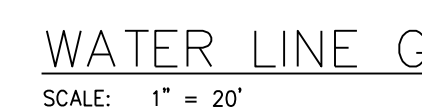


LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

C.500



NOTE:

WATER MAINS SHALL NOT EXCEED
7 FEET IN DEPTH AS MEASURED
TO THE TOP OF THE PIPE.



RECORD DRAWING

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"400-00 100.10", "4.00% 1.15% slope", or "8-inch HDPE-PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

Date: 6/2/2022
 Certified by: Matthew J. Schlicht
 Title: Engineer
 Firm: Engineering Solutions

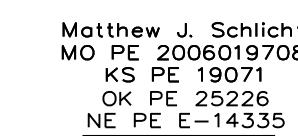
Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1695
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

PARK RIDGE 8TH PLAT
Section 9, Township 48 North, Range 31 West
Lee's Summit, Jackson County, Missouri

Project: PARK RIDGE

Issue Date: March 17, 2021

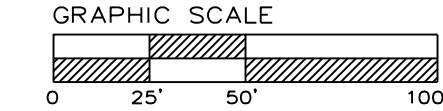
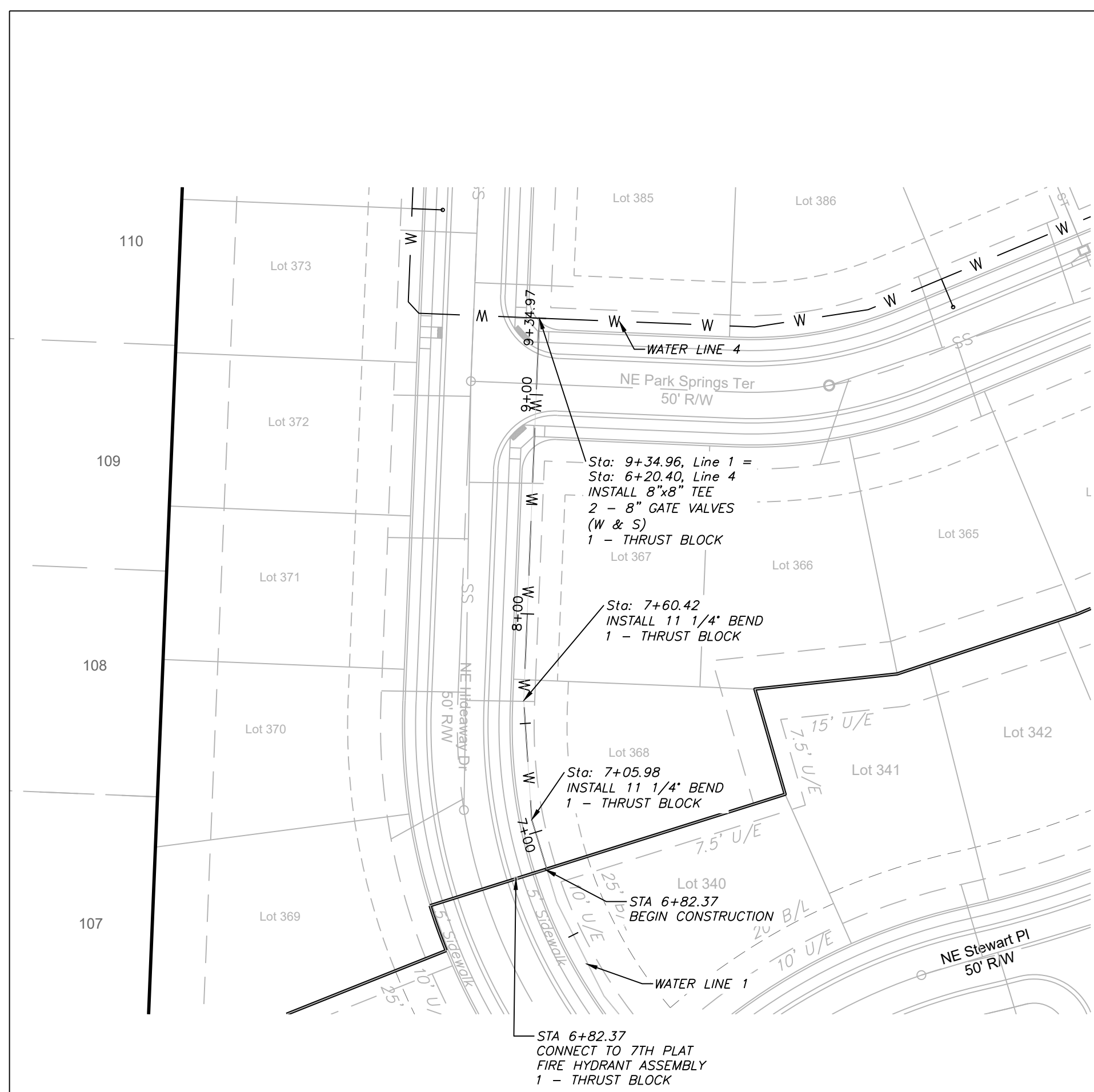
Water Line General Layout
PARK RIDGE 8TH PLAT
Section 9, Township 48 North, Range 31 West
Lee's Summit, Jackson County, Missouri



REVISIONS

6/2/2022 As-Built

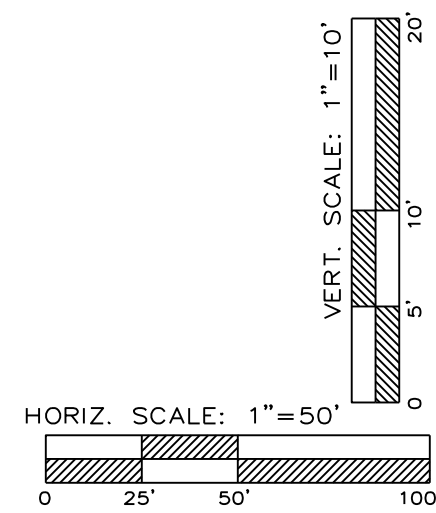
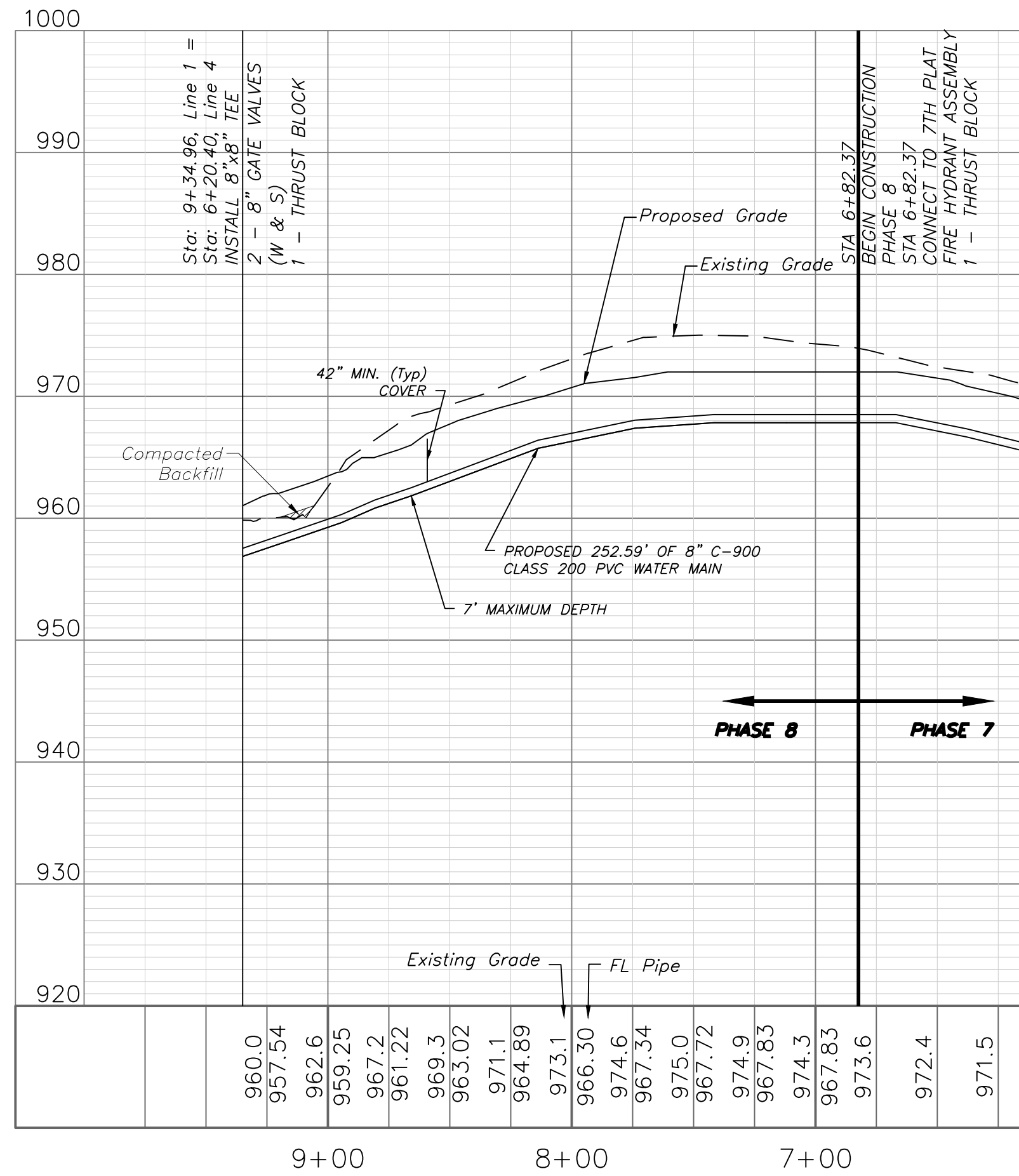
C.501



WATER PLAN & PROFILE
SCALE: 1" = 50'

Note:

Compacted Fill shall be placed to a minimum 18" above the top of the pipe prior to installation.

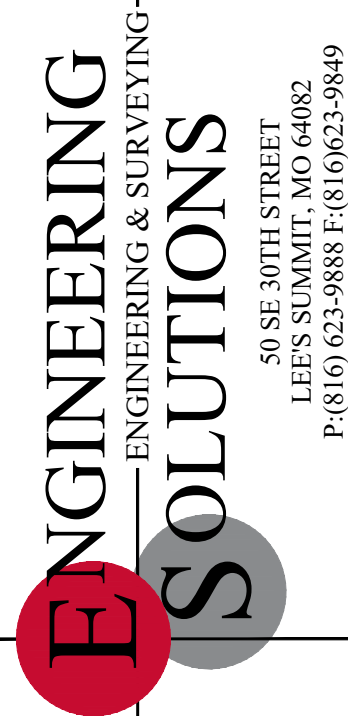


RECORD DRAWING

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Date: 6/2/2022
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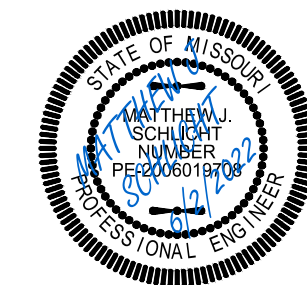


Professional Registration
Missouri
Engineering 2005002186-D
Surveying 2005008319-D
Kansas
Engineering E-1685
Surveying LS-218
Oklahoma
Engineering 6254
Nebraska
Engineering CA2821

PARK RIDGE 8TH PLAT
Section 9, Township 48 North, Range 31 West
Lee's Summit, Jackson County, Missouri

Project: PARK RIDGE
Issue Date: March 17, 2021

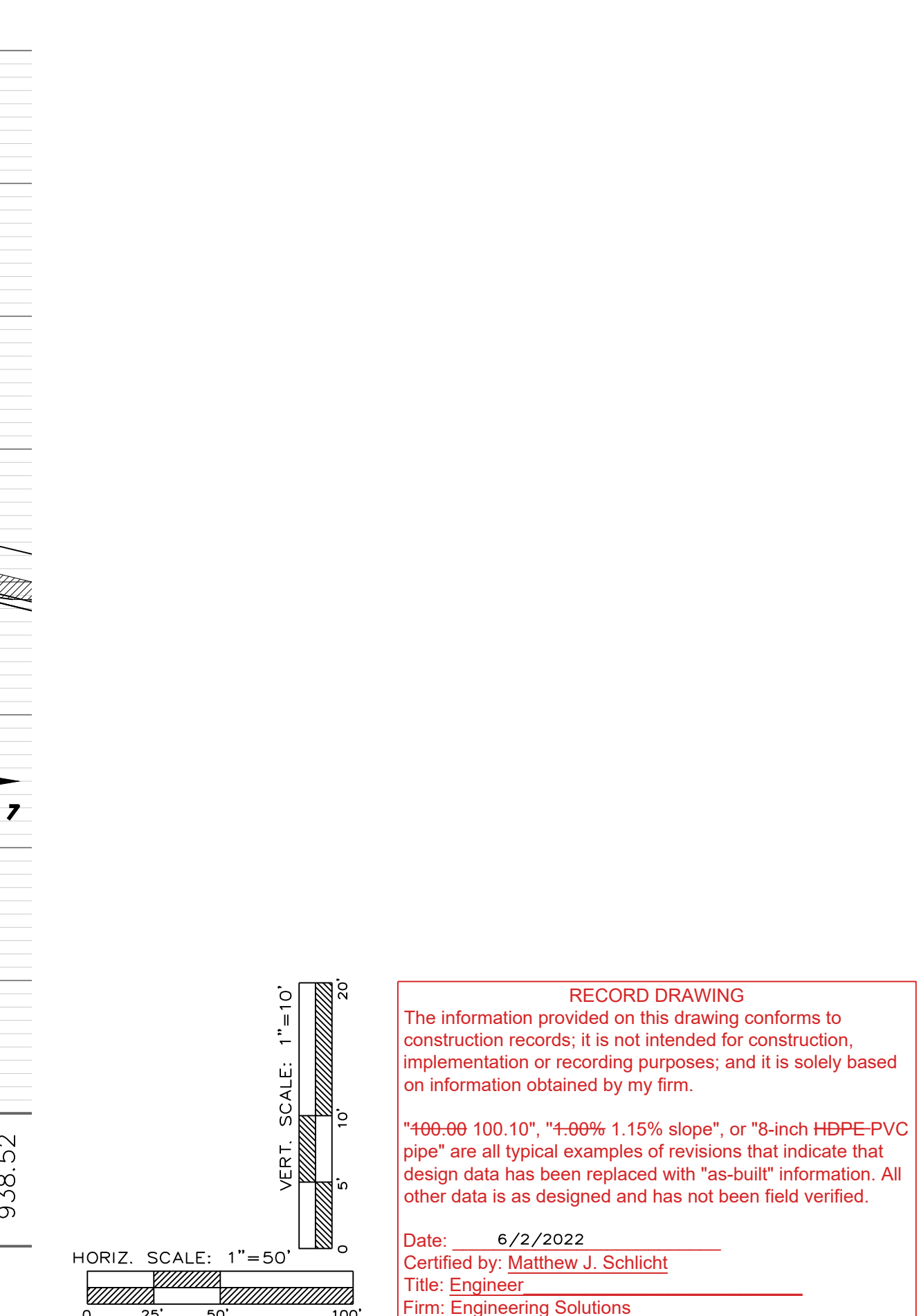
Water Main Plan and Profile, Line 2
PARK RIDGE 8TH PLAT
Section 9, Township 48 North, Range 31 West
Lee's Summit, Jackson County, Missouri



Matthew J. Schlicht
MO PE 2006019708
KS PE 19071
OK PE 25226
NE PE E-14335

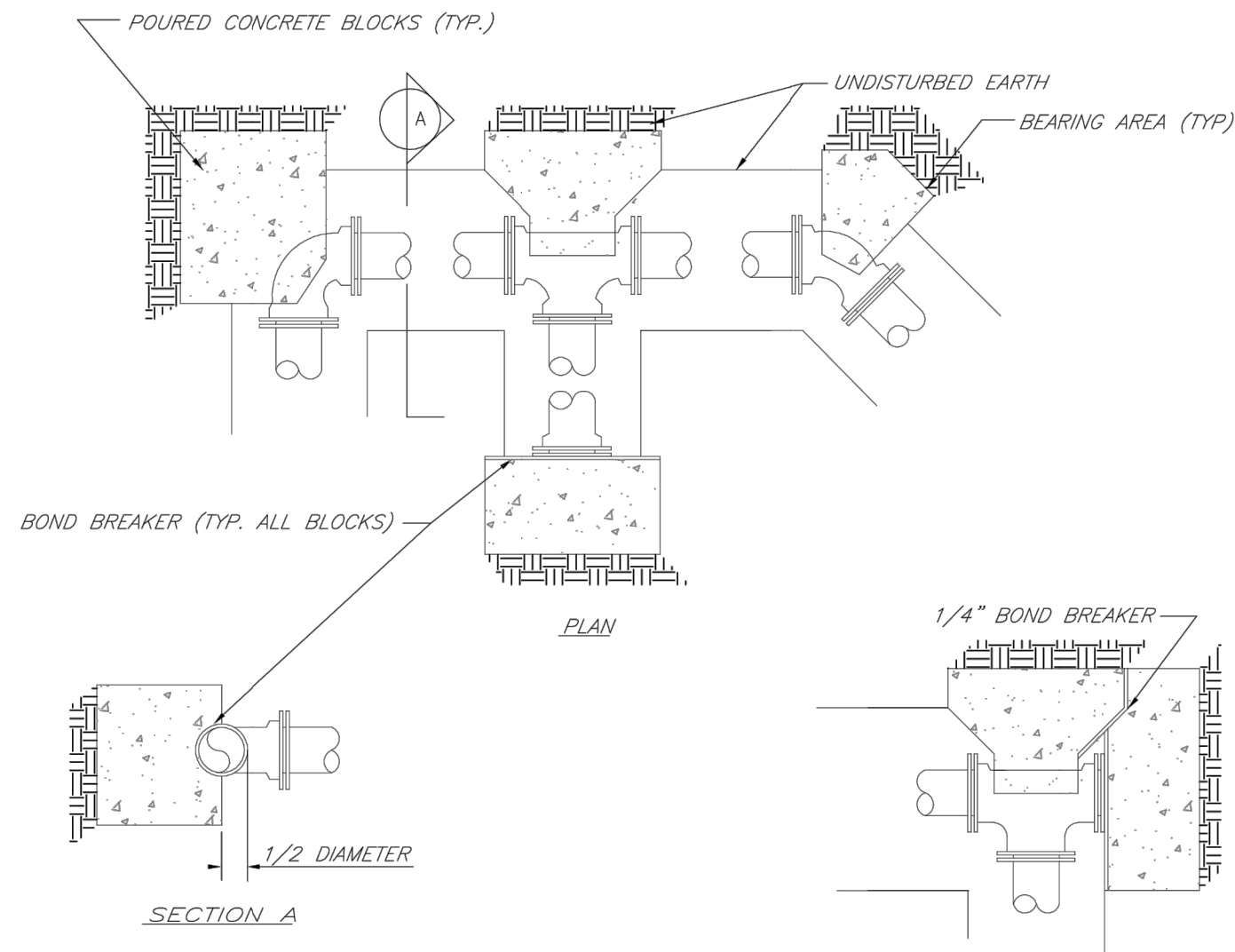
REVISIONS
6/2/2022 As-Built

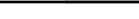
C.502



REQUIRED CONCRETE BEARING AREA (SQUARE FEET - SF)							
NOM. DIA. (INCHES)	TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND		
6	4.7	6.7	4.0	4.0	4.0		
8	8.4	11.8	6.4	4.0	4.0		
10	13.1	18.5	10.0	5.1	4.0		
12	18.8	26.7	14.4	7.4	4.0		
14	25.7	36.3	19.6	10.0	5.0		
16	33.5	47.4	25.6	13.1	6.6		
18	42.4	REST. JT.	32.5	16.5	8.3		
20	REST. JT.	REST. JT.	40.1	20.4	10.3		
24	REST. JT.	REST. JT.	REST. JT.	29.4	14.8		

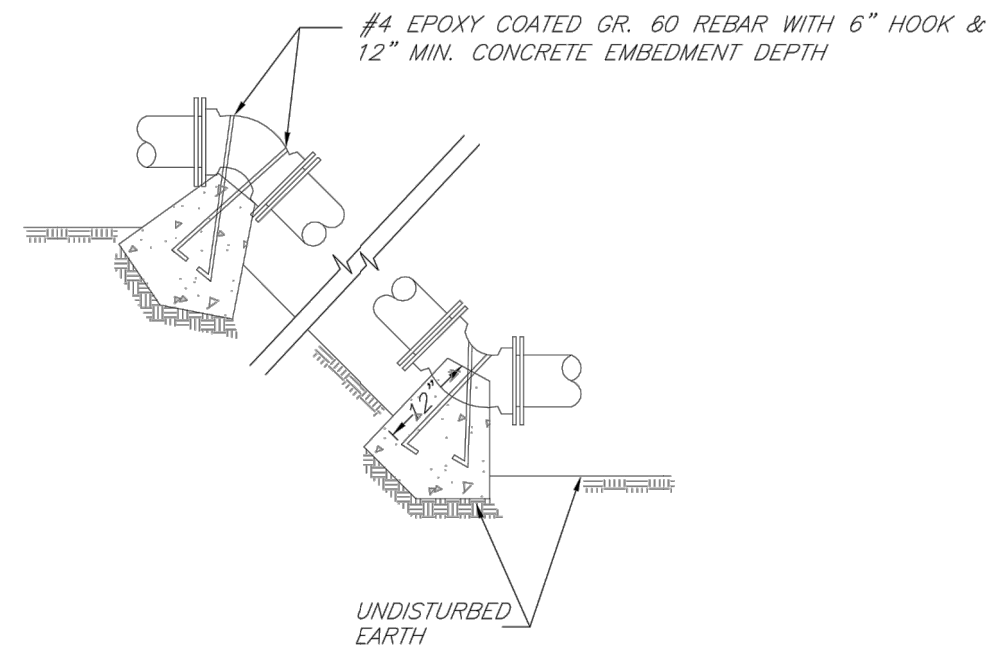
- NOTES:
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
 2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
 3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.
 4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.



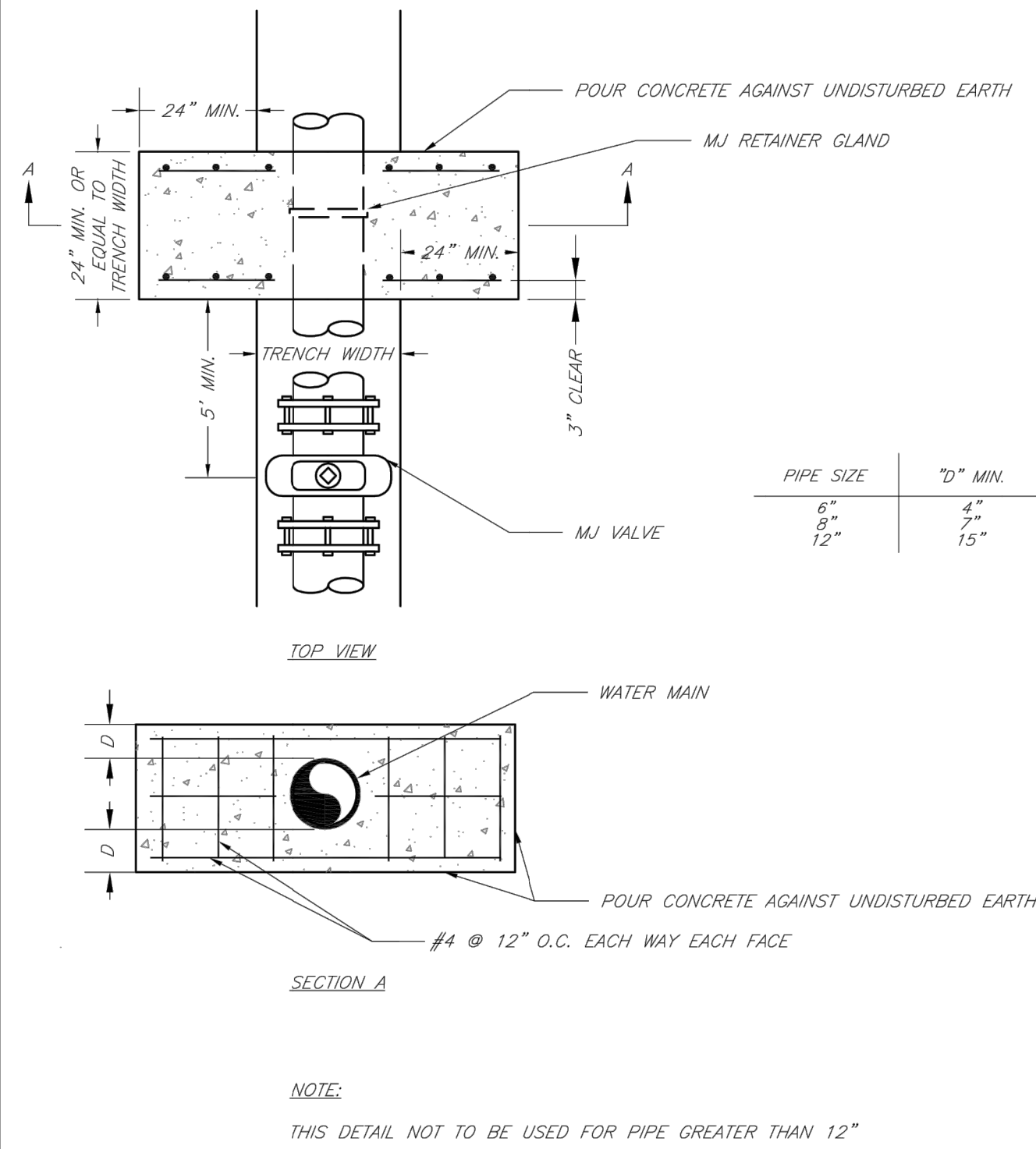
	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	Date: 02/13
		Drawn By: JN
		Checked By: DL
		FILE: WAT-1
	HORIZONTAL THRUST BLOCKS	
	Rev: 1/14	
Rev:		

REQUIRED CONCRETE VOLUME (CUBIC FEET - CF)							
NOM. DIA. (INCHES)	TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND		
6	50.5	71.4	38.6	19.7	9.9		
8	89.8	126.9	68.7	35.0	17.6		
10	140.2	198.3	107.3	54.7	27.5		
12	202.0	REST. JT.	154.6	78.8	39.6		
14	REST. JT.	REST. JT.	210.4	107.3	53.9		
16	REST. JT.	REST. JT.	REST. JT.	140.1	70.4		
18	REST. JT.	REST. JT.	REST. JT.	177.3	89.1		
20	REST. JT.	REST. JT.	REST. JT.	REST. JT.	110.0		
24	REST. JT.	REST. JT.	REST. JT.	REST. JT.	158.4		

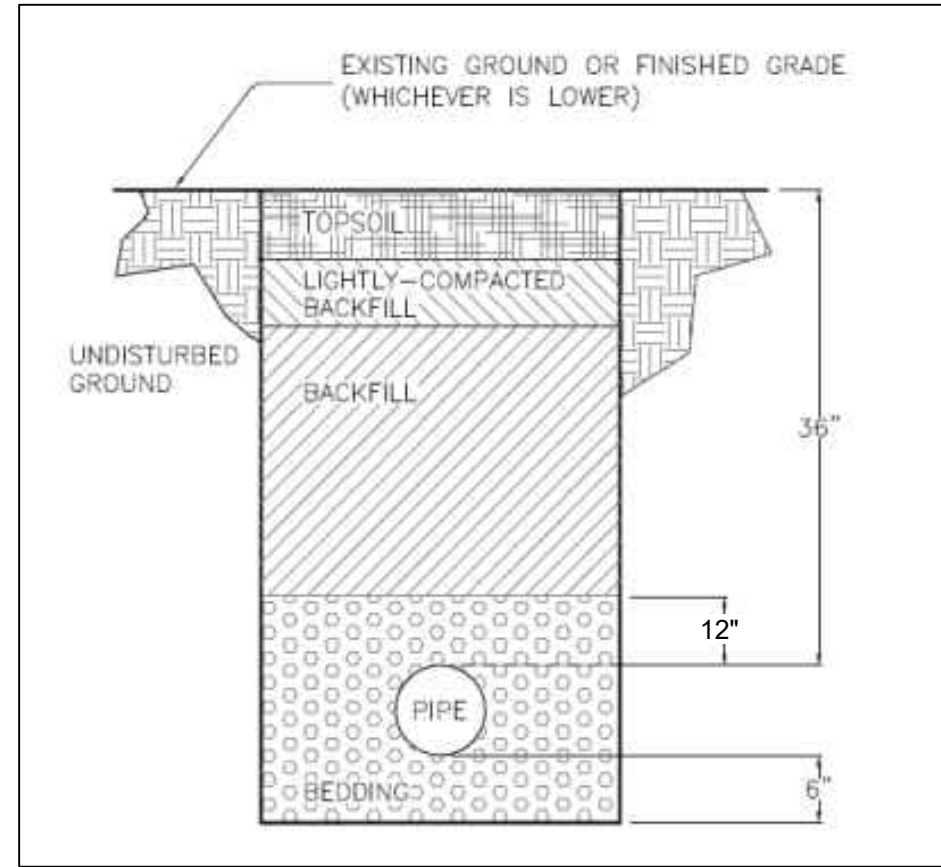
- NOTES:
1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.
 2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.
 3. BEARING MUST BE AGAINST UNDISTURBED SOIL.
 4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.



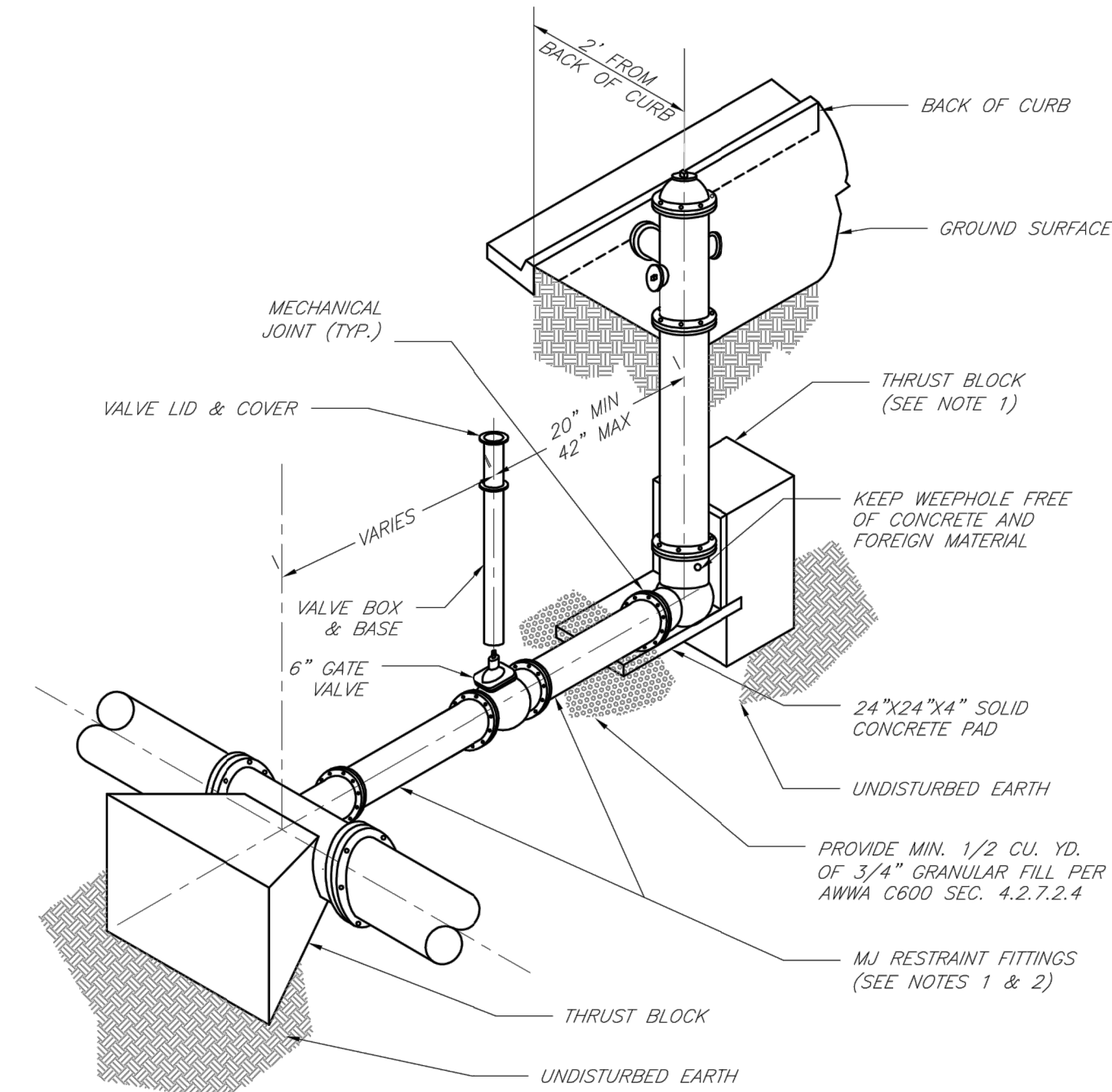
	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	Date: 02/13
		Drawn By: JN
		Checked By: DL
		FILE: WAT-2
	VERTICAL THRUST BLOCKS	
	Rev: 1/14	
Rev:		



	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	Date: 02/13
		Drawn By: JN
		Checked By: DL
		FILE: WAT-3
		Rev: 1/14
	STRADDLE BLOCK	
Rev:		

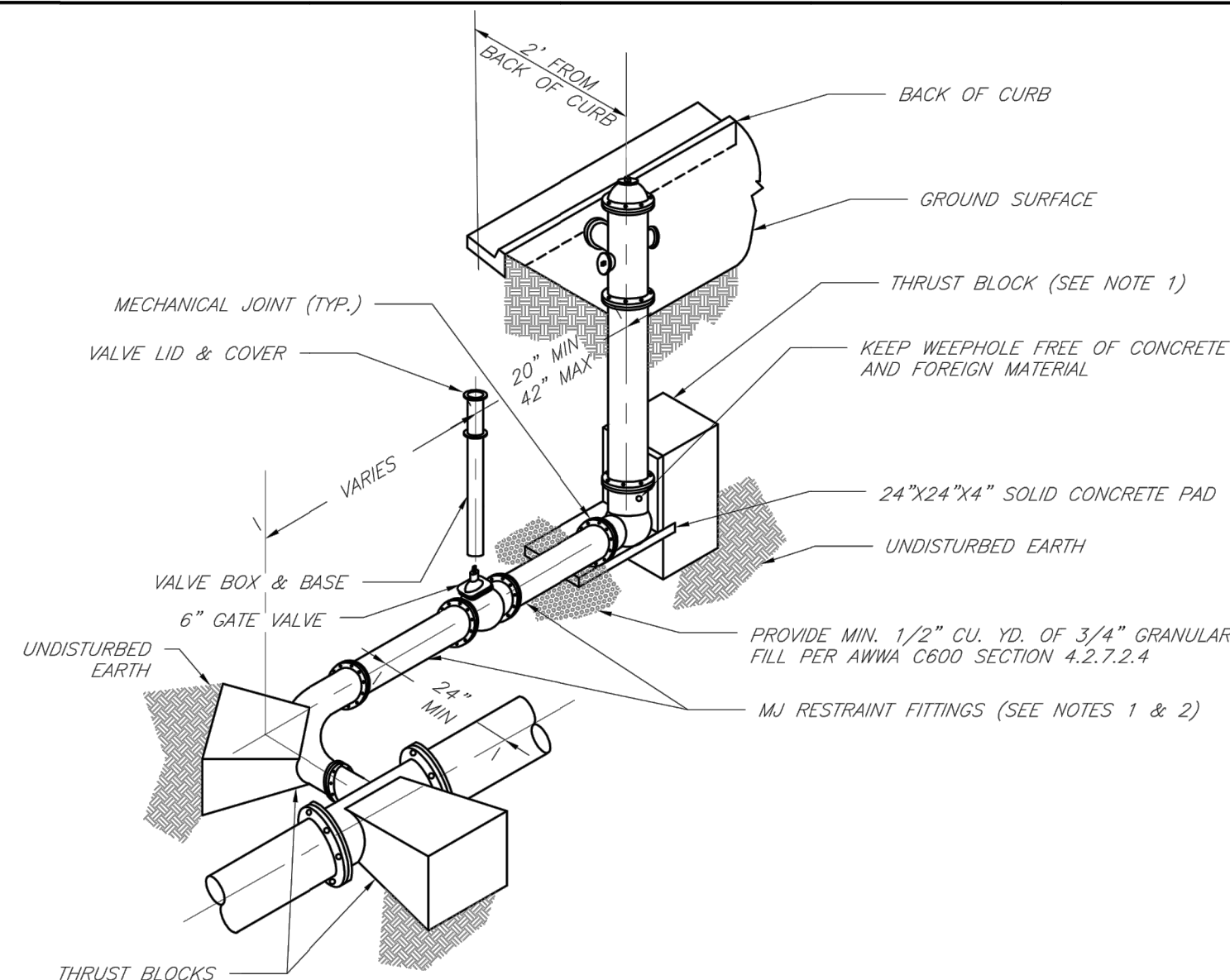


TRENCH AND BACKFILL DETAIL
N.T.S.



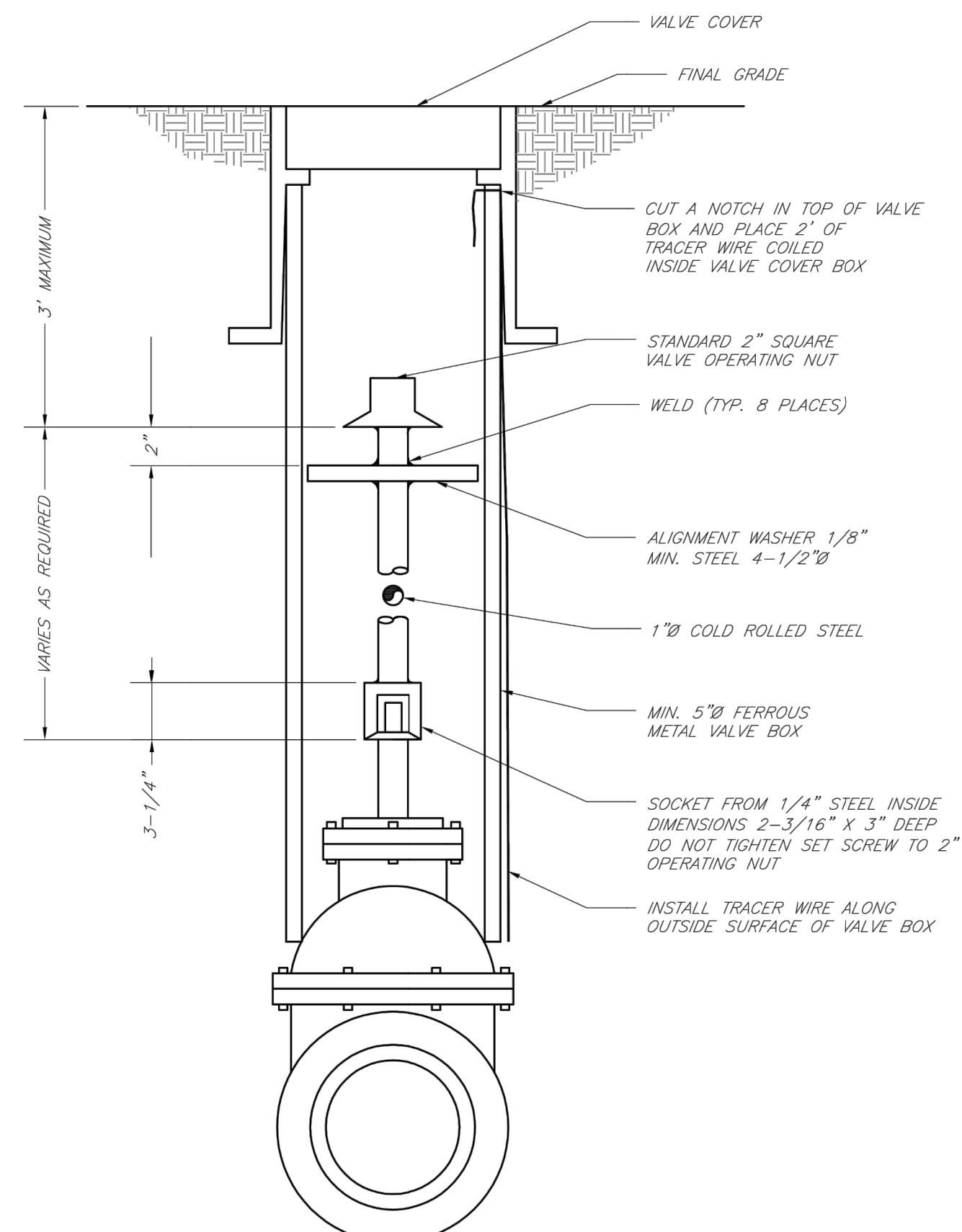
- NOTES:
1. WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
 2. GATE VALVE MAY BE BOLTED DIRECTLY TO MJ RESTRAINT TEE.
 3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
 4. BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
 5. FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
 6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	Date: 02/13
		Drawn By: JN
		Checked By: DL
		FILE: WAT-7
	HYDRANT INSTALLATION — STRAIGHT SET	
	Rev: 1/14	
Rev:		



- NOTES:
1. WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
 2. GATE VALVE MAY BE BOLTED DIRECTLY TO MJ RESTRAINT TEE.
 3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
 4. BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
 5. FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
 6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	Date: 02/13
		Drawn By: JN
		Checked By: DL
		FILE: WAT-B
	HYDRANT WITH 90 DEGREE BEND	
	Rev: 1/14	
Rev:		



	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063	Date: 02/13
		Drawn By: JN
		Checked By: DL
		FILE: WAT-9
		Rev: 1/14
VALVE STEM EXTENSION AND VALVE BOX		

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Date: 6/2/2022
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Firm: Engineering Solutions