

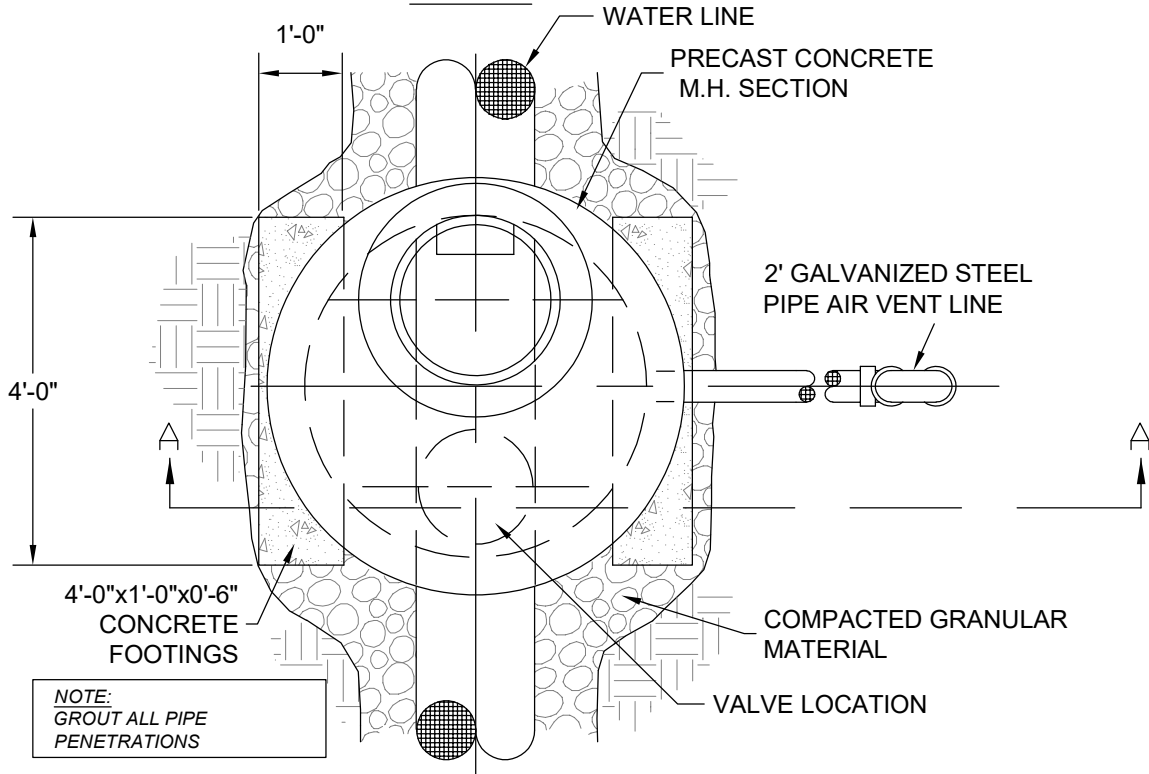


STANDARD CONSTRUCTION DETAILS

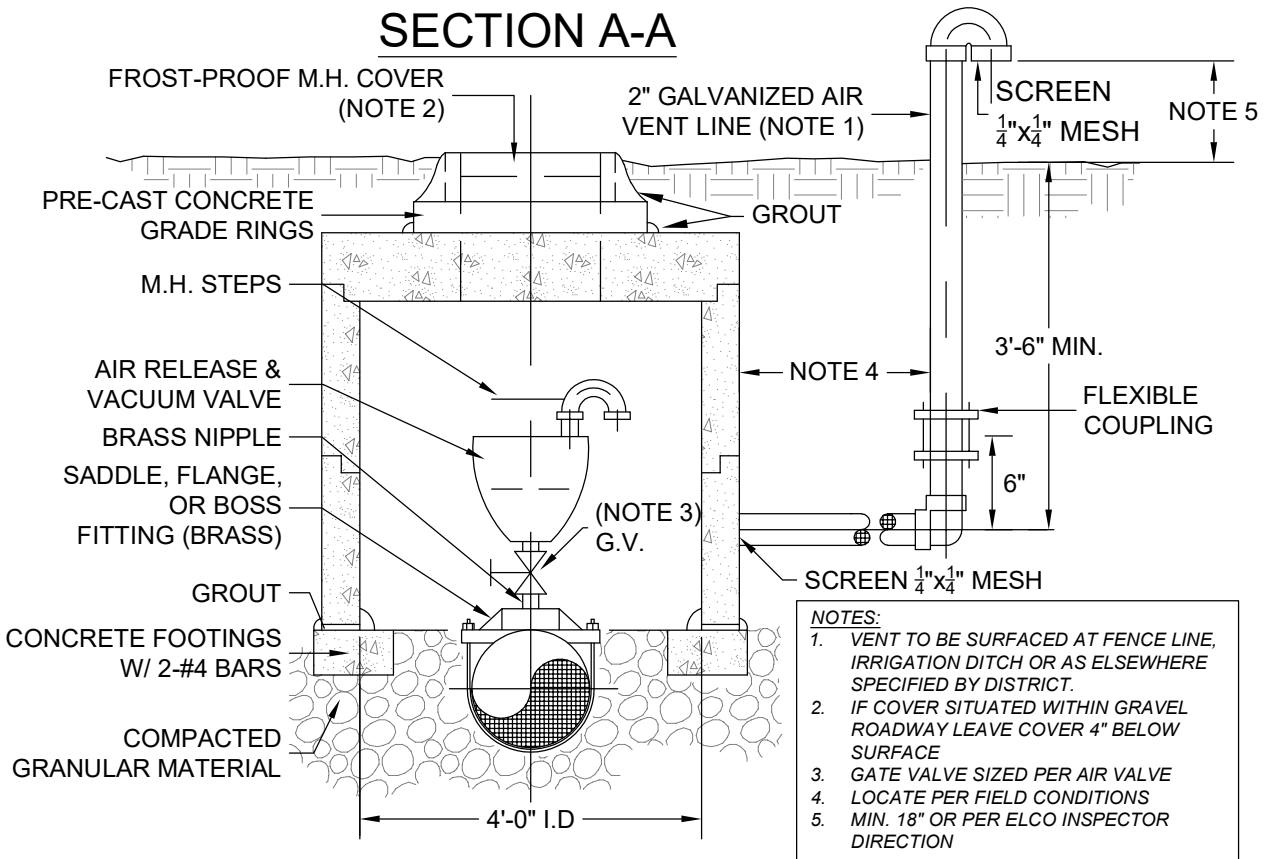
TABLE OF CONTENTS

<u>DRAWING TITLE</u>	<u>DWG NO.</u>
❖ Air Relief / Vacuum Valve with Vault	001
❖ Blowoff Assembly – Type (A)	002
❖ Blowoff Assembly – Type (B)	003
❖ Buried Casing Detail	004
❖ Trench Detail	005
❖ Trench & Bedding Detail	006
❖ Cut-Off Wall	007
❖ Insulated Water Main at Storm Sewer or Culvert Crossing	008
❖ Typical ¾" & 1" Curbstop Detail	009
❖ Typical ¾" & 1" Meter Pit Detail	010
❖ Typical ¾" Dual Meter Pit Detail	011
❖ Large Water Service Detail 1.5 - 2"	012
❖ Water Meter Layout Details	013
❖ 3", 4" & 6 Meter Vault Side View	014
❖ 3", 4" & 6 Meter Vault Top View	015
❖ Valve Detail	016
❖ Typical Fire Hydrant Installation	017
❖ Fire Hydrant Installation High Density Development Areas	018
❖ Water Main Lowering Detail	019
❖ Typical Thrust Blocks	020
❖ Tracer Wire Box Detail	021

PLAN



SECTION A-A



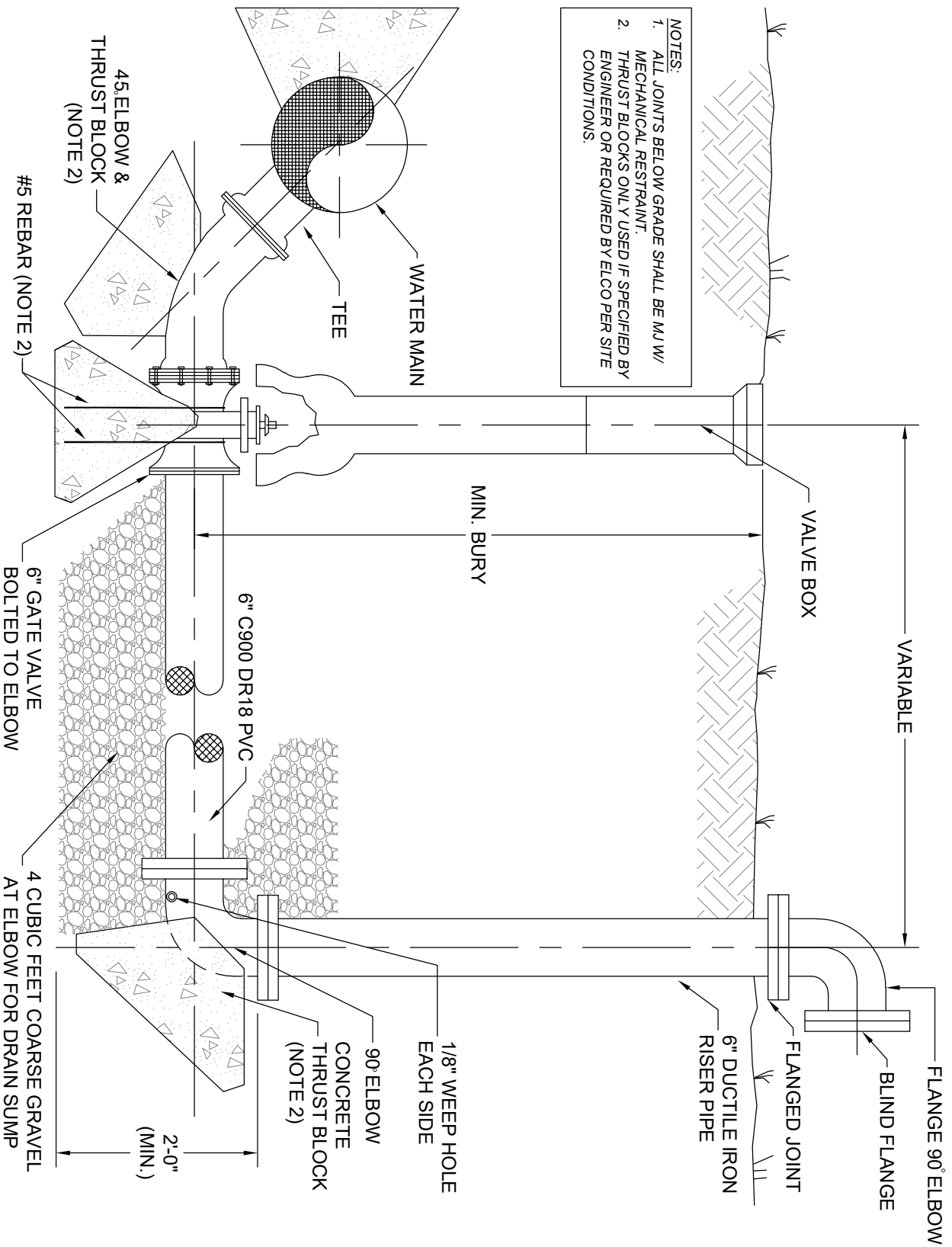
EAST LARIMER COUNTY WATER DISTRICT AIR RELIEF / VACUUM VALVE WITH VAULT

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



EAST LARIMER COUNTY WATER DISTRICT

BLOWOFF ASSEMBLY - TYPE (A)

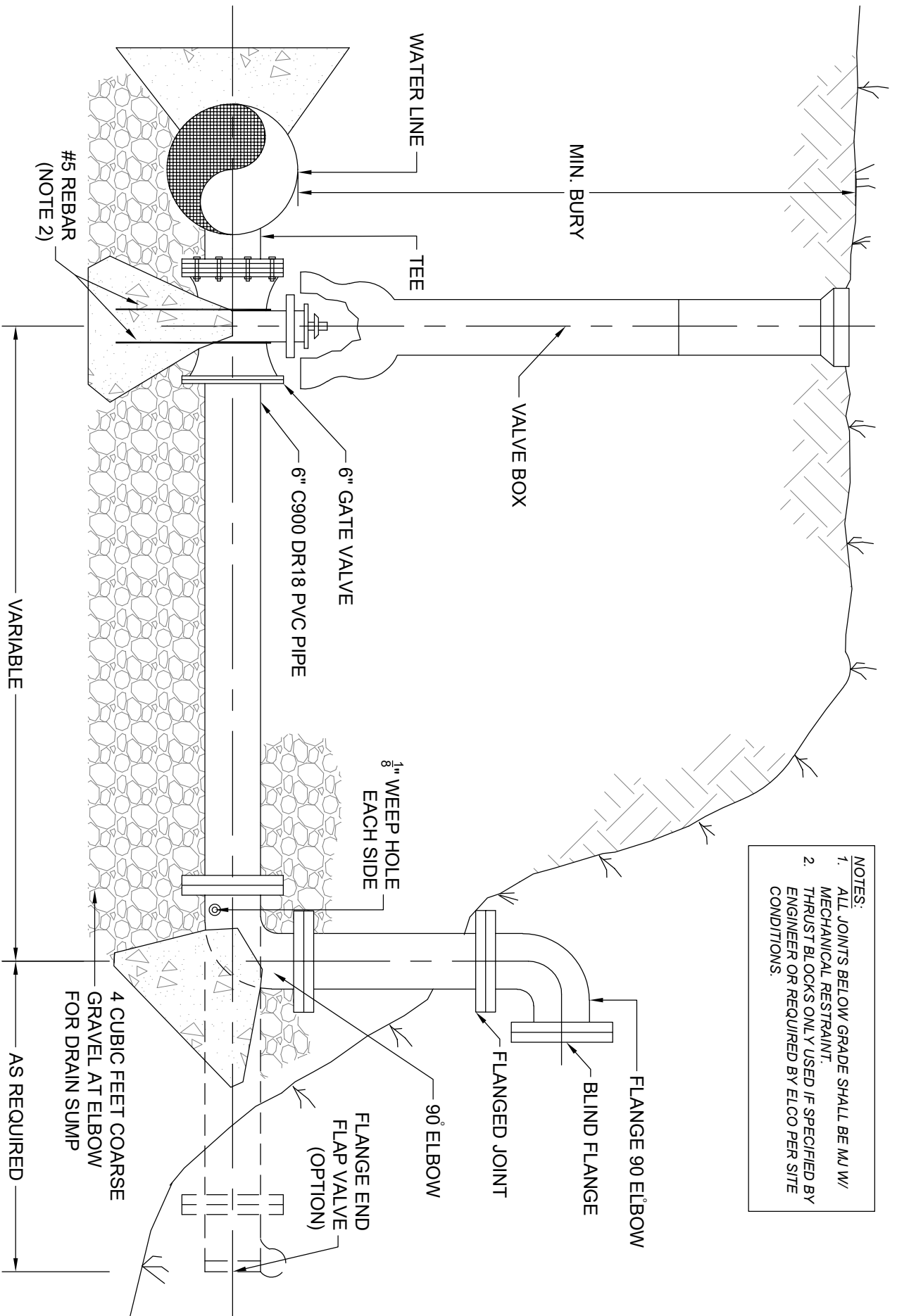


Designed	N/A	Date	N/A	File No.	esd002_blowoff_a
Drawn	RKB		08/01/91	Drawing No.	002
Revised	EJV		8/21	NOT TO SCALE	
Approved	RS		8/21	Sheet 01 of 02	



EAST LARIMER COUNTY WATER DISTRICT

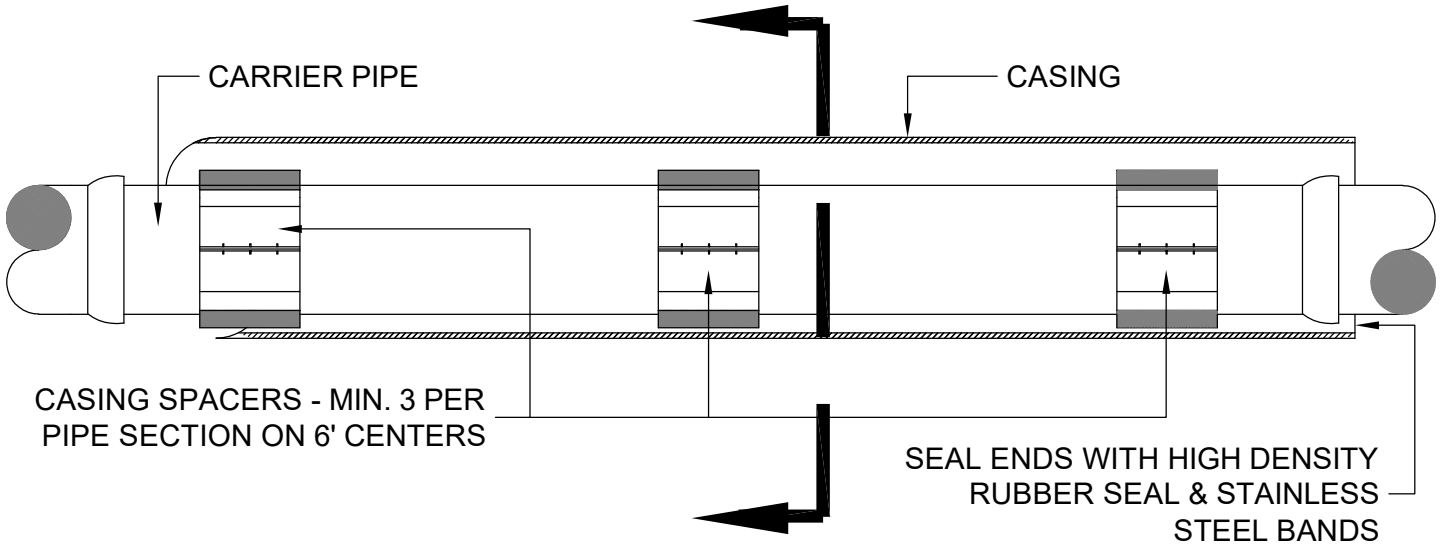
BLOWOFF ASSEMBLY - TYPE (B)



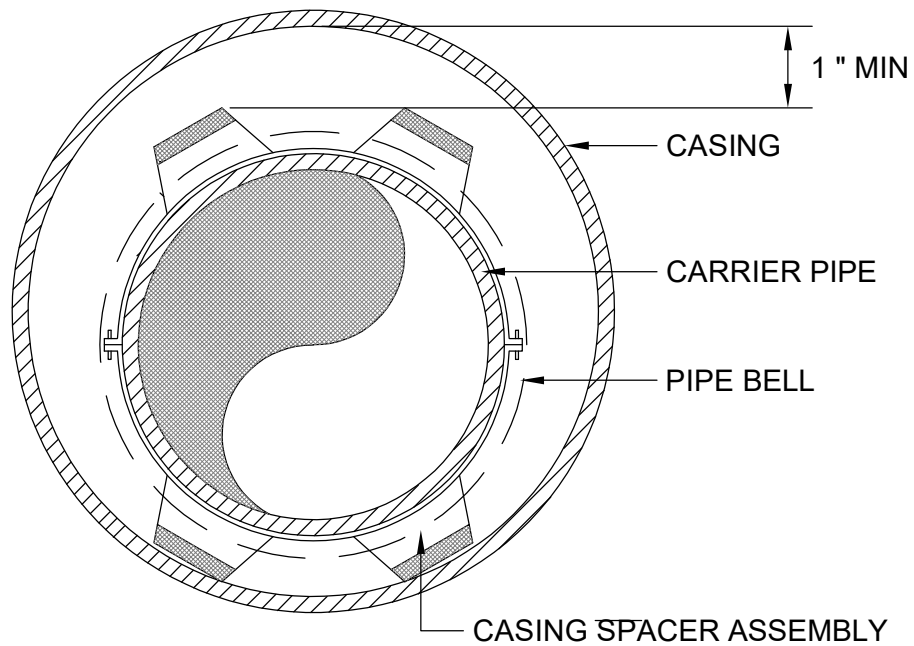
- NOTES:**
1. ALL JOINTS BELOW GRADE SHALL BE MJ/W/ MECHANICAL RESTRAINT.
 2. THRUST BLOCKS ONLY USED IF SPECIFIED BY ENGINEER OR REQUIRED BY ELCO PER SITE CONDITIONS.

Designed	N/A	Date	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.



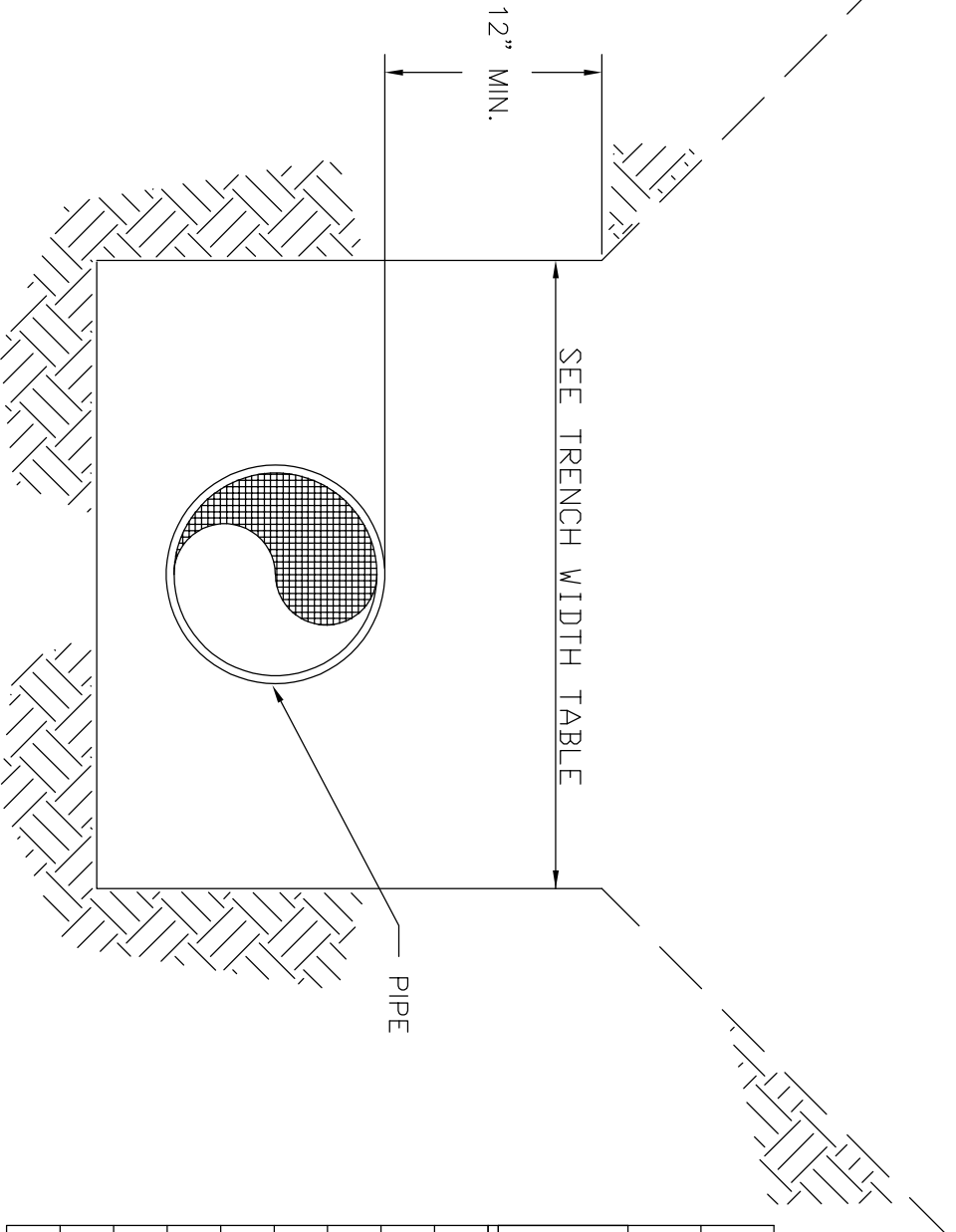
EAST LARIMER COUNTY WATER DISTRICT
BURIED CASING DETAIL

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



EAST LARIMER COUNTY WATER DISTRICT

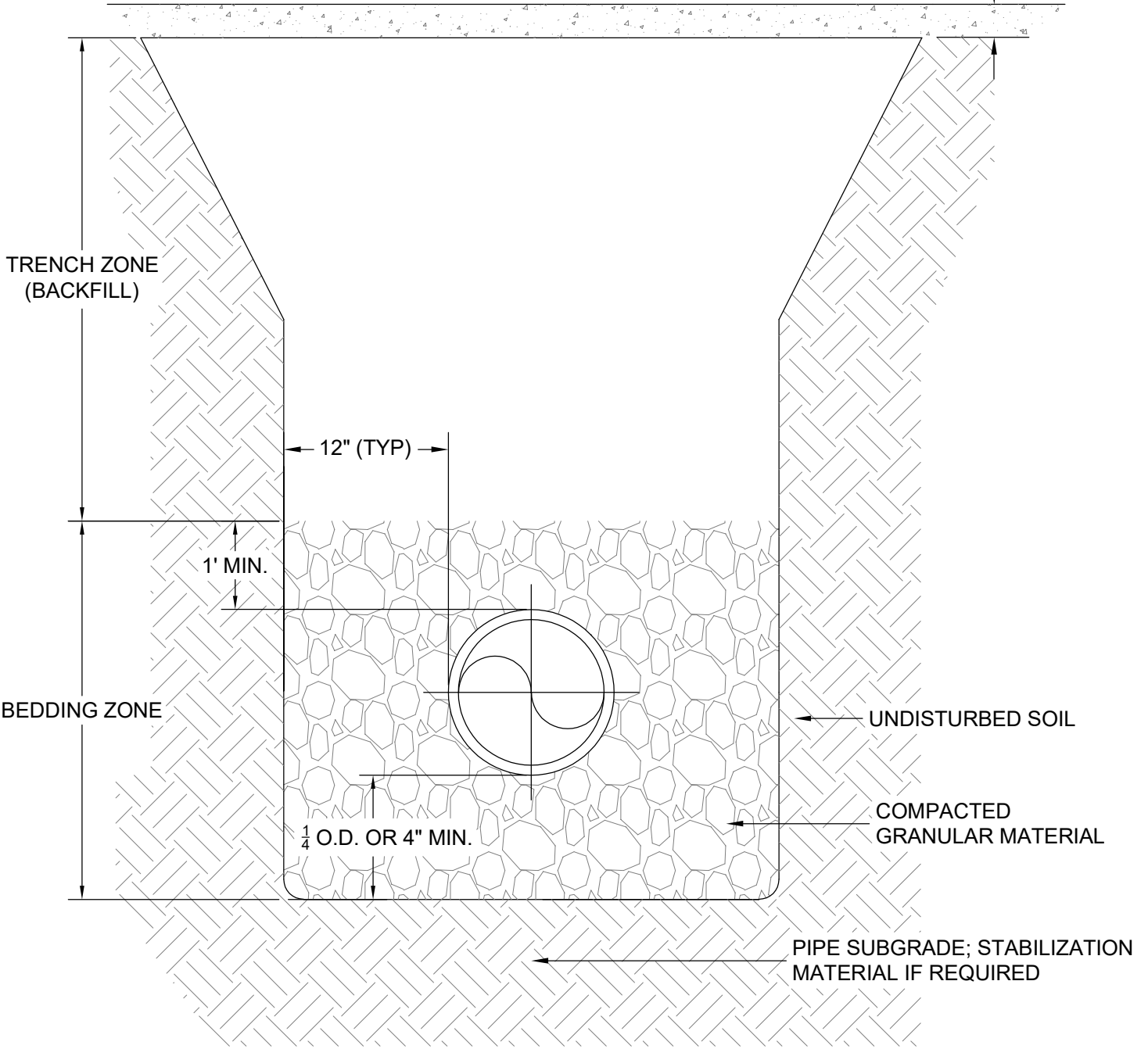
TRENCH DETAIL



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

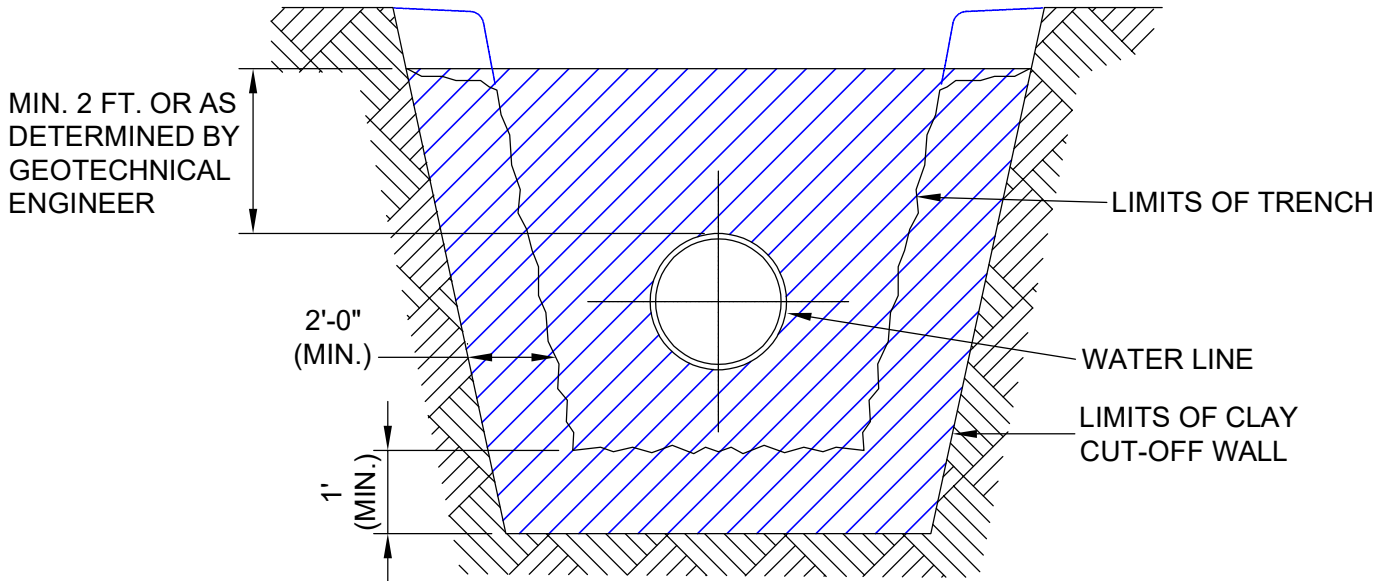
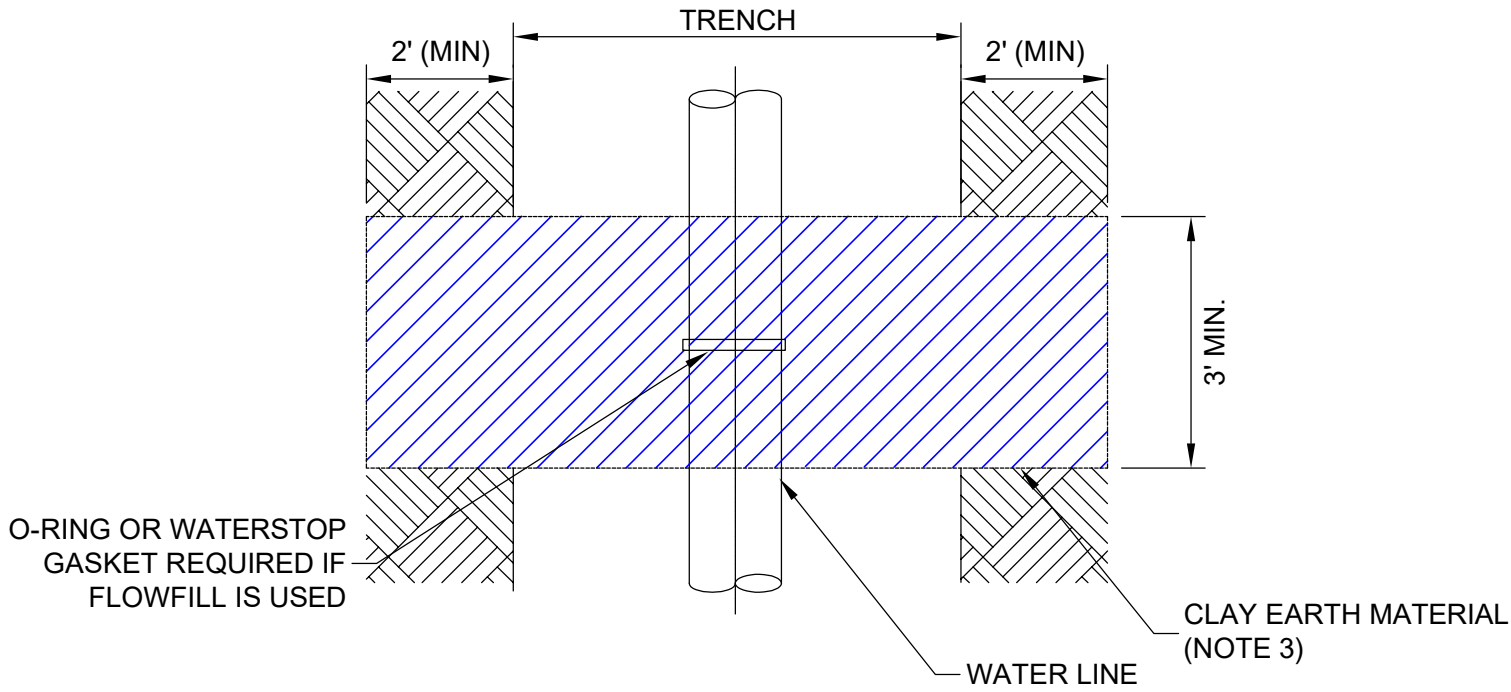
Designed	N/A	Date	N/A	File No.	esd023_trench_detail
Drawn	RKB		10/91	Drawing No.	005
Revised	EJV		8/20	NOT TO SCALE	
Approved	RS		8/20	Sheet 01 of 01	

PAVEMENT IF REQUIRED



EAST LARIMER COUNTY WATER DISTRICT
TRENCH AND BEDDING DETAIL

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



- 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.



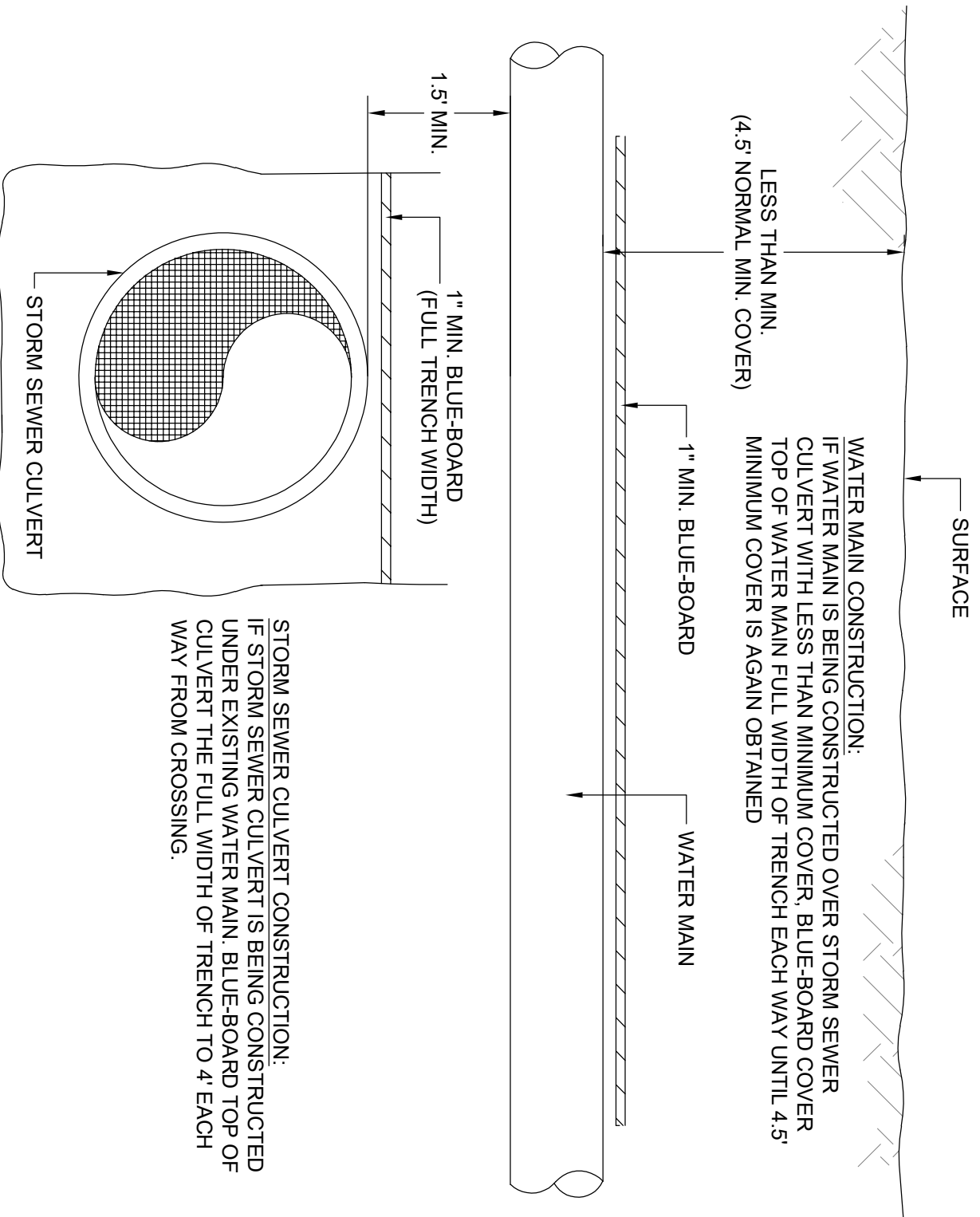
EAST LARIMER COUNTY WATER DISTRICT
CUT-OFF WALL

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



EAST LARIMER COUNTY WATER DISTRICT

INSULATED WATER MAIN AT STORM SEWER OR CULVERT CROSSING



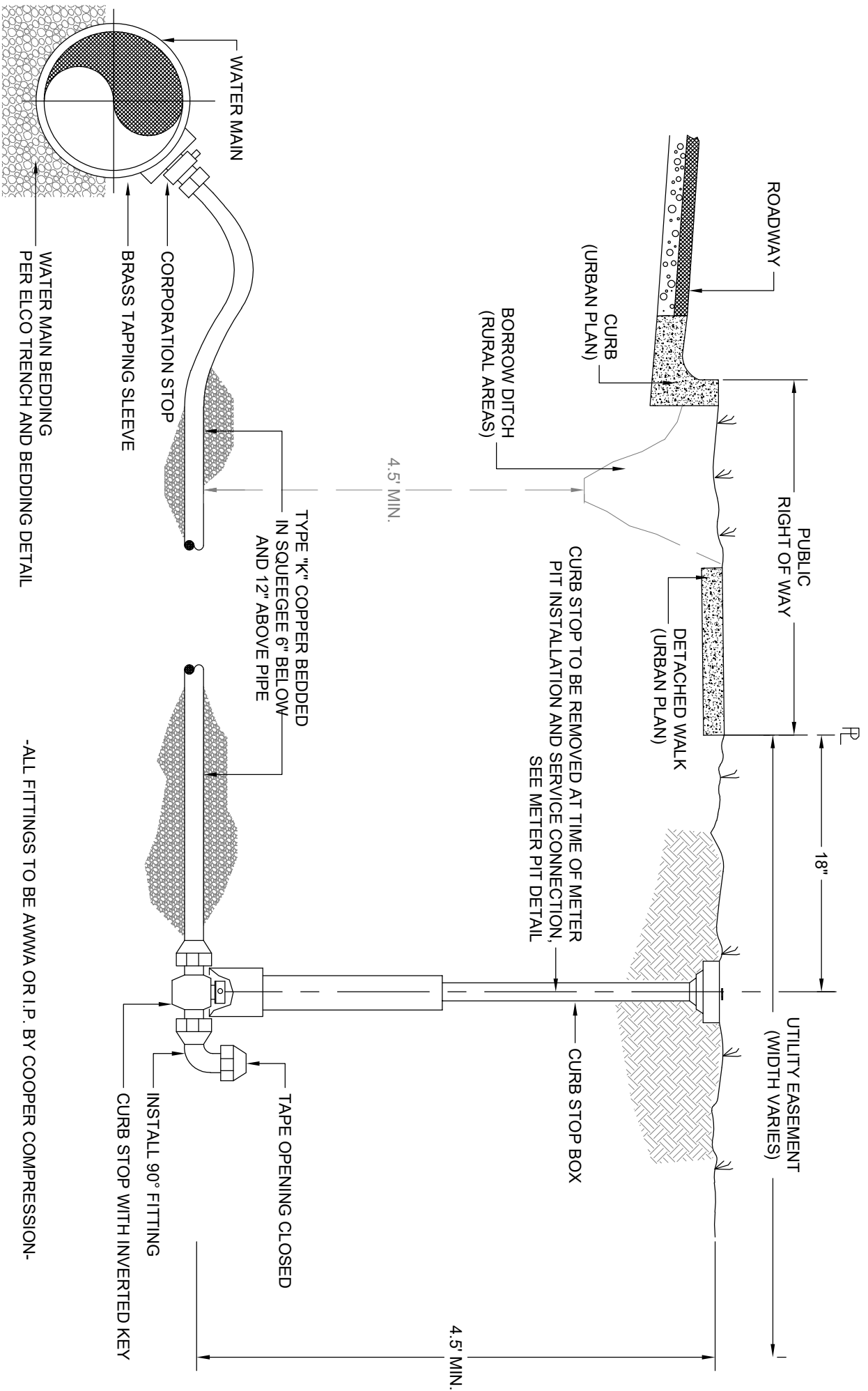
STORM SEWER CULVERT CONSTRUCTION:
 IF STORM SEWER CULVERT IS BEING CONSTRUCTED UNDER EXISTING WATER MAIN, BLUE-BOARD TOP OF CULVERT THE FULL WIDTH OF TRENCH TO 4' EACH WAY FROM CROSSING.

Designed	N/A	Date	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	



EAST LARIMER COUNTY WATER DISTRICT

TYPICAL 3/4" & 1" CURB STOP DETAIL



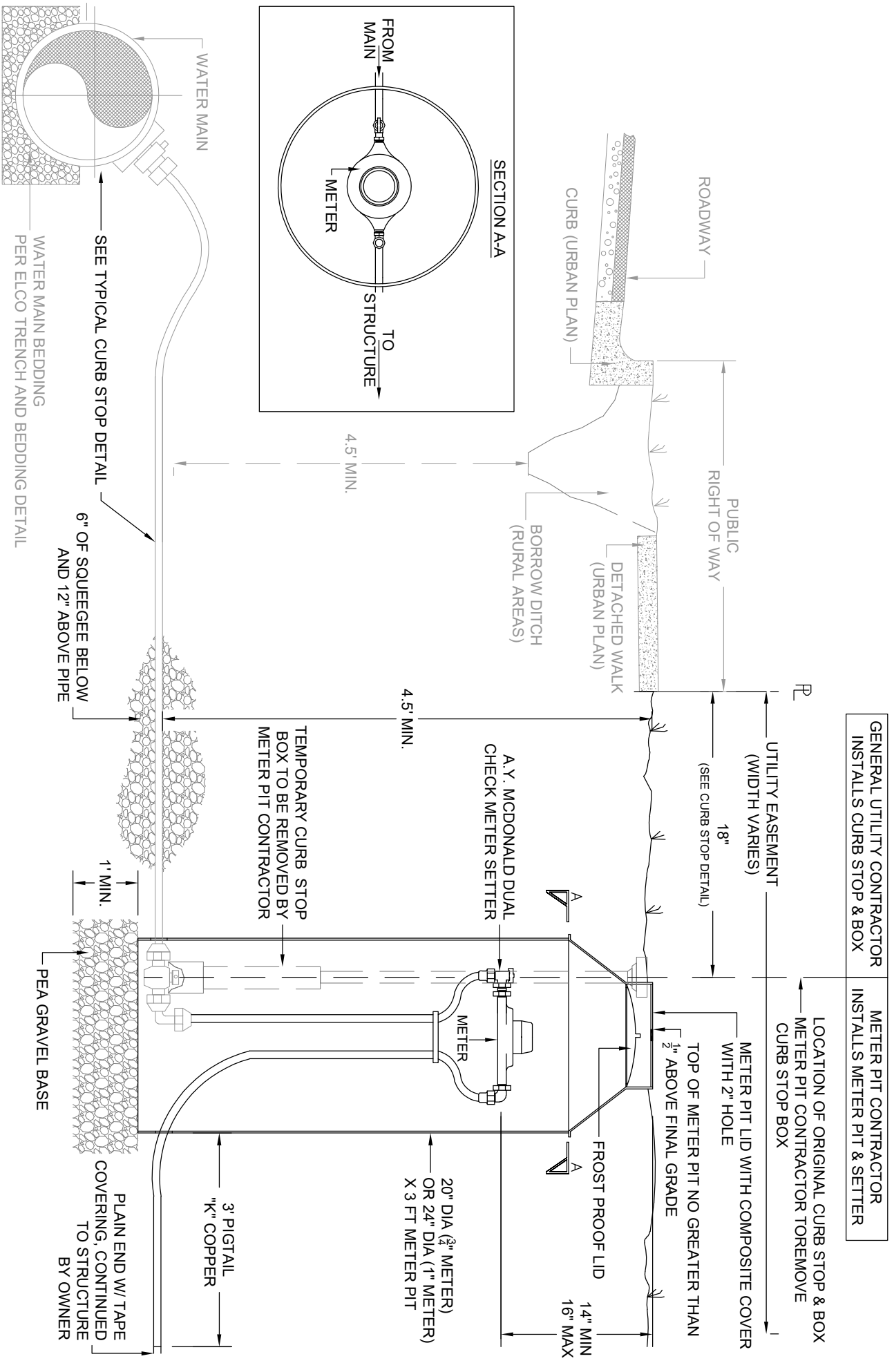
-ALL FITTINGS TO BE AWWA OR I.P. BY COOPER COMPRESSION-

Designed	N/A	Date	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 3/4" & 1" METER PIT DETAIL

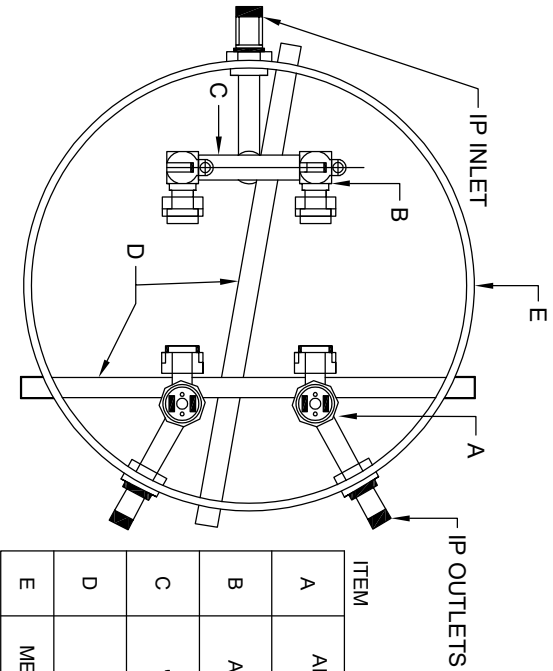
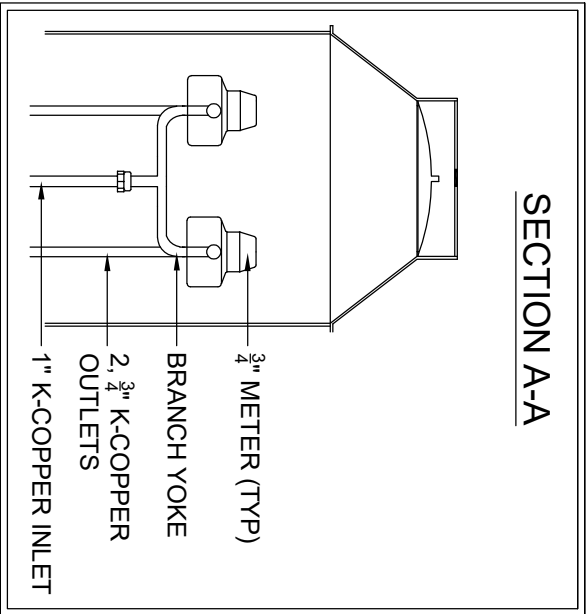


Designed	N/A	Date	N/A	File No.	esd010_service_typical
Drawn	RKB		10/91	Drawing No.	010
Revised	EJV		2/24	NOT TO SCALE	
Approved	RS		2/24	Sheet 01 of 02	

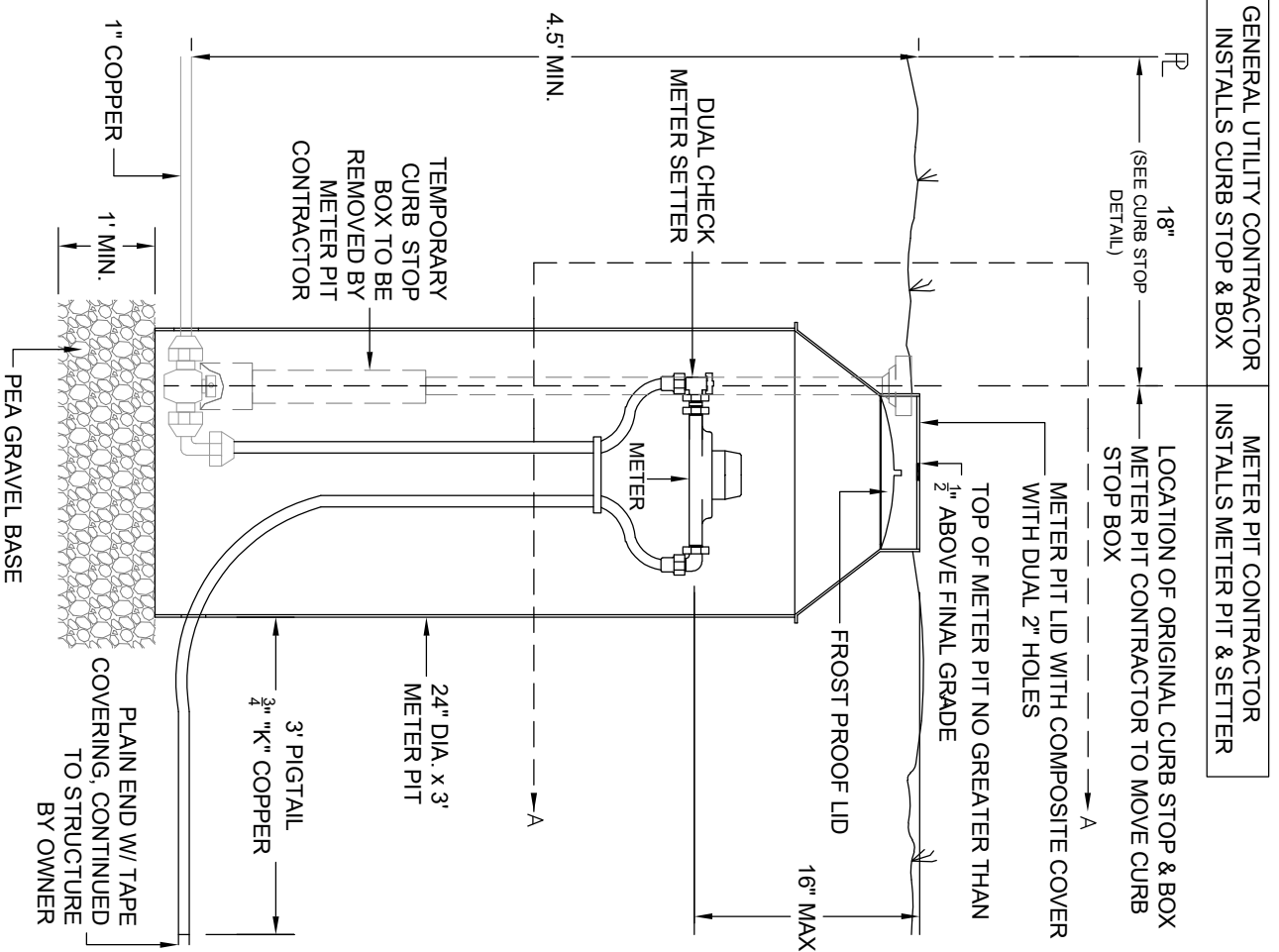


EAST LARIMER COUNTY WATER DISTRICT

TYPICAL $\frac{3}{4}$ " DUAL METER PIT DETAIL



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



GENERAL UTILITY CONTRACTOR
INSTALLS CURB STOP & BOX

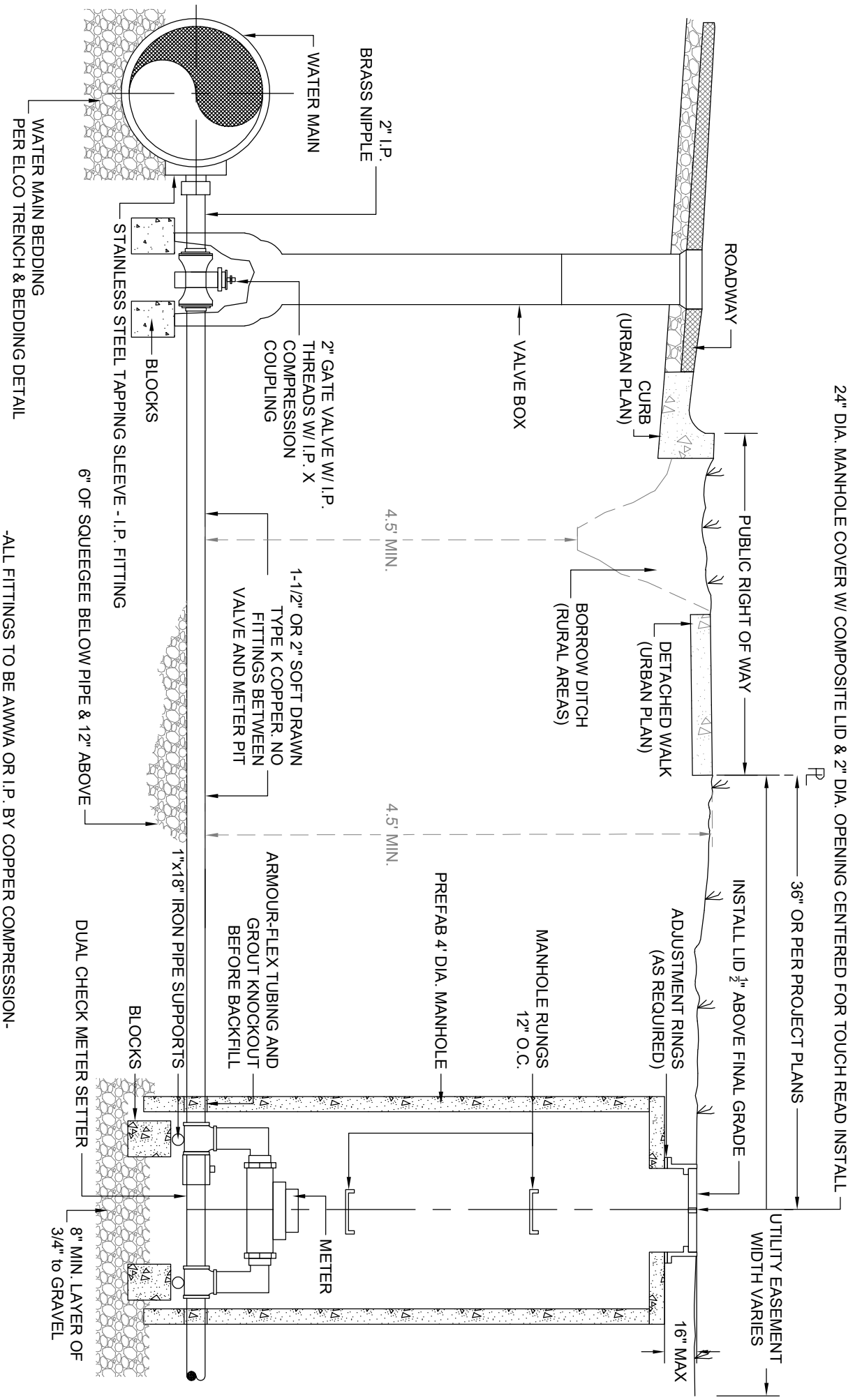
METER PIT CONTRACTOR
INSTALLS METER PIT & SETTER

Designed	Date	File No.
N/A	N/A	esd071_service_dual
Drawn		Drawing No.
EJV	8/20	011
Revised		NOT TO SCALE
EJV	2/24	
Approved		Sheet 02 of 03
RS	2/24	



EAST LARIMER COUNTY WATER DISTRICT

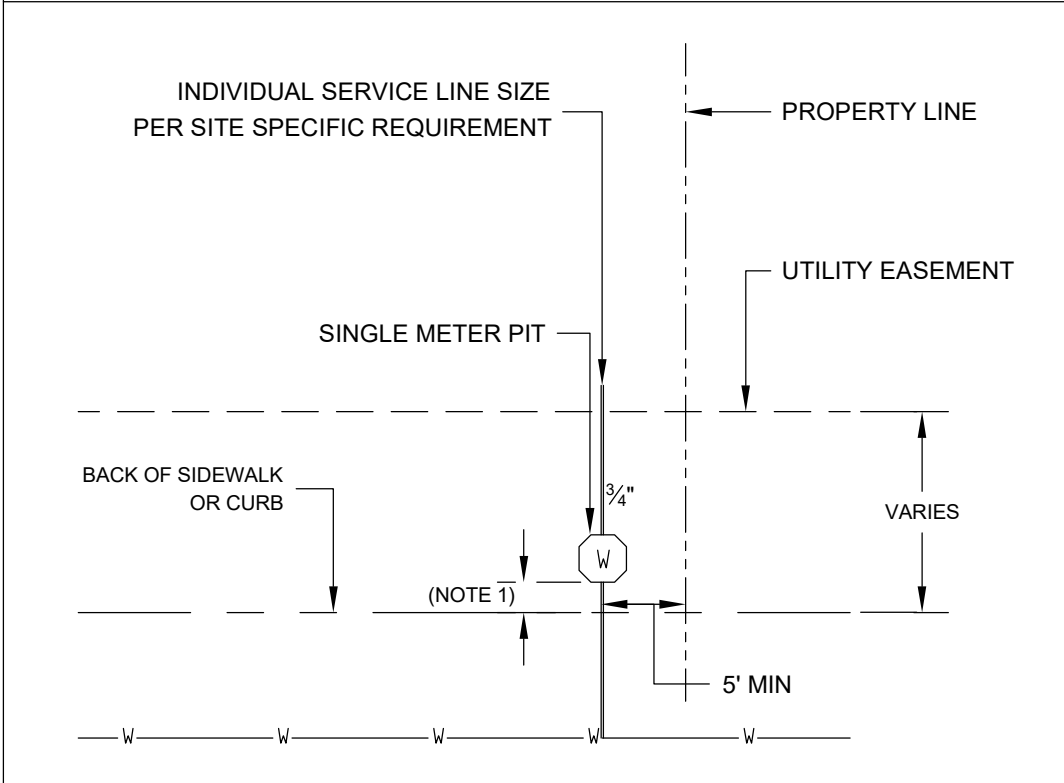
LARGE WATER SERVICE DETAIL 1-1/2" - 2"



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

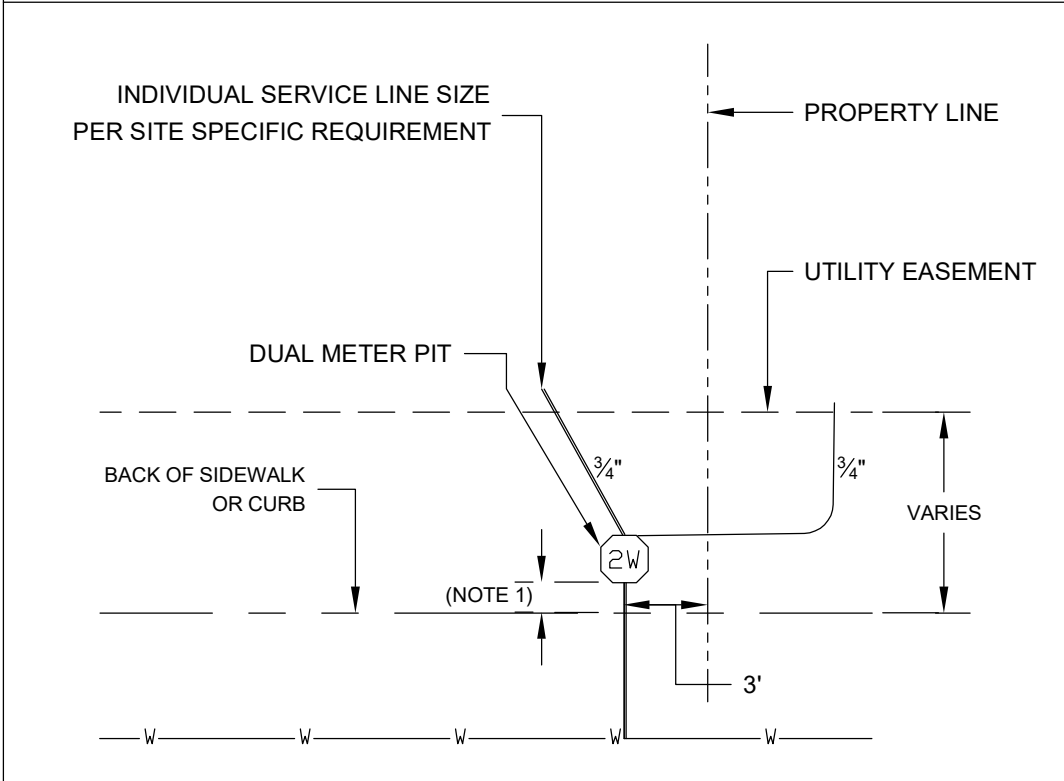
Designed	Date	File No.
N/A	N/A	esd012_service_large
Drawn	Date	Drawing No.
REM	09/91	012
Revised	Date	NOT TO SCALE
EJV	2/24	
Approved	Date	Sheet
RS	2/24	03 of 03

SINGLE 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.

DUAL METER LAYOUT



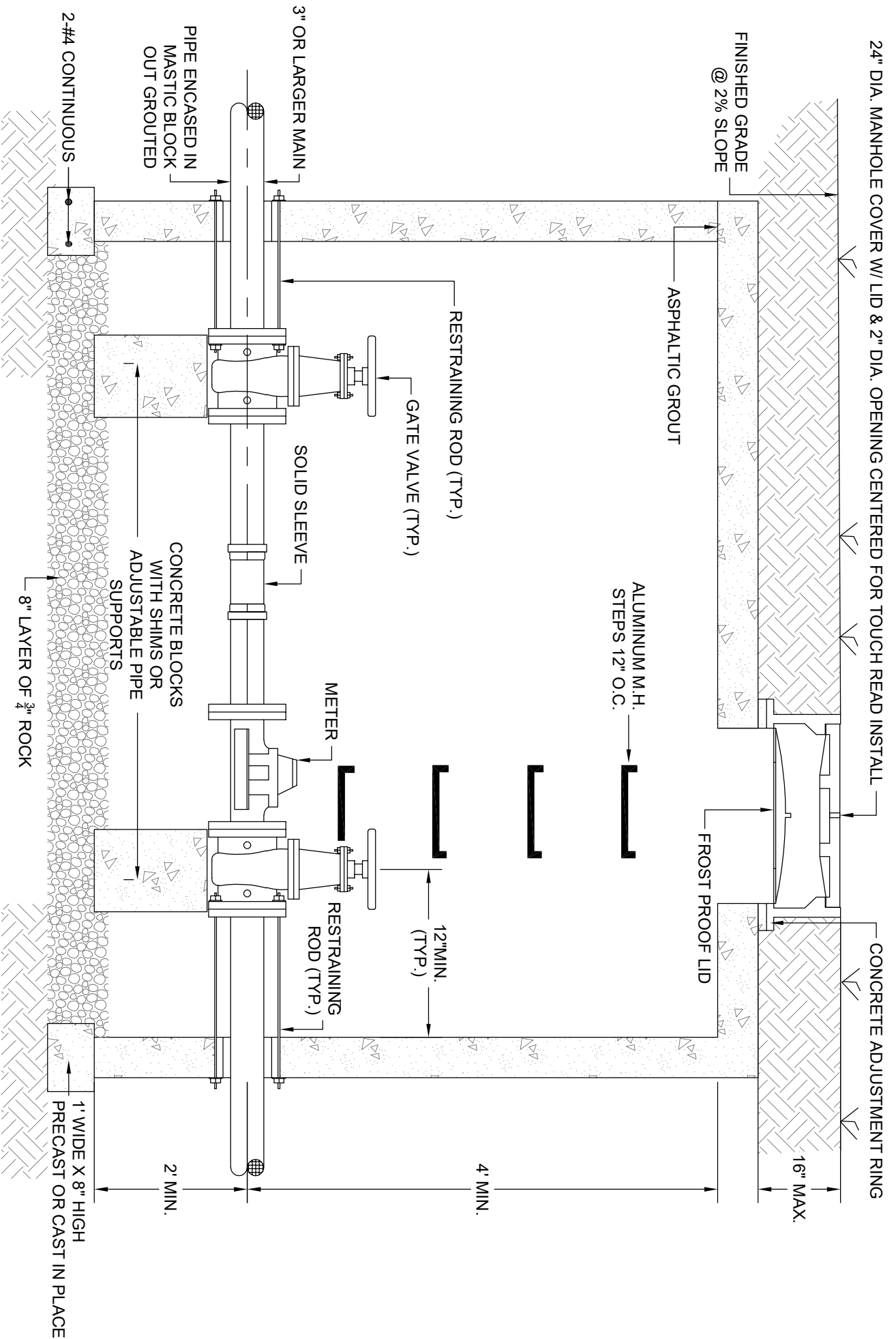
EAST LARIMER COUNTY WATER DISTRICT WATER METER LAYOUT DETAILS

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)

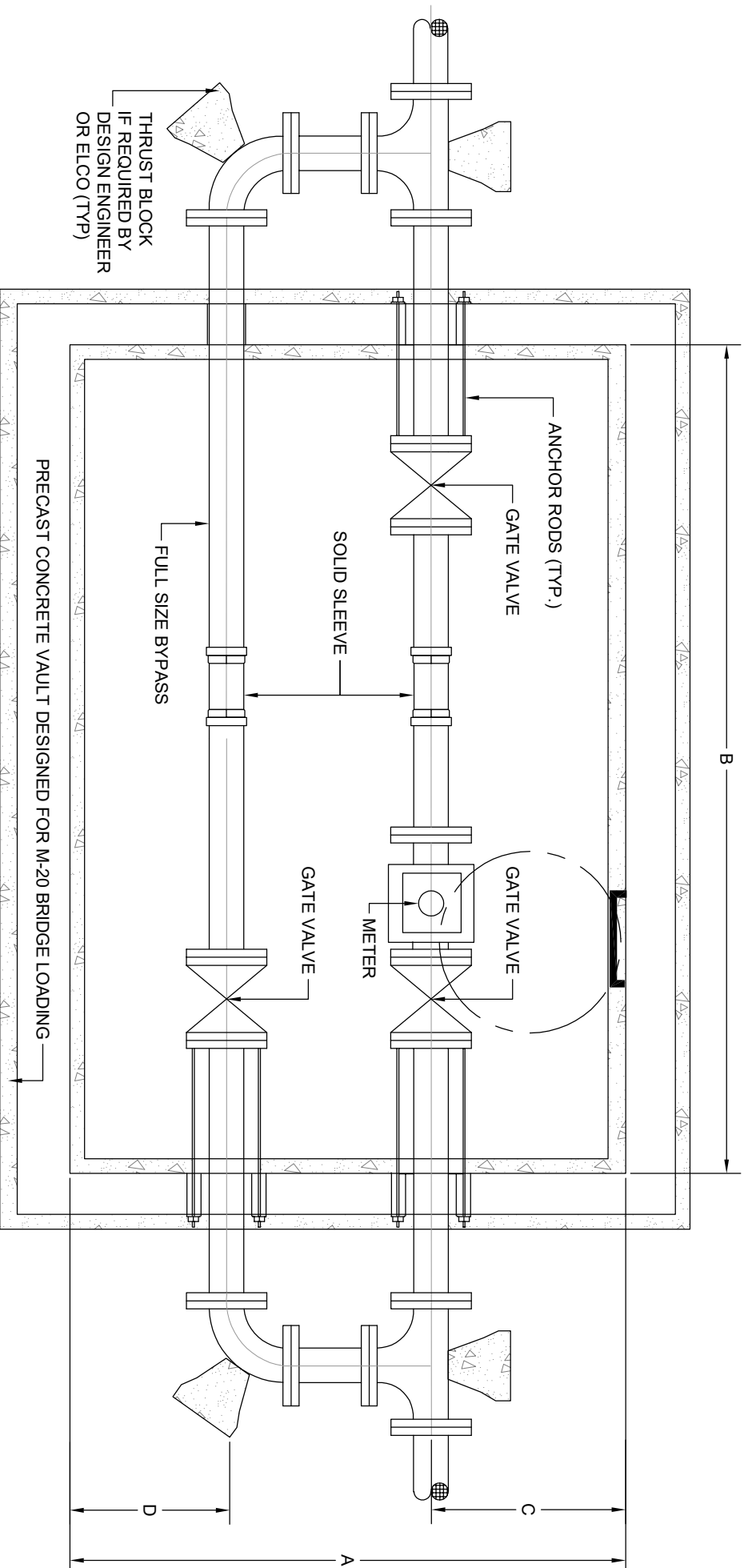


Designed		Date		File No.	
N/A	N/A	N/A	N/A	esd014_meter_vault_profile	
Drawn				Drawing No.	
REM	10/99			014	
Revised				NOT TO SCALE	
EJV	2/24			Sheet 01 of 02	
Approved					
RS	2/24				



EAST LARIMER COUNTY WATER DISTRICT

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



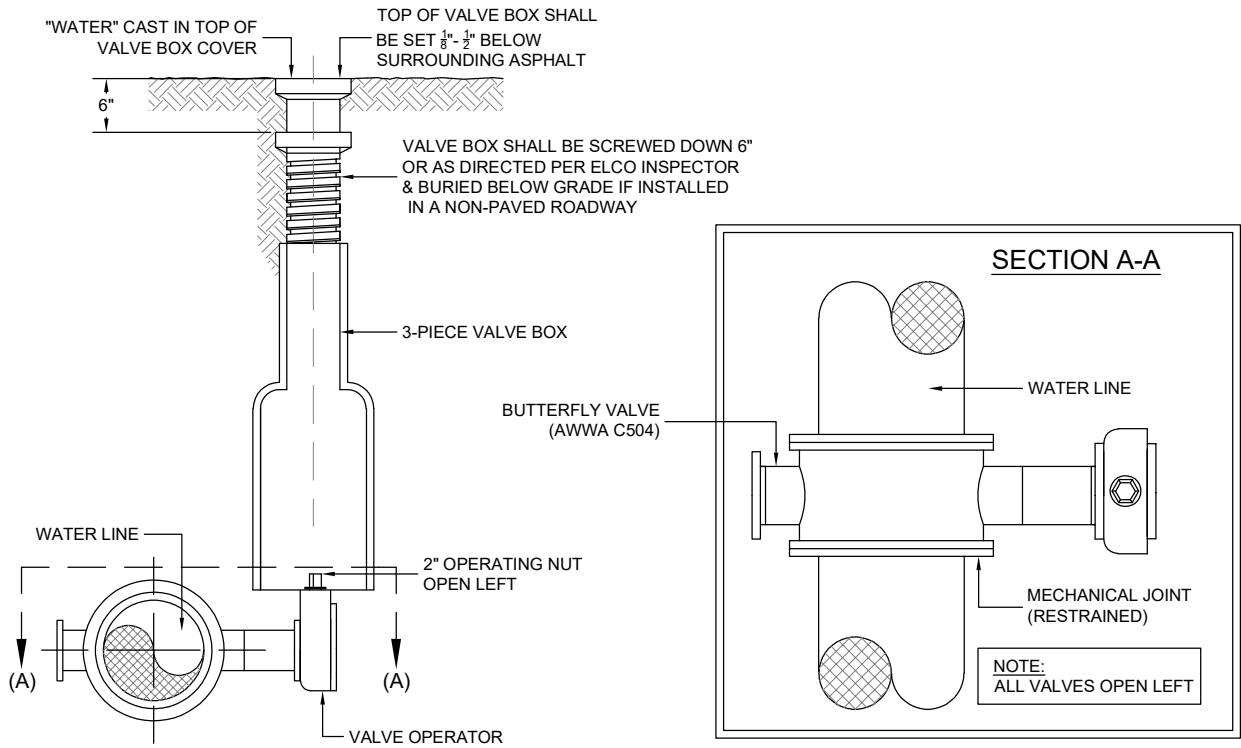
METER VAULT DIMENSIONS

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.

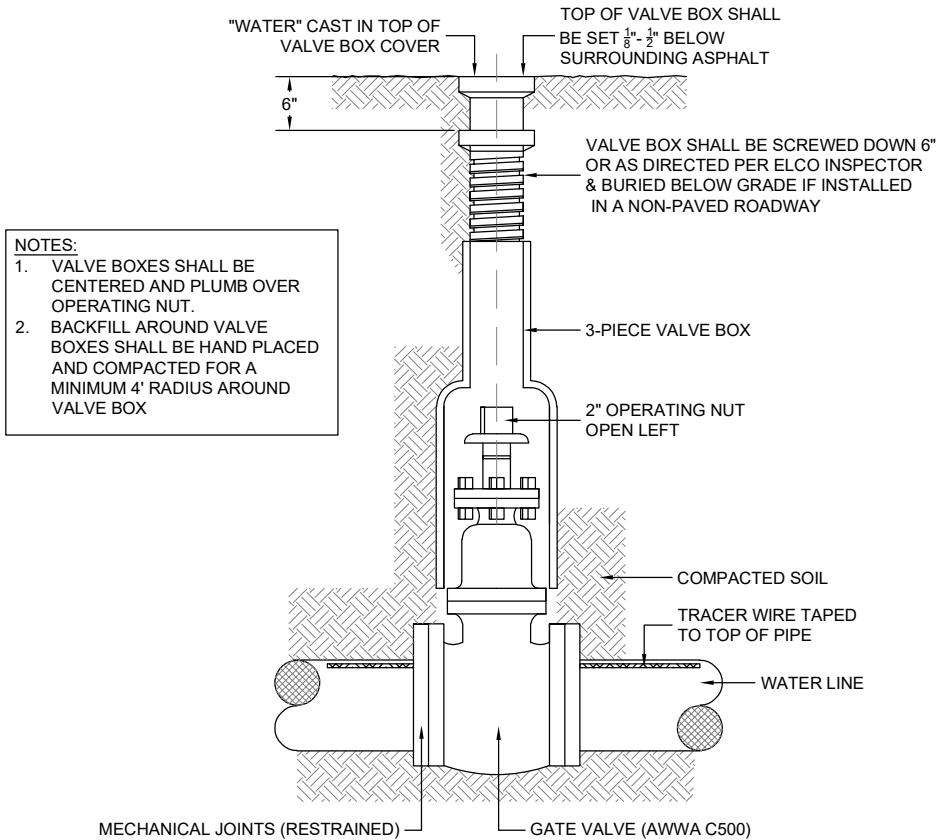
GENERAL NOTES:
 IF PRESSURE REDUCING VALVE IS REQUIRED IT SHALL BE INSTALLED INSIDE BUILDING, IMMEDIATELY FOLLOWING THE MAIN SHUT-OFF VALVE.

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

BUTTERFLY VALVE DETAIL



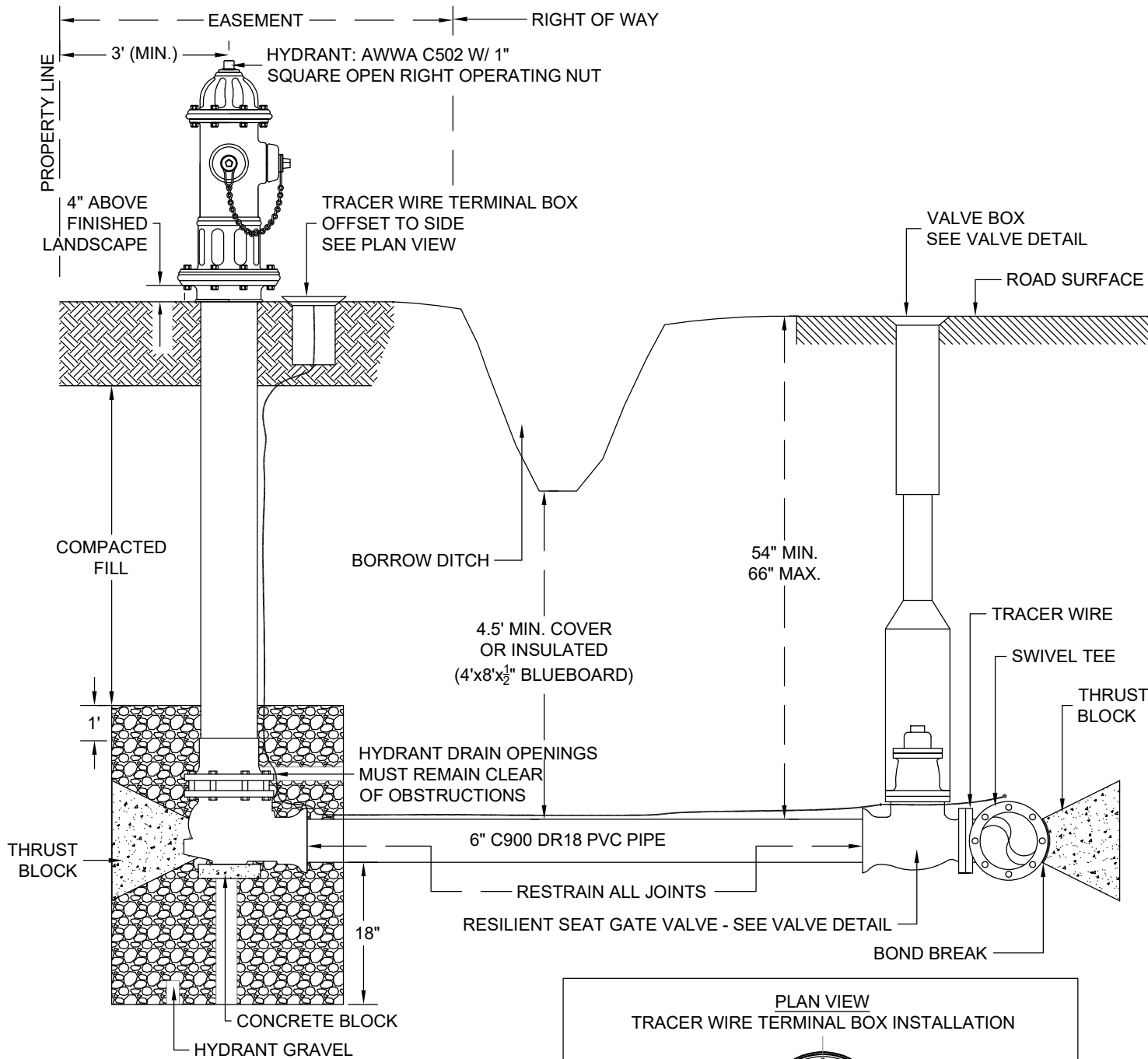
GATE VALVE DETAIL



EAST LARIMER COUNTY WATER DISTRICT

VALVE DETAIL

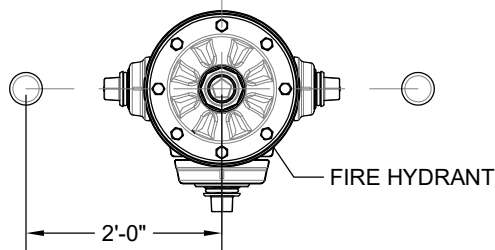
Designed	<i>RKB</i>	Date	<i>08/91</i>	File No.	<i>esd016_valve_detail</i>
	Drawn	<i>EJV</i>	Date	<i>08/20</i>	Drawing No.
Revised	<i>EJV</i>	Date	<i>5/23</i>		<i>016</i>
Approved	<i>RS</i>	Date	<i>8/21</i>		NOT TO SCALE
					Sheet <i>01</i> of <i>01</i>



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**

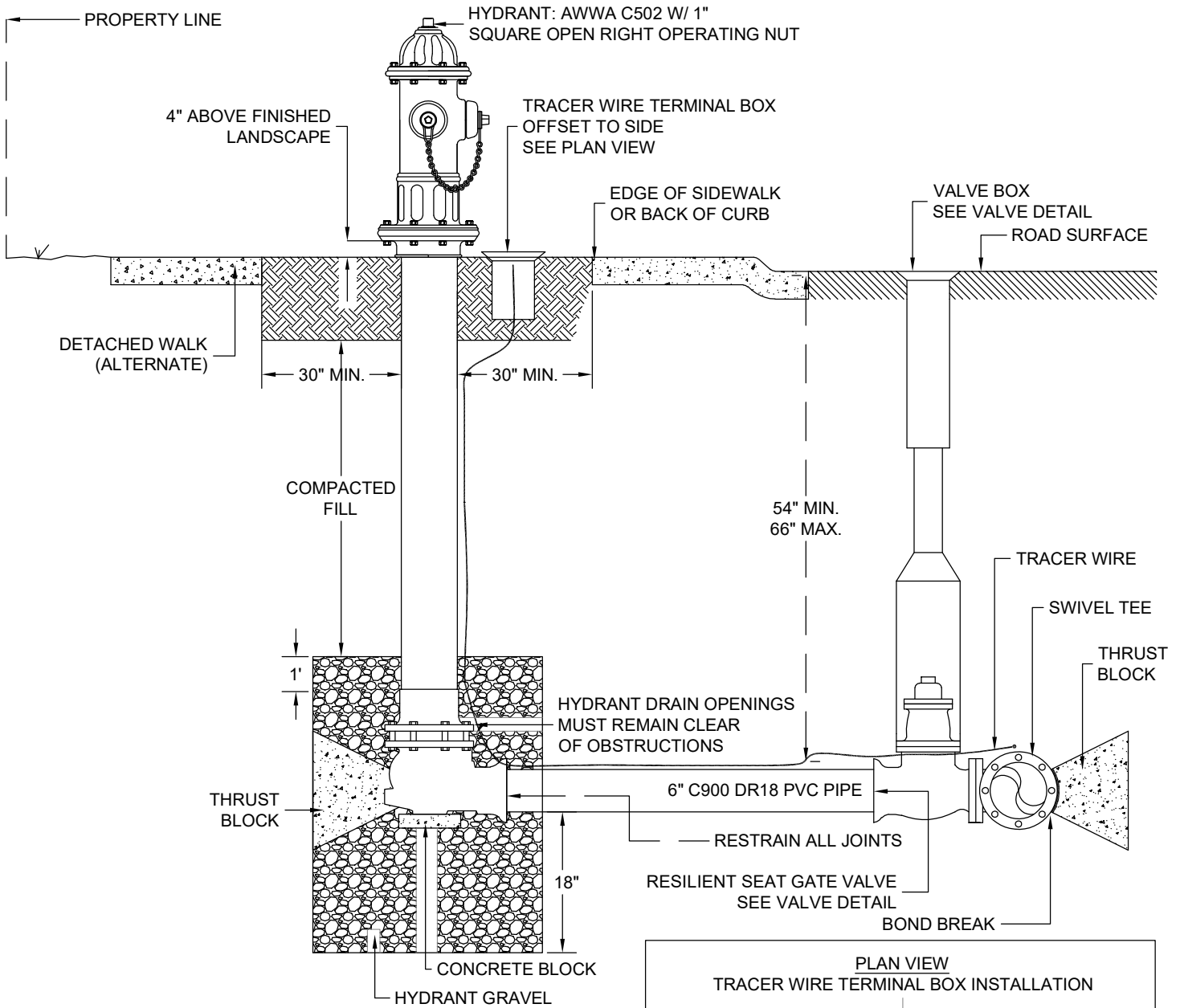


TRACER WIRE TERMINAL BOX INSTALLED EITHER RIGHT OR LEFT OF EACH FIRE HYDRANT ASSEMBLY

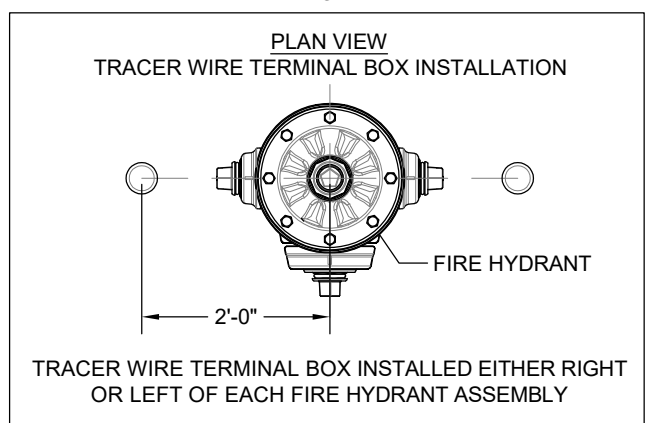


**EAST LARIMER COUNTY WATER DISTRICT
TYPICAL FIRE HYDRANT INSTALLATION**

Designed	N/A	Date	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

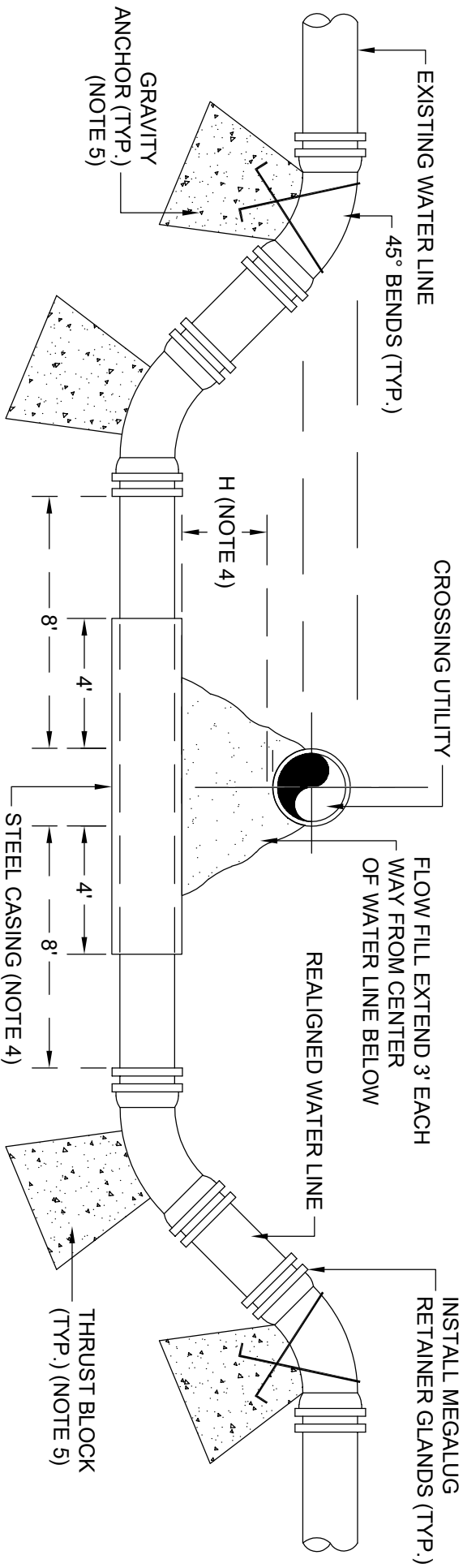


- NOTES:**
1. NO LANDSCAPING (TREES, SHRUBS, BOULDERS, ETC.), RETAINING WALLS OR FENCES ALLOWED WITHIN 10' OF FIRE HYDRANT.
 2. FIRE HYDRANT PIPING, VALES, ETC. SHALL BE DOUBLE WRAPPED IN POLYETHYLENE.



EAST LARIMER COUNTY WATER DISTRICT
 TYPICAL FIRE HYDRANT INSTALLATION
 HIGH DENSITY DEVELOPMENT AREAS

Designed	N/A	Date	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

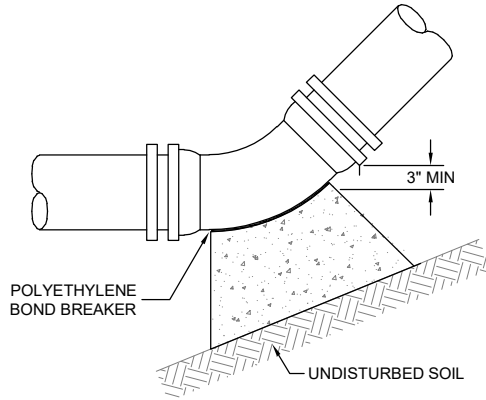


- GENERAL NOTES:**
1. SEE THRUST BLOCK DETAIL FOR SIZING.
 2. ALL FITTINGS & JOINTS IN LOWERING AREA TO BE RESTRAINED WITH MECHANICAL JOINT RESTRAINTS.
 3. ALL D.I.P PIPE & FITTINGS SHALL BE DOUBLE WRAPPED WITH POLYETHYLENE ENCASUREMENT.
 4. IF CLEARANCE "H" IS LESS THAN 18", INSTALL STEEL CASING WHEN CROSSING UTILITY IS 24" DIAMETER OR GREATER, OR AS REQUIRED BY 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.

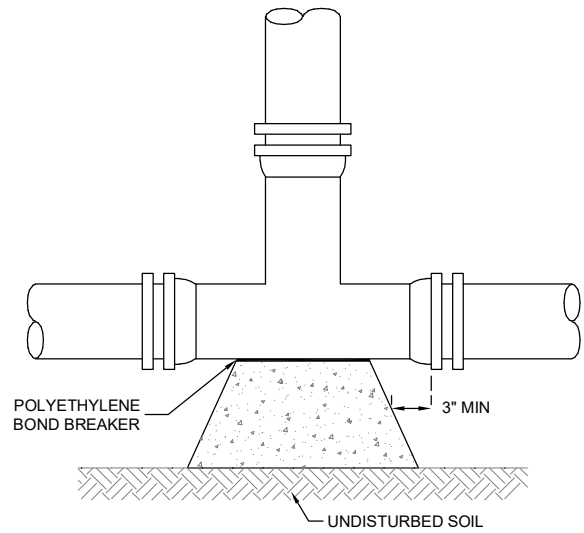
EAST LARIMER COUNTY WATER DISTRICT

WATER MAIN LOWERING DETAIL

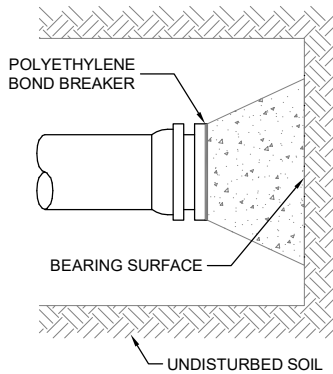
Designed	N/A	Date	N/A	File No.	esd019_main_lowering
Drawn	EJV		8/20	Drawing No.	019
Revised	EJV		8/21	NOT TO SCALE	
Approved	RS		8/21	Sheet 01 of 01	



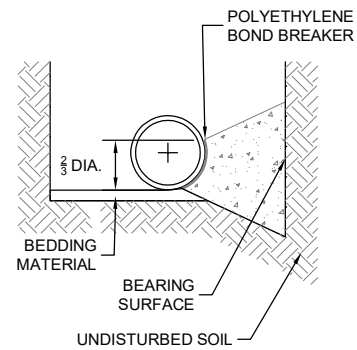
TYPICAL BEND



TEE



PLUG



TYPICAL CROSS-SECTION

BEARING AREAS FOR VARIOUS FITTINGS (FT²)

SIZE	TEE & PLUG	90° BEND	45° BEND	22 1/2° BEND	11 1/4° 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:

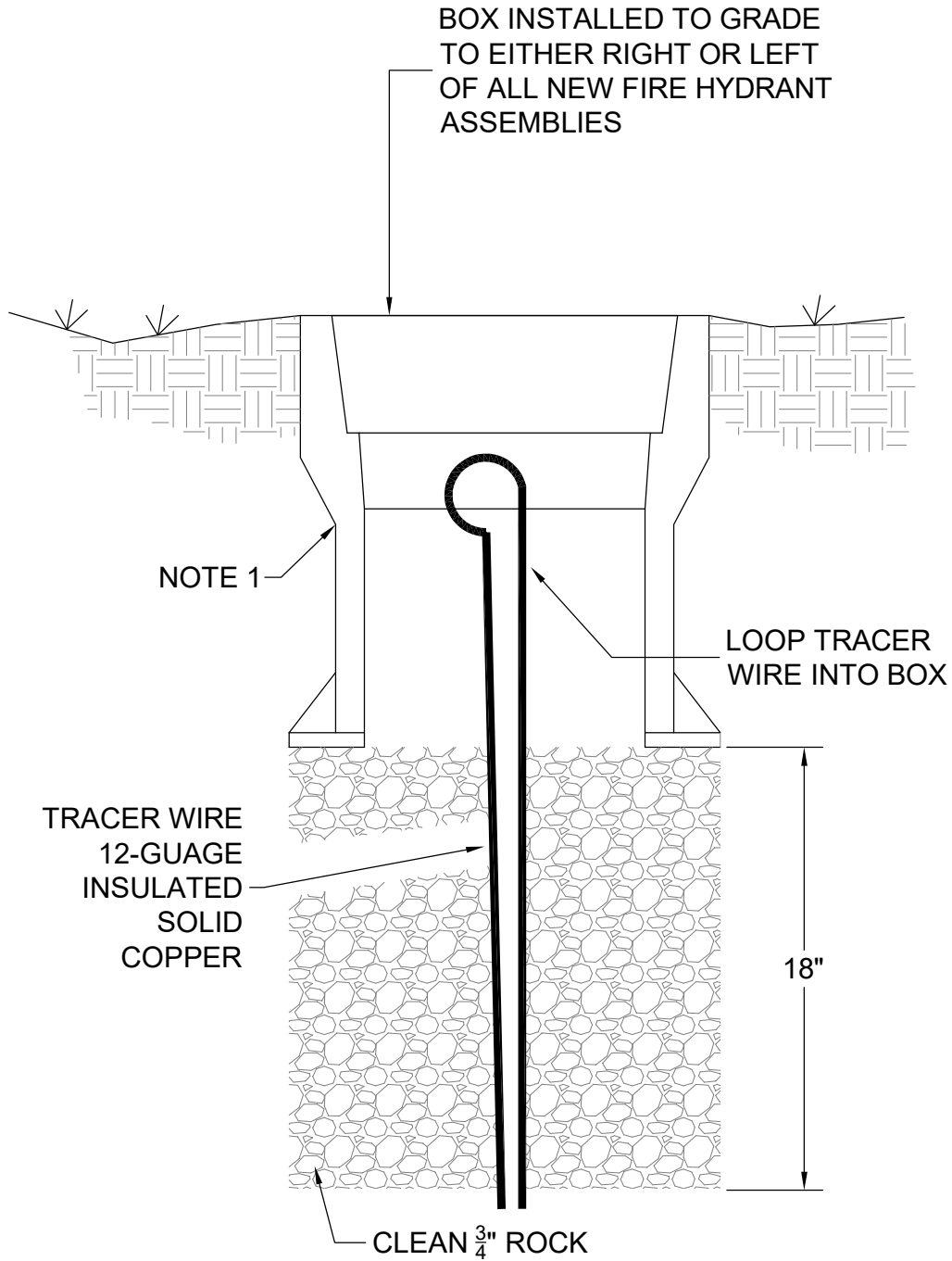
1. ALL CONCRETE SHALL BE POURED AGAINST UNDISTURBED EARTH
2. ALL FITTINGS & PLUGS MUST BE WRAPPED WITH POLYETHYLENE TO PREVENT CONCRETE FROM ADHERING TO THE BOLTS OR PIPE.



EAST LARIMER COUNTY WATER DISTRICT
TYPICAL THRUST BLOCK

Designed	N/A	Date	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

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