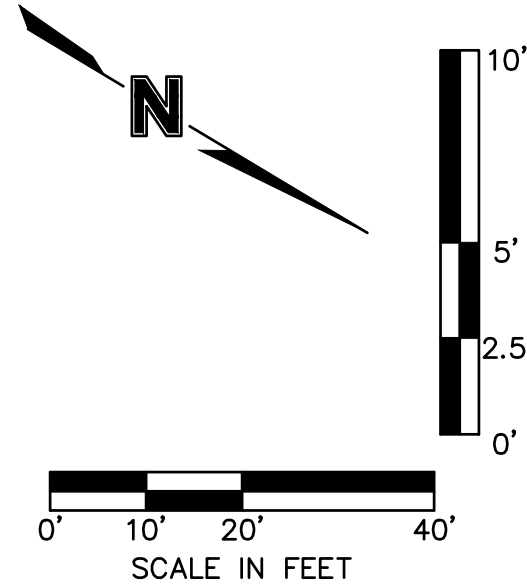
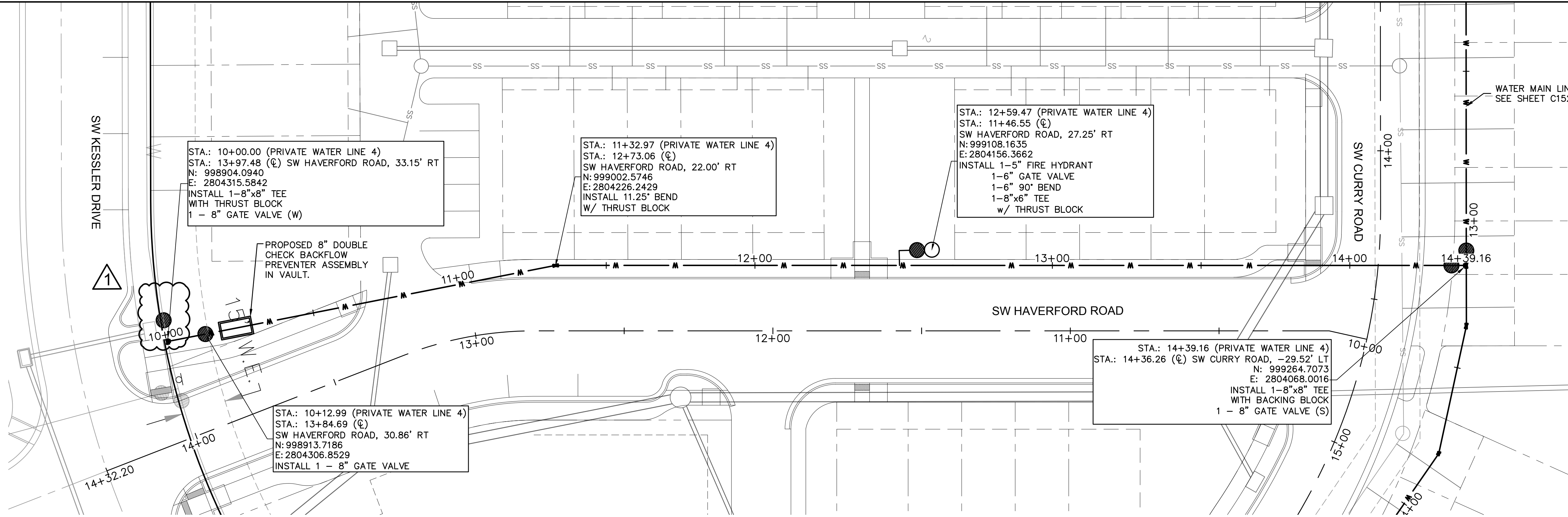
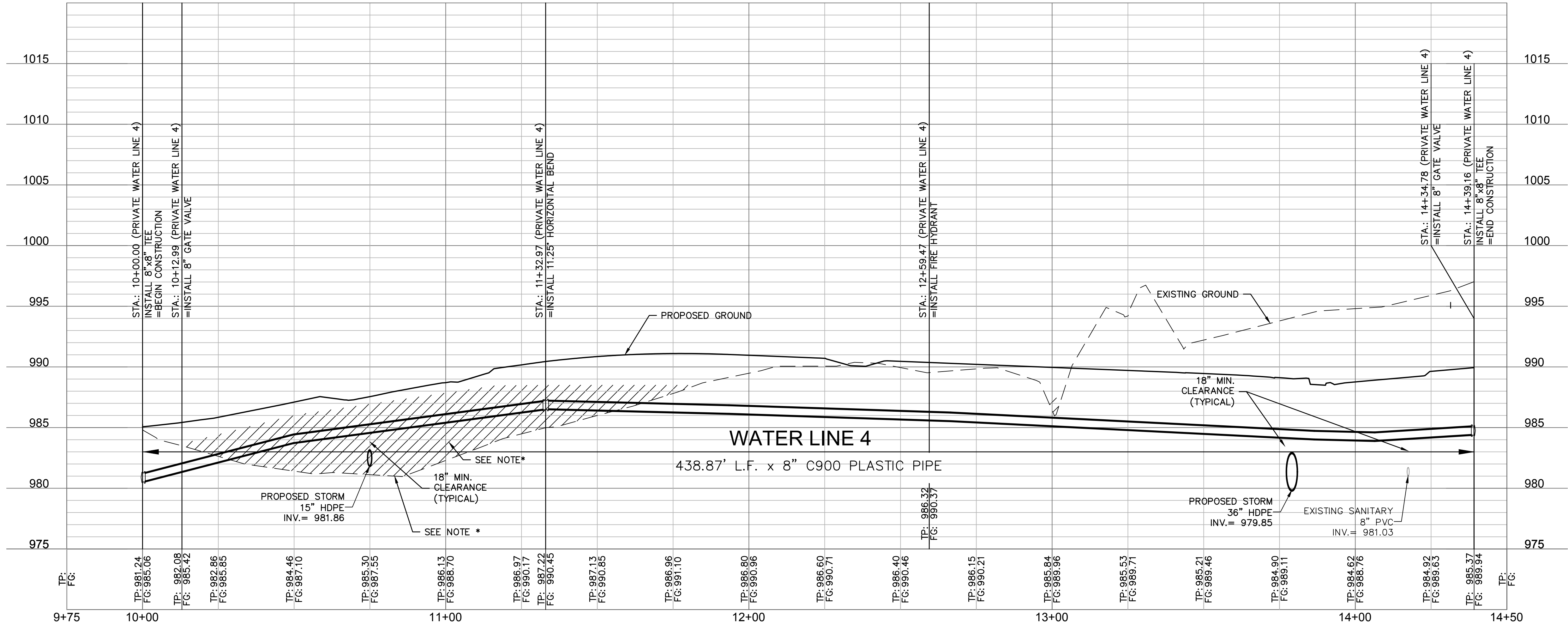


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USER: jsellars



*NOTE: CONTRACTOR SHALL FILL AND COMPACT TO 95% STANDARD DENSITY TO A POINT 18" MINIMUM ABOVE THE TOP OF PIPE PRIOR TO EXCAVATION FOR THE PIPE.

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Development Services Department
Lee's Summit, Missouri
10/21/2022

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JULIE ELAINE SELLERS
Professional Engineer
NUMBER
PE-2017000367
10/17/22

BY
DATE
09/29/2022
REV. NO.
1

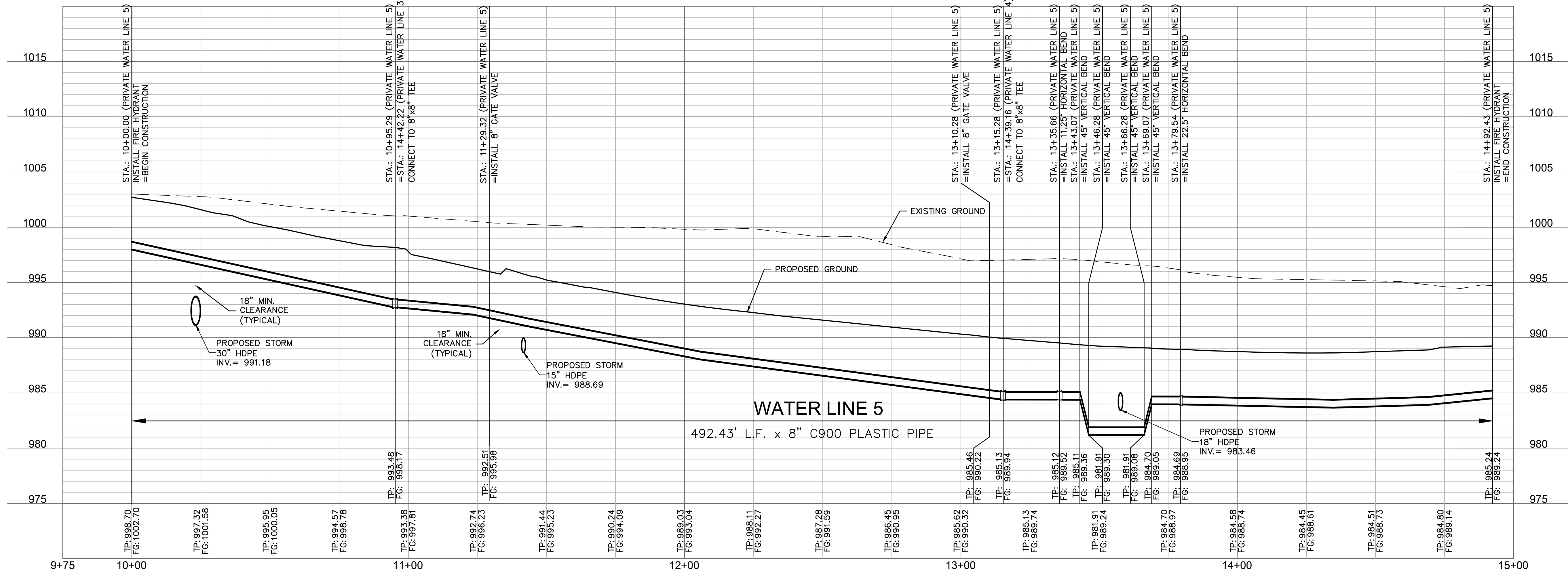
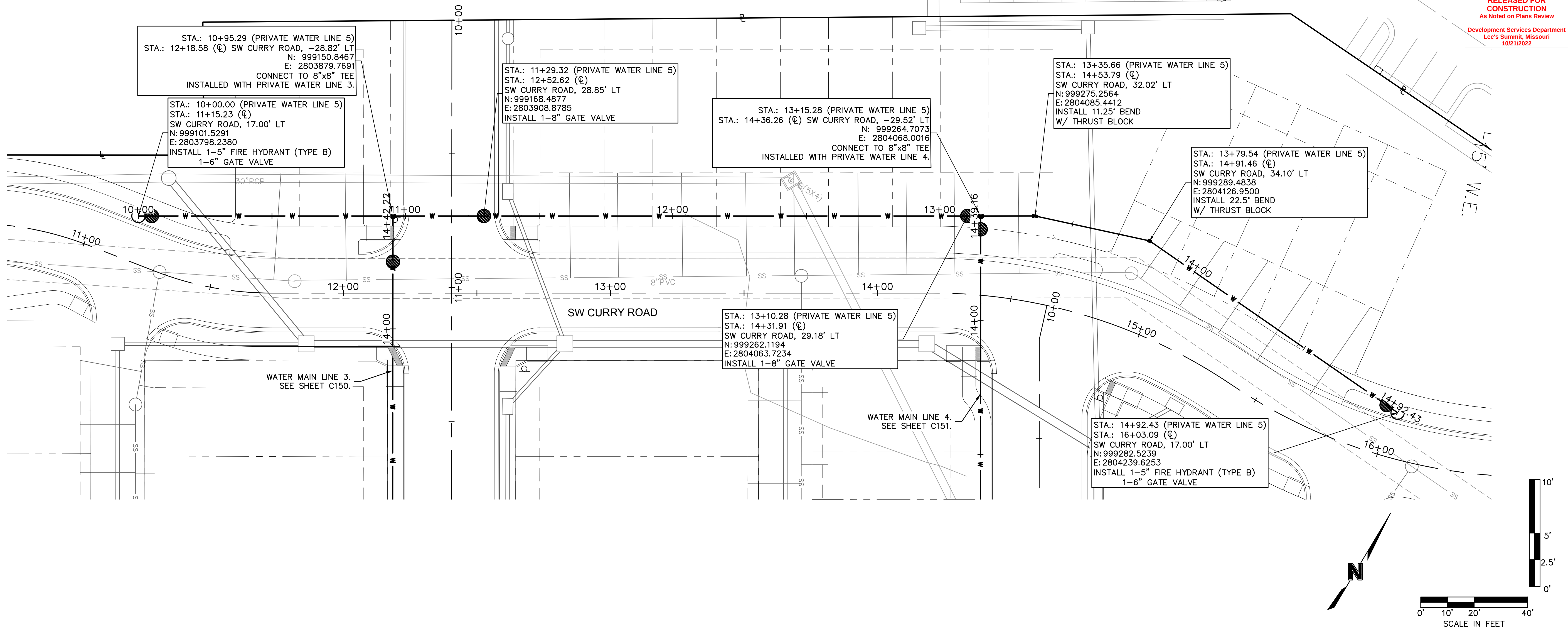
REVISIONS DESCRIPTION
REVISIONS PER CITY COMMENTS

REVISIONS
2021

WATER MAIN 4 PLAN & PROFILE
NEW LONGVIEW TOWNHOMES
451 SW LONGVIEW BLVD
LEE'S SUMMIT, MO

drawn by: OLJCM
checked by: JES
approved by: JES
QA/QC by: JES
project no.: 021-02987
drawing no.:
date: 08.25.2021

SHEET
C151



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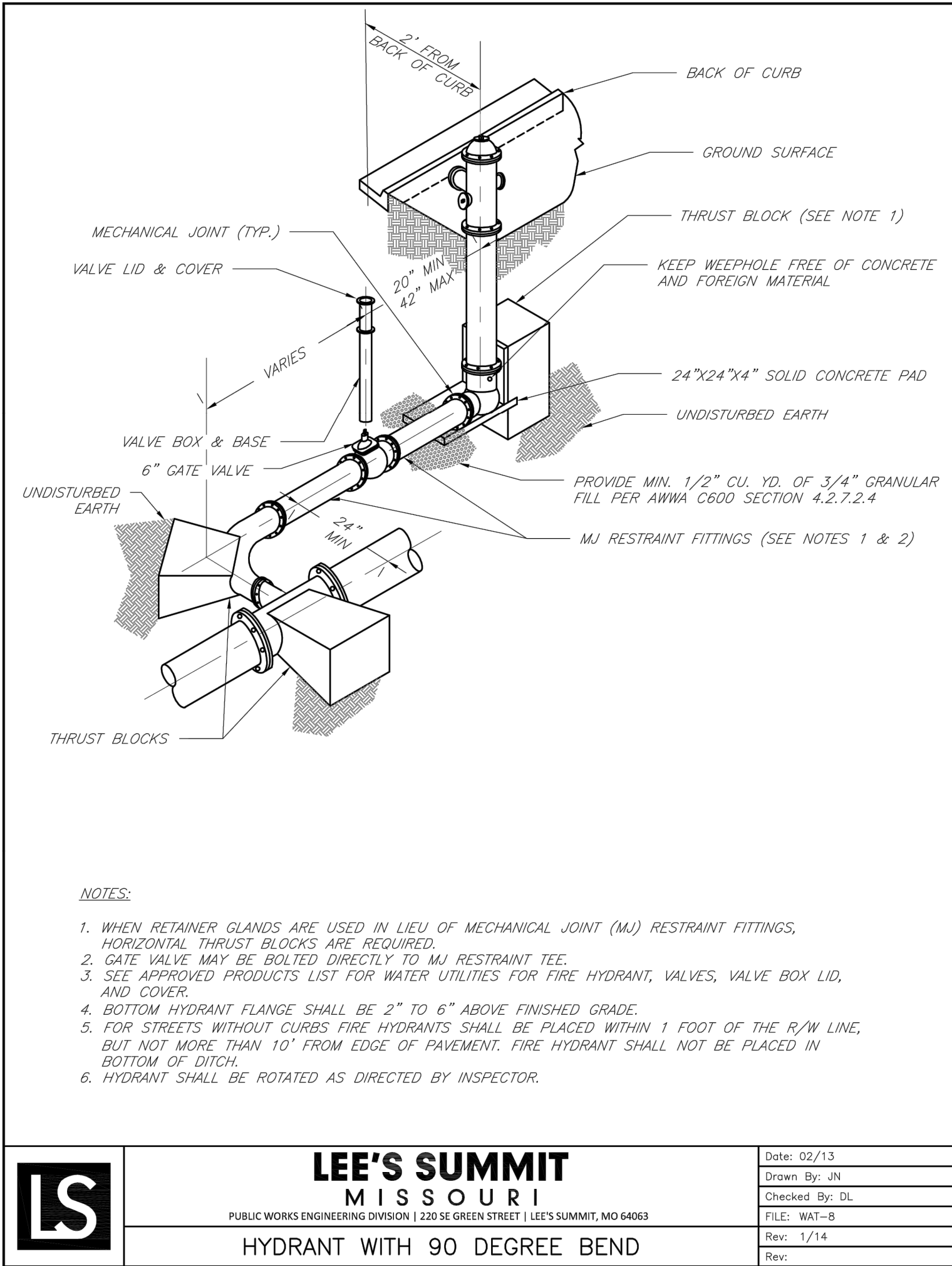
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REQUIRED CONCRETE VOLUME (CUBIC FEET - CF)						
NOM. DIA. (INCHES)	180	90	45	22.5	11.25	
6	TEE, PLUG	BEND	BEND	BEND	BEND	
8	50.5	71.4	38.6	19.7	9.9	
10	89.8	126.9	68.7	35.0	17.6	
12	140.2	198.3	107.3	54.7	27.5	
14	REST. JT.	REST. JT.	210.4	107.3	53.9	
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	

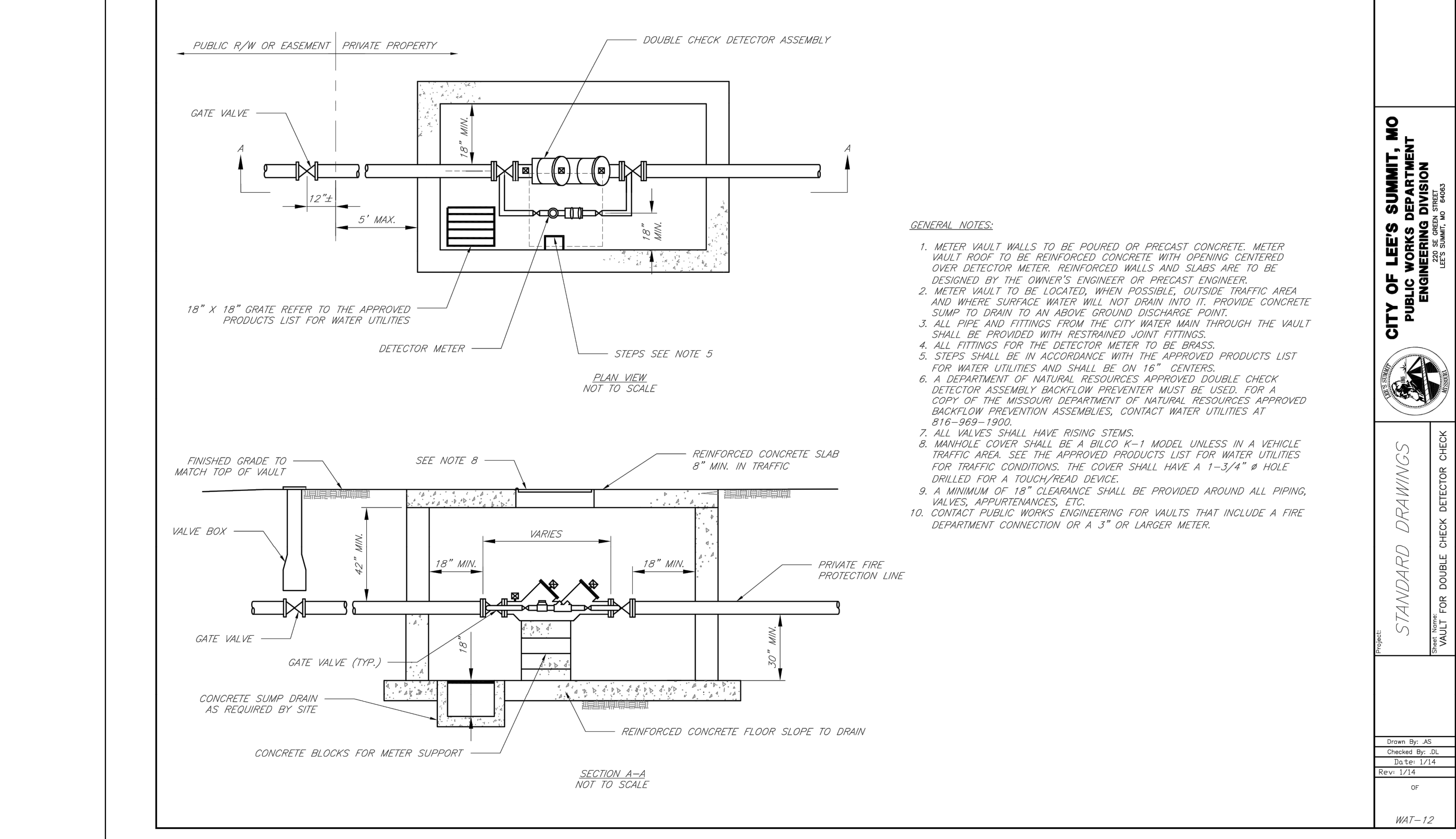
NOTES:

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

VERTICAL THRUST BLOCKS

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



REQUIRED CONCRETE BEARING AREA (SQUARE FEET - SF)						
NOM. DIA. (INCHES)	180	90	45	22.5	11.25	
6	TEE, PLUG	BEND	BEND	BEND	BEND	
8	4.7	6.7	4.0	4.0	4.0	
10	8.4	11.8	6.4	4.0	4.0	
12	13.1	18.5	10.0	5.1	4.0	
14	18.6	26.7	14.4	7.4	4.0	
16	25.7	36.3	19.6	10.0	5.0	
18	33.5	47.4	25.6	13.1	6.6	
20	42.4	REST. JT.	32.5	16.5	8.3	
24	REST. JT.	REST. JT.	40.1	20.4	10.3	
			REST. JT.	29.4	14.8	

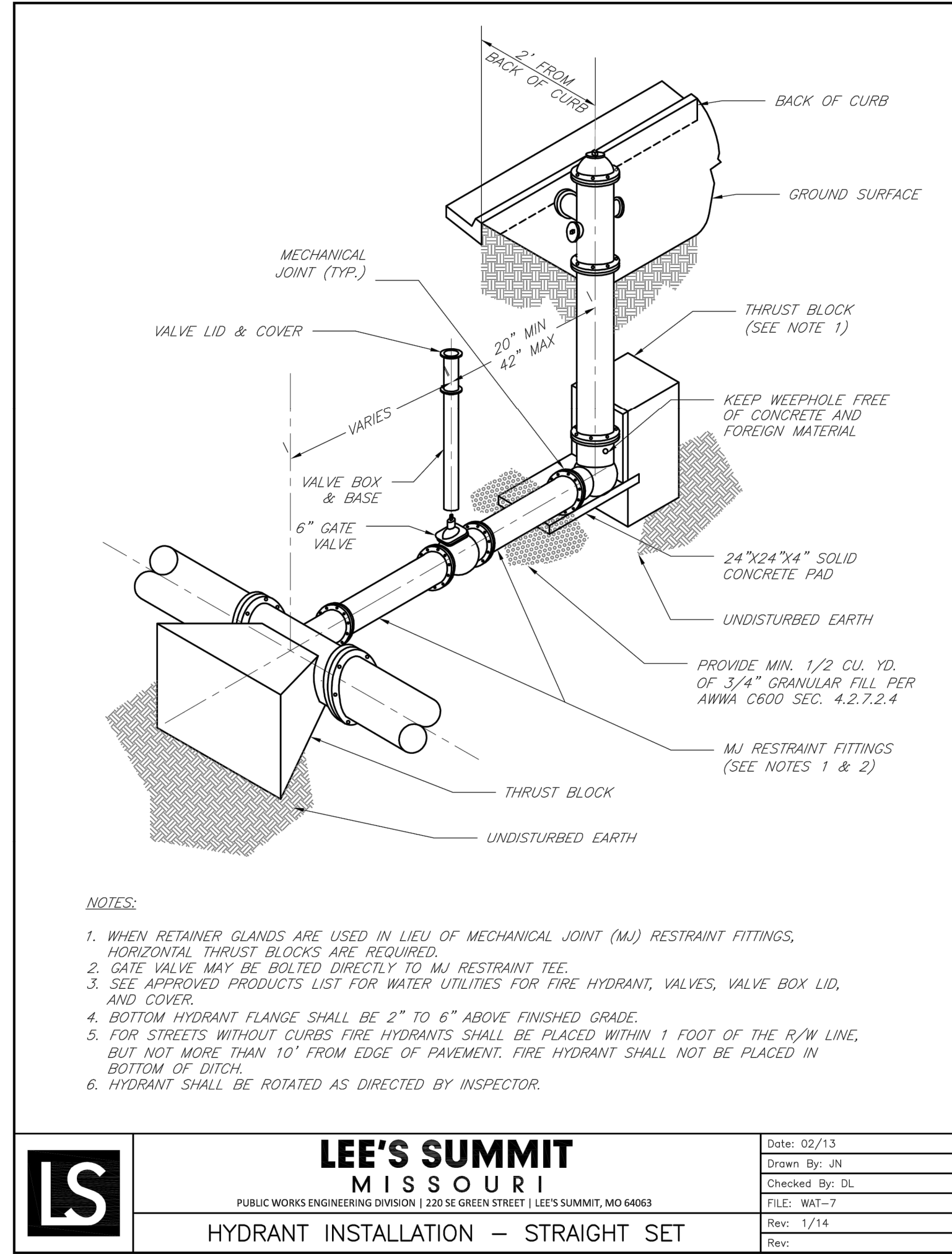
NOTES:

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

HORIZONTAL THRUST BLOCKS

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



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451 SW LONGVIEW BLVD
LEE'S SUMMIT, MO

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checked by: JES
approved by: JES
QA/QC by: JES
project no.: 021-02987
drawing no.: C_DTL02_02102987
date: 08.25.2021

SHEET
C154