

MONTICELLO 4th PLAT

WATER CONSTRUCTION PLANS

LOTS 109- TRACTS

SECTION 4, TOWNSHIP 48 NORTH, RANGE 31 WEST

LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

WATER:

1 ~ THE CONTRACTOR SHALL COORDINATE WITH THE PUBLIC WORKS INSPECTOR PRIOR TO ANY CONNECTIONS TO THE PUBLIC WATER SUPPLY.

2 ~ FIRE HYDRANTS SHALL BE OPTIC YELLOW WATEROUS "PACER" MODEL NO. WB-67-250 WITH NON-RISING STEM OR CITY ENGINEER APPROVED EQUAL. HYDRANTS SHALL HAVE A 5 1/4" VALVE WITH A 4 1/2" PUMPER NOZZLE AND 2 - 2 1/2" HOSE NOZZLES (LEFT HAND OPENING).

3 ~ GATE VALVES SHALL BE MUELLER NO. 2360 Series HUB END "O" RING SEAL NON-RISING STEM. VALVES 12" OR LARGER SHALL BE BUTTERFLY VALVES MANUFACTURED BY THE HENRY PRATT COMPANY OR CITY ENGINEER APPROVED EQUAL. LEFT HAND OPENING. MINIMUM 200# TESTING AWWA.

4 ~ ALL WATER MAINS SHALL BE CONSTRUCTED WITH A MINIMUM COVER OF 42 INCHES. STREET GRADING SHALL BE COMPLETED PRIOR TO BEGINNING CONSTRUCTION OF WATER MAINS.

5 ~ ALL BENDS, TEES AND FIRE HYDRANTS SHALL BE INSTALLED WITH SUITABLE CONCRETE THRUST BLOCKS POURED IN PLACE AGAINST UNDISTURBED EARTH AND PER CITY OF LEE'S SUMMIT AND APWA STANDARDS.

6 ~ THE MINIMUM SEPARATION BETWEEN THE PROPOSED WATER MAIN AND SANITARY OR STORM SEWERS IS AS FOLLOWS:

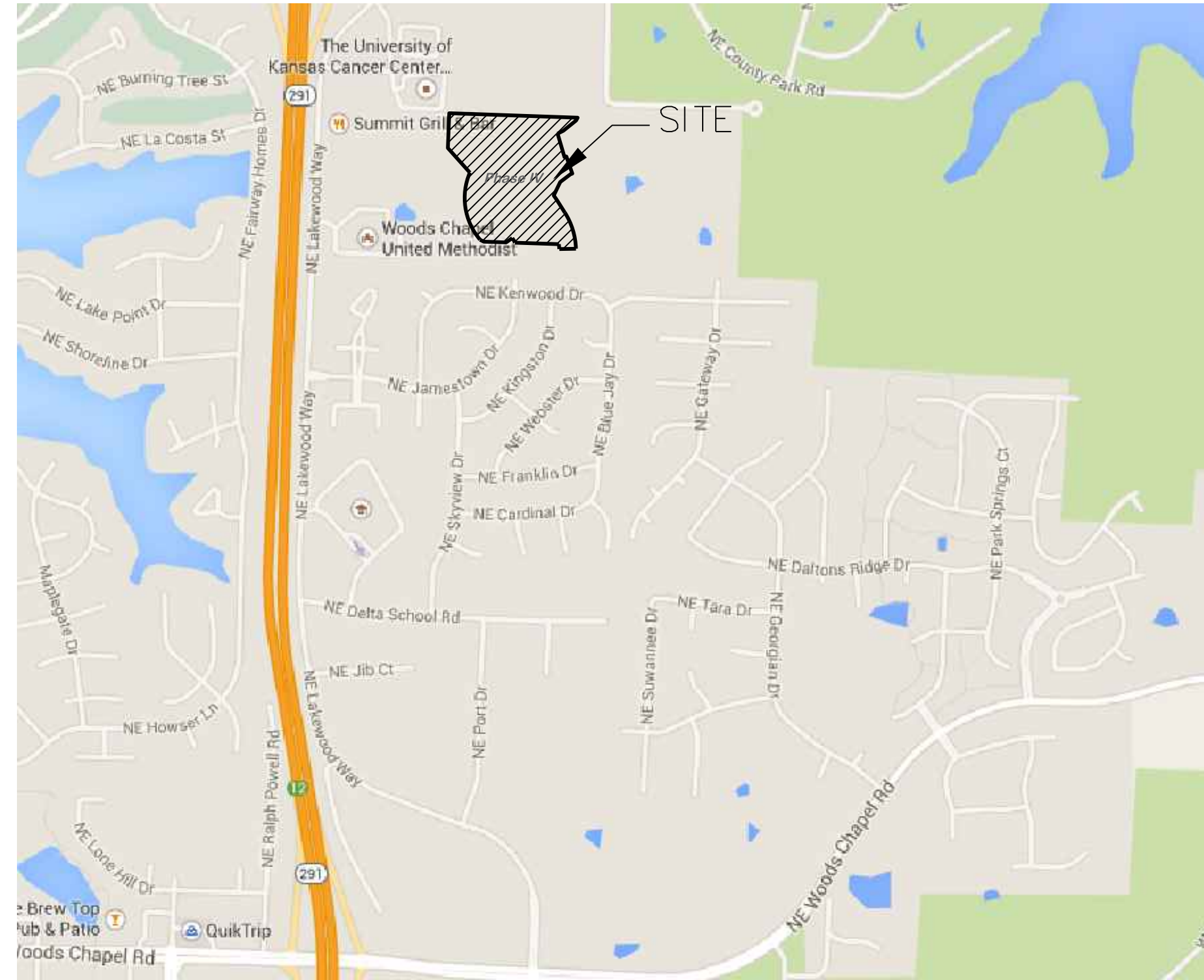
A ~ SANITARY SEWERS: HORIZONTAL = 10 FEET - VERTICAL = 18 INCHES

B ~ STORM SEWERS: HORIZONTAL = 10 FEET - VERTICAL = 18 INCHES

THESE SEPARATIONS SHALL PREVAIL OVER ANY DATA SHOWN IN THESE PLANS AND THE CONTRACTOR SHALL INSTALL BENDS OR OTHER FITTINGS AS NECESSARY TO ACHIEVE THE REQUIRED SEPARATIONS.

7 ~ ALL CONSTRUCTION SHALL FOLLOW THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL AS ADOPTED BY ORDINANCE 5813

8 ~ Areas where proposed pipe is at or above existing grade, embankment shall be placed and compacted prior to installing the pipe. Embankment shall be placed to finished grade, prior to trenching for pipe installation. For pipes deeper than 4 feet from finished grade, trenching may take place when the embankment is at least 4 feet above the proposed top of pipe elevation.



SITE LOCATION MAP

INDEX OF SHEETS:

- C.500 ~ COVER SHEET
- C.501 ~ WATER LINE GENERAL LAYOUT
- C.502 ~ WATER LINE PLAN & PROFILE
- C.503 ~ WATER LINE PLAN & PROFILE
- C.504 ~ DETAIL SHEET

Summary of Quantities:

ITEM AND DESCRIPTION	UNIT	ESTIMATED QUANTITY
FIRE HYDRANT ASSEMBLY	UNIT	4.00
8" WATER LINE	FT	2,510.56
8" GATE VALVE/ VALVE BOX & COVER	UNIT	4.00
CONNECT TO EXISTING	UNIT	3.00
TEMP. TO PERM. FIRE HYDRANT CONVERSION	UNIT	2.00
THRUST BLOCK	UNIT	30.00
TEES, BENDS	LS	28.00

UTILITY COMPANIES:

THE FOLLOWING LIST OF UTILITY COMPANIES IS PROVIDED FOR INFORMATION ONLY. WE DO NOT OFFER ANY GUARANTEE OR WARRANTY THAT THIS LIST IS COMPLETE OR ACCURATE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONTACTING ALL UTILITY COMPANIES THAT MAY BE AFFECTED BY THE PROPOSED CONSTRUCTION AND VERIFYING THE ACTUAL LOCATION OF EACH UTILITY LINE. THE CONTRACTOR SHALL NOTIFY ENGINEERING SOLUTIONS AT 816.623.9888 OF ANY CONFLICT WITH PROPOSED IMPROVEMENTS.

EVERGY ~ 298-1196
 MISSOURI GAS ENERGY ~ 756-5261
 SOUTHWESTERN BELL TELEPHONE ~ 761-5011
 COMCAST CABLE ~ 795-1100
 WILLIAMS PIPELINE ~ 422-6300
 CITY OF LEE'S SUMMIT PUBLIC WORKS ~ 969-1800
 CITY OF LEE'S SUMMIT DEVELOPMENT ENGINEERING INSPECTION AT 816.969.1200
 CITY OF LEE'S SUMMIT WATER UTILITIES ~ 969-1900
 MISSOURI ONE CALL (DIG RITE) ~ 1-800-344-7483

LEGEND:

- B/L ~ BUILDING SET-BACK
- C/A ~ COMMON AREA
- D/E ~ DRAINAGE EASEMENT
- FND. ~ FOUND
- L/E ~ LANDSCAPE EASEMENT
- L.N.A. ~ LIMITS OF NO ACCESS
- R/W ~ RIGHT OF WAY
- SAN ~ SANITARY SEWER LINE
- S/W ~ SIDEWALK
- U/E ~ UTILITY EASEMENT
- W ~ WATER LINE
- ST ~ STORM SEWER LINE

ENGINEER'S CERTIFICATION:

I HEREBY CERTIFY THAT THIS PROJECT HAS BEEN DESIGNED AND THESE PLANS PREPARED IN ACCORDANCE WITH THE CURRENT DESIGN CRITERIA OF THE CITY OF LEE'S SUMMIT, MISSOURI AND THE STATE OF MISSOURI. I FURTHER CERTIFY THAT THESE PLANS WERE DESIGNED IN ACCORDANCE TO AASHTO STANDARDS.

CITY OF LEE'S SUMMIT, MISSOURI

APPROVED: _____ DATE: _____

BY: _____
CITY ENGINEER



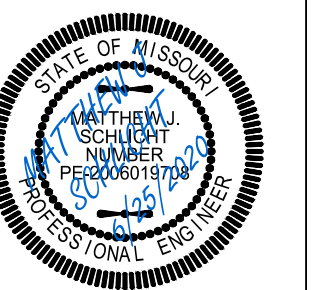
Professional Registration
 Missouri
 Engineering 200602188-D
 Surveying 200500319-D
 Kansas
 Engineering E-1695
 Surveying LS-218
 Oklahoma
 Engineering 6254
 Nebraska
 Engineering CA2821

Project:
 Monticello
 Issue Date:
 April 10, 2020

Water Main Cover Sheet
 Construction Plans for:
 Monticello 4th Plat
 Lee's Summit, Jackson County, Missouri

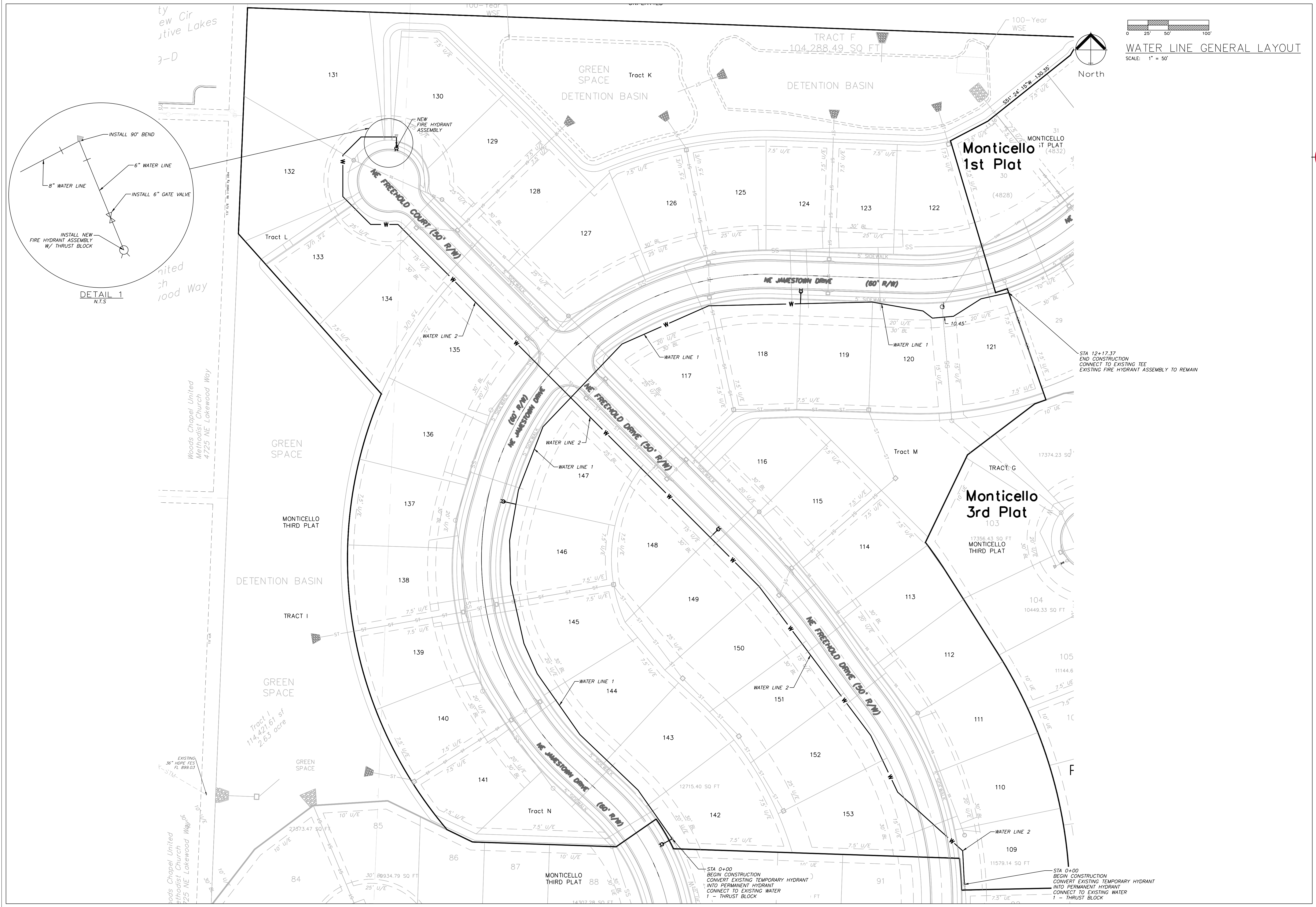
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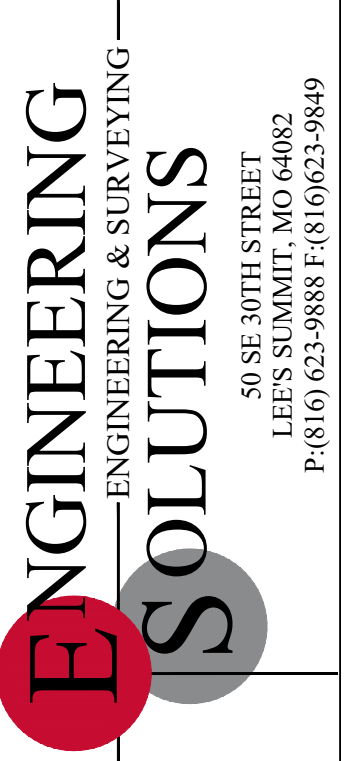


Matthew J. Schlicht
 MO PE 2006019708
 KS PE 19071
 OK PE 25226

REVISIONS
 REV. 6/9/2020
 REV. 6/19/2020
 REV. 6/25/2020



WATER LINE GENERAL LAYOUT
SCALE: 1" = 50'



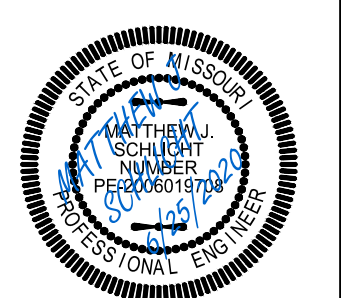
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Surveying 200500319-D
Kansas
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Water Line General Layout
Construction Plans for:
Monticello 4th Plat
Lee's Summit, Jackson County, Missouri

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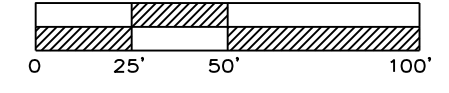
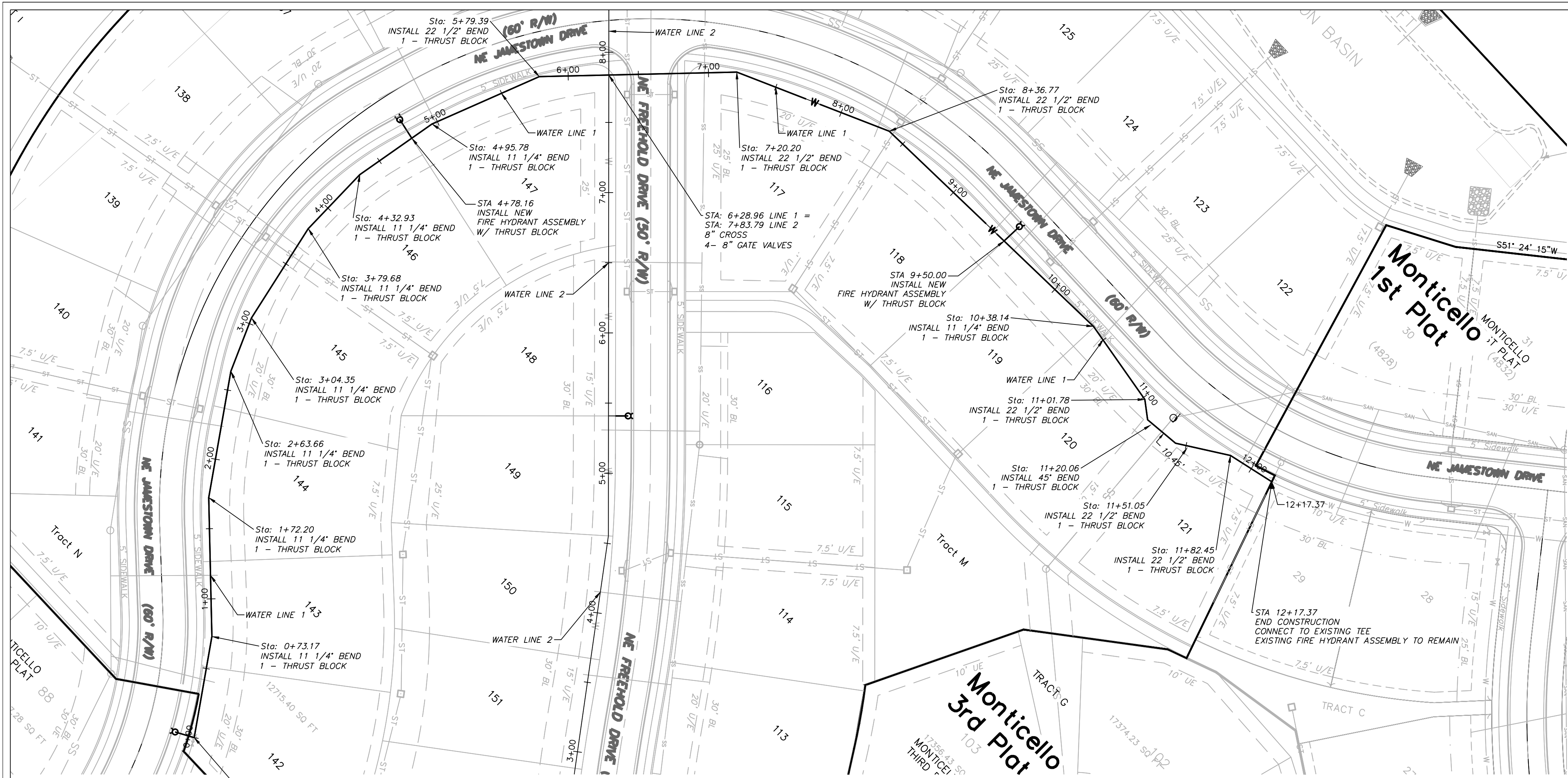
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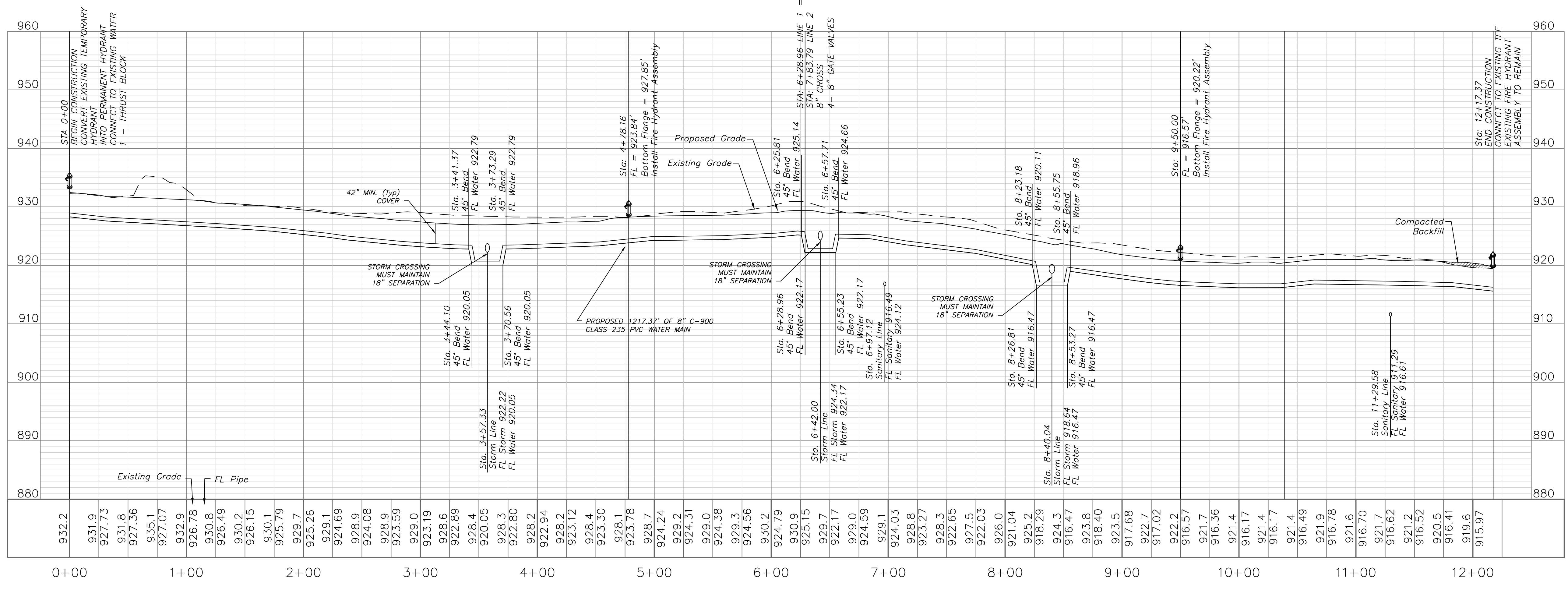
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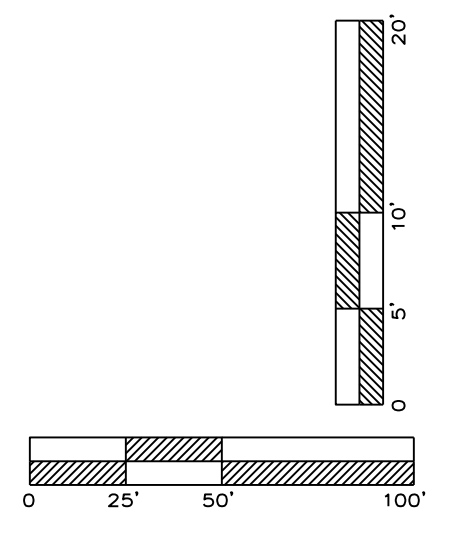


WATER PLAN & PROFILE
SCALE: 1" = 50'

WATER LINE 1



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



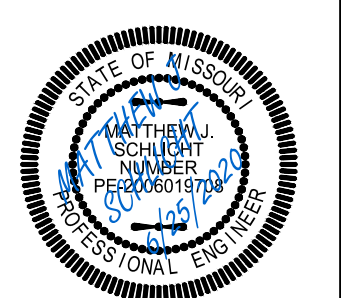
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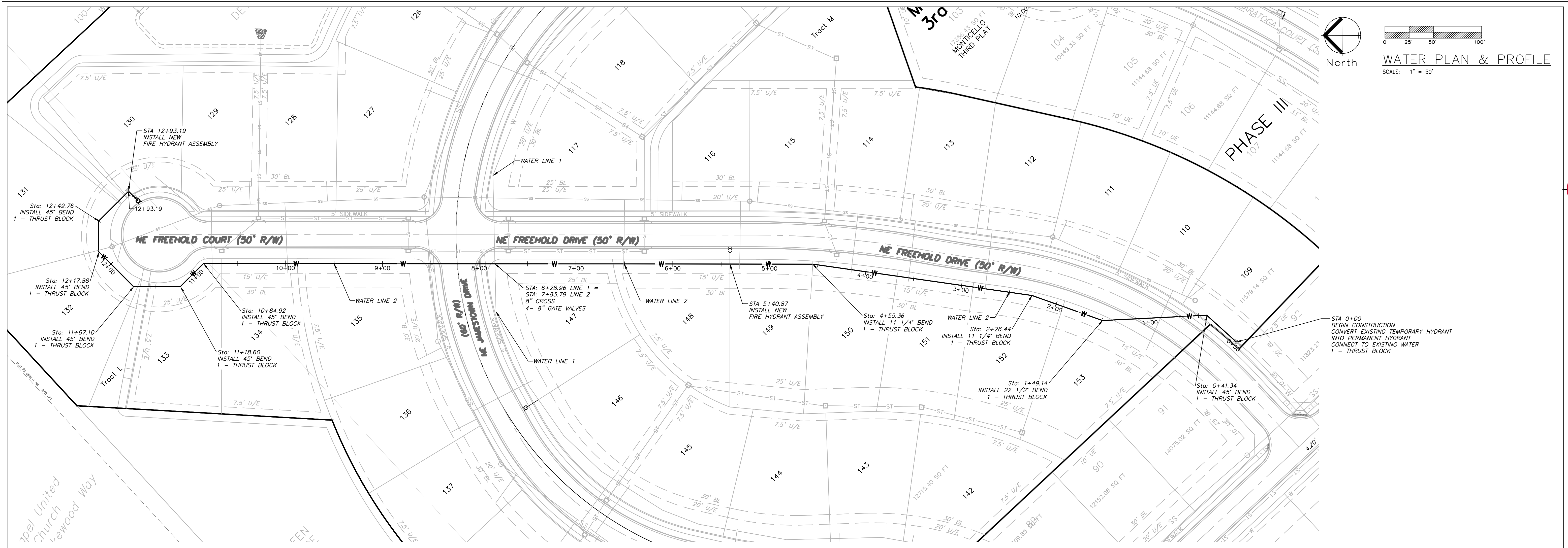
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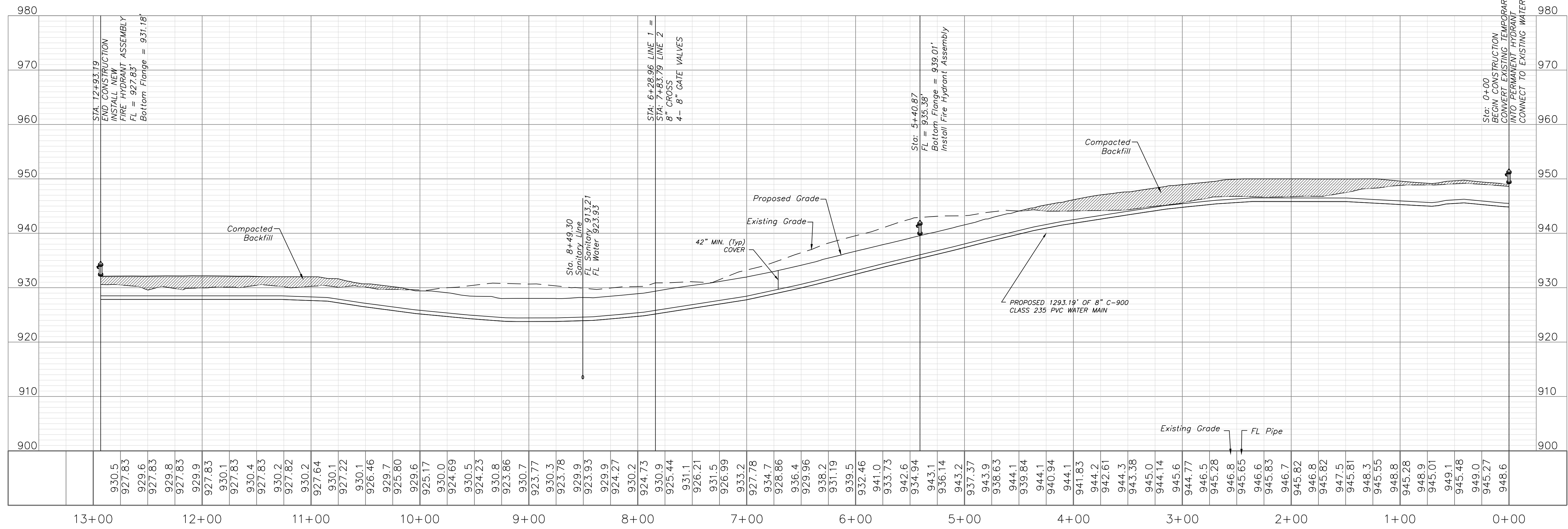


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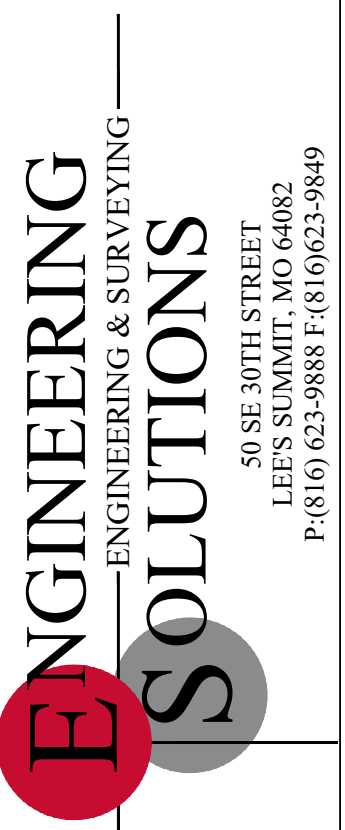
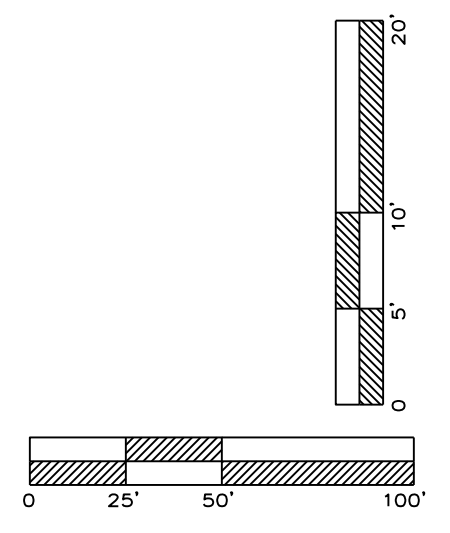
REVISIONS
REV. 6/9/2020
REV. 6/19/2020
REV. 6/25/2020



WATER LINE 2



NOTE:
 WATER MAINS SHALL NOT EXCEED 7 FEET IN DEPTH AS MEASURED TO THE TOP OF THE PIPE.
 COMPACTED FILL SHALL BE PLACED TO A MINIMUM 18" ABOVE THE TOP OF THE PIPE PRIOR TO INSTALLATION.



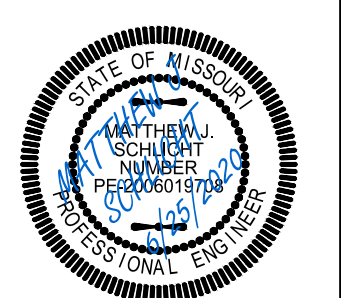
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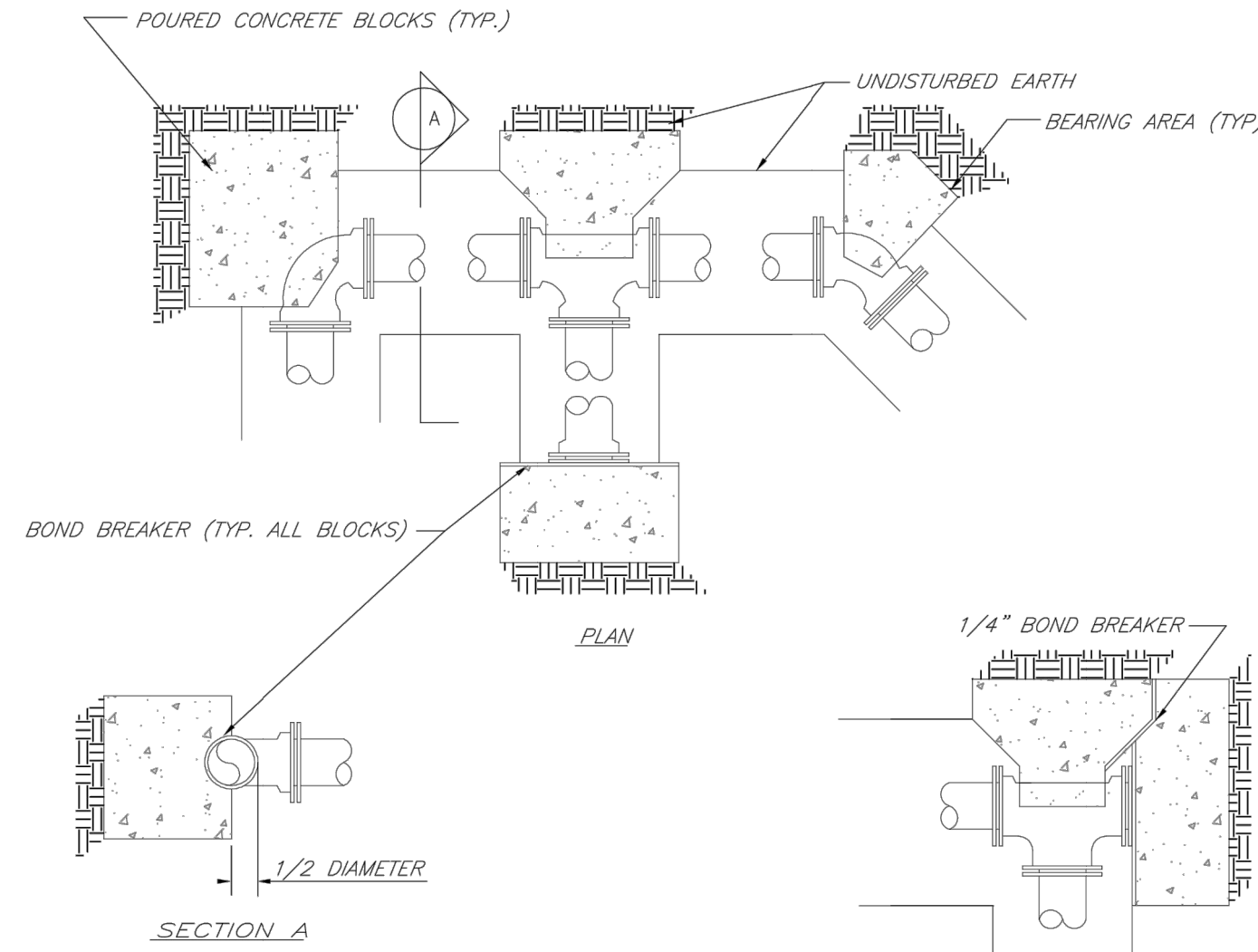
Matthew J. Schlicht
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REV. 6/19/2020	
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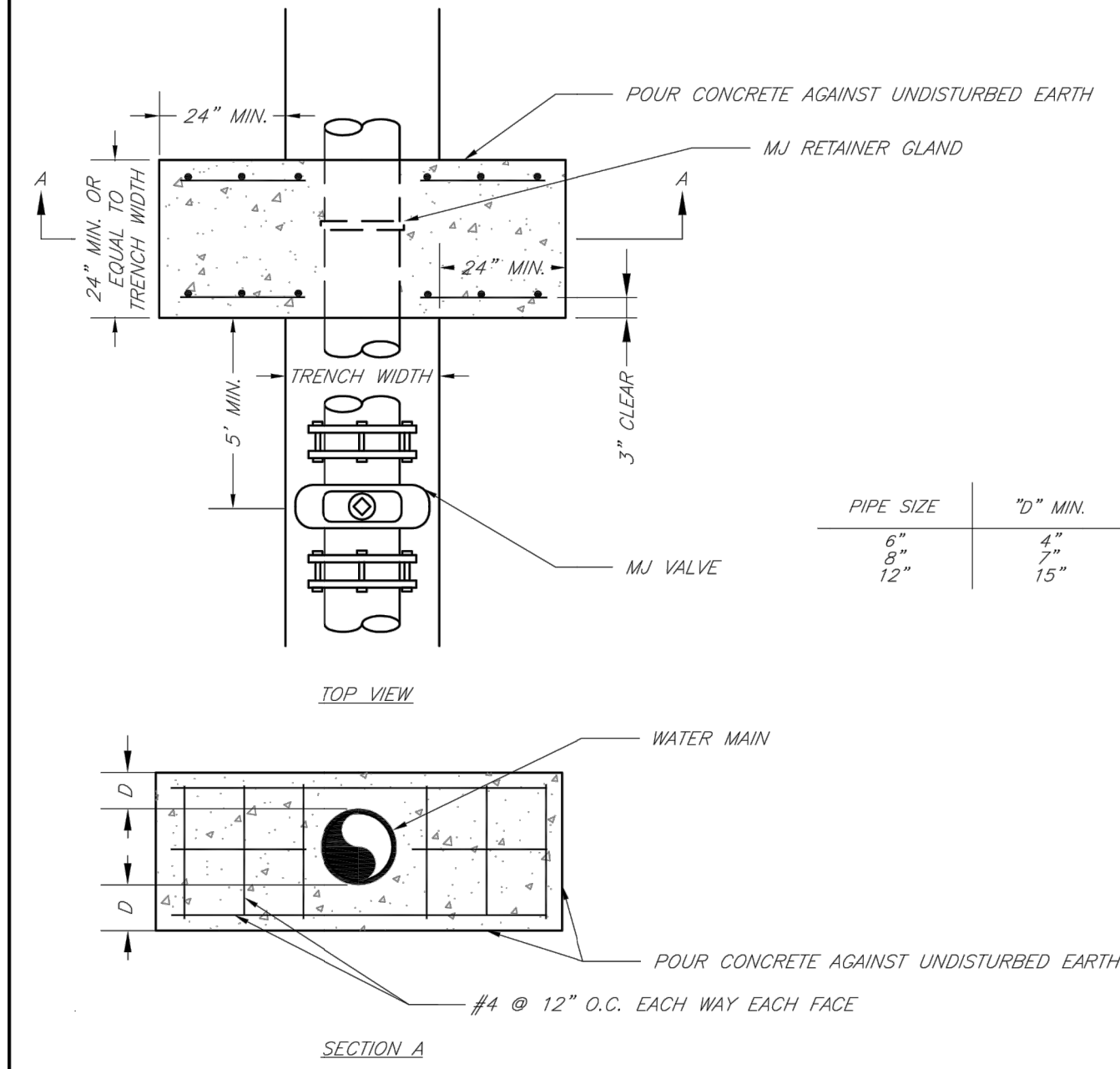
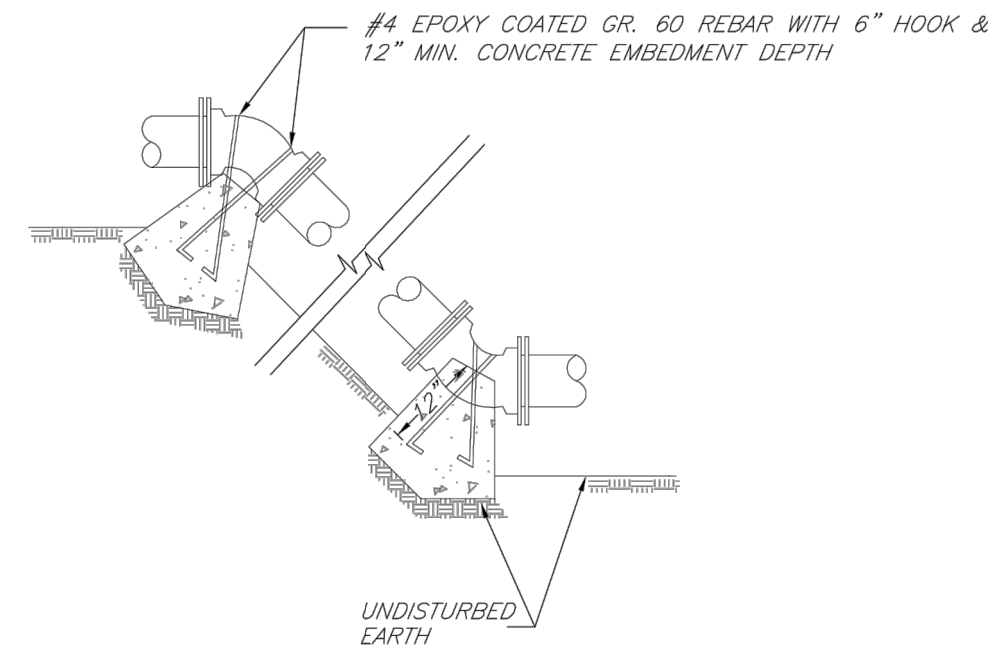
REQUIRED CONCRETE BEARING AREA (SQ. FEET - SF)							
NOM. DIA. (INCHES)	TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND		
6	4.7	6.7	4.0	4.0	4.0		
8	8.4	11.8	6.4	4.0	4.0		
10	13.1	18.5	10.0	5.1	4.0		
12	18.8	26.7	14.4	7.4	4.0		
14	25.7	36.3	19.6	10.0	5.0		
16	33.5	47.4	25.6	13.1	6.6		
18	42.4	REST. JT.	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.



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		

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NOTE:
 THIS DETAIL NOT TO BE USED FOR PIPE GREATER THAN 12"

LEE'S SUMMIT MISSOURI
 PUBLIC WORKS ENGINEERING DIVISION | 230 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HORIZONTAL THRUST BLOCKS

Date: 02/13
 Drawn By: JN
 Checked By: DL
 FILE: WAT-1
 Rev: 1/14

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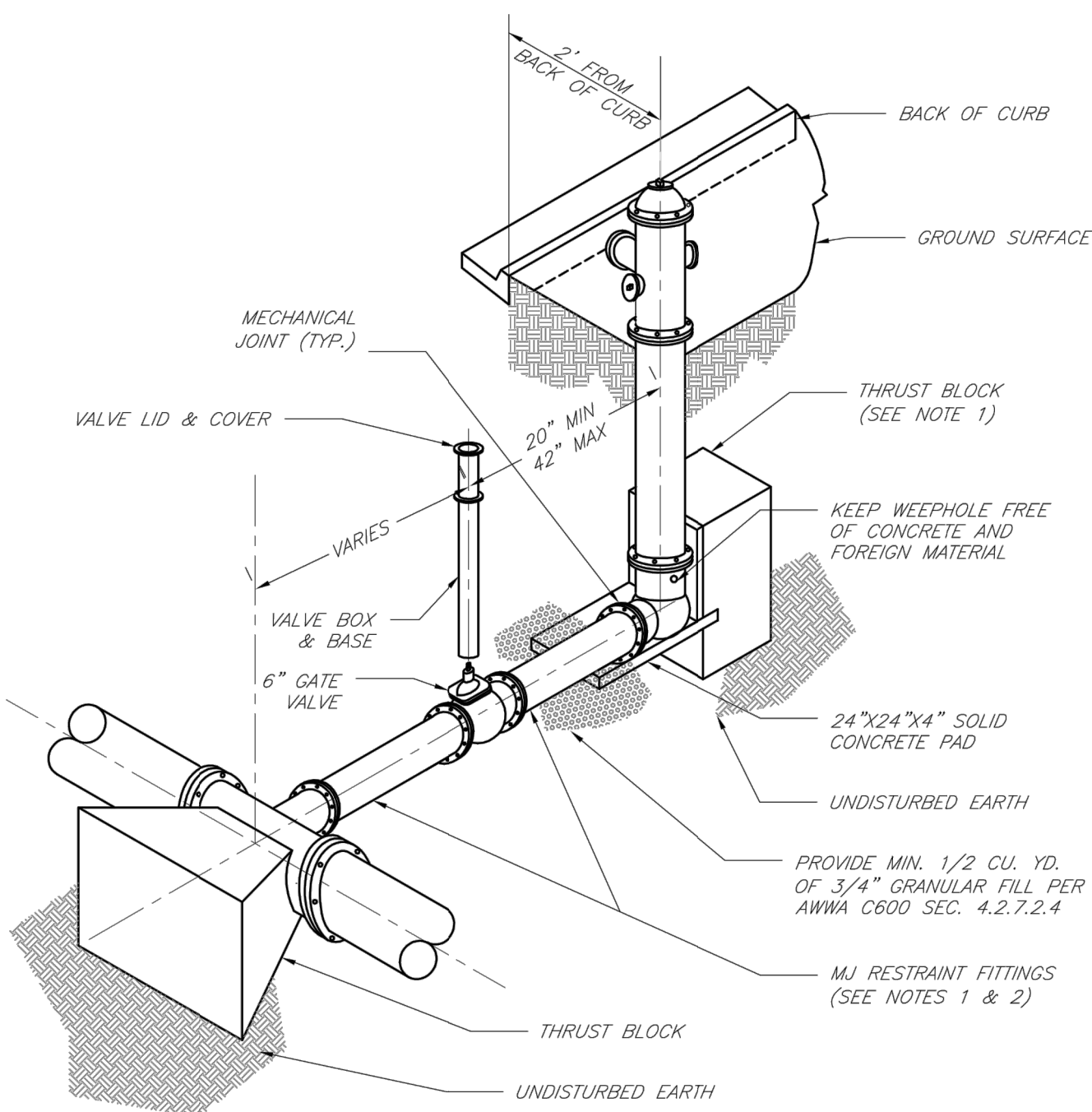
VERTICAL THRUST BLOCKS

Date: 02/13
 Drawn By: JN
 Checked By: DL
 FILE: WAT-2
 Rev: 1/14

LEE'S SUMMIT MISSOURI
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STRADDLE BLOCK

Date: 02/13
 Drawn By: JN
 Checked By: DL
 FILE: WAT-3
 Rev: 1/14

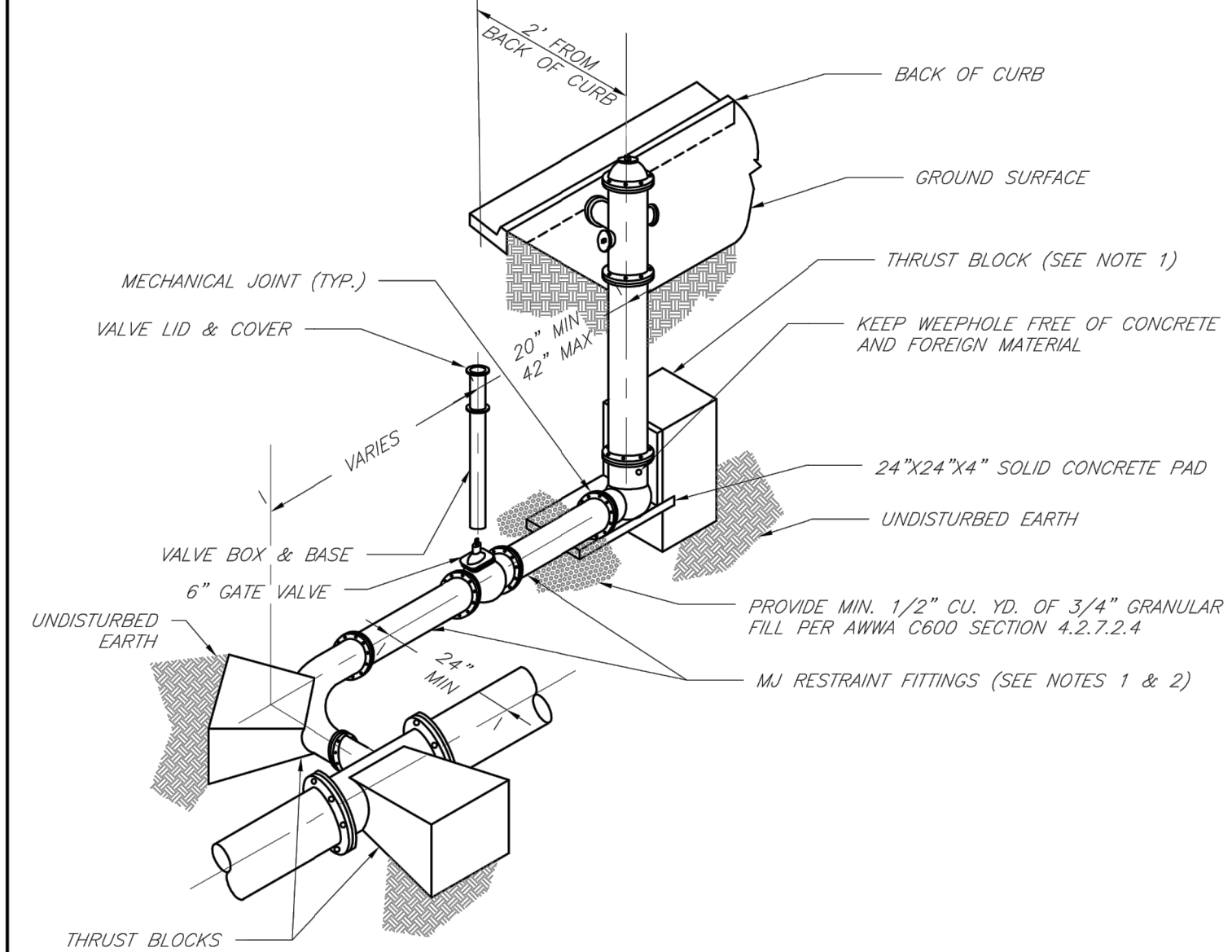


- NOTES:
 1. WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
 2. GATE VALVE MAY BE BOLTED DIRECTLY TO MJ RESTRAINT TEE.
 3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
 4. 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 | 230 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HYDRANT INSTALLATION - STRAIGHT SET

Date: 02/13
 Drawn By: JN
 Checked By: DL
 FILE: WAT-7
 Rev: 1/14

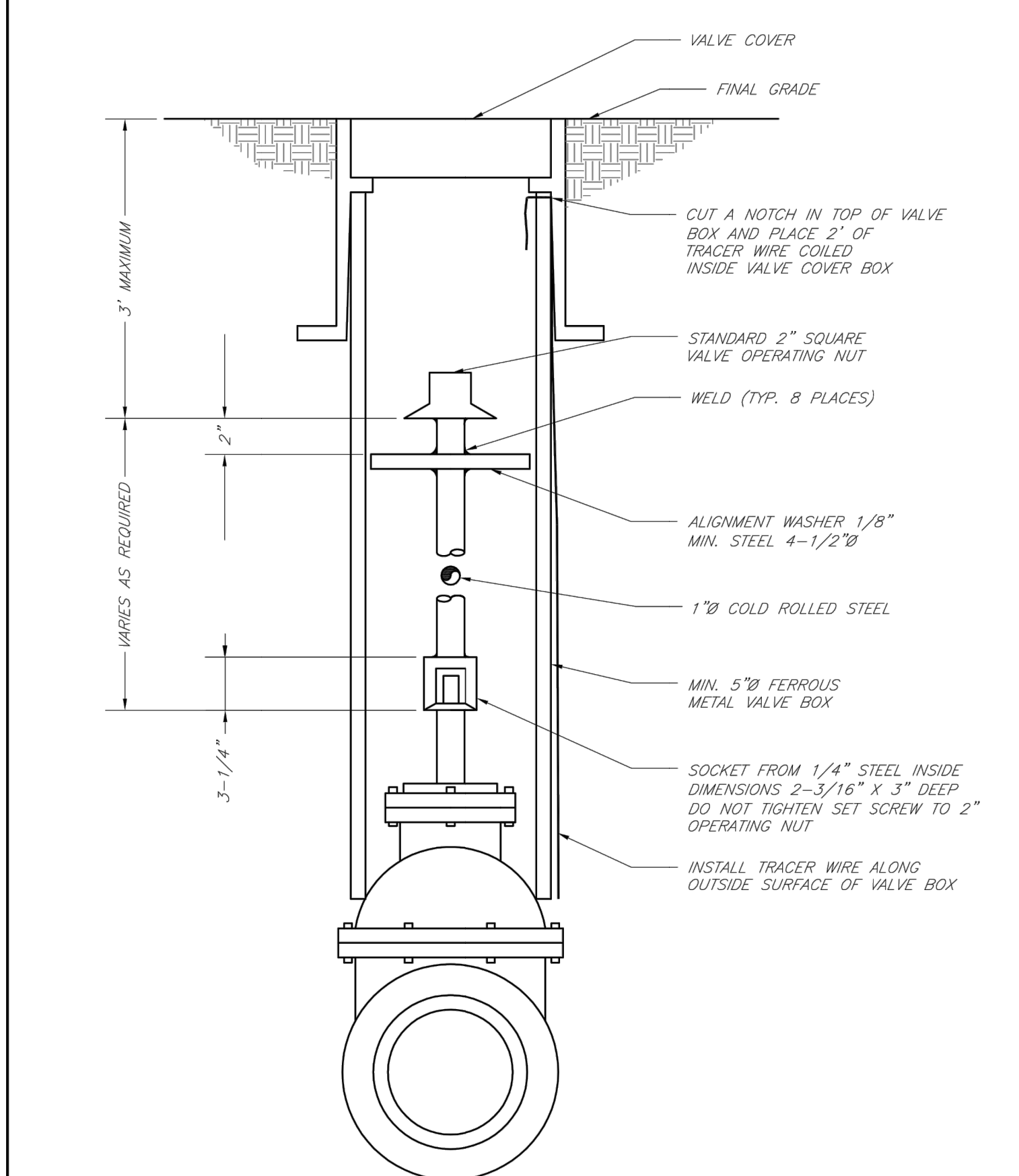


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LEE'S SUMMIT MISSOURI
 PUBLIC WORKS ENGINEERING DIVISION | 230 SE GREEN STREET | LEE'S SUMMIT, MO 64063

HYDRANT WITH 90 DEGREE BEND

Date: 02/13
 Drawn By: JN
 Checked By: DL
 FILE: WAT-8
 Rev: 1/14



LEE'S SUMMIT MISSOURI
 PUBLIC WORKS ENGINEERING DIVISION | 230 SE GREEN STREET | LEE'S SUMMIT, MO 64063

VALVE STEM EXTENSION AND VALVE BOX

Date: 02/13
 Drawn By: JN
 Checked By: DL
 FILE: WAT-9
 Rev: 1/14