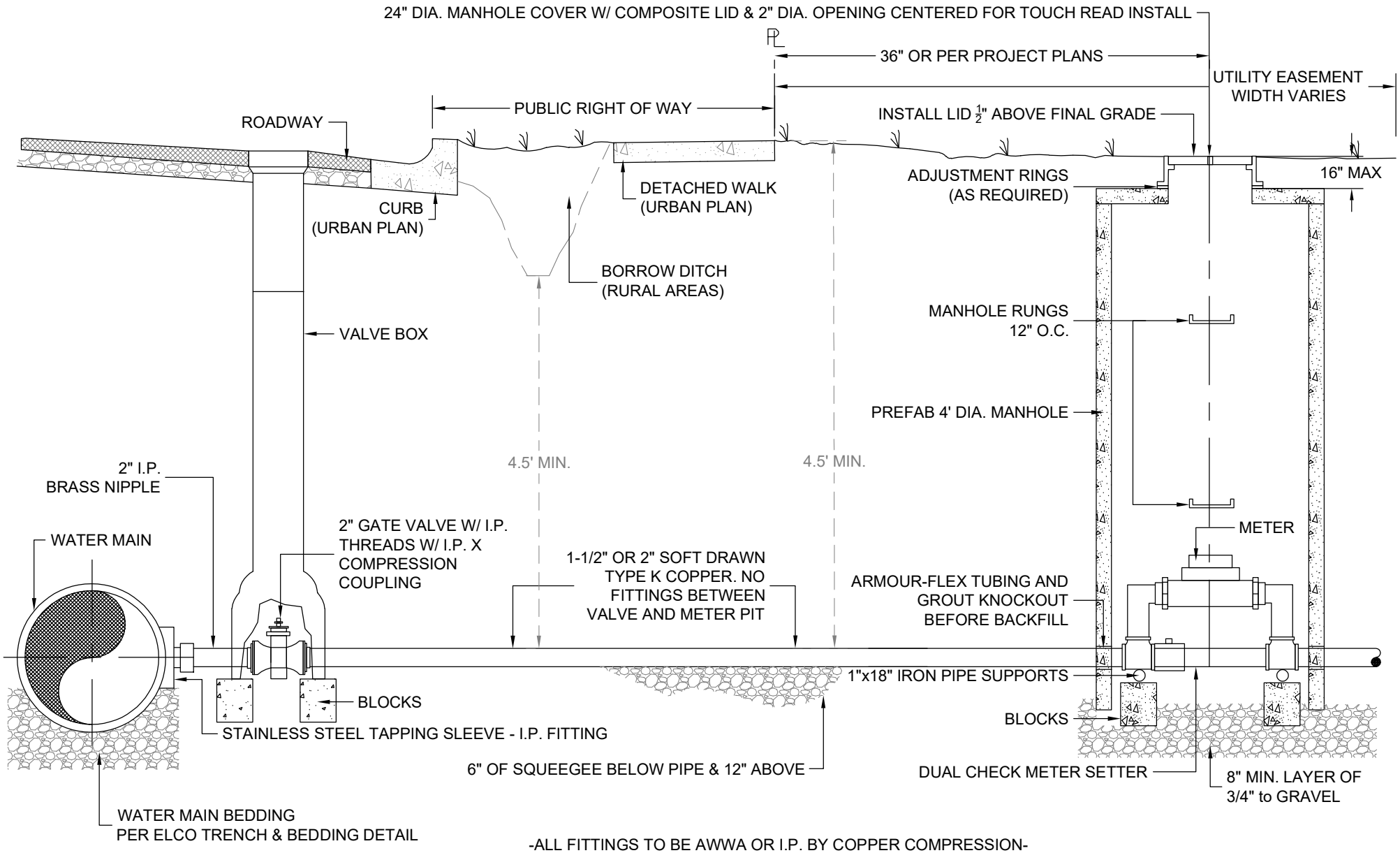
GENERAL UTILITY CONTRACTOR INSTALLS CURB STOP & BOX	METER PIT CONTRACTOR INSTALLS METER PIT & SETTER



EAST LARIMER COUNTY WATER DISTRICT

TYPICAL ¾" DUAL METER PIT DETAIL

		Date	
Designed	N/A	N/A	File No. esd011_service_dual
Drawn	EJV	8/20	Drawing No. 011
Revised	RS	7/24	NOT TO SCALE
Approved	RS	7/24	Sheet 02 of 03



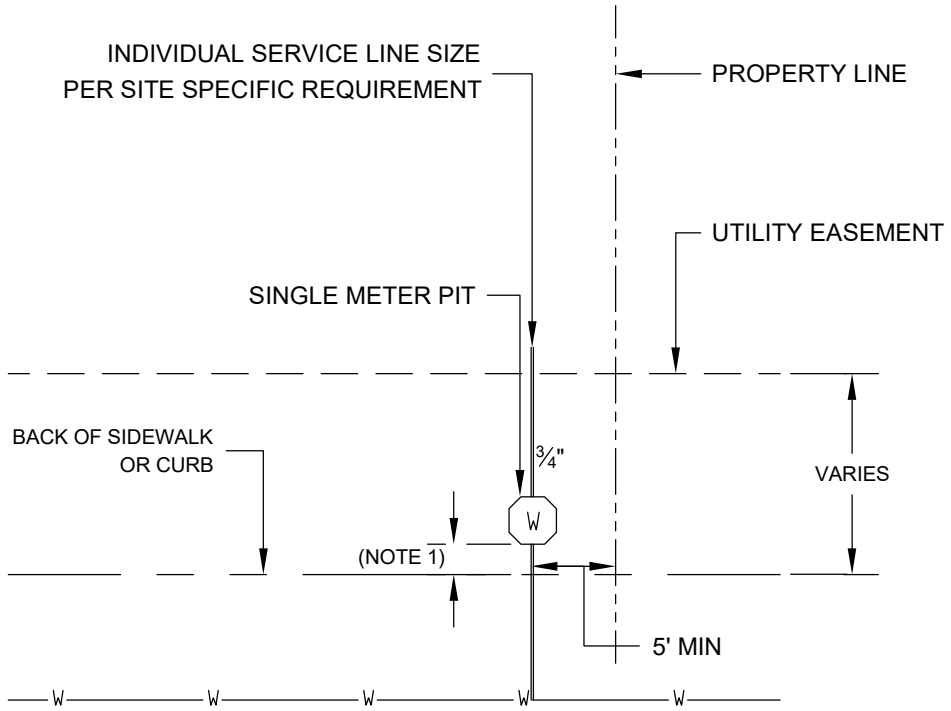
-ALL FITTINGS TO BE AWWA OR I.P. BY COPPER COMPRESSION-

EAST LARIMER COUNTY WATER DISTRICT

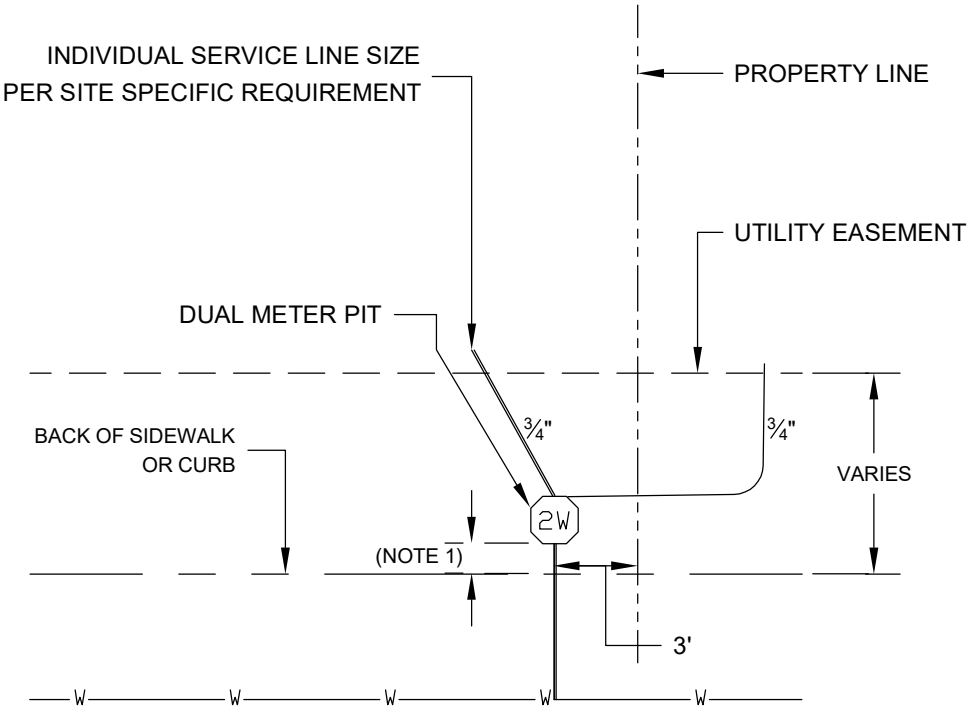
LARGE WATER SERVICE DETAIL 1-1/2"-2"

		Date	
Designed	N/A	N/A	File No. esd012_service_large
Drawn	REM	09/91	Drawing No. 012
Revised	EJV	2/24	NOT TO SCALE
Approved	RS	2/24	Sheet 03 of 03

SINGLE METER LAYOUT



DUAL METER LAYOUT



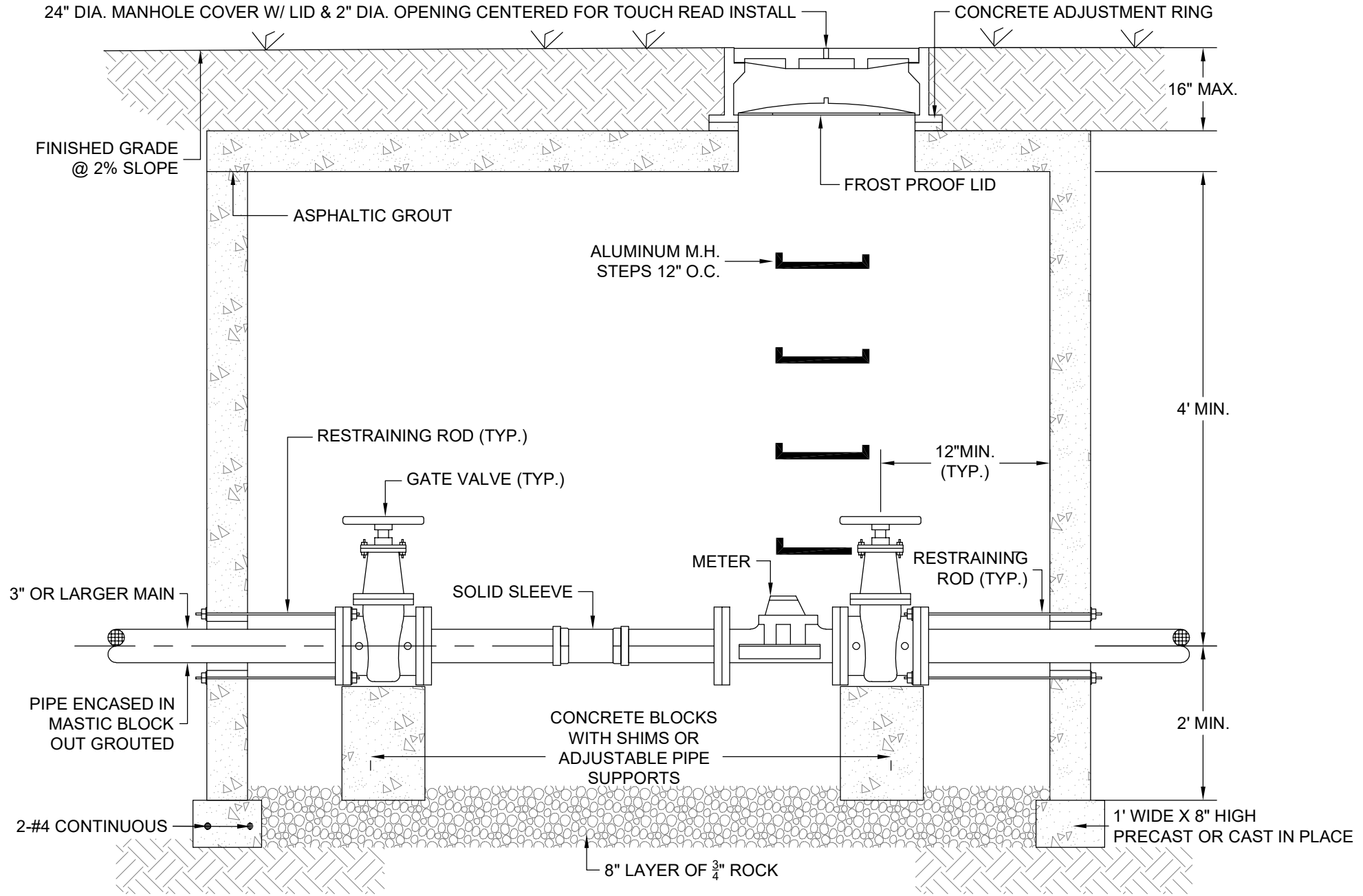
NOTES:

1: See Meter Pit Detail
2: Distance may need to be modified if drainage or other site specific conditions dictate changes to these dimensions.

EAST LARIMER COUNTY WATER DISTRICT

WATER METER LAYOUT DETAILS

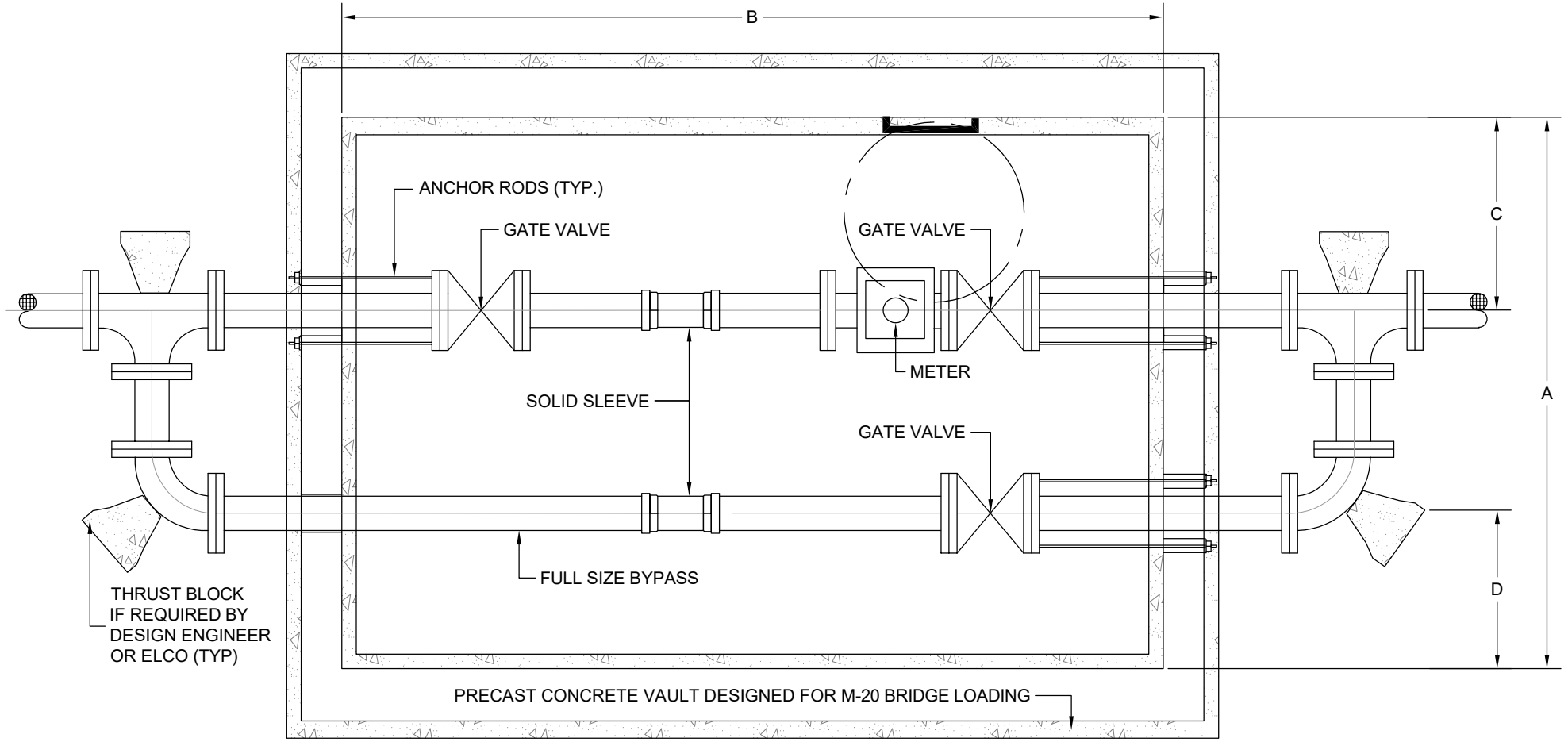
Designed	RS	Date 07/29/20	File No. esd013_meterpit_layout
Drawn	EJV	07/29/20	Drawing No. 013
Revised	EJV	2/24	NOT TO SCALE
Approved	RS	2/24	Sheet 01 of 01



EAST LARIMER COUNTY WATER DISTRICT

3", 4" & 6" METER VAULT (SIDE VIEW)

		Date	
Designed	N/A	N/A	File No. esd014_meter_vault_profile
Drawn	REM	10/99	Drawing No. 014
Revised	EJV	2/24	NOT TO SCALE
Approved	RS	2/24	Sheet 01 of 02



METER VAULT DIMENSIONS

METER SIZE	A	B	C	D
3 inch	6'	7'	2'-6" MIN.	2'-6" MIN.
4 inch	7'	7'	3' MIN.	2'-6" MIN.
6 inch	8'	7'	3' MIN.	2'-6" MIN.

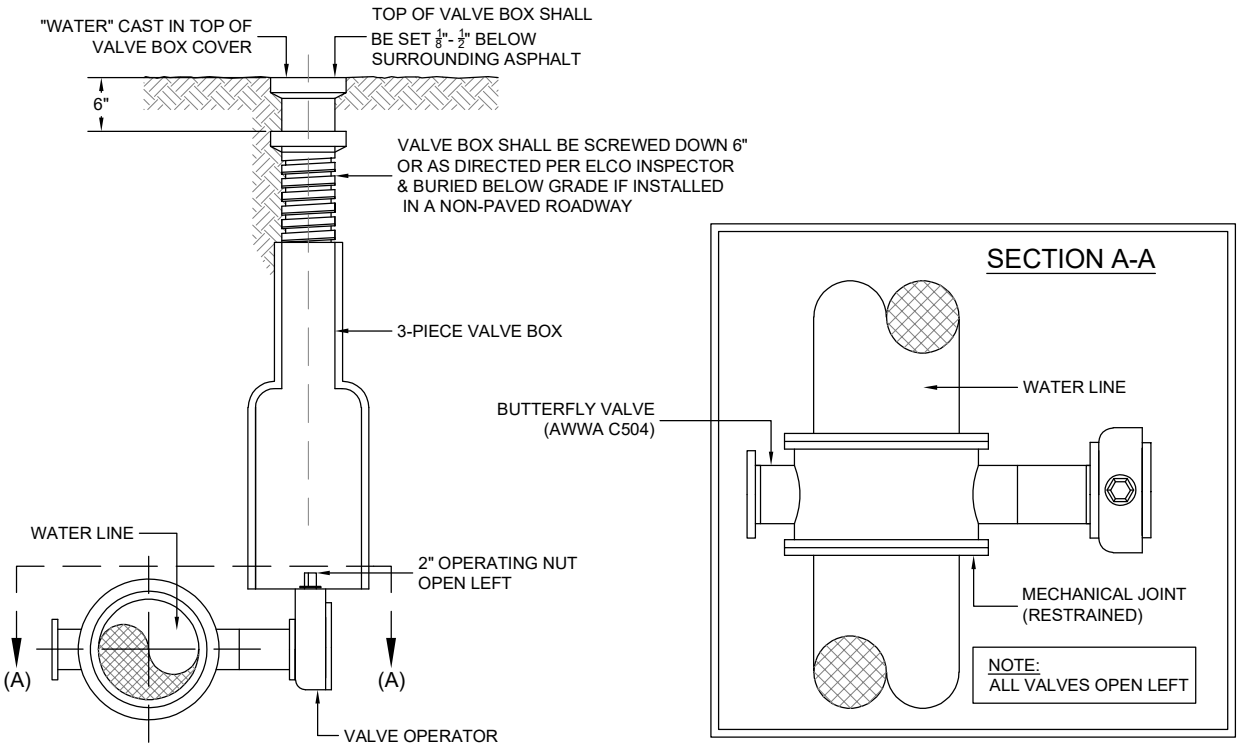
GENERAL NOTES:
IF PRESSURE REDUCING VALVE IS REQUIRED IT SHALL BE INSTALLED INSIDE BUILDING, IMMEDIATELY FOLLOWING THE MAIN SHUT-OFF VALVE.

EAST LARIMER COUNTY WATER DISTRICT

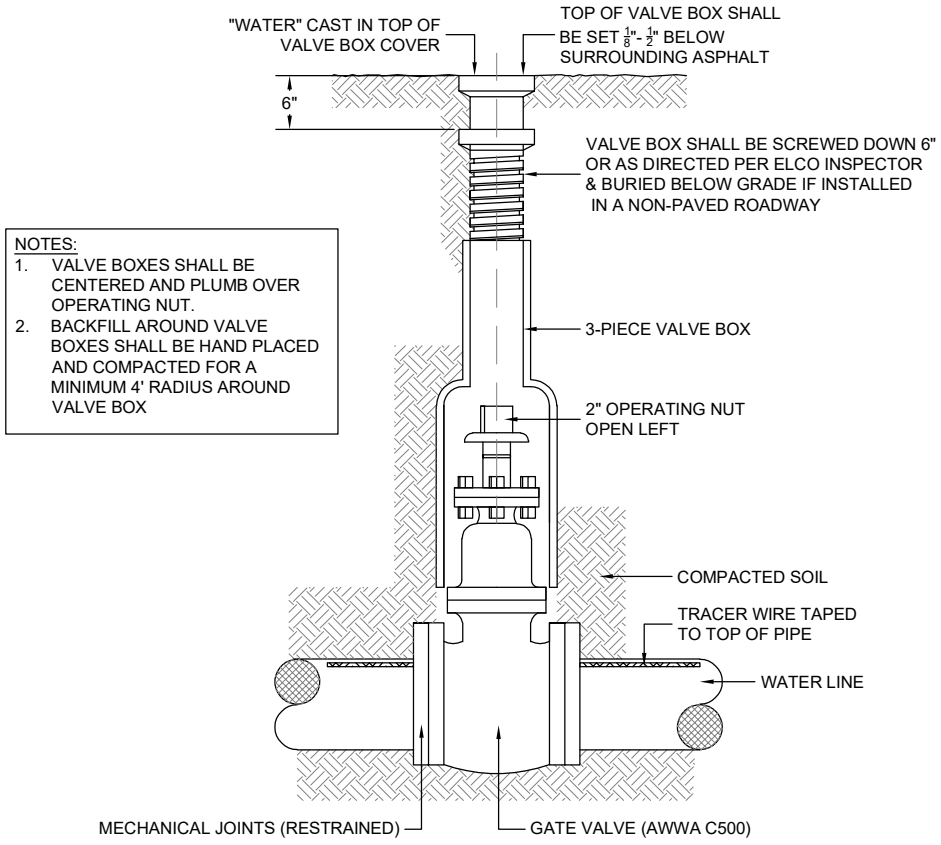
3",4" & 6" METER VAULT (TOP VIEW)

		Date	
Designed	N/A	N/A	File No. esd015_meter_vault_plan
Drawn	REM	10/99	Drawing No. 015
Revised	EJV	2/24	NOT TO SCALE
Approved	RS	2/24	Sheet 02 of 02

BUTTERFLY VALVE DETAIL



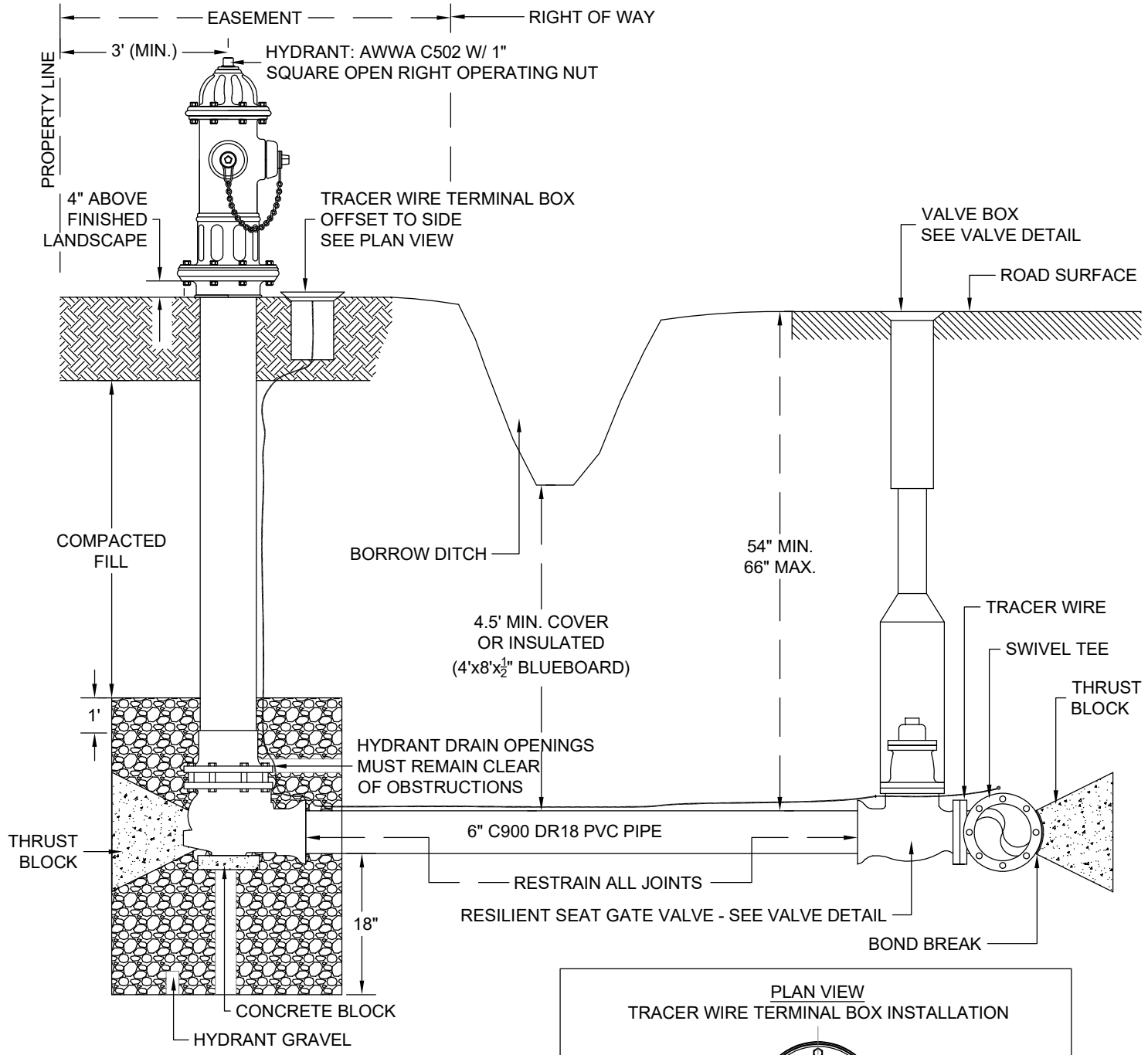
GATE VALVE DETAIL



EAST LARIMER COUNTY WATER DISTRICT

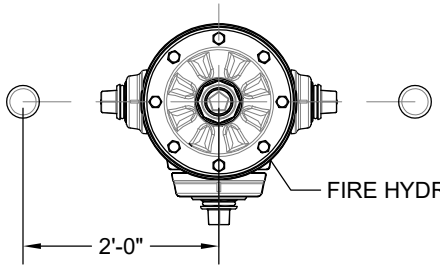
VALVE DETAIL

		Date	
Designed	RKB	08/91	File No. esd016_valve_detail
Drawn	EJV	08/20	Drawing No. 016
Revised	EJV	5/23	NOT TO SCALE
Approved	RS	8/21	Sheet 01 of 01



NOTES:
1. NO LANDSCAPING (TREES, SHRUBS, BOULDERS, ETC.), RETAINING WALLS OR FENCES ALLOWED WITHIN 10' OF FIRE HYDRANT.
2. FIRE HYDRANT PIPING, VALES, ETC. SHALL BE DOUBLE WRAPPED IN POLYETHYLENE.

PLAN VIEW
TRACER WIRE TERMINAL BOX INSTALLATION

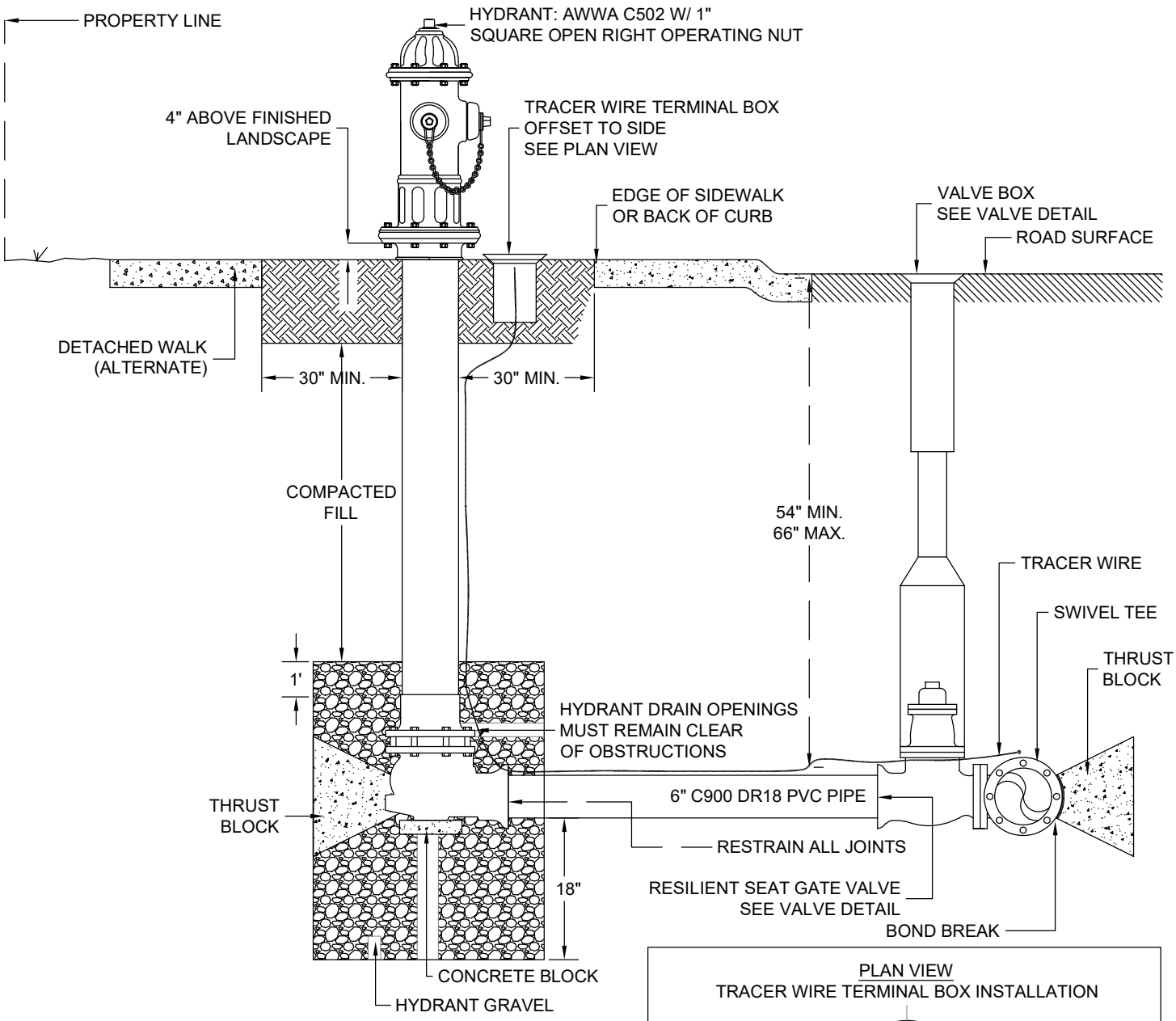


TRACER WIRE TERMINAL BOX INSTALLED EITHER RIGHT OR LEFT OF EACH FIRE HYDRANT ASSEMBLY

EAST LARIMER COUNTY WATER DISTRICT

TYPICAL FIRE HYDRANT INSTALLATION

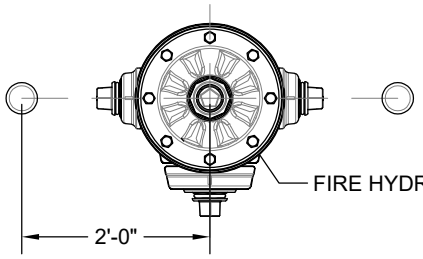
		Date	
Designed	N/A	N/A	File No. esd017_fire_hydrant
Drawn	EJV	8/20	Drawing No. 017
Revised	EJV	2/24	NOT TO SCALE
Approved	RS	2/24	Sheet 01 of 02



NOTES:

1. NO LANDSCAPING (TREES, SHRUBS, BOULDERS, ETC.), RETAINING WALLS OR FENCES ALLOWED WITHIN 10' OF FIRE HYDRANT.
2. FIRE HYDRANT PIPING, VALES, ETC. SHALL BE DOUBLE WRAPPED IN POLYETHYLENE.

PLAN VIEW
TRACER WIRE TERMINAL BOX INSTALLATION

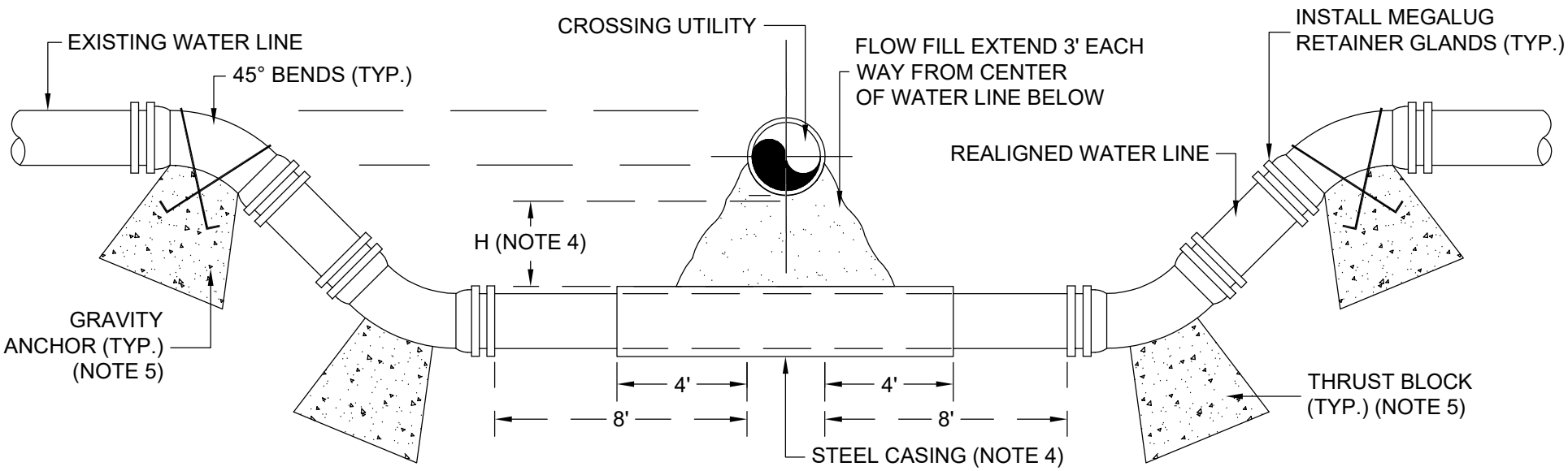


TRACER WIRE TERMINAL BOX INSTALLED EITHER RIGHT OR LEFT OF EACH FIRE HYDRANT ASSEMBLY

EAST LARIMER COUNTY WATER DISTRICT

TYPICAL FIRE HYDRANT INSTALLATION HIGH DENSITY DEVELOPMENT AREAS

		Date	
Designed	N/A	N/A	File No. esd018_fire_hydrant_hd
Drawn	EJV	8/20	Drawing No. 018
Revised	EJV	2/24	NOT TO SCALE
Approved	RS	2/24	Sheet 02 of 02



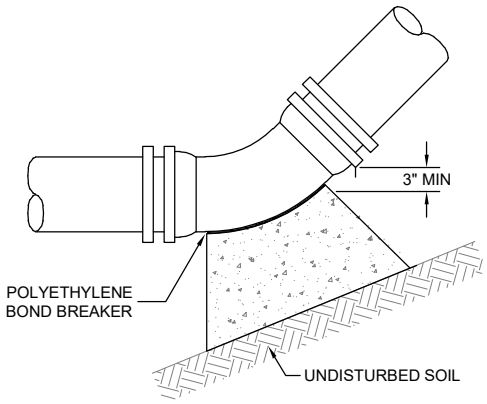
GENERAL NOTES:

1. SEE THRUST BLOCK DETAIL FOR SIZING.
2. ALL FITTINGS & JOINTS IN LOWERING AREA TO BE RESTRAINED WITH MECHANICAL JOINT RESTRAINTS.
3. ALL D.I.P PIPE & FITTINGS SHALL BE DOUBLE WRAPPED WITH POLYETHYLENE ENCASEMENT.
4. IF CLEARANCE "H" IS LESS THAN 18", INSTALL STEEL CASING WHEN CROSSING UTILITY IS 24" DIAMETER OR GREATER, OR AS REQUIRED BY ELCO BASED ON SITE SPECIFIC CONDITIONS. FOR CROSSING UTILITY OF DIAMETER LESS THAN 24", CASING IS NOT REQUIRED UNLESS SPECIFIED BY ELCO PER SITE SPECIFIC CONDITIONS.
5. ANCHOR AND THRUST BLOCKS TO BE INSTALLED ONLY IF ADEQUATE MECHANICAL THRUST RESTRAINT CANNOT BE PROVIDED OR AS REQUIRED BY DESIGN ENGINEER OR ELCO. ENGINEER TO DETERMINE DISTANCES TO BE RESTRAINED.

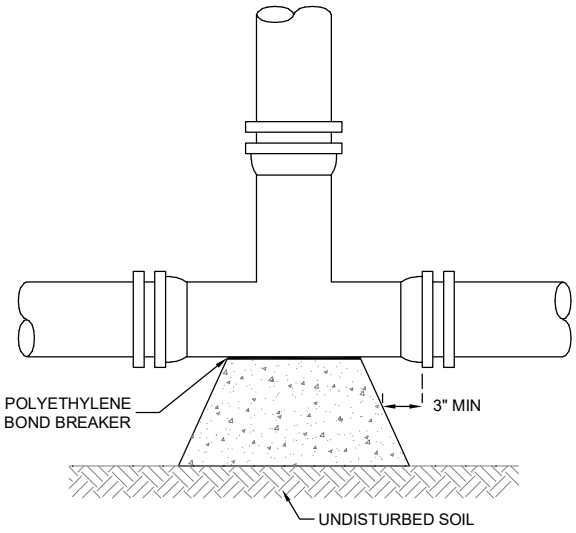
EAST LARIMER COUNTY WATER DISTRICT

WATER MAIN LOWERING DETAIL

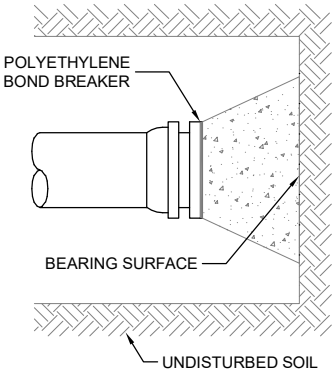
		Date	
Designed	N/A	N/A	File No. esd019_main_lowering
Drawn	EJV	8/20	Drawing No. 019
Revised	EJV	8/21	NOT TO SCALE
Approved	RS	8/21	Sheet 01 of 01



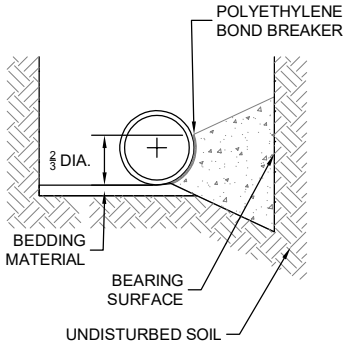
TYPICAL BEND



TEE



PLUG



TYPICAL CROSS-SECTION

BEARING AREAS FOR VARIOUS FITTINGS (FT²)

SIZE	TEE & PLUG	90° BEND	45° BEND	22 ½° BEND	11 ¼° BEND
6"	4.0	5.5	3.0	1.5	1.0
8"	6.5	9.0	5.0	2.5	1.5
12"	14.0	20.0	11.0	5.5	3.0
16"	25.0	35.0	19.0	10.0	5.0
20"	38.0	54.5	29.5	15.0	7.5
24"	55.5	78.5	42.5	22.0	11.0
30"	86.5	122.0	66.0	34.0	17.0
36"	124.0	175.5	95.0	48.5	24.5
42"	168.0	237.5	128.5	65.5	33.0

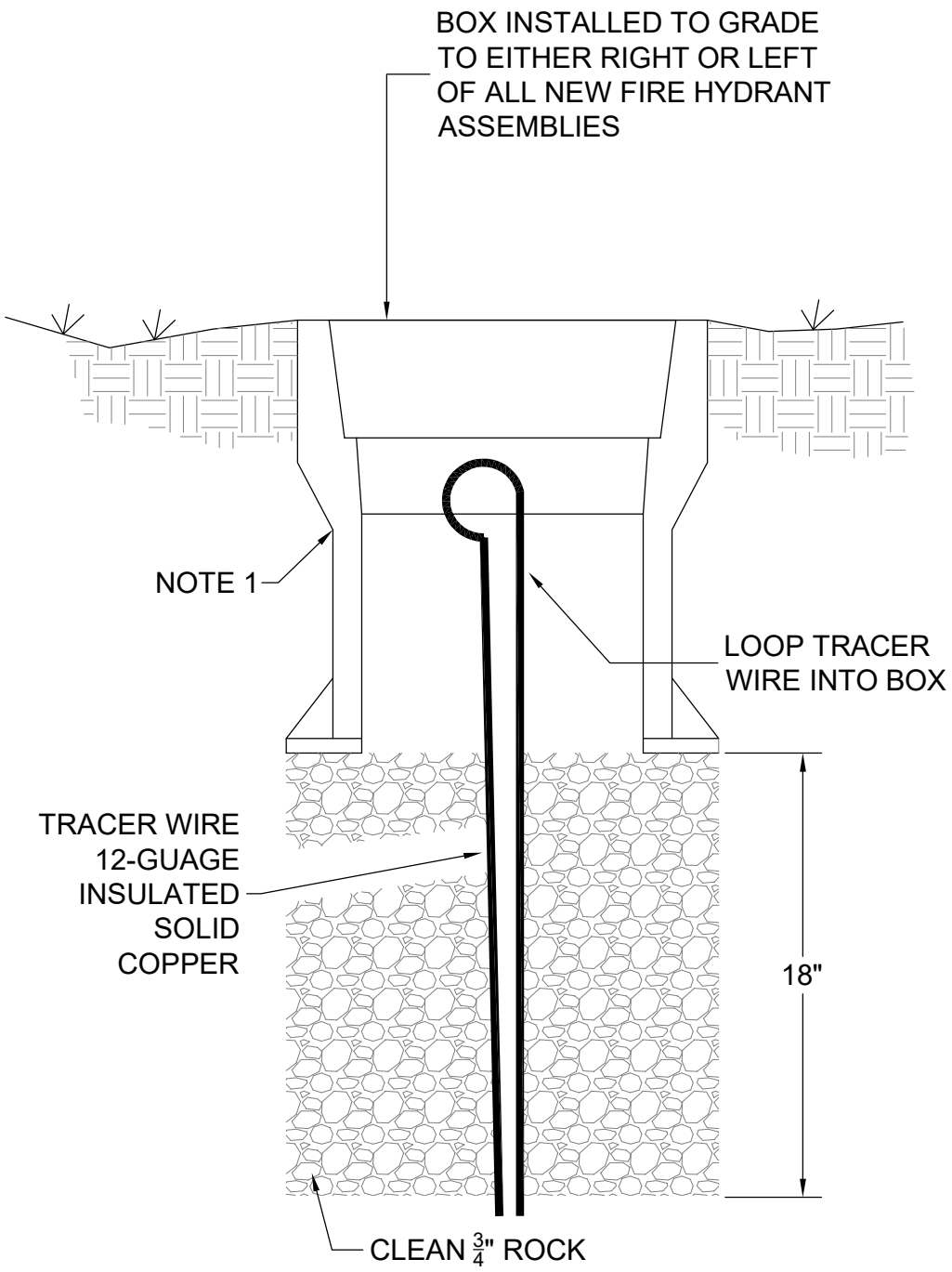
NOTES:
1. ALL CONCRETE SHALL BE POURED AGAINST UNDISTURBED EARTH
2. ALL FITTINGS & PLUGS MUST BE WRAPPED WITH POLYETHYLENE TO PREVENT CONCRETE FROM ADHERING TO THE BOLTS OR PIPE.

EAST LARIMER COUNTY WATER DISTRICT

TYPICAL THRUST BLOCK

		Date	
Designed	N/A	N/A	File No. esd020_typical_thrust
Drawn	EJV	8/20	Drawing No. 020
Revised	EJV	8/20	NOT TO SCALE
Approved	RS	8/20	Sheet 01 of 01

INSTALLATION DETAIL



NOTES:
1. BOX & LID ASSEMBLY SHALL BE CAST IRON TYLER SLIP-TYPE MODEL 6865 (TOP ONLY) OR APPROVED EQUAL.
2. TRACER WIRE SHALL NOT BE INSTALLED (BROUGHT TO SURFACE) IN VALVE BOXES.

EAST LARIMER COUNTY WATER DISTRICT

TRACER WIRE BOX DETAIL

		Date	
Designed	N/A	N/A	File No. esd022_tracer_wire_box
Drawn	EJV	8/20	Drawing No. 021
Revised	EJV	10/21	NOT TO SCALE
Approved	RS	8/21	Sheet 01 of 01