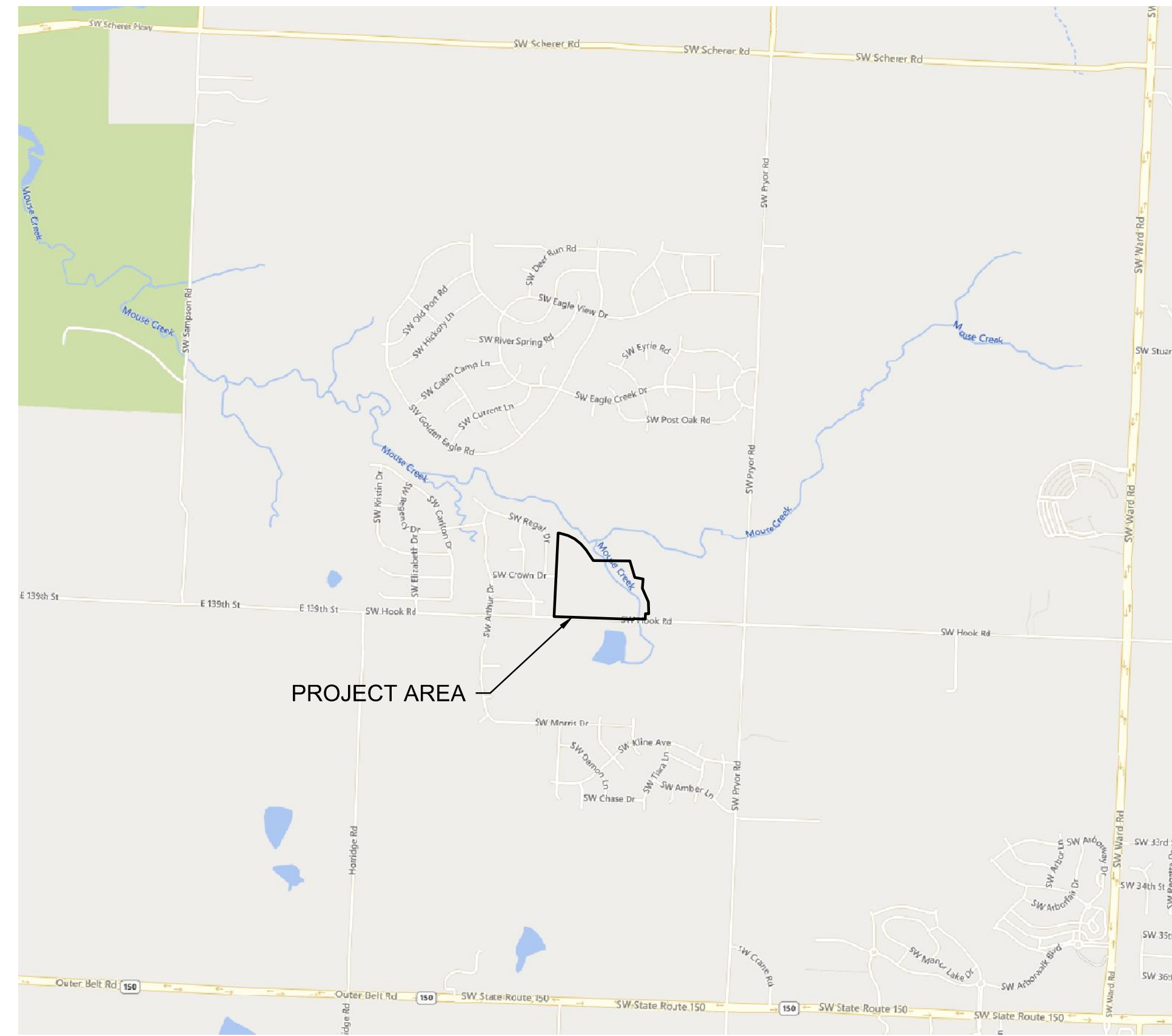
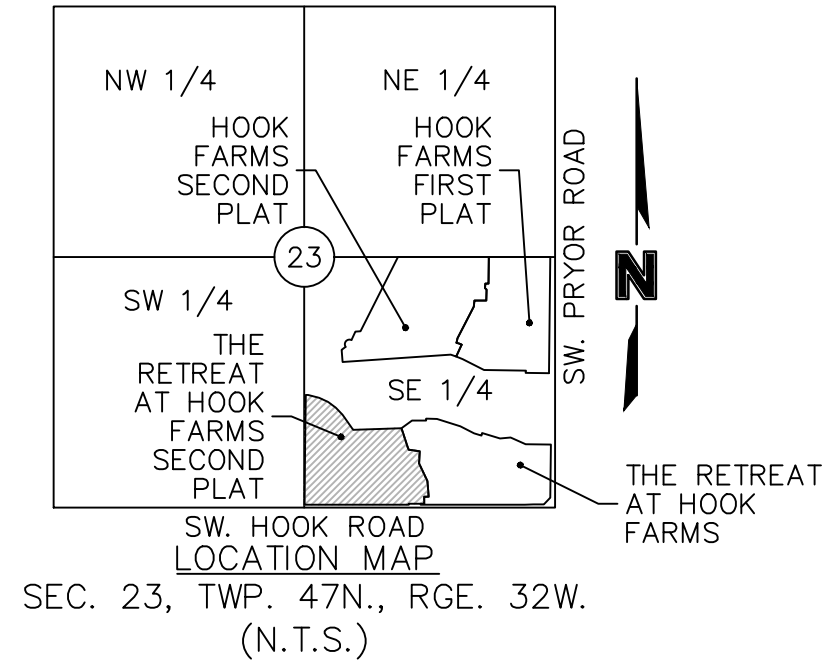


THE RETREAT AT HOOK FARMS SECOND PLAT WATER MAIN EXTENSION PLANS

SECTION 23, TOWNSHIP 47 N, RANGE 32 W
IN LEE'S SUMMIT, JACKSON COUNTY, MO



SHEET LIST	
NUMBER	TITLE
C301	TITLE SHEET
C302	GENERAL NOTES
C303	GENERAL LAYOUT
C304	WATER MAIN PLAN & PROFILE (LINE 1)
C305	WATER MAIN PLAN & PROFILE (LINE 1)
C306	WATER MAIN PLAN & PROFILE (LINE 1)
C307	WATER MAIN PLAN & PROFILE (LINE 2)
C308	WATER MAIN PLAN & PROFILE (LINE 2)
C309	WATER MAIN PLAN & PROFILE (LINE 3)
C310	DETAIL SHEET
C311	DETAIL SHEET

PROJECT TEAM & UTILITY CONTACT LIST	
OWNER / DEVELOPER HUNT MIDWEST REAL ESTATE DEVELOPMENT, INC. 8300 NE UNDERGROUND DRIVE KANSAS CITY, MO 64161 CONTACT: AARON SCHMIDT PHONE: 816.455.2500	UTILITY SERVICE NUMBERS NAME: LEE'S SUMMIT PUBLIC WORKS PHONE: 816-969-1800 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
ENGINEER OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JULIE E. SELLERS, P.E. PHONE: 816.361.1177 EMAIL: JSSELLERS@OLSSON.COM	
SURVEYOR OLSSON 1301 BURLINGTON, SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JASON ROUDEBUSH, P.L.S. PHONE: 816.361.1177 EMAIL: JROUDEBOUSH@OLSSON.COM	

<input type="checkbox"/>	NOT FOR CONSTRUCTION
<input type="checkbox"/>	REVIEWED FOR CONSTRUCTION

PROPERTY DESCRIPTION

A TRACT OF LAND IN THE SOUTHEAST QUARTER OF SECTION 23, TOWNSHIP 47 NORTH, RANGE 32 WEST OF THE 5TH PRINCIPAL MERIDIAN IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI BEING BOUNDED AND DESCRIBED BY OR UNDER THE DIRECT SUPERVISION OF JASON S. ROUDEBUSH, P.L.S. 2002014092 AS FOLLOWS: COMMENCING AT THE SOUTHEAST CORNER OF SAID SOUTHEAST QUARTER; THENCE NORTH 87°58'53" WEST, ON THE SOUTH LINE OF SAID SOUTHEAST QUARTER, 2,651.35 FEET TO THE SOUTHEAST CORNER OF MONARCH VIEW 1ST PLAT, A SUBDIVISION OF LAND IN SAID LEE'S SUMMIT RECORDED AS INSTRUMENT NUMBER 98169637 IN BOOK 163 AT PAGE 62 IN JACKSON COUNTY RECORDER OF DEEDS OFFICE, ALSO BEING THE SOUTHWEST CORNER OF SAID SOUTHEAST QUARTER; THENCE NORTH 02°43'00" EAST, ON THE WEST LINE OF SAID SOUTHEAST QUARTER, ALSO BEING THE EAST LINE OF SAID MONARCH VIEW 1ST PLAT, 30.00 FEET TO THE NORTHWEST CORNER OF SW HOOK ROAD AS ESTABLISHED BY RIGHT-OF-WAY DEED RECORDED AS INSTRUMENT NUMBER 199910077639 IN SAID JACKSON COUNTY RECORDER OF DEEDS OFFICE, ALSO BEING THE POINT OF BEGINNING OF THE TRACT OF LAND TO BE HEREIN DESCRIBED; THENCE NORTH 02°43'00" EAST, ON SAID WEST AND EAST LINES, AND ALSO BEING EAST LINE OF MONARCH VIEW 2ND PLAT, A SUBDIVISION OF LAND IN SAID LEE'S SUMMIT, RECORDED AS INSTRUMENT NUMBER 200010047892 IN BOOK 167 AT PAGE 87 IN SAID JACKSON COUNTY RECORDER OF DEEDS OFFICE, 1,163.24 FEET; THENCE LEAVING SAID WEST AND EAST LINES, SOUTH 87°16'25" EAST, 25.54 FEET; THENCE SOUTH 73°15'30" EAST, 121.46 FEET; THENCE SOUTH 62°39'56" EAST, 102.90 FEET; THENCE SOUTH 52°04'22" EAST, 102.90 FEET; THENCE SOUTH 41°28'48" EAST, 102.90 FEET; THENCE SOUTH 33°05'07" EAST, 195.12 FEET; THENCE NORTH 90°00'00" EAST, 510.19 FEET TO A POINT ON THE WESTERLY LINE OF PROPOSED THE RETREAT AT HOOK FARMS; THENCE SOUTH 16°31'39" EAST, ALONG SAID WESTERLY LINE, 238.84 FEET; THENCE SOUTH 78°36'20" EAST, ALONG SAID WESTERLY LINE, 118.51 FEET; THENCE SOUTH 04°39'35" WEST, ALONG SAID WESTERLY LINE, 128.06 FEET; THENCE SOUTH 23°04'06" EAST, ALONG SAID WESTERLY LINE, 206.79 FEET; THENCE SOUTH 02°38'45" EAST, ALONG SAID WESTERLY LINE, 164.78 FEET; THENCE NORTH 87°58'48" WEST, ALONG SAID WESTERLY LINE, 45.85 FEET; THENCE SOUTH 01°54'56" WEST, ALONG SAID WESTERLY LINE, 76.13 FEET; THENCE NORTH 87°58'53" WEST, ALONG SAID WESTERLY LINE, 38.61 FEET TO A POINT ON THE EXISTING NORTHERLY RIGHT-OF-WAY LINE OF SW HOOK ROAD, AS ESTABLISHED BY RIGHT OF WAY DEED RECORDED AS INSTRUMENT NUMBER 2007E0016663 IN SAID JACKSON COUNTY RECORDER OF DEEDS OFFICE; THENCE LEAVING SAID WESTERLY LINE, CONTINUING NORTH 87°58'53" WEST, ALONG SAID EXISTING NORTHERLY RIGHT-OF-WAY LINE, 125.00 FEET; THENCE SOUTH 02°01'07" WEST, ALONG SAID EXISTING NORTHERLY RIGHT-OF-WAY LINE, 10.00 FEET; THENCE NORTH 87°58'53" WEST, ALONG SAID EXISTING NORTHERLY RIGHT-OF-WAY LINE, 853.20 FEET TO THE NORTHWEST CORNER OF SAID RIGHT-OF-WAY DEED, ALSO BEING THE NORTHEAST CORNER OF SW HOOK ROAD, AS ESTABLISHED BY SAID RIGHT-OF-WAY DEED INSTRUMENT NUMBER 199910077639; THENCE CONTINUING NORTH 87°58'53" WEST ALONG THE EXISTING NORTHERLY RIGHT-OF-WAY LINE OF SAID SW HOOK ROAD, 252.00 FEET TO THE POINT OF BEGINNING. CONTAINING 1,085,519 SQUARE FEET OR 24.92 ACRES, MORE OR LESS.

BENCHMARK

JA-74
 ELEVATION: 1058.10
 N: 978461.2779
 E: 2809447.9650
 DESCRIPTION: KC METRO ALUMINUM GRS DISK SET IN CONCRETE. THE STATION IS STAMPED JA-74, 1988, AND PROJECTS ABOUT 1 INCH

OLSSON HAS BEEN RETAINED TO PROVIDE AS-BUILT DRAWINGS FOR THIS PROJECT.

Julie E. Sellers
 JULIE E. SELLERS, P.E.
 CIVIL ENGINEER
 MO # PE-2017000367
 10/29/21
 DATE

olsson

Olsson - Civil Engineering
 Missouri Certificate of Authority #001592
 1301 Burlington Street
 North Kansas City, MO 64116
 TEL 816.361.1177
 FAX 816.361.1888
 www.olsson.com



REV. NO.	DATE	REVISIONS DESCRIPTION	BY	
			REVISIONS DESCRIPTION	DATE
1	08-26-2021	REVISED PER CITY COMMENTS		
2	10-29-2021	REVISED PER CITY COMMENTS		

TITLE SHEET
 WATER MAIN EXTENSION PLANS
 THE RETREAT AT HOOK FARMS
 SECOND PLAT
 LEE'S SUMMIT, MO

drawn by: B.M.W./A.A.
 checked by: B.M.W.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: A19-4059
 date: 05-05-2021

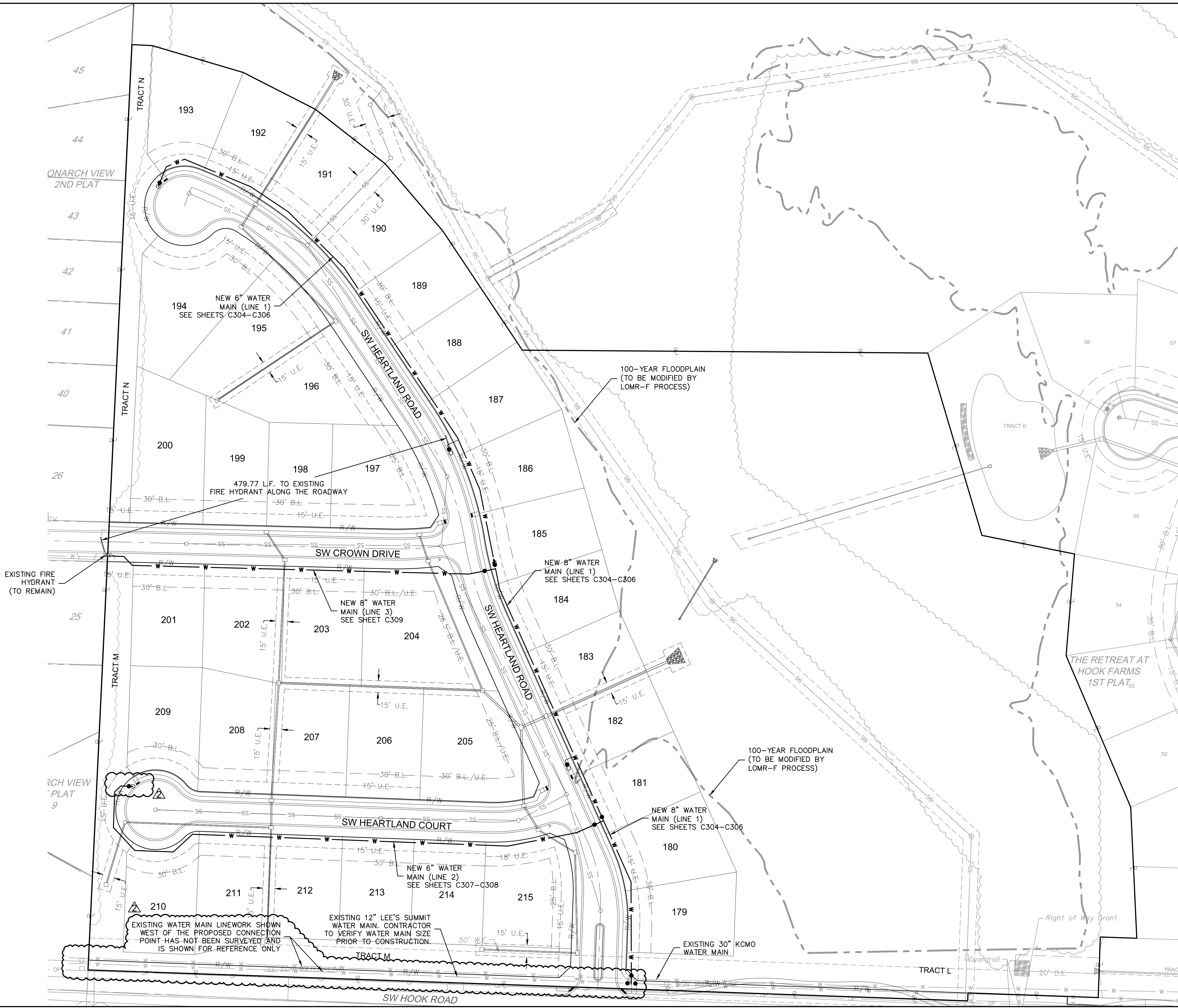
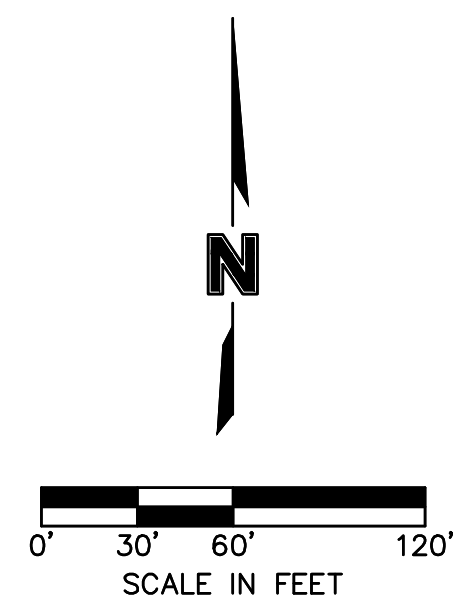
SHEET
 C301

USER: bworthley

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 DATE: Oct 28, 2021 5:31pm XREFS: C_XBASE_A194059 C_PBNDY_A194059 C_PUBK_A194059



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STATE OF MISSOURI
 JULIE ELAINE SELLERS
 PROFESSIONAL ENGINEER
 NUMBER PE-2017000367
 10/29/21

REV. NO.	DATE	REVISIONS DESCRIPTION
1	08-26-2021	REVISED PER CITY COMMENTS
2	10-29-2021	REVISED PER CITY COMMENTS

GENERAL LAYOUT
 WATER MAIN EXTENSION PLANS
 THE RETREAT AT HOOK FARMS
 SECOND PLAT

BY _____

2021

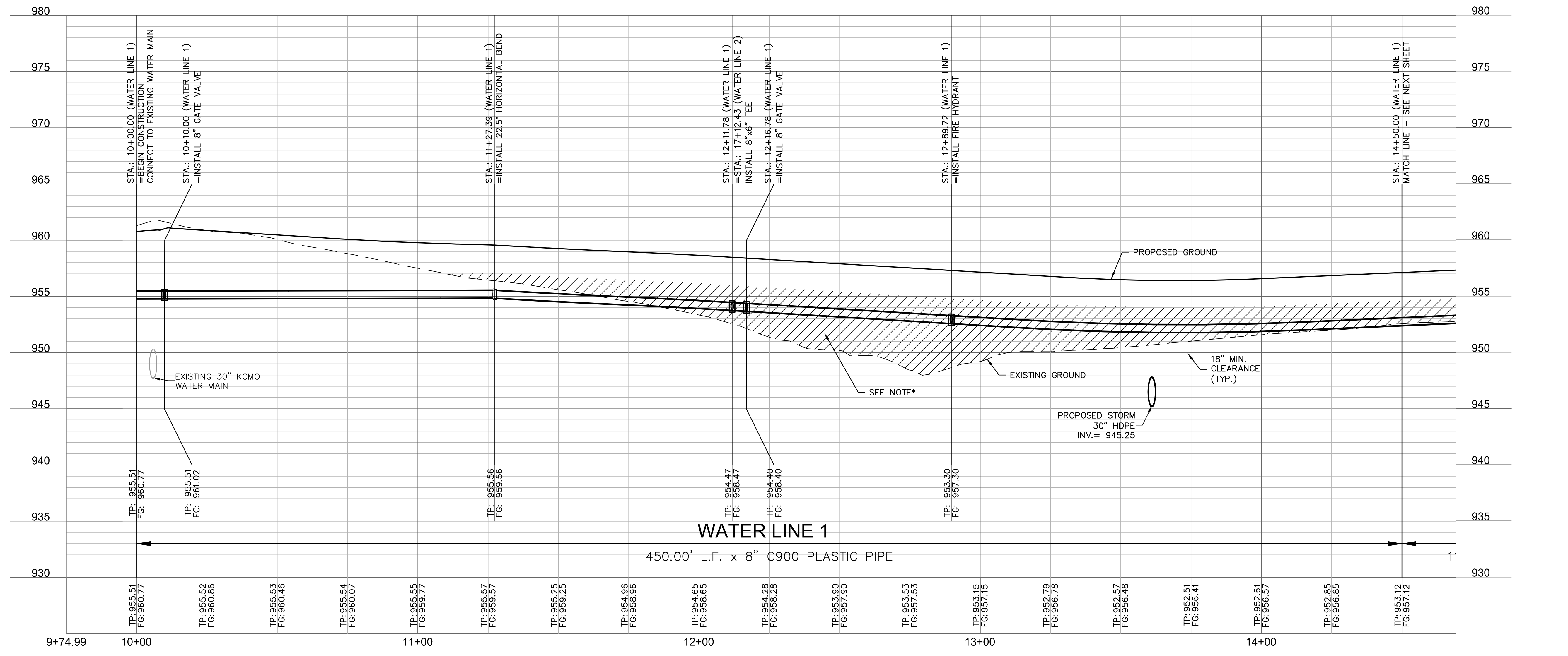
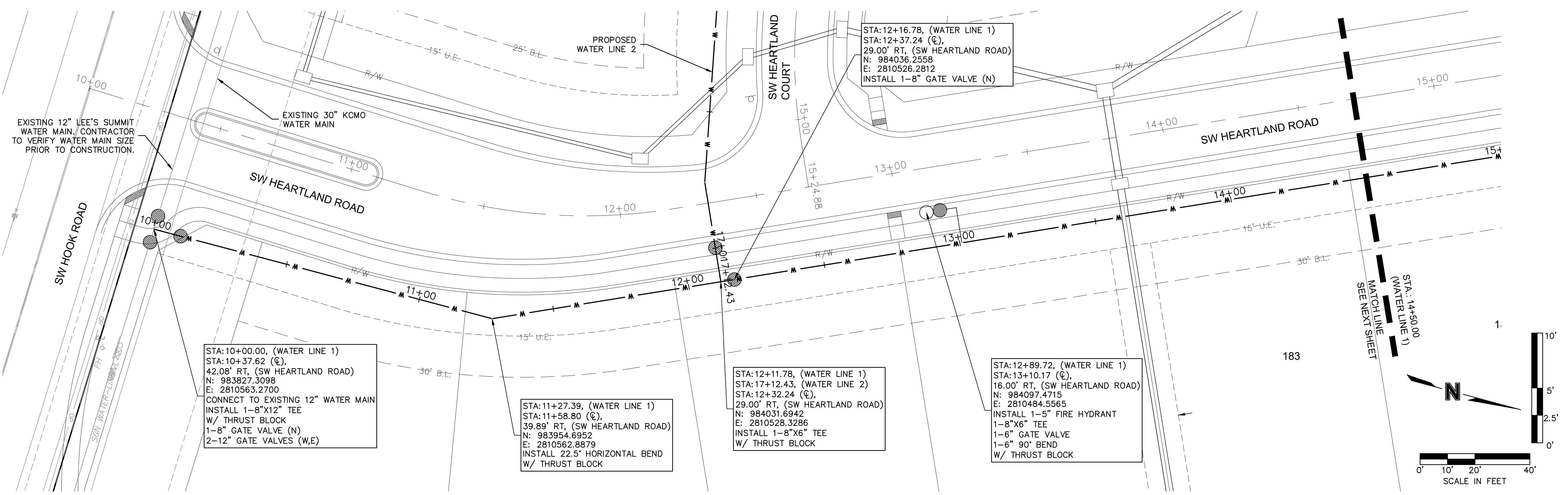
REVISIONS

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: A19-4059
 date: 05-05-2021

SHEET
 C303

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 USER: bworthley

*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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STATE OF MISSOURI
 JULIE ELAINE SELLERS
 PE-2017000367
 10/29/21
 PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION
1	08-26-2021	REVISED PER CITY COMMENTS
2	10-29-2021	REVISED PER CITY COMMENTS

WATER MAIN PLAN & PROFILE (LINE 1)
 WATER MAIN EXTENSION PLANS
 THE RETREAT AT HOOK FARMS
 SECOND PLAT

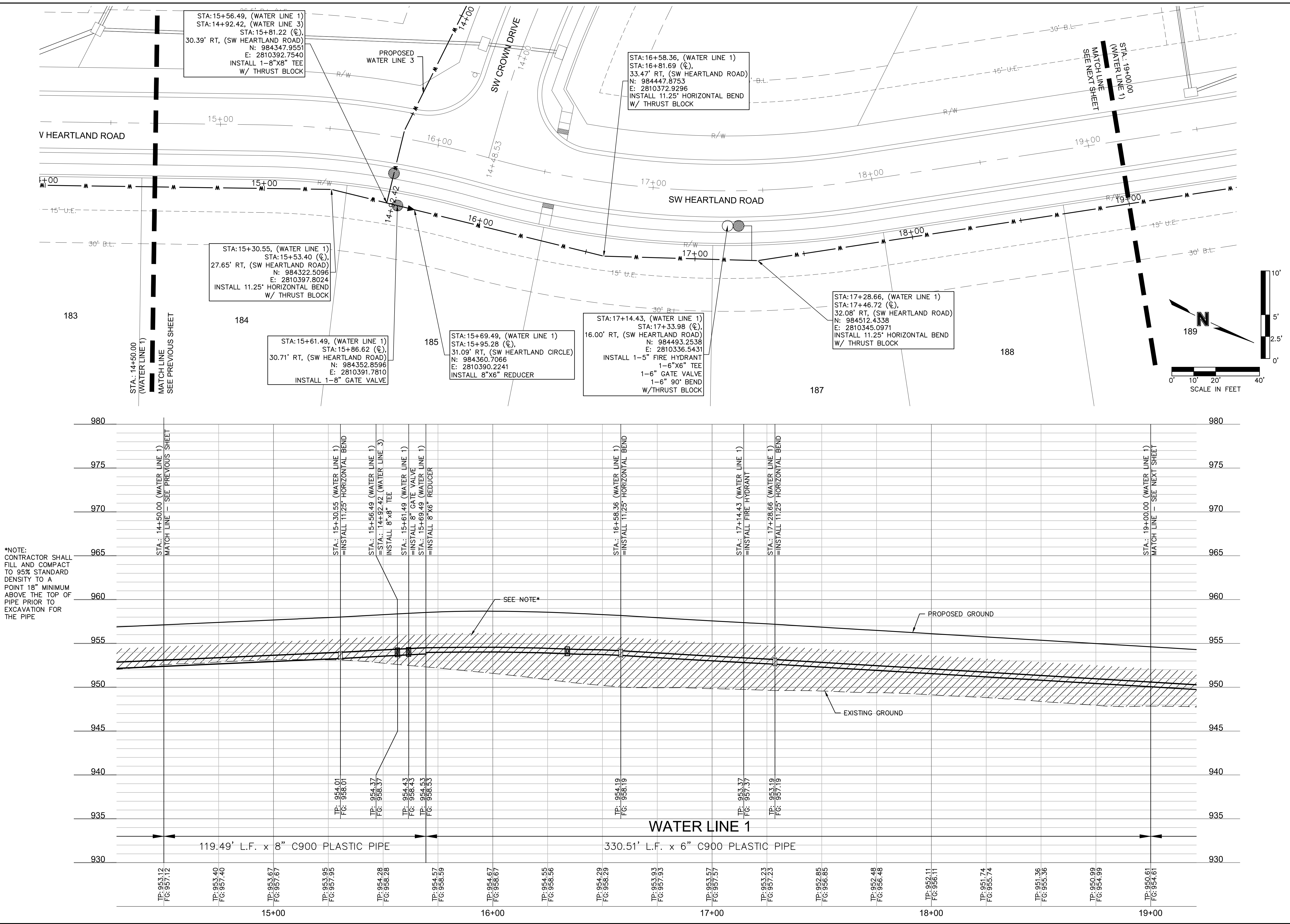
2021

REVISIONS

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: A19-4059B
 date: 05-05-2021

SHEET
C304

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 USER: bworthley C_XBASE_A194059



*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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STATE OF MISSOURI
 JULIE ELAINE
 SELLERS
 PE-2017000367
 10/29/21
 PROFESSIONAL ENGINEER

REV. NO.	DATE	REVISIONS DESCRIPTION
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2	10-29-2021	REVISED PER CITY COMMENTS

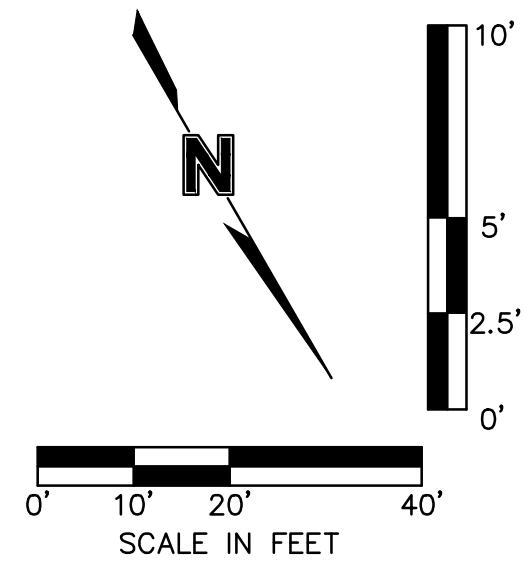
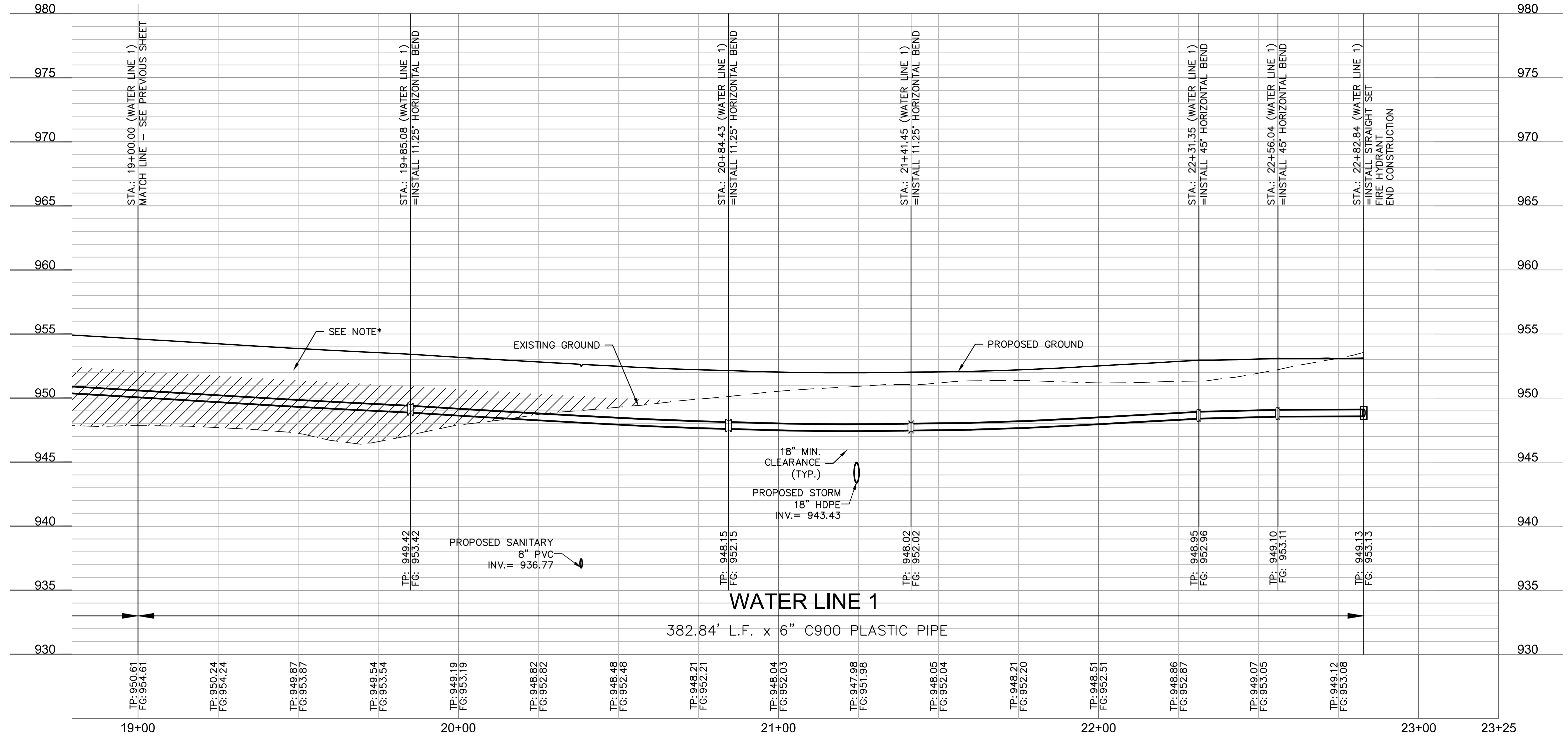
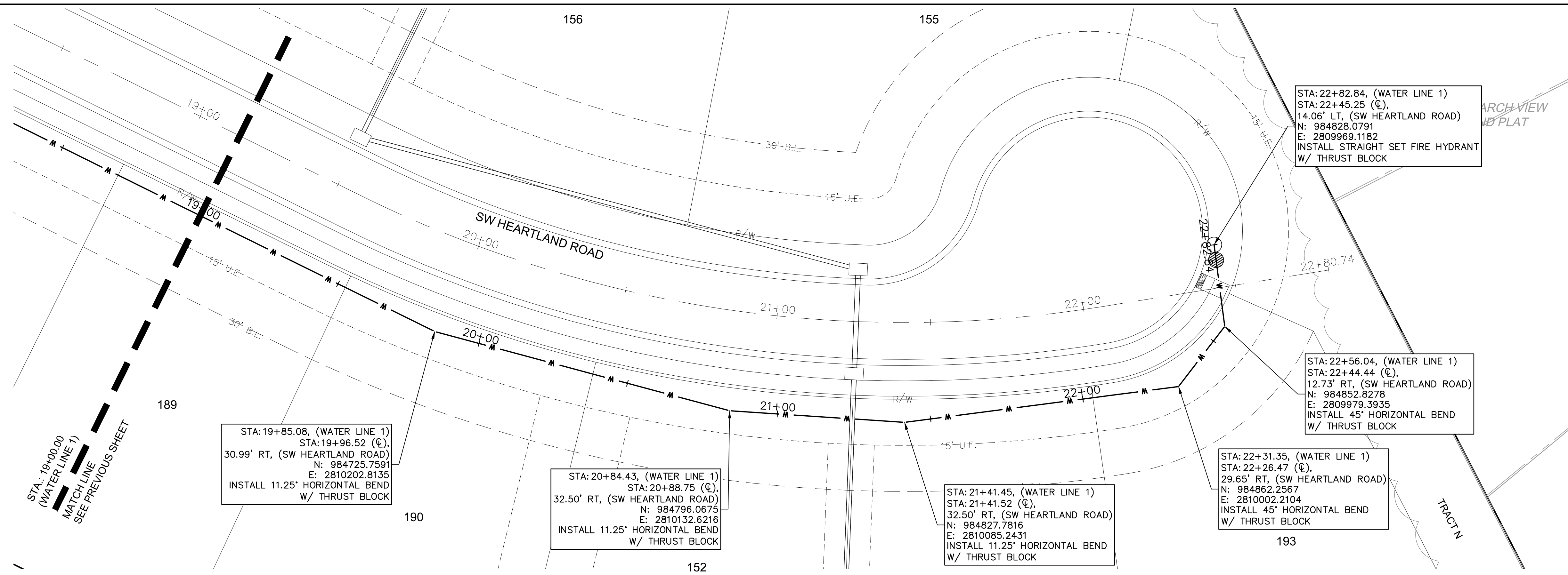
WATER MAIN PLAN & PROFILE (LINE 1)
 WATER MAIN EXTENSION PLANS
 THE RETREAT AT HOOK FARMS
 SECOND PLAT

2021
 REVISIONS
 LEE'S SUMMIT, MO

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: A19-4059B
 date: 05-05-2021

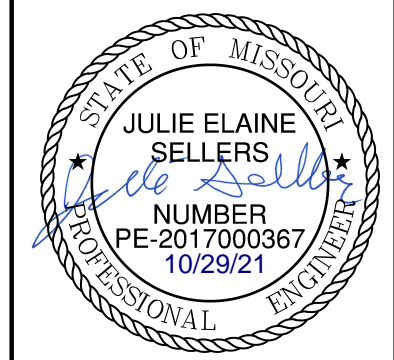
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 USER: bworthley



*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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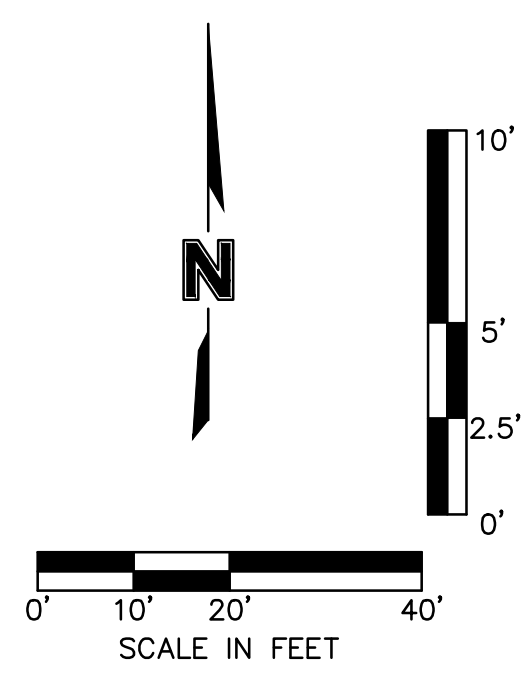
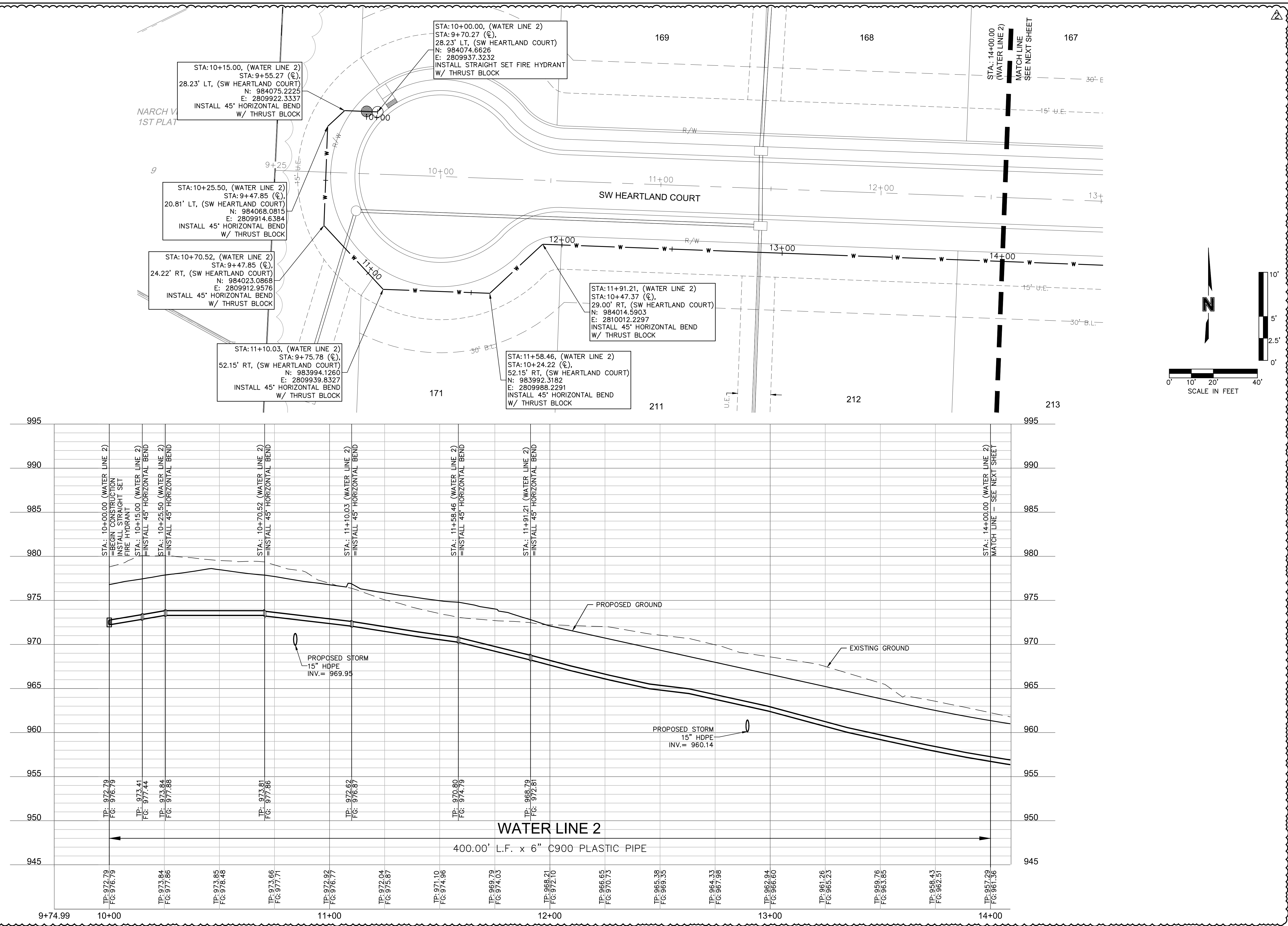


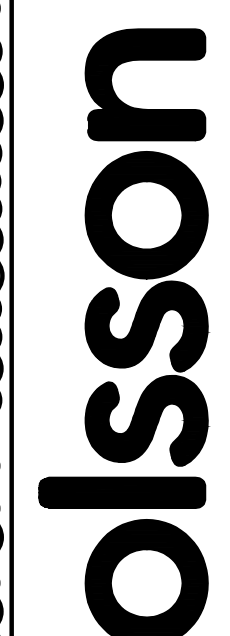
REV. NO.	DATE	REVISIONS DESCRIPTION
1	08-26-2021	REVISED PER CITY COMMENTS
2	10-29-2021	REVISED PER CITY COMMENTS

WATER MAIN PLAN & PROFILE (LINE 1)
 WATER MAIN EXTENSION PLANS
 THE RETREAT AT HOOK FARMS
 SECOND PLAT
 LEE'S SUMMIT, MO
 2021

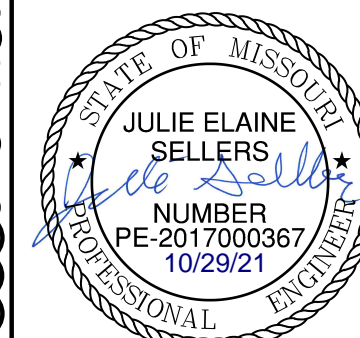
drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: A19-4059B
 date: 05-05-2021

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 USER: bworthley C_PBASE_A194059





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2	10-29-2021	REVISED PER CITY COMMENTS

BY	
DATE	2021

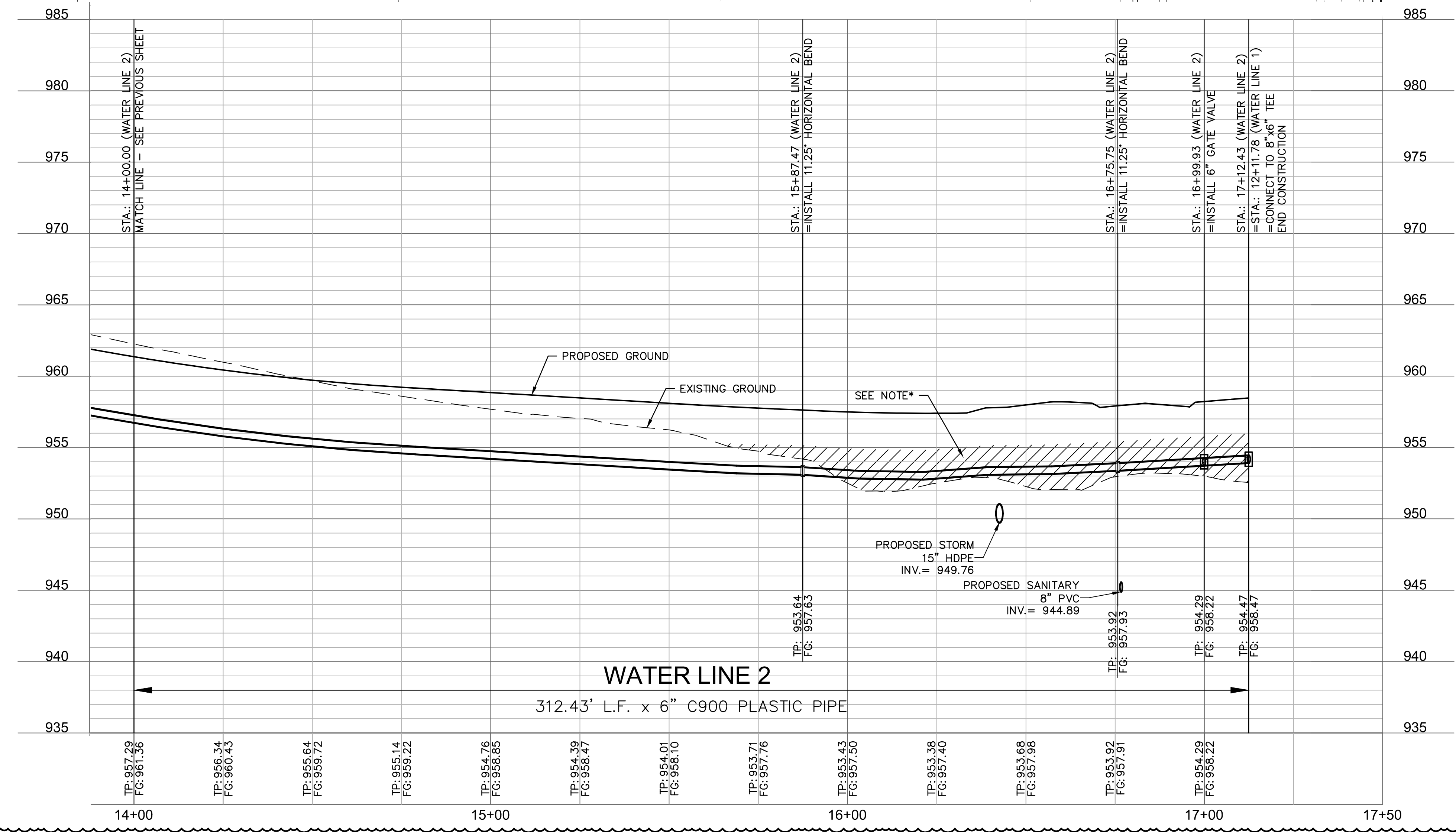
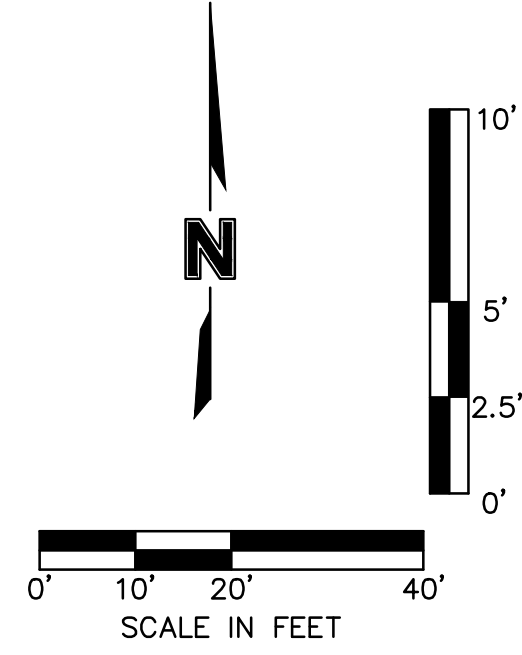
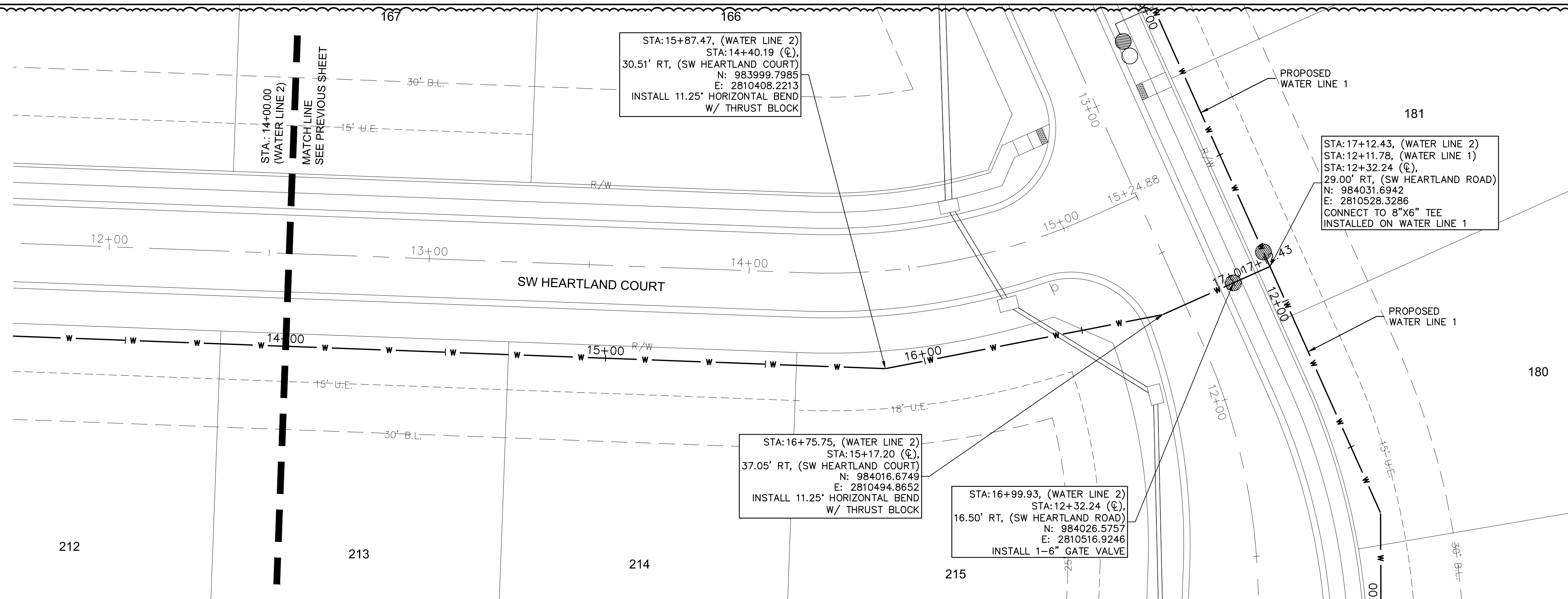
WATER MAIN PLAN & PROFILE (LINE 2)
WATER MAIN EXTENSION PLANS
THE RETREAT AT HOOK FARMS
SECOND PLAT

LEE'S SUMMIT, MO

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: A19-4059B
 date: 05-05-2021

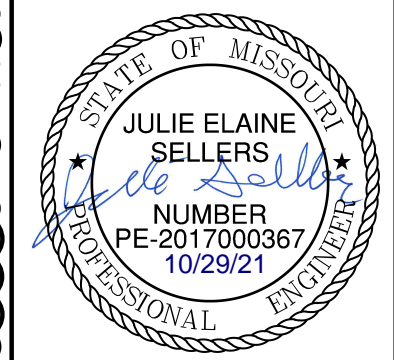
SHEET
C307

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 DATE: Oct 29, 2021 9:03am XREFS: C_PWATR_A194059 C_PBASE_A194059 C_PBNBY_A194059 C_PUTIL_A194059 C_PTBLK_A194059
 USER: bworthley C_XBASE_A194059



*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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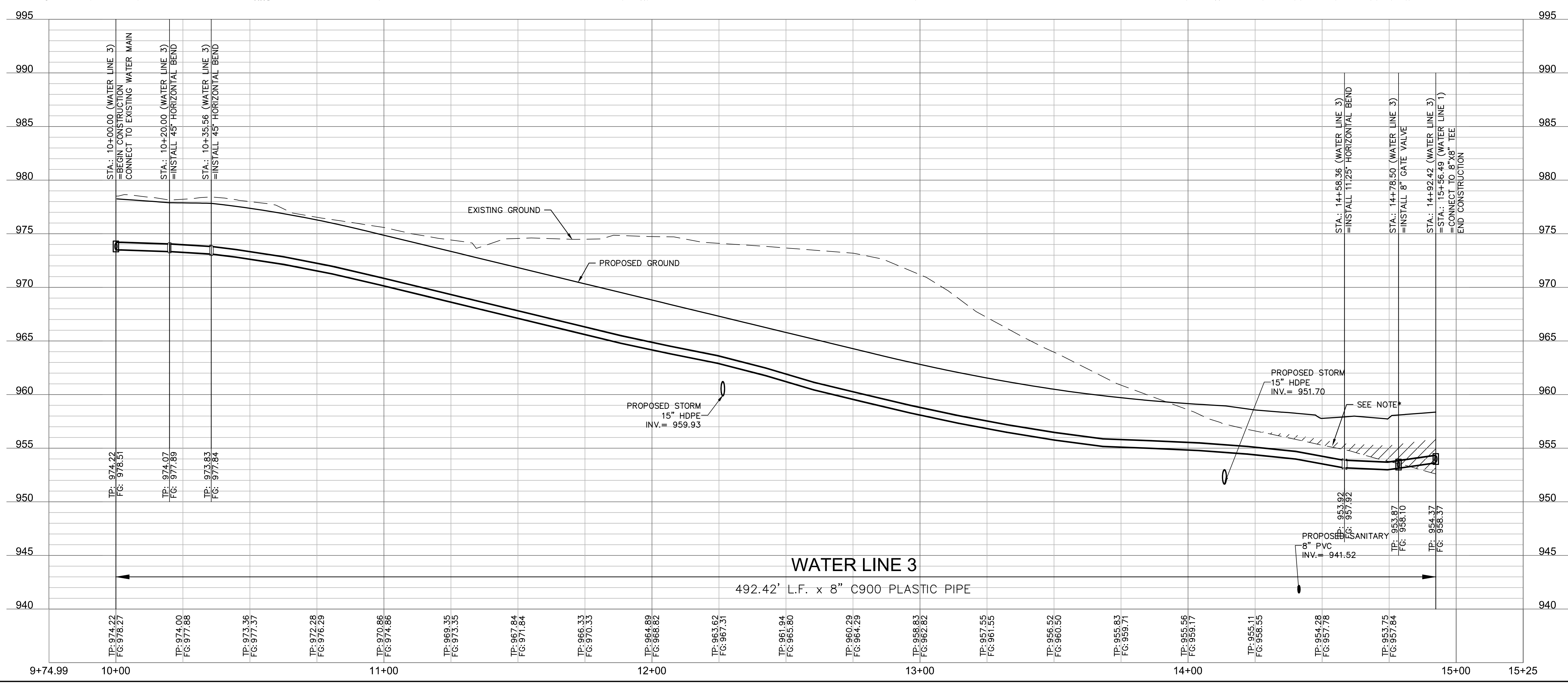
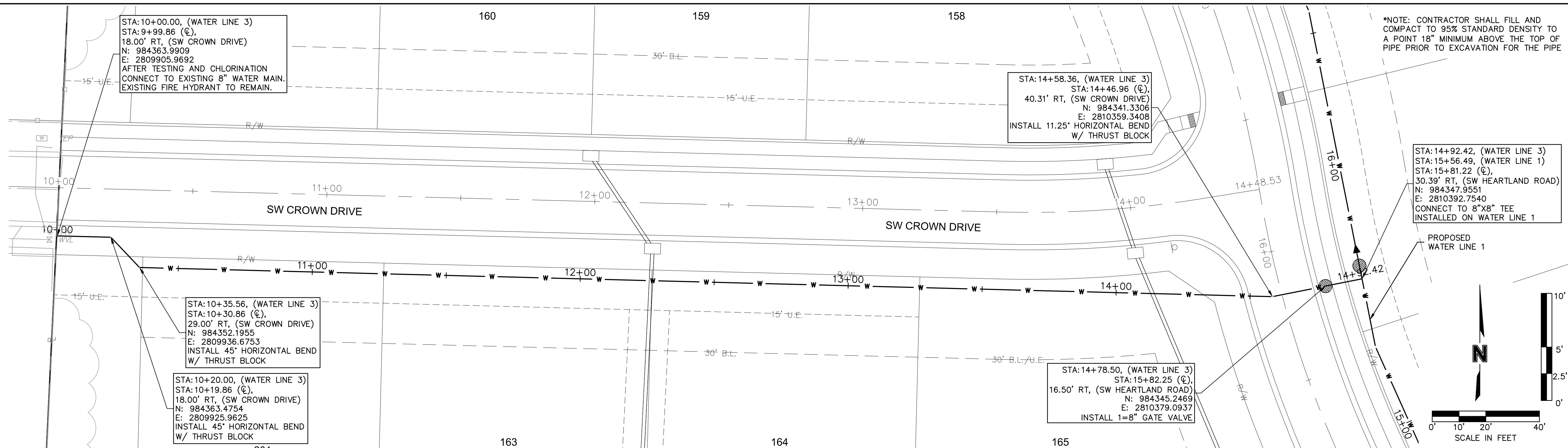
REV. NO.	DATE	REVISIONS DESCRIPTION
1	08-26-2021	REVISED PER CITY COMMENTS
2	10-29-2021	REVISED PER CITY COMMENTS

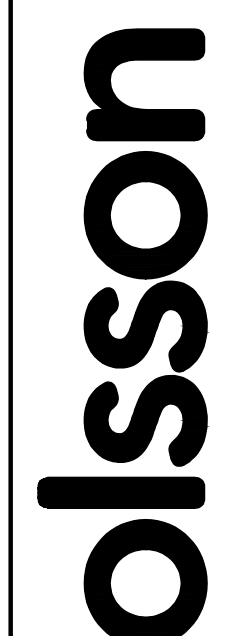
WATER MAIN PLAN & PROFILE (LINE 2)
 WATER MAIN EXTENSION PLANS
 THE RETREAT AT HOOK FARMS
 SECOND PLAT
 LEE'S SUMMIT, MO
 2021

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: A19-4059B
 date: 05-05-2021

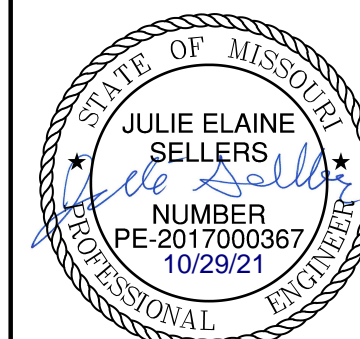
SHEET C308

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 DATE: Oct 28, 2021 5:34pm XREFS: C_PWATR_A194059 C_PBNDY_A194059 C_PBASE_A194059 C_PTBLK_A194059





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 Missouri Certificate of Authority #001592
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 FAX 816.361.1888
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REV. NO.	DATE	REVISIONS DESCRIPTION
1	08-26-2021	REVISED PER CITY COMMENTS
2	10-29-2021	REVISED PER CITY COMMENTS

BY: _____

DATE: _____

REVISIONS

WATER MAIN PLAN & PROFILE (LINE 3)
 WATER MAIN EXTENSION PLANS
 THE RETREAT AT HOOK FARMS
 SECOND PLAT
 LEE'S SUMMIT, MO

2021

drawn by: B.M.W./A.A.
 checked by: B.M.W./A.A.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: A19-4059B
 date: 05-05-2021

SHEET C309

USER: bworthley

DWG: F:\2019\4001-4500\019-4059-A\40-Design\AutoCAD\Final Plans\Sheets\GNCV\Water Main Extension Plans\C_DTL01_A194059.dwg
DATE: Oct 28, 2021 5:35pm XREFS: C_P\TBLK_A194059

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	59.1	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
 HORIZONTAL THRUST BLOCKS

Date: 02/13
 Drawn By: JN
 Checked By: DL
 FILE: WAT-1
 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	35.6	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	287.1	154.6	78.8	39.6
14	273.0	394.1	210.4	107.3	53.9
16	353.0	508.1	273.0	140.1	70.4
18	442.0	639.1	342.0	177.3	89.1
20	539.0	787.1	417.0	219.4	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:

LEE'S SUMMIT MISSOURI
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063
 STRADDLE BLOCK

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

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" IN ANY DIMENSION.
 3. TOP OF FLOWABLE BACKFILL SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE.
 4. LENGTH OF TRENCH CHECK SHALL BE A MINIMUM OF 12".

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
 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
 HYDRANT INSTALLATION - STRAIGHT SET

Date: 02/13
 Drawn By: JN
 Checked By: DL
 FILE: WAT-7
 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
 HYDRANT WITH 90 DEGREE BEND

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

olsson

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STATE OF MISSOURI
 JULIE ELAINE SELLERS
 MISSOURI PROFESSIONAL ENGINEER
 NUMBER PE-2017000367
 10/29/21

REV. NO.	DATE	REVISIONS DESCRIPTION
1	08-28-2021	REVISED PER CITY COMMENTS
2	10-29-2021	REVISED PER CITY COMMENTS

DETAIL SHEET
 WATER MAIN EXTENSION PLANS
 THE RETREAT AT HOOK FARMS
 SECOND PLAT
 LEE'S SUMMIT, MO 2021

drawn by: B.M.W./A.A.
 checked by: B.M.W.
 designed by: B.M.W./A.A.
 QA/QC by: J.E.S.
 project no.: A19-4059
 date: 05-05-2021

