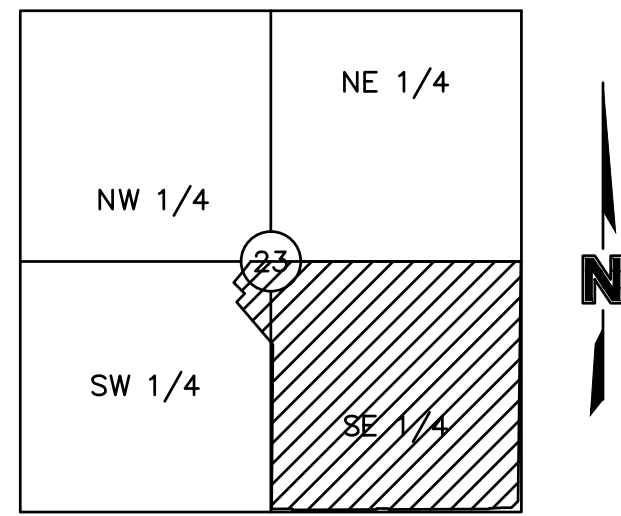


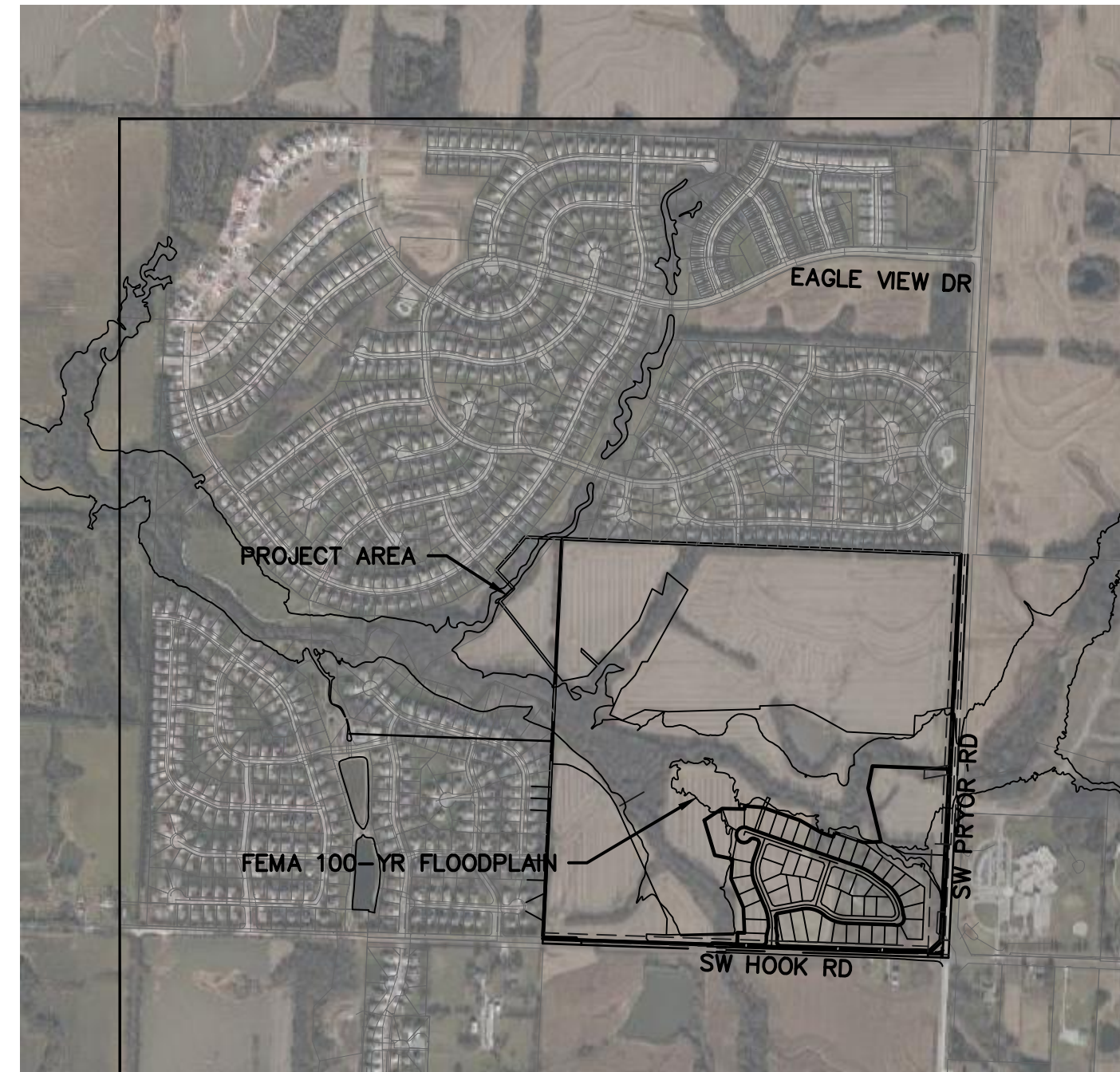
# THE RETREAT AT HOOK FARMS WATER MAIN EXTENSION PLANS

SECTION 23, TOWNSHIP 47N, RANGE 23W  
IN LEE'S SUMMIT, JACKSON COUNTY, MO



LOCATION MAP  
Sec. 23, Twp. 47 N., Rge. 23 W.  
(N.T.S.)

PROJECT TEAM & UTILITY CONTACT LIST	
<b>OWNER / DEVELOPER</b> HUNT MIDWEST REAL ESTATE DEVELOPMENT, INC. 8300 NE UNDERGROUND DRIVE KANSAS CITY, MO 64161 CONTACT: AARON SCHMIDT PHONE: 816.459.4285 FAX: 000.000.0000	<b>UTILITY SERVICE NUMBERS</b> NAME: DEVELOPMENT SERVICES PHONE: 816-969-1200  NAME: LEE'S SUMMIT WATER & SERVICES DEPARTMENT PHONE: 816-969-1940  NAME: SPIRE (MGE) PHONE: 314-342-0500  NAME: AT&T PHONE: 800-286-8313  NAME: EVERGY PHONE: 816-471-5275  NAME: SPECTRUM (TWC) PHONE: 877-772-2253  NAME: GOOGLE FIBER PHONE: 877-454-6959
<b>ENGINEER</b> OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: NAME, P.E. PHONE: 816.299.4341	
<b>SURVEYOR</b> OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JASON ROUDEBUSH, PLS PHONE: 816.361.1177	



Sheet List Table		
Page Number	Sheet Number	Sheet Title
35	C300	COVER SHEET
36	C301	GENERAL LAYOUT
37	C302	WATER MAIN 1 PLAN & PROFILE
38	C303	WATER MAIN 2 PLAN & PROFILE
39	C304	WATER MAIN 3 PLAN & PROFILE
40	C305	WATER MAIN DETAILS

ESTIMATE OF QUANTITIES				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
1	8" C900 PLASTIC PIPE	L.F.	3090	
4	8" X 8" TEE	EA.	3	
5	16" X 8" TEE	EA.	2	
6	STRAIGHT SET HYDRANT ASSEMBLY	EA.	1	
7	FIRE HYDRANT ASSEMBLY (INCLUDING TEE)	EA.	5	
8	8" GATE VALVES	EA.	11	
9	16" BUTTERFLY VALVES	EA.	4	
10	STRADDLE BLOCK	EA.	1	
11	8" HORIZONTAL BENDS	EA.	15	
12	8" VERTICAL BENDS	EA.	1	

SUMMARY OF QUANTITIES AS INDICATED ABOVE AND ANY QUANTITIES AS SHOWN WITHIN THE PLANS HAVE BEEN PROVIDED FOR PERMITTING PURPOSES ONLY AND ARE NOT INTENDED FOR USE IN PREPARATION OF CONTRACT DOCUMENTS. QUANTITIES INTENDED FOR, BUT NOT LIMITED TO, THE PREPARATION OF PROPOSALS AND BID DOCUMENTS SHALL BE INDEPENDENTLY EVALUATED BY THE ESTIMATING PARTY BASED UPON THE CONTENTS OF THESE PLANS.

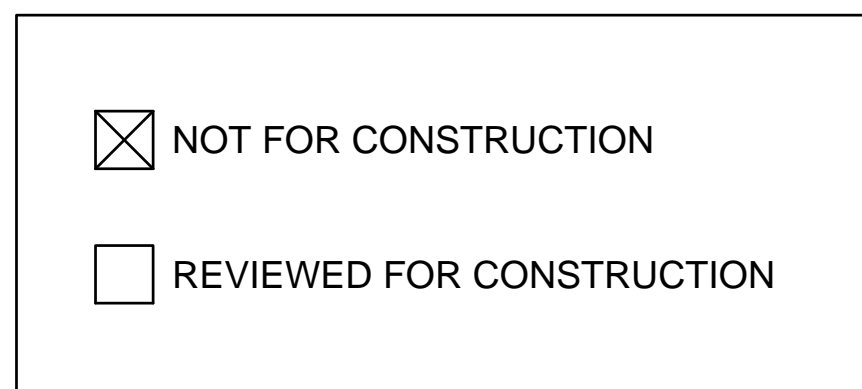
## PROPERTY DESCRIPTION:

(AS PROVIDED BY CHICAGO TITLE INSURANCE COMPANY, NOVEMBER 1, 2018)

ALL THAT PART OF THE SOUTHEAST QUARTER OF SECTION 23, TOWNSHIP 47, RANGE 32, IN THE CITY OF LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, BEING BOUNDED AND DESCRIBED AS FOLLOWS: BEGINNING AT THE NORTHWEST CORNER OF SAID SOUTHEAST QUARTER; THENCE SOUTH 89 DEGREES 45 MINUTES 34 SECONDS EAST, ALONG THE NORTH LINE OF SAID SOUTHEAST QUARTER, 2613.19 FEET TO ITS INTERSECTION WITH THE WEST RIGHT-OF-WAY LINE OF PRYOR ROAD AS NOW ESTABLISHED; THENCE SOUTH 02 DEGREES 45 MINUTES 31 SECONDS WEST, ALONG SAID WEST RIGHT-OF-WAY LINE, 2520.50 FEET; THENCE SOUTH 47 DEGREES 23 MINUTES 30 SECONDS WEST, ALONG SAID WEST RIGHT-OF-WAY LINE, 135.21 FEET TO ITS INTERSECTION WITH THE NORTH RIGHT-OF-WAY LINE OF HOOK ROAD, AS NOW ESTABLISHED; THENCE NORTH 87 DEGREES 58 MINUTES 31 SECONDS WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE, 2264.70 FEET; THENCE NORTH 02 DEGREES 43 MINUTES 25 SECONDS EAST, ALONG SAID NORTH RIGHT-OF-WAY LINE, 10.00 FEET; THENCE NORTH 87 DEGREES 58 MINUTES 31 SECONDS WEST, ALONG SAID NORTH RIGHT-OF-WAY LINE, 252.00 FEET TO A POINT ON THE WEST LINE OF SAID SOUTHEAST QUARTER; THENCE NORTH 02 DEGREES 43 MINUTES 25 SECONDS EAST ALONG SAID WEST LINE, 2615.22 FEET TO THE POINT OF BEGINNING.

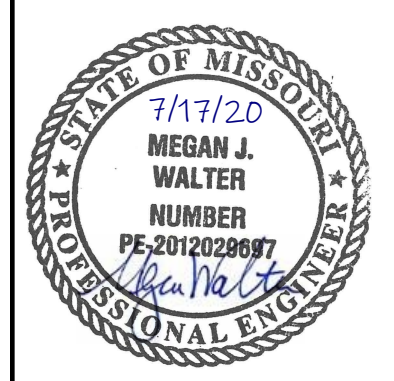
ALSO,

ALL THAT PART OF THE FOLLOWING DESCRIBED PROPERTY IN THE NORTHEAST 1/4 OF THE SOUTHWEST 1/4 OF SECTION 23, TOWNSHIP 47, RANGE 32, LYING NORTH OF EAGLE CREEK GREENWAY, A SUBDIVISION, ALL IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI, TO-WIT: THE SOUTH ONE HALF OF THE NORTHEAST QUARTER AND THE SOUTH ONE-HALF OF THE NORTHWEST QUARTER AND ALL THAT PART OF THE SOUTHWEST QUARTER OF SECTION 23, TOWNSHIP 47, RANGE 32, IN LEE'S SUMMIT, JACKSON COUNTY MISSOURI, BEING DESCRIBED AS FOLLOWS: BEGINNING AT THE SOUTHWEST CORNER OF SAID NORTHWEST QUARTER, THENCE NORTH 2 DEGREES 36 MINUTES 10 SECONDS EAST, ALONG THE WEST LINE OF SAID NORTHWEST QUARTER 1330.50 FEET TO THE NORTHWEST CORNER OF THE SOUTH ONE-HALF OF SAID NORTHWEST QUARTER, THENCE SOUTH 87 DEGREES 40 MINUTES 35 SECONDS EAST, ALONG THE NORTH LINE OF SAID SOUTH ONE-HALF 2657.85 FEET TO THE NORTHEAST CORNER OF SAID SOUTH ONE-HALF, THENCE SOUTH 87 DEGREES 41 MINUTES 31 SECONDS EAST ALONG THE NORTH LINE OF THE SOUTH ONE-HALF OF SAID NORTHEAST QUARTER 2654.44 FEET TO THE NORTHEAST CORNER OF SAID SOUTH ONE-HALF; THENCE SOUTH 2 DEGREES 46 MINUTES 08 SECONDS WEST, ALONG THE EAST LINE OF SAID NORTHEAST QUARTER 1323.83 FEET TO THE SOUTHEAST CORNER OF SAID NORTHEAST QUARTER; THENCE NORTH 87 DEGREES 45 MINUTES 23 SECONDS WEST, ALONG THE SOUTH LINE OF SAID NORTHEAST QUARTER, 2653.42 FEET TO THE SOUTHWEST CORNER OF SAID NORTHEAST QUARTER; THENCE SOUTH 2 DEGREES 43 MINUTES 24 SECONDS WEST, (DEED-SOUTH 2 DEGREES 41 MINUTES 49 SECONDS WEST), ALONG THE EAST LINE OF SAID SOUTHWEST QUARTER, 1138.42 FEET TO THE CENTERLINE OF MOUSE CREEK, AS NOW ESTABLISHED; THENCE NORTH 25 DEGREES 51 MINUTES 18 WEST (DEED-NORTH 25 DEGREES 52 MINUTES 53 WEST), ALONG SAID CENTERLINE, 73.83 FEET; THENCE NORTH 67 DEGREES 53 MINUTES 09 SECONDS WEST (DEED-NORTH 67 DEGREES 54 MINUTES 44 SECONDS WEST), ALONG SAID CENTERLINE, 379.20 FEET; THENCE SOUTH 39 DEGREES 00 MINUTES 27 SECONDS WEST (DEED-SOUTH 38 DEGREES 58 MINUTES 52 SECONDS WEST), ALONG SAID CENTERLINE, 187.72 FEET; THENCE NORTH 48 DEGREES 37 MINUTES 07 SECONDS WEST (DEED-NORTH 48 DEGREES 38 MINUTES 42 SECONDS WEST), ALONG SAID CENTERLINE, 131.31 FEET; THENCE NORTH 73 DEGREES 28 MINUTES 23 SECONDS WEST (DEED-NORTH 73 DEGREES 29 MINUTES 58 SECONDS WEST), ALONG SAID CENTERLINE, 279.90 FEET THENCE NORTH 26 DEGREES 34 MINUTES 47 SECONDS WEST (DEED-NORTH 26 DEGREES 36 MINUTES 22 SECONDS WEST), ALONG SAID CENTERLINE, 312.25 FEET; THENCE NORTH 62 DEGREES 29 MINUTES 46 SECONDS WEST (DEED-NORTH 62 DEGREES 31 MINUTES 21 SECONDS WEST), ALONG SAID CENTERLINE, 134.47 FEET; THENCE SOUTH 52 DEGREES 10 MINUTES 15 SECONDS WEST (DEED-SOUTH 52 DEGREES 08 MINUTES 40 SECONDS WEST), ALONG SAID CENTERLINE, 85.16 FEET; THENCE SOUTH 19 DEGREES 37 MINUTES 09 SECONDS WEST (DEED-SOUTH 19 DEGREES 35 MINUTES 34 SECONDS WEST), ALONG SAID CENTERLINE, 142.83 FEET; THENCE SOUTH 79 DEGREES 21 MINUTES 39 SECONDS WEST (DEED-SOUTH 79 DEGREES 20 MINUTES 04 SECONDS WEST), ALONG SAID CENTERLINE, 68.92 FEET; THENCE NORTH 73 DEGREES 27 MINUTES 48 SECONDS WEST (DEED-NORTH 73 DEGREES 29 MINUTES 23 SECONDS WEST), ALONG SAID CENTERLINE, 114.02 FEET; THENCE NORTH 25 DEGREES 46 MINUTES 28 SECONDS WEST (DEED-NORTH 25 DEGREES 48 MINUTES 03 SECONDS WEST), ALONG SAID CENTERLINE, 73.12 FEET; THENCE NORTH 87 DEGREES 30 MINUTES 19 SECONDS WEST (DEED-NORTH 87 DEGREES 31 MINUTES 54 SECONDS WEST), ALONG SAID CENTERLINE, 473.33 FEET; THENCE NORTH 49 DEGREES 45 MINUTES 48 SECONDS WEST (DEED-NORTH 49 DEGREES 47 MINUTES 23 SECONDS WEST), ALONG SAID CENTERLINE, 343.23 FEET; THENCE NORTH 56 DEGREES 22 MINUTES 25 SECONDS WEST (DEED-NORTH 56 DEGREES 24 MINUTES 00 SECONDS WEST), ALONG SAID CENTERLINE, 277.94 FEET; THENCE NORTH 65 DEGREES 42 MINUTES 49 SECONDS WEST (DEED-NORTH 65 DEGREES 44 MINUTES 24 SECONDS WEST), ALONG SAID CENTERLINE, 182.37 FEET; THENCE NORTH 22 DEGREES 55 MINUTES 55 SECONDS WEST (DEED-NORTH 22 DEGREES 57 MINUTES 30 SECONDS WEST), ALONG SAID CENTERLINE, 65.99 FEET TO ITS INTERSECTION WITH THE WEST LINE OF SAID SOUTHWEST QUARTER; THENCE NORTH 2 DEGREES 36 MINUTES 17 SECONDS EAST (DEED-NORTH 2 DEGREES 34 MINUTES 42 SECONDS EAST), ALONG SAID WEST LINE, 239.42 FEET TO THE POINT OF BEGINNING.  
(SHOWN FOR CONVENIENCE IN REPORTING.)



RELEASE FOR  
CONSTRUCTION  
AS NOTED ON PLANS REVIEW  
DEVELOPMENT SERVICES  
LEE'S SUMMIT, MISSOURI  
09/15/2020

**olsson**  
1301 Burlington Street  
North Kansas City, MO 64116  
TEL 816.361.1177  
FAX 816.361.1888  
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REV. NO.	DATE	DESCRIPTION
1	7/17/2020	CITY COMMENTS

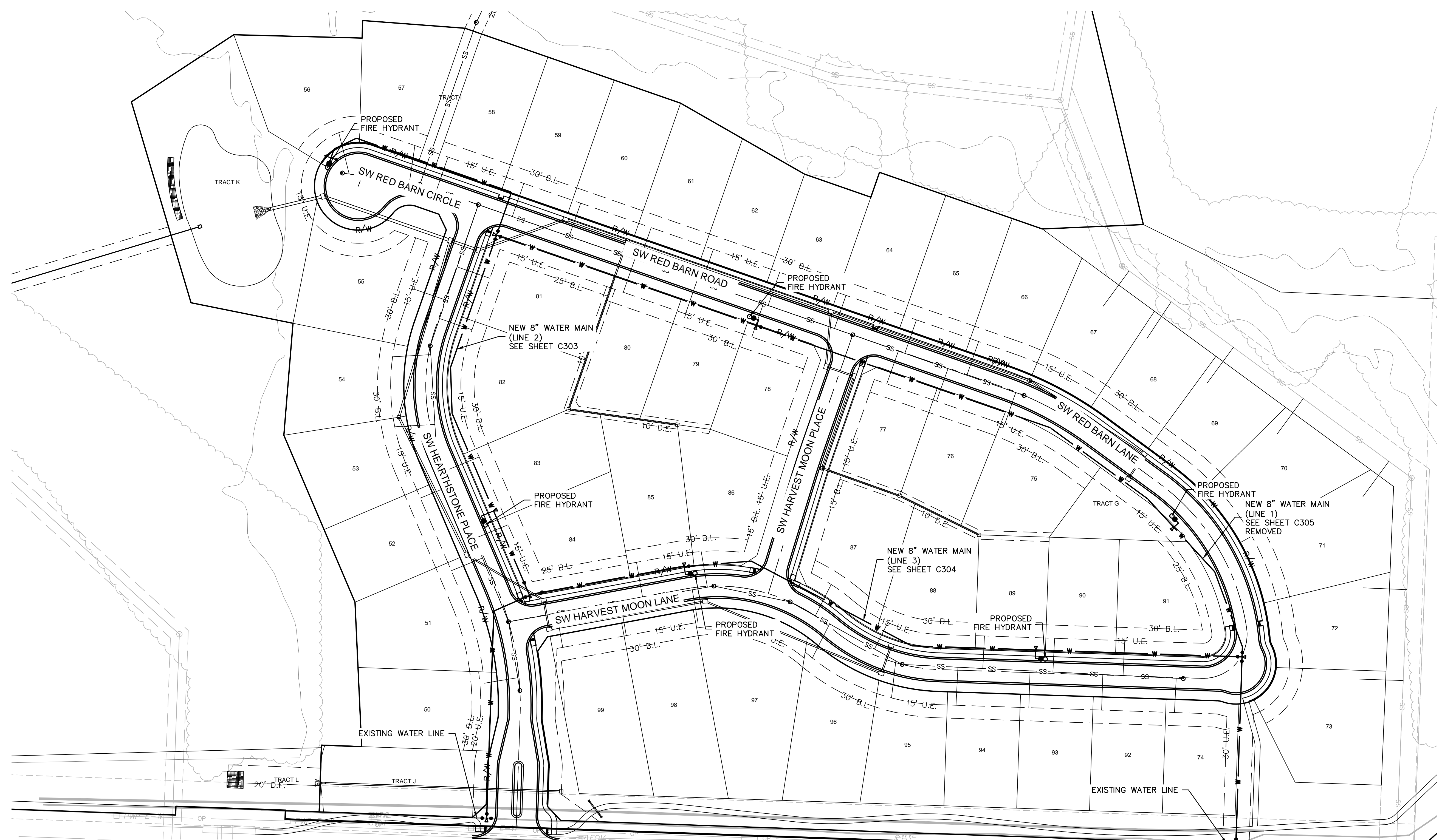
COVER SHEET  
WATER MAIN EXTENSION PLANS  
THE RETREAT AT HOOK FARMS  
CONSTRUCTION DOCUMENTS  
LEE'S SUMMIT, MO  
2020

drawn by: EM  
checked by: EM  
designed by: RB  
QA/QC by: NH  
project no.: 019-4059  
drawing no.: C\_TTL00\_0194059  
date: 4/20/2020

SHEET C300

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**LEGEND**

	<b>NEW</b>	<b>EXISTING</b>
WATER MAINS		
FIRE HYDRANTS ASSEMBLY		
STRAIGHT SET HYDRANT ASSEMBLY		
STRADDLE BLOCK		
VALVES		
OTHERS		
PROPERTY LINE		
STOP SIGN		
END OF ROAD TREATMENT		

SCALE IN FEET

**GENERAL NOTES:**

- ALL WORK SHALL BE DONE IN ACCORDANCE WITH THE MOST RECENT VERSION OF THE LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL FOR WATER MAINS (SECTION 6900). WHERE DISCREPANCIES EXIST BETWEEN THESE PLANS AND THE DESIGN AND CONSTRUCTION MANUAL, THE DESIGN AND CONSTRUCTION MANUAL SHALL PREVAIL.
- AREAS WITH LESS THAN 4' OF DEPTH FROM EXISTING GRADE TO PROPOSED TOP OF PIPE SHALL BE FILLED TO AN ELEVATION OF 4 FEET ABOVE THE PROPOSED TOP OF PIPE, COMPACTED 95% OF STANDARD PROCTOR DENSITY AS DETERMINED BY ASTM D698 PRIOR TO TRENCHING FOR PIPE INSTALLATION.

**RELEASE FOR CONSTRUCTION**  
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 09/15/2020

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	7/17/2020	CITY COMMENTS	

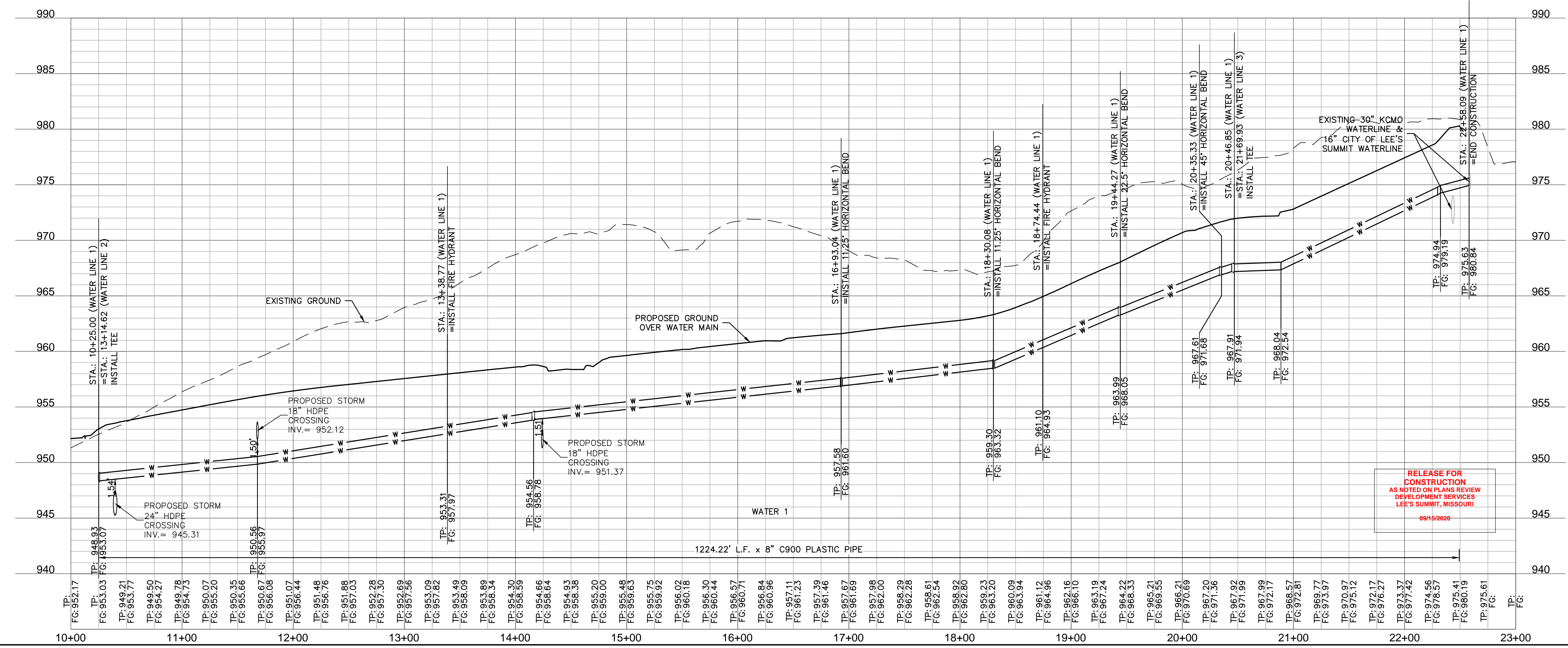
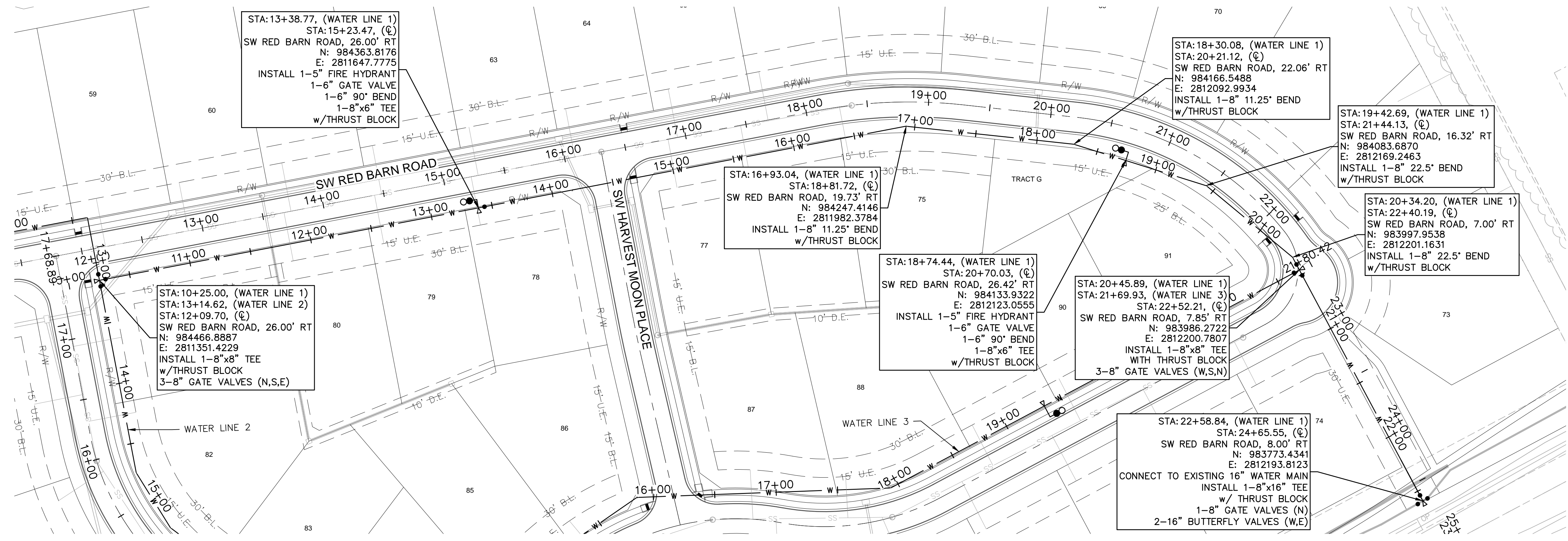
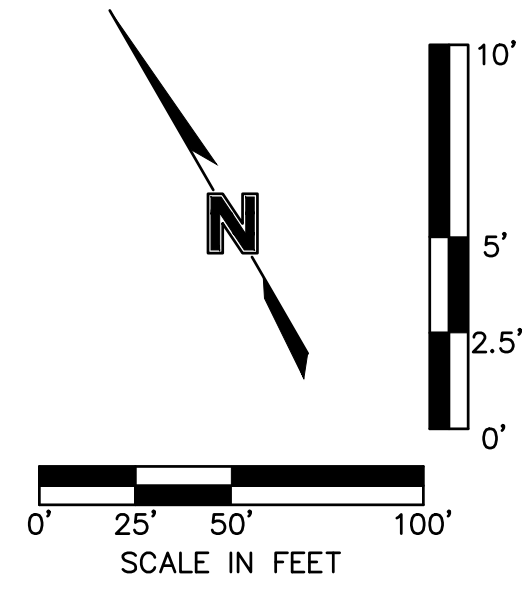
**GENERAL LAYOUT**  
**WATER MAIN EXTENSION PLANS**  
**THE RETREAT AT HOOK FARMS**  
**CONSTRUCTION DOCUMENTS**

2020  
 REVISIONS  
 LEE'S SUMMIT, MO

drawn by: _____	EM
checked by: _____	EM
designed by: _____	RB
QA/QC by: _____	NH
project no.: 019-4059	
drawing no.: C-WTR01_0194059	
date: 4/20/2020	

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- NOTES:
- CONTRACTOR TO VERIFY EXISTING CONDITIONS AND COMMUNICATE WITH ENGINEER IF DIFFERENT THAN PLANS.
  - CONTRACTOR SHALL FILL AND COMPACT TO 95% STANDARD DENSITY TO A POINT 4' MINIMUM ABOVE THE TOP OF PIPE PRIOR TO EXCAVATION FOR THE PIPE.
  - CONTRACTOR SHALL NOT INSTALL GATE VALVES WITHIN ADA RAMPS.
  - MAXIMUM DEPTH OF THE WATER MAIN SHALL NOT EXCEED 7' FROM FINISH GRADE.



RELEASE FOR CONSTRUCTION  
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 FAX 816.361.1888  
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STATE OF MISSOURI  
 7/17/20  
 MEGAN J. WALTER  
 NUMBER  
 PE-2012028897  
 PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION	CITY COMMENTS
1	7/17/2020		

WATER MAIN 1 PLAN & PROFILE  
 WATER MAIN EXTENSION PLANS  
 THE RETREAT AT HOOK FARMS  
 CONSTRUCTION DOCUMENTS

2020

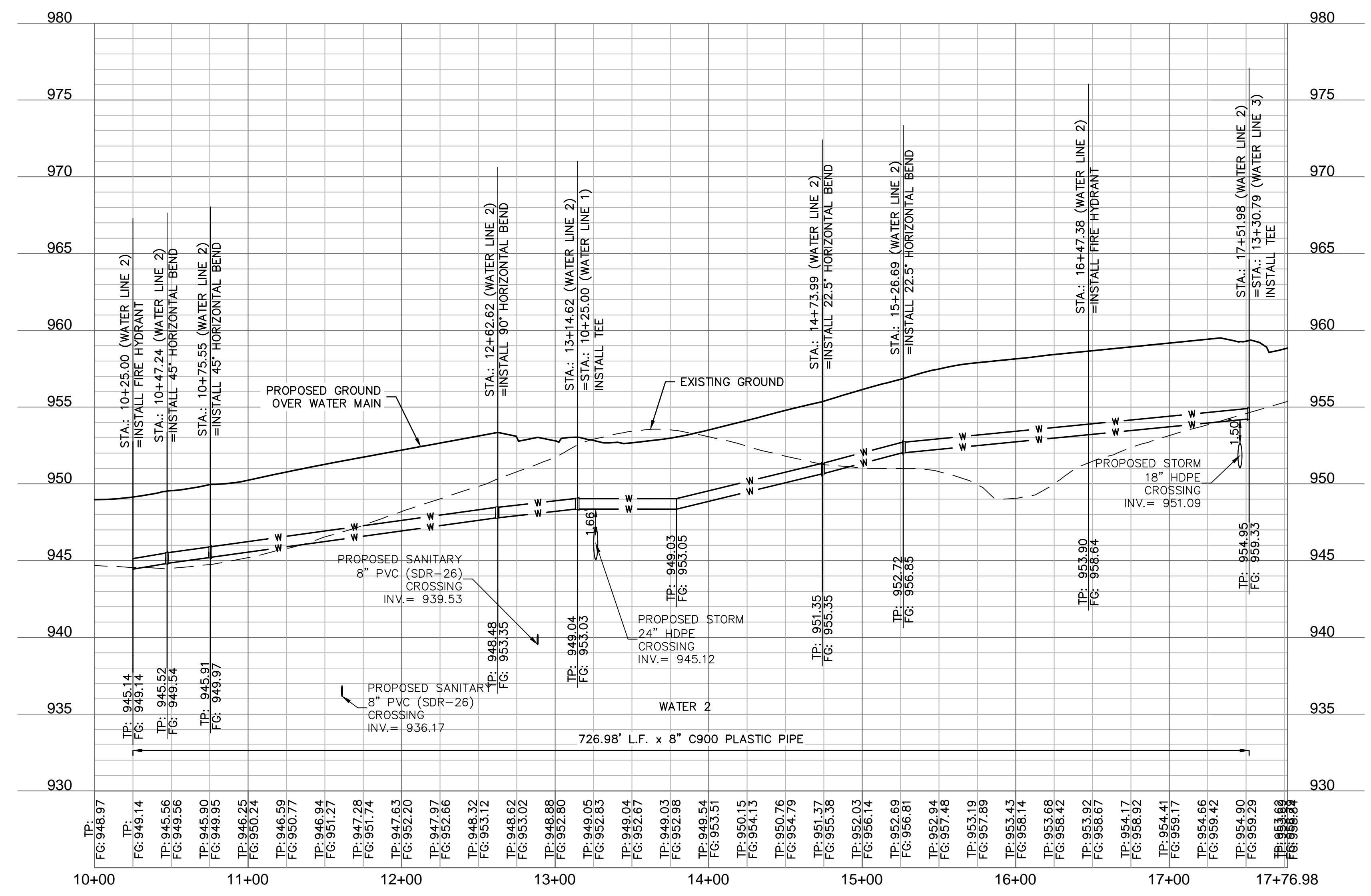
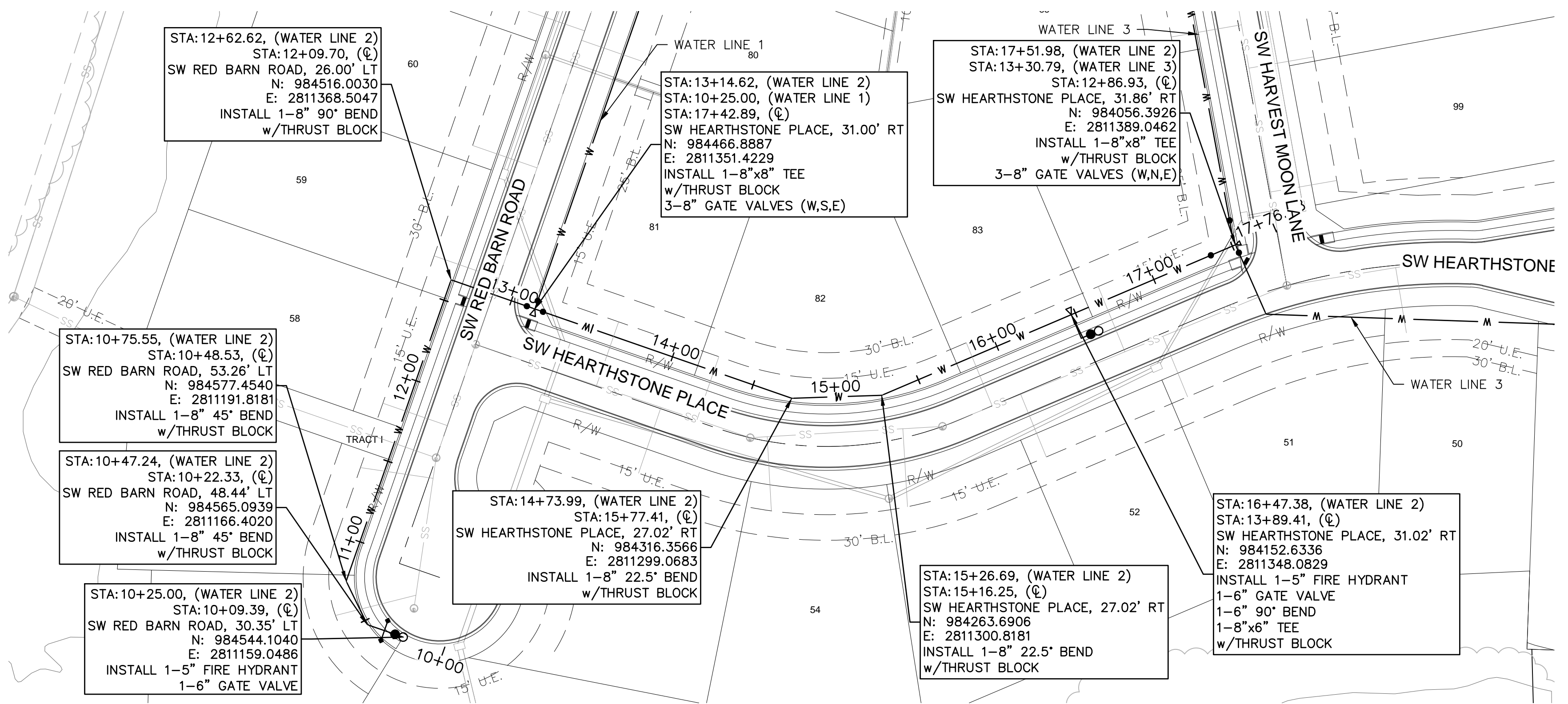
REVISIONS

LEE'S SUMMIT, MO

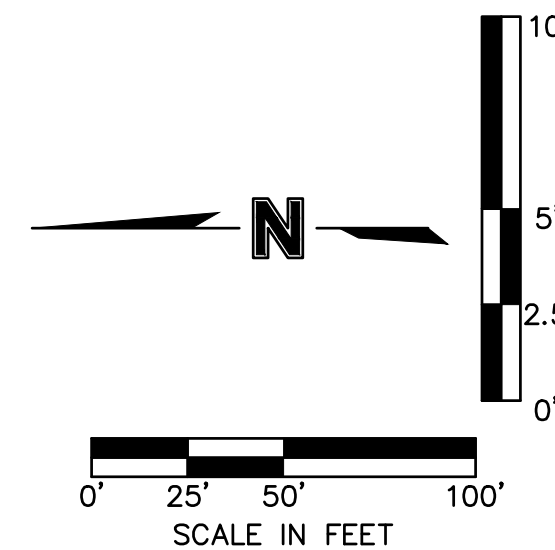
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checked by:	EM
designed by:	RB
QA/QC by:	NH
project no.:	019-4059
drawing no.:	C_WTR02_0194059
date:	4/20/2020

**SHEET C302**

- NOTES:
1. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND COMMUNICATE WITH ENGINEER IF DIFFERENT THAN PLANS.
  2. CONTRACTOR SHALL FILL AND COMPACT TO 95% STANDARD DENSITY TO A POINT 4" MINIMUM ABOVE THE TOP OF PIPE PRIOR TO EXCAVATION FOR THE PIPE.
  3. CONTRACTOR SHALL NOT INSTALL GATE VALVES WITHIN ADA RAMPS.
  4. MAXIMUM DEPTH OF THE WATER MAIN SHALL NOT EXCEED 7' FROM FINISH GRADE.



RELEASE FOR CONSTRUCTION  
 AS NOTED ON PLANS REVIEW  
 DEVELOPMENT SERVICES  
 LEE'S SUMMIT, MISSOURI  
 09/15/2020



drawn by: EM  
 checked by: EM  
 designed by: RB  
 QA/QC by: NH  
 project no.: 019-4059  
 drawing no.: C\_WTR02\_0194059  
 date: 4/20/2020

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REV. NO.	DATE	REVISIONS DESCRIPTION
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WATER MAIN 2 PLAN & PROFILE  
 WATER MAIN EXTENSION PLANS  
 THE RETREAT AT HOOK FARMS  
 CONSTRUCTION DOCUMENTS

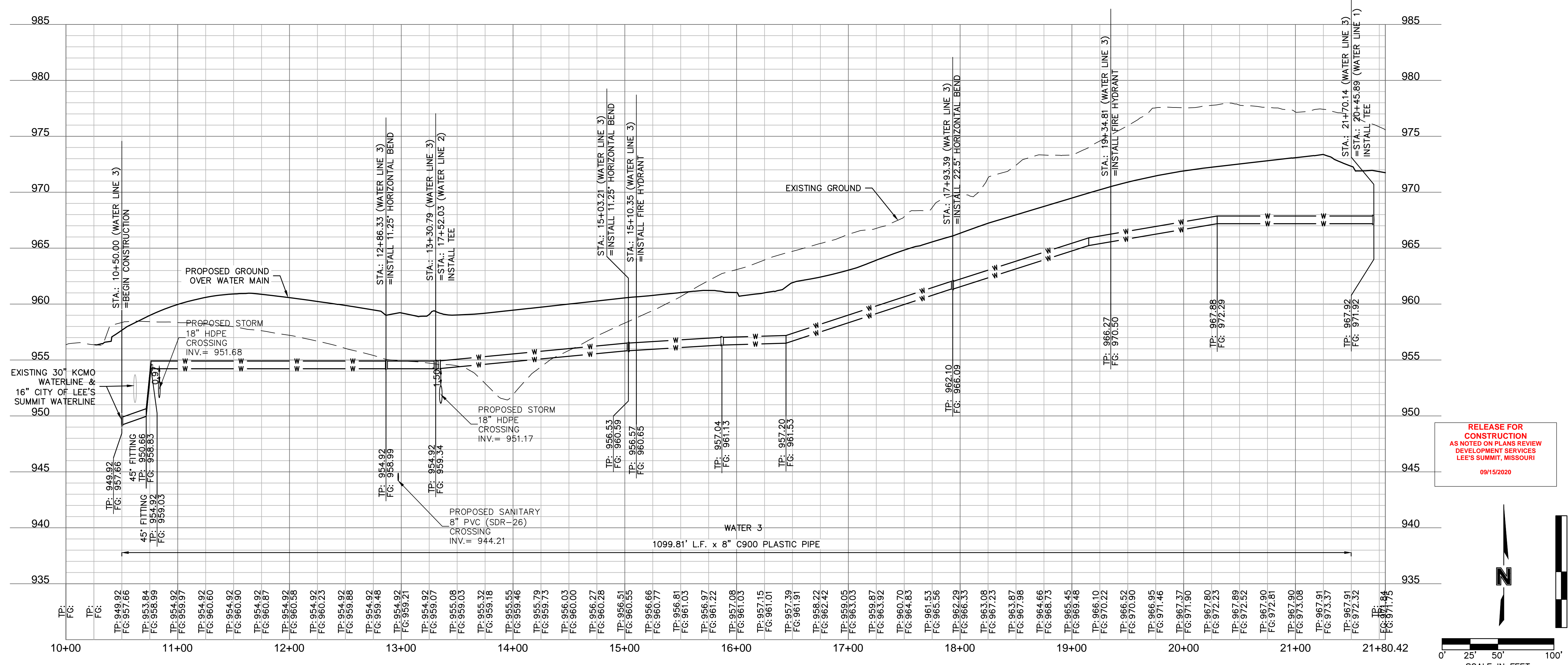
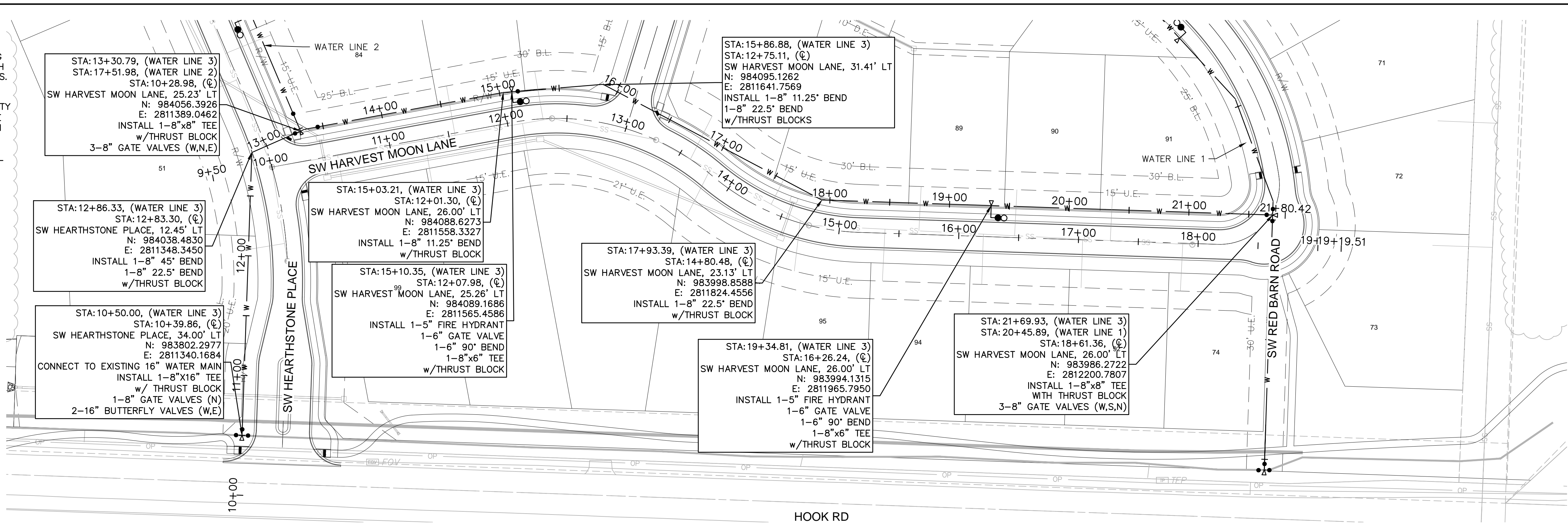
2020  
 REVISIONS

LEE'S SUMMIT, MO

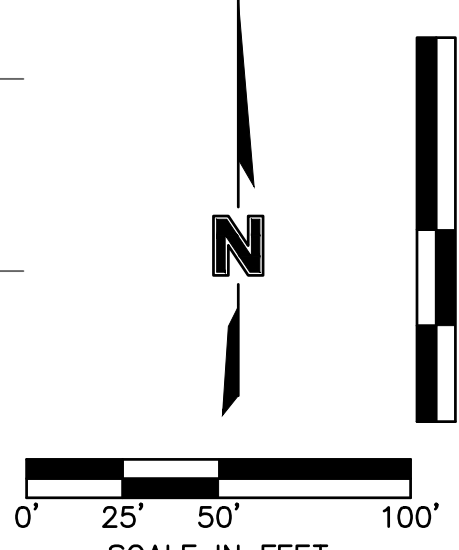
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NOTES:  
 1. CONTRACTOR TO VERIFY EXISTING CONDITIONS AND COMMUNICATE WITH ENGINEER IF DIFFERENT THAN PLANS.  
 2. CONTRACTOR SHALL FILL AND COMPACT TO 95% STANDARD DENSITY TO A POINT 4' MINIMUM ABOVE THE TOP OF PIPE PRIOR TO EXCAVATION FOR THE PIPE.  
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RELEASE FOR CONSTRUCTION  
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REV. NO.	DATE	REVISIONS DESCRIPTION
1	7/17/2020	CITY COMMENTS

WATER MAIN 3 PLAN & PROFILE  
 WATER MAIN EXTENSION PLANS  
 THE RETREAT AT HOOK FARMS  
 CONSTRUCTION DOCUMENTS

2020

drawn by: EM  
 checked by: EM  
 designed by: RB  
 QA/QC by: NH  
 project no.: 019-4059  
 drawing no.: C\_WTR02\_0194059  
 date: 4/20/2020

LEE'S SUMMIT, MO

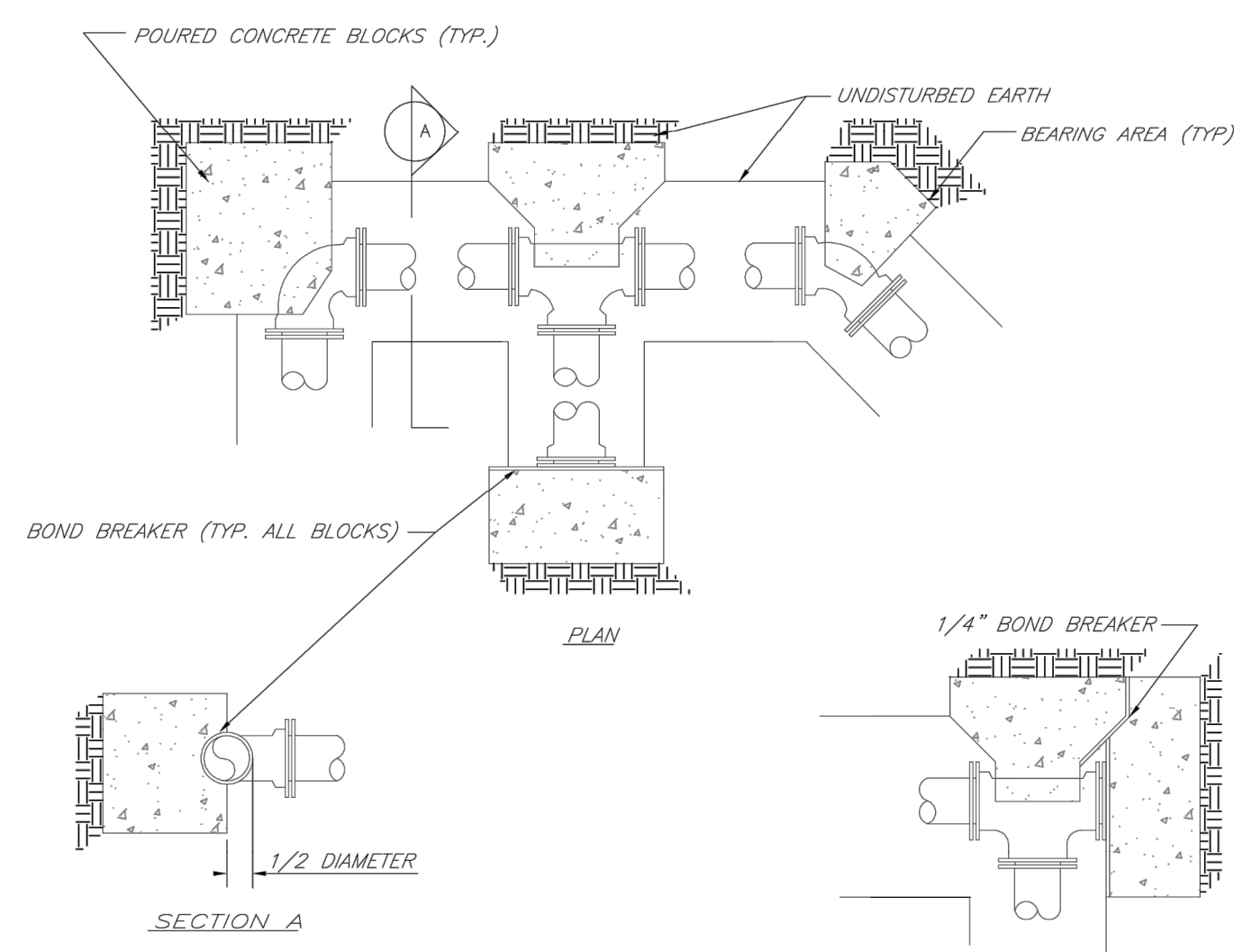
SHEET
C304

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 DATE: Jul 16, 2020 9:56am  
 USER: emorton

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	4.4	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

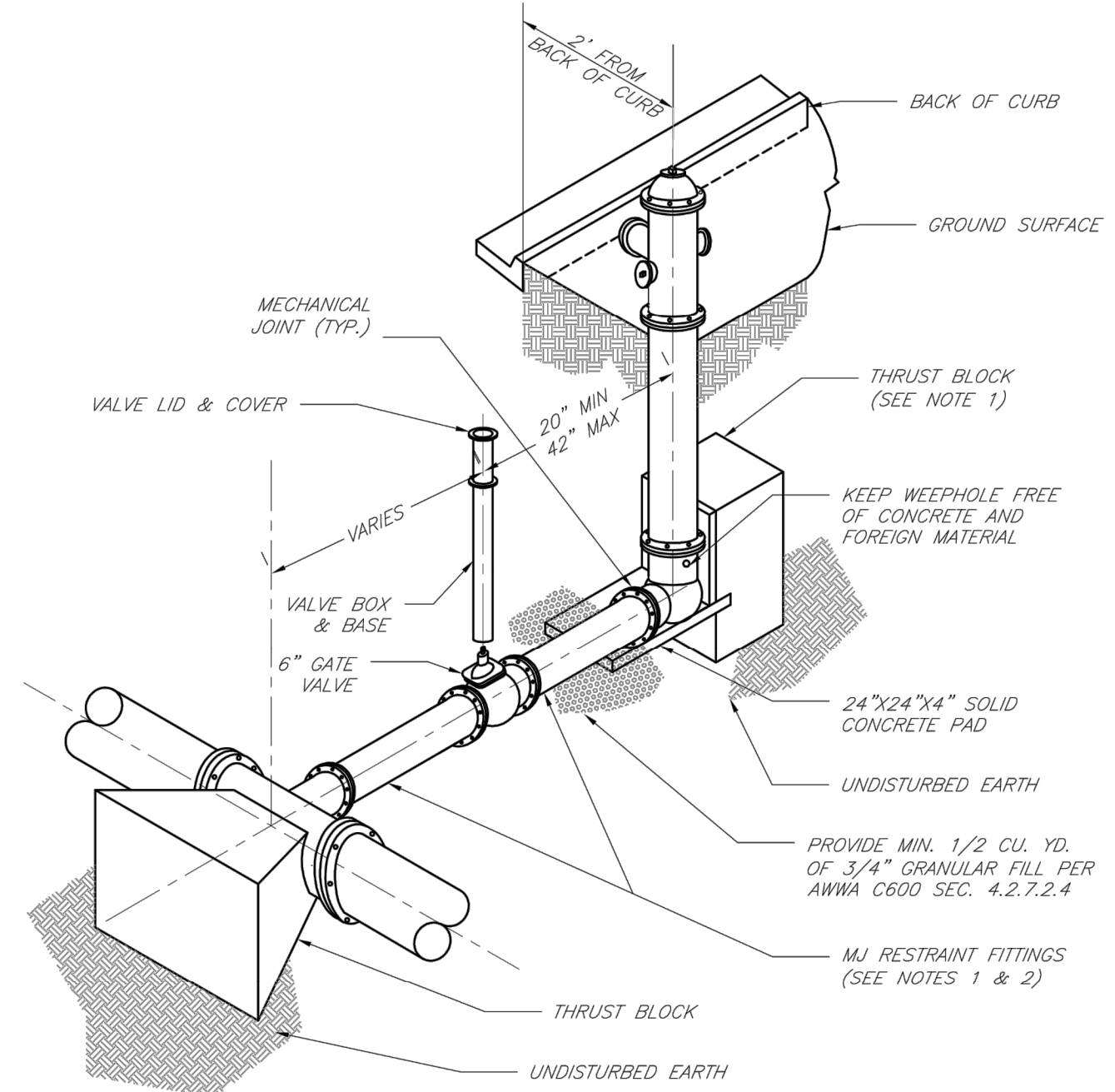
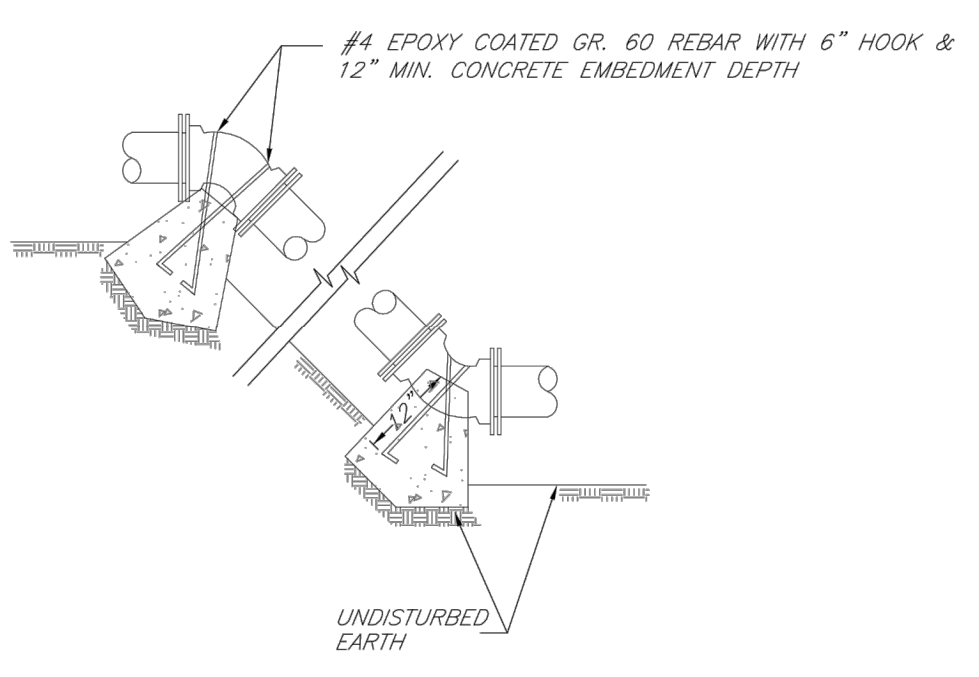
- NOTES:  
 1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.  
 2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.  
 3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.  
 4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH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



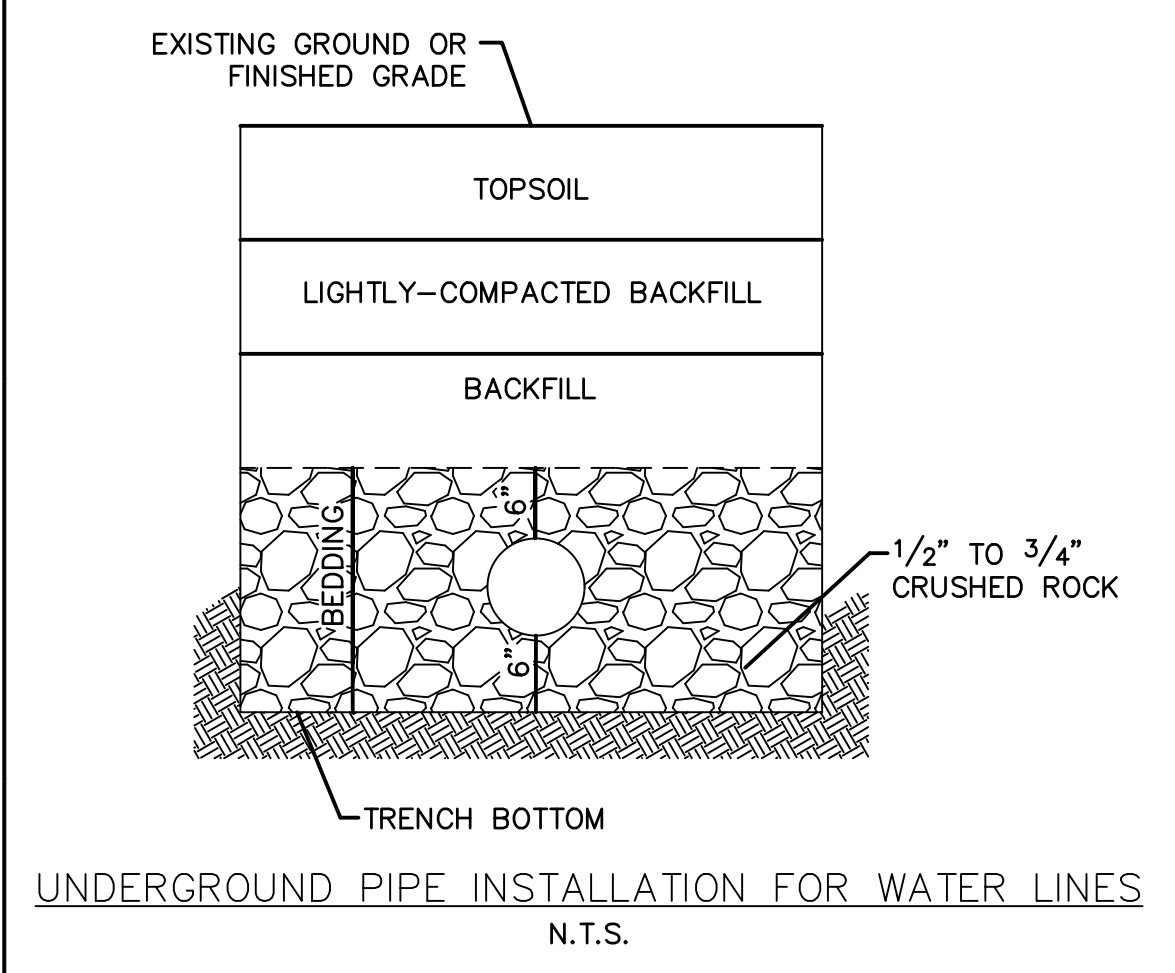
REQUIRED CONCRETE VOLUME (CUBIC FEET - CF)

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	88.1
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.



- 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\"/>

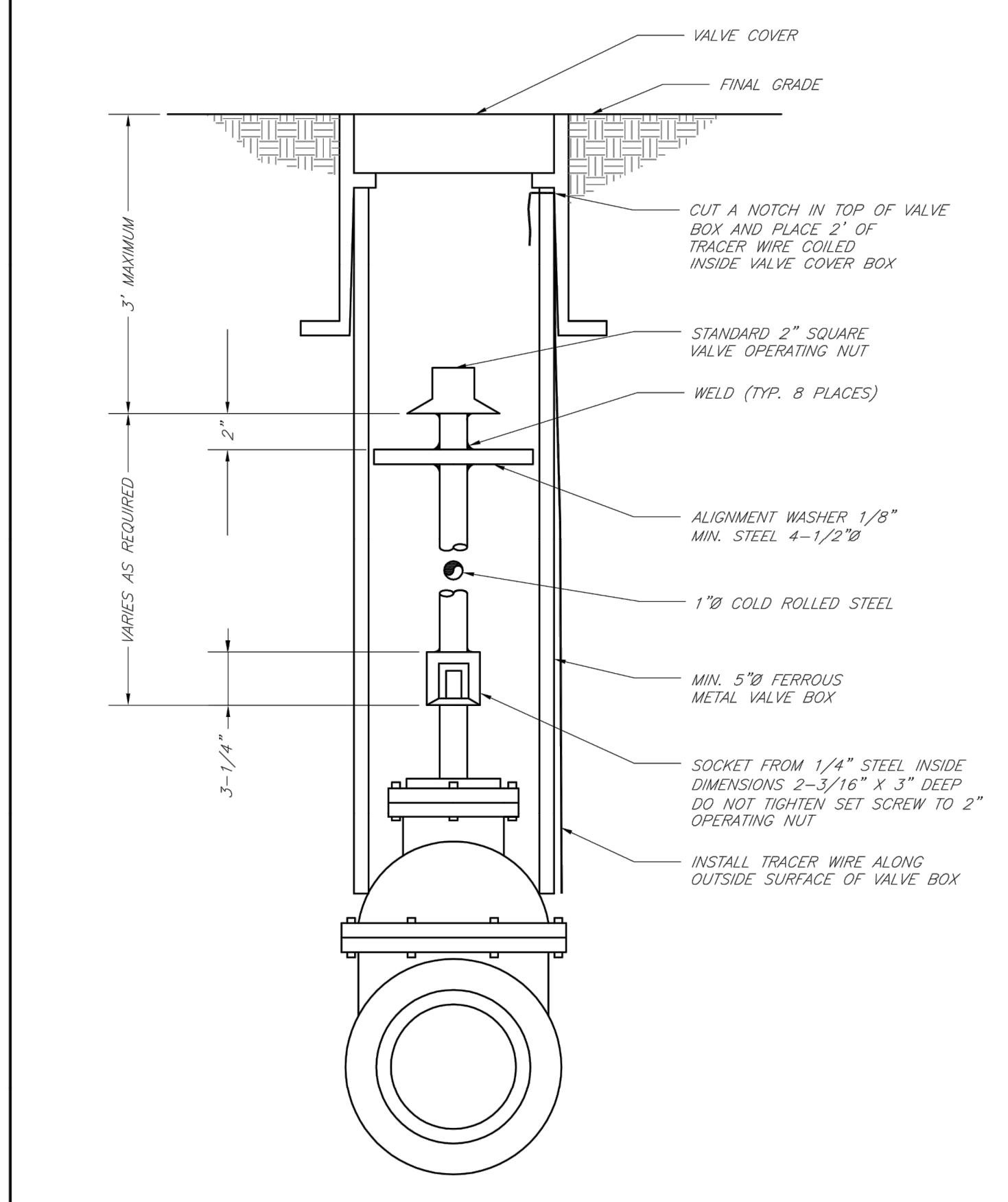


- NOTES:  
 1. A MINIMUM OF 42 INCHES OF COVER SHALL BE OVER THE TOP OF THE PIPE. THIS MINIMUM OF COVER SHALL BE FROM THE TOP OF THE PIPE TO THE FINISHED GRADE. A MAXIMUM COVER OF 7' SHALL BE ALLOWED.  
 2. BEDDING AGGREGATE SHALL BE PLACES FROM A LEVEL 6 INCHES BELOW THE BOTTOM OF THE PIPE TO A LEVEL 6 INCHES ABOVE THE TOP OF THE PIPE.  
 3. TRENCH BACKFILL IN PAVED AREAS WITHIN STREET OR ALLEY RIGHT OF WAYS  
 a. NARROW TRENCH: SUITABLE BACKFILL MATERIAL FOR TRENCHES 24 INCHES OR LESS IN WIDTH AND SHALL BE TYPE A FLOWABLE FILL.  
 b. STANDARD TRENCH: SUITABLE BACKFILL MATERIAL FOR TRENCHES BETWEEN 24 TO 48 INCHES WIDE SHALL BE EITHER TYPE A FLOWABLE FILL OR DENSE, WELL GRADED AGGREGATE BASE MATERIAL. AGGREGATE BASE MATERIAL SHALL MEET THE REQUIREMENTS FOR KDOT AB-3; MODOT TYPES 1 OR 5; OR APWA 2202.2.  
 c. WIDE TRENCH: SUITABLE BACKFILL MATERIAL FOR TRENCHES BETWEEN GREATER THAN 48 INCHES WIDE SHALL BE SUITABLE MATERIAL AS SPECIFIED FOR EARTH EMBANKMENT IN APWA STANDARD SPECIFICATIONS, SECTION 2102.2.C.  
 4. SUITABLE BACKFILL MATERIAL OUTSIDE OF PAVED AREAS WITHIN RIGHT OF WAY, AND ALL AREAS OUTSIDE RIGHT OF WAY, MAY BE SUITABLE MATERIAL AS SPECIFIED FOR EARTH EMBANKMENT IN APWA STANDARD SPECIFICATIONS, SECTION 2102.2.C. SUITABLE BACKFILL MATERIAL MAY ALSO BE OTHER TRENCH BACKFILL MATERIAL (FLOWABLE FILL OR AGGREGATE BASE) DEPENDING ON SITE CONDITIONS, TRENCH WIDTHS OR AT THE DIRECTION OF THE CITY'S ON SITE INSPECTOR.

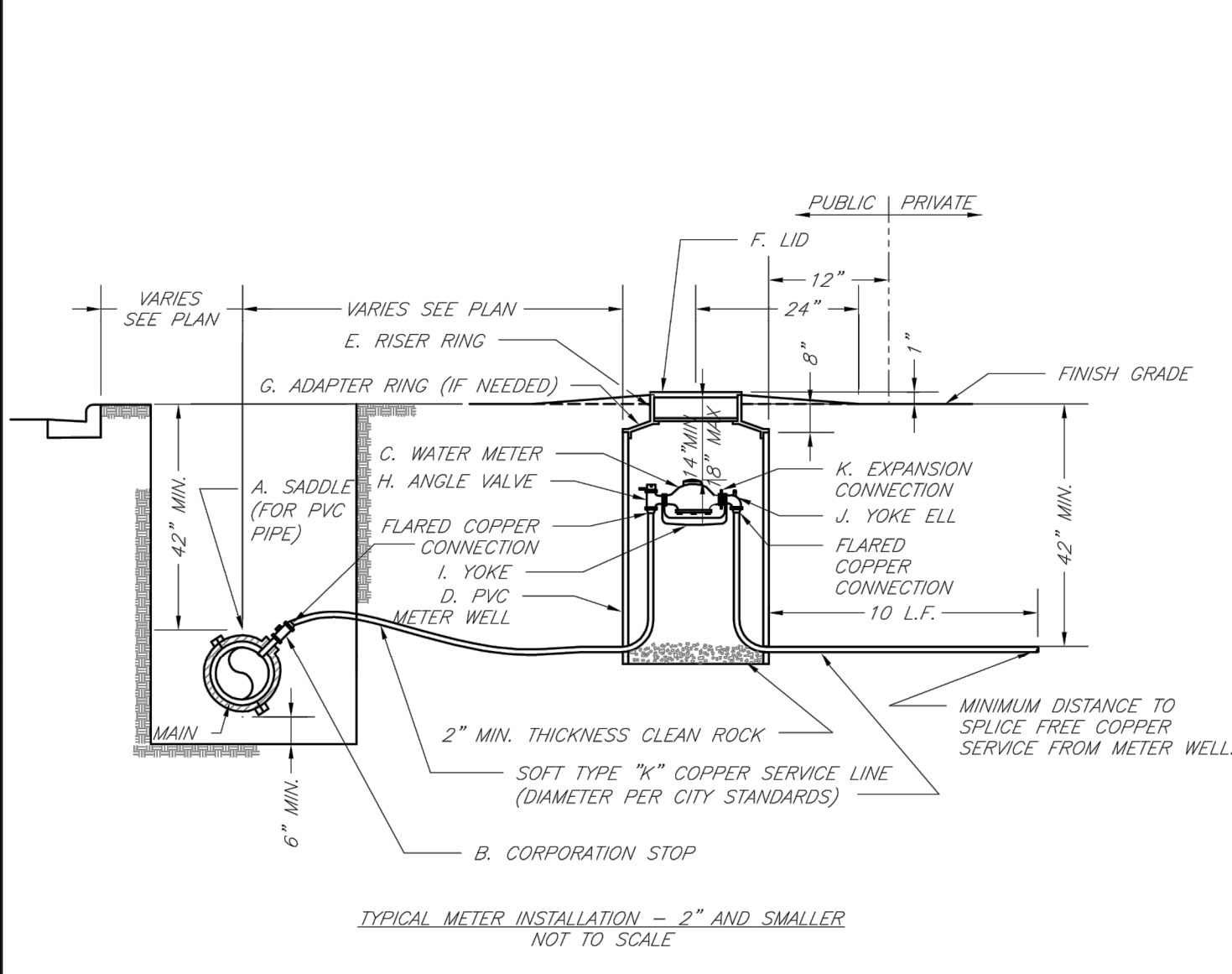
**LEE'S SUMMIT MISSOURI**  
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063  
**HORIZONTAL THRUST BLOCKS**  
 Date: 02/13  
 Drawn By: JN  
 Checked By: DL  
 FILE: WAT-1  
 Rev: 1/14

**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

**LEE'S SUMMIT MISSOURI**  
 PUBLIC WORKS ENGINEERING DIVISION | 220 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

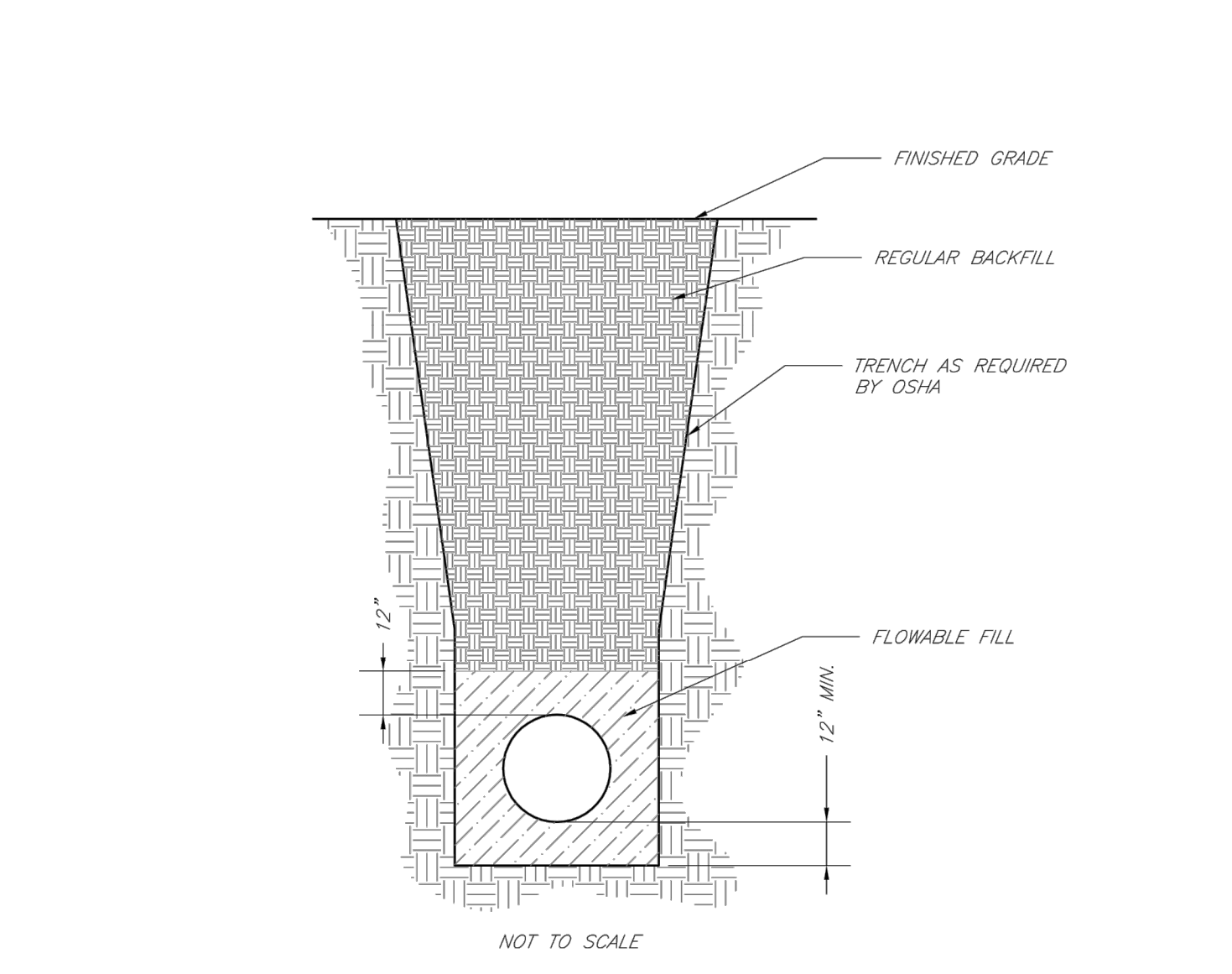


**LEE'S SUMMIT MISSOURI**  
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063  
**VALVE STEM EXTENSION AND VALVE BOX**  
 Date: 02/13  
 Drawn By: JN  
 Checked By: DL  
 FILE: WAT-9  
 Rev: 1/14



- NOTES:  
 1. METER INSTALLATION SHALL NOT BE LOCATED IN AREAS SUBJECT TO VEHICULAR TRAFFIC OR IN CONCRETE PAVEMENT WITHOUT CITY APPROVAL.  
 2. IF METER IS TO BE LOCATED OTHER THAN IN FRONT OF PROPERTY LINE, CITY APPROVAL SHALL BE OBTAINED.  
 3. CITY TO FURNISH ITEMS A-K.  
 4. NO OTHER EQUIPMENT SHALL BE INSTALLED IN THIS PIT.  
 5. 42\"/>

**LEE'S SUMMIT MISSOURI**  
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063  
**SERVICE CONNECTION/METER WELL**  
 Date: 02/13  
 Drawn By: JN  
 Checked By: DL  
 FILE: WAT-11  
 Rev: 1/14



- NOTES:  
 1. FLOWABLE FILL SHALL MEET THE REQUIREMENTS OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL.  
 2. REGULAR BACKFILL ABOVE THE TRENCH CHECK SHALL BE FREE OF DEBRIS, ORGANIC MATTER, AND STONES > 6\"/>

**LEE'S SUMMIT MISSOURI**  
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063  
**TRENCH CHECK**  
 Date: 02/13  
 Drawn By: JN  
 Checked By: DL  
 FILE: WAT-6  
 Rev: 1/14

RELEASE FOR CONSTRUCTION  
 AS NOTED ON PLANS REVIEW  
 DEVELOPMENT SERVICES  
 LEE'S SUMMIT, MISSOURI  
 09/15/2020

**olsson**  
 1301 Burlington Street  
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STATE OF MISSOURI  
 7/17/20  
 MEGAN J. WALTER  
 NUMBER  
 PE-2012028897  
 PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION
1	7/17/2020	CITY COMMENTS

WATER MAIN DETAILS  
 WATER MAIN EXTENSION PLANS  
 THE RETREAT AT HOOK FARMS  
 CONSTRUCTION DOCUMENTS  
 LEE'S SUMMIT, MO

2020

drawn by: EM  
 checked by: EM  
 designed by: RB  
 QA/QC by: NH  
 project no.: 019-4059  
 drawing no.: C\_DTL00\_0194059  
 date: 4/20/2020

SHEET C305