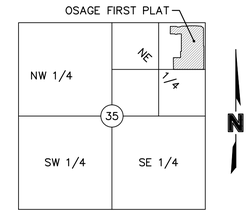
OSAGE
FIRST PLAT
SANITARY SEWER PLANS

NE 1/4 SECTION 35, TOWNSHIP 47 N, RANGE 32 W.
IN LEE'S SUMMIT, JACKSON COUNTY, MISSOURI

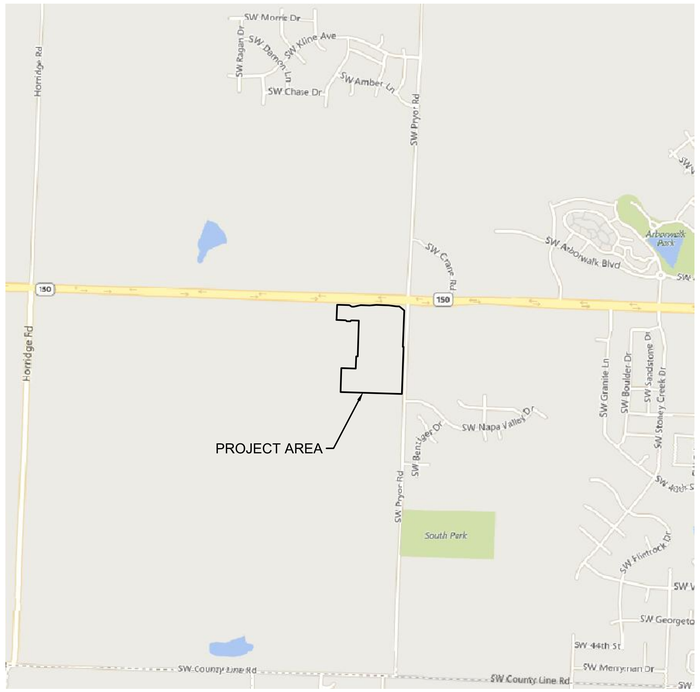


LOCATION MAP
SEC. 35, TWP. 47N., RGE. 32W.
(N.T.S.)

PROJECT TEAM & UTILITY CONTACT LIST	
OWNER / DEVELOPER CLAYTON PROPERTIES GROUP, INC. D.B.A. SUMMIT HOMES 120 SE 30TH STREET CONTACT: VINCENT WALKER LEE'S SUMMIT, MO 64082 PHONE: 816.246.6700 EMAIL: VINCENT@SUMMITHOMESKC.COM	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 ST. SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: BROCK WORTHLEY PHONE: 816.361.1177 EMAIL: BWORTHLEY@OLSSON.COM	
SURVEYOR OLSSON 1301 BURLINGTON ST. SUITE 100 NORTH KANSAS CITY, MO 64116 CONTACT: JASON ROUDEBUSH PHONE: 816.361.1177 EMAIL: JROUDEBUSH@OLSSON.COM	

☐ NOT FOR CONSTRUCTION

☒ REVIEWED FOR CONSTRUCTION



PROPERTY DESCRIPTION:

A tract of land in the Northeast Quarter of the Northeast Quarter of Section 35, Township 47 North, Range 32 West of the 5th Principal Meridian, and including part of Lots 1, 2 and 3 SALVAGGIO'S RANCH, a subdivision of land, recorded as Instrument Number I1210418 in Book I53 at Page 73 in Jackson County Recorder of Deeds Office, all in Lee's Summit, Jackson County, Missouri being bounded and described by Jason S. Roudebush, P.L.S. 2002014092 as follows: Commencing at the Northeast corner of said Northeast Quarter; thence South 02°08'00" West, on the East line of said Northeast Quarter, 658.78 feet to the Southeast corner of the North half of the Northeast Quarter of said Northeast Quarter; thence North 88°08'29" West, on the South line of said North half, 50.00 feet to the Southeast corner of said Lot 3, said point also being on the existing Westerly right-of-way line of SW Pryor Road, as now established, and also being the Point of Beginning of the tract of land to be herein described; thence South 88°08'29" East, on said North line and said existing Westerly right-of-way line, 10.00 feet to the existing Westerly right-of-way line of said SW Pryor Road as established by Document 1963814460 in Book 1634 at Page 487 being on a line on that is 40.00 West of and parallel with the East line of said Northeast Quarter of said Northeast Quarter; thence South 02°08'00" West, on said existing Westerly right-of-way line and said parallel line, 658.80 feet to a point on the South line of the said Northeast Quarter of said Northeast Quarter; thence North 88°09'45" West, on said South line, 857.08 feet; thence leaving said South line, North 01°48'53" East, 335.30 feet; thence South 88°11'07" East, 202.50 feet; thence North 01°48'53" East, 170.00 feet; thence South 88°11'07" East, 21.62 feet; thence North 01°48'53" East, 500.00 feet; thence North 88°11'07" West, 106.00 feet; thence South 46°48'53" West, 19.80 feet; thence North 88°11'07" West, 50.00 feet; thence North 43°11'07" West, 19.80 feet; thence North 88°11'07" West, 127.17 feet to a point on the West line of the East half of the Northwest Quarter of said Northeast Quarter; thence North 02°09'46" East, on said West line, 212.32 feet to a point on the existing Southerly right-of-way line of Missouri State Highway No. 150, as established by Document Number 2009E0064160, being 80.00 feet right of Centerline Station 316+29.79 (Station 316+29.51 Deed); thence leaving said West line, South 88°11'07" East, along said existing Southerly right-of-way line, 170.21 feet to a point that is 80+00.00 right of Centerline Station 318+00.00 thence South 58°26'25" East, along said Southerly right of way line, 40.31 feet to a point that is 100.00 feet right of centerline Station 318+35.00; thence South 88°11'07" East, along said Southerly right of way line, 30.00 feet to a point that is 100.00 feet right of centerline Station 318+65.00; thence North 76°55'17" East, along said Southerly right of way line, 97.27 feet to a point on the Southerly right of way line of Missouri State Highway No. 150 as established by Document 2009E0006361, being 75.00 feet right of centerline Station 319+59.00; thence South 88°11'07" East, along said Southerly right of way line, 126.00 feet to a point that is 75.00 feet right of centerline Station 320+85.00; thence North 85°28'29" East, along said Southerly right of way line, 90.55 feet to a point that is 65.00 feet right of centerline Station 321+75.00; thence South 88°11'07" East, along said Southerly right of way line and along the Southerly right of way line of Missouri State Highway No. 150 as established by Document 2009E0006351, 175.00 feet to a point that is 65.00 feet right of centerline Station 323+50.00; thence South 82°44'41" East, along said Southerly right of way line, 105.48 feet to a point that is 75.00 feet right of centerline Station 324+55.00; thence South 88°11'07" East, along said Southerly right of way line, 45.00 feet to a point that is 75.00 feet right of centerline Station 325+00.00; thence South 49°40'27" East, along said Southerly right of way line, 88.33 feet to a point that is 130.00 feet right of centerline Station 325+69.12 (Station 325+69.30 Deed), said point also being on the East line of said Lot 2, SALVAGGIO'S RANCH and on the West right of way of said SW Pryor Road as now established; thence South 02°08'00" West, along said East lot line and said West right of way line, 509.17 feet to the Point of Beginning. Containing 917,234 square feet or 21.06 acres, more or less.

BENCHMARK

BENCHMARK NO. 1
CHISELED PLUS ON THE EAST FLANGED BOLT OF THE FIRE HYDRANT ON THE WEST SIDE OF SW PRYOR ROAD ON ADJOINING PROPERTY SOUTH OF THE SOUTHWEST CORNER OF SUBJECT PROPERTY.
ELEVATION = 1014.830

BENCHMARK NO. 2
RAILROAD SPIKE IN THE NORTH FACE OF POWER POLE LOCATED ON THE SOUTH SIDE MISSOURI STATE HIGHWAY 150 AT THE WEST SIDE OF THE DRIVEWAY TO 2025 MISSOURI STATE HIGHWAY 150, LEE'S SUMMIT, MO.
ELEVATION = 1031.313

Sheet List Table	
Sheet Number	Sheet Title
C201	TITLE SHEET
C202	GENERAL NOTES
C203	GENERAL LAYOUT
C204	SANITARY PLAN & PROFILE (LINE 1)
C205	SANITARY PLAN & PROFILE (LINE 1 CONT'D)
C206	SANITARY PLAN & PROFILE (LINE 1 CONT'D)
C207	SANITARY PLAN & PROFILE (LINE 1 CONT'D)
C208	SANITARY PLAN & PROFILE (LINE 1 CONT'D)
C209	SANITARY PLAN & PROFILE (LINE 1 CONT'D)
C210	SANITARY PLAN & PROFILE (LINE 2)
C211	SANITARY PLAN & PROFILE (LINE 3)
C212	SANITARY PLAN & PROFILE (LINE 3 CONT'D)
C213	SANITARY PLAN & PROFILE (LINE 4)
C214	SANITARY PLAN & PROFILE (LINE 7)
C215	SANITARY SEWER DESIGN TABLES
C216	DETAIL SHEET
C217	DETAIL SHEET

AS-BUILT

3/10/2021

REVIEWED BY:

CITY OF LEE'S SUMMIT — DATE

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

Brad Worthley — 3/10/2021

BROCK M. WORTHLEY, P.E.
CIVIL ENGINEER
MO# PE-2019000237 — DATE

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

STATE OF MISSOURI
BROCK M. WORTHLEY
NUMBER
PE-2019000237
PROFESSIONAL ENGINEER
3/10/2021

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	4/24/2020	REVISED PER CITY COMMENTS	
2	7/24/2020	REVISED PER CONTRACTOR COMMENTS	

TITLE SHEET
SANITARY SEWER PLANS

OSAGE
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2020

drawn by: AA
checked by: BS
designed by: AA
QA/QC by: JES
project no.: A19-2339
drawing no.: C_TTL01_A192339
date: 3/17/2020

SHEET
C201

DWG: F:\2019\2001-2500\019-2339-A\40-Design\AutoCAD\Final Plans - Asbuilts\Sheets\GNCV\SANITARY\C_TTL01_A192339.dwg USER: bworthley
DATE: Mar 10, 2021 3:42pm XREFS: C_PTBLK_A192339 C_PBNDY_A192339

GENERAL NOTES

1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ENSURING THAT THE PLANS IN THEIR POSSESSION ARE THE MOST CURRENT VERSION ISSUED, ARE FULLY COORDINATED WITH ALL SUBCONTRACTORS, AND PRESENT ON SITE AT ALL TIMES. CURRENT PLANS PREPARED BY OLSSON MAY BE OBTAINED AT THE DIRECTION OF OLSSON'S CLIENT. DIRECT REQUESTS TO OLSSON MAY REQUIRE ADDITIONAL AUTHORIZATIONS, AGREEMENTS, AND/OR FEES. PLEASE CONTACT THE ENGINEER FOR INFORMATION.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY DEVIATIONS FROM THESE PLANS UNLESS WRITTEN APPROVAL FROM ENGINEER, OWNER, AND DEVELOPER.
3. ALL WORK AND MATERIALS SHALL BE SUBJECT TO INSPECTION AND APPROVAL BY THE OWNER OR THE OWNER'S REPRESENTATIVE.
4. ALL ESTIMATES OF QUANTITIES ARE FOR INFORMATIONAL PURPOSES ONLY. THE CONTRACTOR SHALL BE RESPONSIBLE FOR DETERMINING QUANTITIES AND ITEMS OF WORK.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PROVIDING ALL LABOR, MATERIALS, AND EQUIPMENT REQUIRED TO COMPLETE THE WORK SHOWN IN THE PLANS.
6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL REQUIRED PERMITS, PAYING ALL FEES, AND FOR OTHERWISE COMPLYING WITH ALL APPLICABLE REGULATIONS GOVERNING THE WORK.
7. THE CONTRACTOR SHALL NOT ENGAGE IN ACTIVITIES THAT MAY ENCROACH ON WATERS OF THE U.S., INCLUDING WETLANDS, UNTIL ANY NECESSARY PERMITS MAY BE OBTAINED. THE CONTRACTOR SHALL REVIEW AND COMPLY WITH ALL CONDITIONS DESCRIBED IN THE PERMIT.
8. THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, THE SAFETY OF ALL PERSONS INCLUDING VISITORS AND THE GENERAL PUBLIC, AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY THROUGHOUT THE PROJECT AND NOT BE LIMITED BY WORKING HOURS. ANY CONSTRUCTION OBSERVATION BY THE ENGINEER OF THE CONTRACTOR'S PERFORMANCE IS NOT INTENDED TO INCLUDE REVIEW OF THE ADEQUACY OF THE CONTRACTOR'S SAFETY MEASURES.
9. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE WITH ALL UTILITY COMPANIES AND OBTAIN ANY RELEVANT INFORMATION. NOTIFY ENGINEER OF ANY DISCREPANCIES.
10. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ALL BOUNDARY CORNERS AND SECTION CORNERS. ANY BOUNDARY CORNER AND/OR SECTION CORNER DISTURBED OR DAMAGED BY CONSTRUCTION ACTIVITIES SHALL BE RESET BY A LAND SURVEYOR LICENSED IN THE STATE OF MISSOURI, AT THE CONTRACTOR'S EXPENSE.
11. THE CONTRACTOR IS RESPONSIBLE FOR THE PROTECTION OF ADJACENT PROPERTIES AND SHALL TAKE ALL PRECAUTIONS NECESSARY TO PREVENT DAMAGE DURING CONSTRUCTION. THE CONTRACTOR IS ALSO RESPONSIBLE FOR REPAIRING ANY DAMAGE RESULTING FROM CONSTRUCTION ACTIVITIES.
12. PRIOR TO MOVING OFF THE JOB THE CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER TO PERFORM A FINAL WALK-THROUGH OF THE CONSTRUCTION SITE.

REFERENCES

1. UNLESS EXPLICITLY DESCRIBED OTHERWISE WITHIN THESE PLANS THE FOLLOWING SHALL APPLY;
   A. ALL CONSTRUCTION, INCLUDING THOSE LISTED BELOW, SHALL CONFORM TO THE LATEST CODES AND ORDINANCES OF LEE'S SUMMIT, MISSOURI.
   B. ALL CONSTRUCTION IN MODOT RIGHT-OF-WAY SHALL CONFORM TO THE LATEST SPECIFICATIONS ADOPTED BY U.S. DEPARTMENT OF TRANSPORTATION AND MODOT.
   C. ALL TRAFFIC CONTROL SIGNAGE SHALL CONFORM WITH THE CURRENT EDITION OF THE MANUAL FOR UNIFORM TRAFFIC CONTROL DEVICES (MUTCD).
   D. ALL UTILITY EXTENSIONS AND CONSTRUCTION SHALL CONFORM TO THE STANDARDS AND SPECIFICATIONS OF THE UTILITY COMPANIES.
   E. ALL EXTERIOR PAVEMENT (PCC, ASPHALT, ETC.) SHALL BE IN CONFORMANCE WITH THE SPECIFICATIONS OF LEE'S SUMMIT, MISSOURI
4. THE CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE DELIVERY MANAGER AND COORDINATING ANY MAILBOXES THAT MAY BE DISTURBED. FAILURE TO DO SO MAY SUBJECT THE CONTRACTOR TO PROSECUTION BY THE FEDERAL GOVERNMENT.

EXISTING CONDITIONS

1. THE CONTRACTOR SHALL VISIT THE SITE AND BECOME FAMILIAR WITH THE EXISTING CONDITIONS OF THE PROJECT AREA.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR PERFORMING THEIR OWN INVESTIGATIONS AND MAKING THEIR OWN ASSUMPTIONS REGARDING SITE SURFACE AND SUBSURFACE CONDITIONS. THIS INCLUDES THE LOCATION AND CONSISTENCY OF ANY EXISTING ROCK LAYERS UNDERLYING THE PROJECT SITE. CONTACT THE ENGINEER REGARDING ANY DISCREPANCIES THAT MAY AFFECT THE ABILITY TO CONSTRUCT FROM THESE PLANS AS DESIGNED.
3. EXISTING CONDITIONS WERE DETERMINED THROUGH A VARIETY OF METHODS THAT MAY INCLUDE SURVEY, AERIAL IMAGERY, AVAILABLE RECORDS, GIS DATA, ETC. SUBSURFACE CONDITIONS ARE APPROXIMATE AND MAY NOT INCLUDE ALL UTILITIES AND OTHER SITE IMPROVEMENTS PRESENT ON SITE. THE CONTRACTOR SHALL MAKE EXPLORATION EXCAVATIONS AND LOCATE EXISTING UNDERGROUND UTILITIES SUFFICIENTLY AHEAD OF CONSTRUCTION TO PERMIT REVISIONS TO PLANS WHEN CONFLICTS AND DISCREPANCIES ARE FOUND.

CONSTRUCTION

1. THE CONTRACTOR SHALL INSTALL TRAFFIC CONTROL WHILE WORKING IN THE PUBLIC RIGHT-OF-WAY AS SHOWN IN THESE PLANS. IF PLANS ARE NOT PROVIDED, CONTRACTOR SHALL COORDINATE AND PROVIDE CONTROLS TO THE SATISFACTION OF THE RIGHT-OF-WAY OWNER.
2. THE CONTRACTOR SHALL PROTECT ALL TREES OVER 3" CALIPER FROM DAMAGE. NO TREE SHALL BE REMOVED WITHOUT PERMISSION OF THE OWNER, UNLESS SHOWN OTHERWISE ON THESE PLANS.
3. THE CONTRACTOR SHALL DISPOSE ALL WASTE MATERIAL RESULTING FROM THE PROJECT OFF-SITE AND IN STRICT CONFORMANCE WITH ALL LOCAL CODES AND ORDINANCES.
4. ALL MANHOLES, CATCH BASINS, UTILITY VALVES AND METER PITS ARE TO BE ADJUSTED OR REBUILT TO GRADE AS REQUIRED. NOT ALL ADJUSTMENTS ARE INDICATED IN THE PLANS.
5. THE CONTRACTOR SHALL STREET SWEEP OR OTHERWISE CLEAN ALL ACCESS ROUTES TO THE SITE AT CONCLUSION OF THE PROJECT.

SHOP DRAWINGS

1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWING A MINIMUM OF 7 DAYS PRIOR TO THE REQUESTED DATE OF APPROVAL. ENGINEER SHALL REVIEW SHOP DRAWINGS OR SAMPLES CONFORMANCE WITH THE DESIGN FOR THIS PROJECT AS DESCRIBED IN THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS. THE ENGINEER'S REVIEW SHALL NOT EXTEND TO MEANS OR METHODS OF CONSTRUCTION. CONTRACTOR SHALL BE RESPONSIBLE FOR ANY VARIATION FROM THE REQUIREMENTS OF THE CONTRACT DOCUMENTS UNLESS CONTRACTOR HAS NOTIFIED ENGINEER OF EACH SUCH VARIATION AT THE TIME OF SUBMISSION, AND OBTAINED ENGINEER'S WRITTEN APPROVAL OF EACH SUCH VARIATION. PRIOR TO SUBMITTING EACH SHOP DRAWING OR SAMPLE, CONTRACTOR SHALL HAVE REVIEWED AND VERIFIED:
   A. ALL FIELD MEASUREMENTS, QUANTITIES, DIMENSIONS, SPECIFIED PERFORMANCE CRITERIA, INSTALLATION REQUIREMENTS, MATERIALS, CATALOG NUMBERS AND SIMILAR INFORMATION WITH RESPECT THERETO;
   B. ALL MATERIALS WITH RESPECT TO INTENDED USE, FABRICATION, SHIPPING, HANDLING, STORAGE, ASSEMBLY AND INSTALLATION PERTAINING TO THE PERFORMANCE OF THE WORK;
   C. ALL INFORMATION RELATIVE TO MEANS, METHODS, TECHNIQUES, SEQUENCES AND PROCEDURES OF CONSTRUCTION AND SAFETY PRECAUTIONS AND PROGRAMS INCIDENT THERETO;
   D. CONTRACTOR SHALL ALSO HAVE REVIEWED AND COORDINATED EACH SHOP DRAWING OR SAMPLE WITH OTHER SHOP DRAWINGS AND SAMPLES, AND WITH THE REQUIREMENTS OF THE WORK AND THE CONTRACT DOCUMENTS.
   E. ALL SUBMITTED SHOP DRAWINGS SHALL BEAR A STAMP OR SPECIFIC WRITTEN INDICATION AND SIGNATURE THAT CONTRACTOR HAS FULLY COMPLETED THE ABOVE TASKS.
2. SHOP DRAWINGS AS DESCRIBED ABOVE ARE REQUIRED FOR, BUT NOT LIMITED TO, THE FOLLOWING:
   A. ALL SANITARY SEWER STRUCTURES TO BE INSTALLED WITH THIS PROJECT.
   B. ANY ITEMS IN THESE PLANS THAT ALLOW FOR AN "APPROVED EQUAL" ALTERNATIVE.

SANITARY SEWER GENERAL NOTES

1. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE CONSTRUCTION WITH CITY OF LEE'S SUMMIT, MISSOURI.
2. ALL PIPE LENGTHS ARE CALCULATED LINEARLY FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
4. ALL STRUCTURE DIMENSIONS ARE TO INSIDE FACE OF STRUCTURE.
5. COORDINATES ARE PROVIDED AT THE CENTER OF STRUCTURE. ADDITIONAL COORDINATES PROVIDED ARE PER LOCAL CODES AND ORDINANCES OR AS AN AID WHEN ORIENTING THE LID DURING INSTALLATION.
6. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF SANITARY SEWER.
7. SANITARY SEWER TRENCHES SHALL BE CONSTRUCTED SUCH THAT UNDISTURBED EXISTING SOIL OR FILL COMPACTED TO 95% PROCTOR DENSITY IS AT A DEPTH THAT IS 18" ABOVE TOP OF PROPOSED PIPE.
8. MANHOLE INVERT CHANNELS SHALL BE SMOOTH, CIRCULAR, AND CONFORMING TO ½ THE ADJACENT PIPE SECTION (INVERT TO CENTER). CHANGES IN DIRECTION OF FLOW SHALL BE MADE WITH A SMOOTH CURVE AND MAINTAIN SHAPE THROUGHOUT. CHANGES IN GRADE OF ADJACENT PIPES SHALL BE TRANSITIONED SMOOTHLY AND EVENLY THROUGH THE MANHOLE.
9. PIPE PENETRATIONS SHALL BE USE GASKETS TO ENSURE WATERTIGHT SEALS.
10. TRACING TAPE SHALL BE INSTALLED ALONG ALL NON-METALLIC SURFACES OR AS DIRECTED BY LOCAL CODES AND ORDINANCES.
11. SEWER LINE INSPECTIONS AND TESTING MUST BE SCHEDULED A MINIMUM OF TWO FULL BUSINESS DAYS IN ADVANCE. CONTRACTOR SHALL FURNISH ALL TESTING EQUIPMENT. TESTING SHALL INCLUDE
    A. MANDREL TEST OF ALL GRAVITY SEWERS. IF THE MANDREL TEST FAILS ON ANY SECTION OF PIPE, THAT SECTION SHALL BE UNCOVERED AND REPLACED.
    B. AIR PRESSURE TEST OF ALL GRAVITY SEWERS.
    C. VACUUM TEST OF ALL MANHOLES.
12. REFER TO SHEET C215 FOR SANITARY DESIGN & SEWER LATERAL INFORMATION.
13. ALL SERVICE LINE CONNECTIONS SHALL BE MADE WITH AN 8"X4" PVC WYE, 4"PVC 45° BEND, AND THE APPROPRIATE LENGTH OF 4" PVC LATERAL (UNLESS OTHERWISE SHOWN) AND CAP. SEE DETAIL SHEET C216.
14. MSFE- INDICATES LOWEST FLOOR SERVICEABLE BY PROPOSED SANITARY SEWER.
15. MAXIMUM DEVIATION FROM LATERAL STATION LOCATIONS AS CALLED OUT SHALL BE 2.0' TO AVOID PIPE JOINT.
16. SANITARY LATERALS ARE DESIGNED @ 2.00% SLOPE. IF RISER IS INDICATED, IT IS TO BE AT THE SANITARY MAIN, UNLESS OTHERWISE NOTED.
17. REFER TO CURRENT CITY SPECIFICATIONS FOR MINIMUM PIPE SLOPES.
18. CONTRACTOR MAY BE REQUIRED TO RECONSTRUCT PIPE AND STRUCTURE IF MINIMUM INVERT DROP OR PIPE SLOPE REQUIREMENTS ARE NOT MET.
19. SANITARY STRUCTURES SHALL BE PER CURRENT CITY DETAILS. IF CITY DOES NOT HAVE PUBLISHED DETAILS STRUCTURES SHALL BE PER CURRENT APWA SPECIFICATIONS.
20. GRAVITY SANITARY SEWER AND WATER LINES SHALL BE SEPARATED BY A MINIMUM OF 10'HORIZONTALLY WHEN PARALLEL AND 2'VERTICALLY WHEN CROSSING. WATER LINES SHALL CROSS ABOVE SANITARY SEWERS.

CONTROL POINT TABLE

POINT NUMBER	NORTHING	EASTING	POINT ELEVATION	DESCRIPTION
11	978424.224	2811650.442	1030.85	5/8" IB/CAP SET IN THE CENTER MEDIAN OF ROUTE 150. IT IS DUE NORTH OF THE CENTER LINE OF THE DRIVEWAY TO PROPERTY ADDRESS 2025 ROUTE 150. IT IS 12.15 FT WEST OF A LIGHT POLE, 8.5 FT SOUTH OF THE BACK OF CURB, AND 8.1 FT NORTH OF THE BACK OF CURB.
12	978340.573	2812332.280	1036.11	5/8" IB/CAP SET ON THE EAST SIDE OF SW PRYOR RD AT THE SOUTHEAST CORNER OF THE INTERSECTION OF ROUTE 150 AND SW PRYOR RD. IT IS 2.15 FT EAST OF THE BACK OF CURB, 19 FT WEST OF THE TRAFFIC SIGNAL POLE, AND 9.6 FT WEST OF A VAULT.
13	977064.448	2812265.992	1012.10	5/8" IB/CAP SET ON THE NORTHEAST CORNER OF THE INTERSECTION OF SW PRYOR RD AND SW NAPA VALLEY DR. IT IS 6 FT EAST OF THE BACK OF CURB, 10.2 FT NORTH OF THE CORNER OF THE SIDEWALK, AND 7.25 FT WEST OF ROCK LANDSCAPE BORDER.
14	977092.478	2810924.856	1040.93	5/8" IB/CAP SET IN THE NORTHWEST CORNER OF THE SOUTH ADJOINING PROPERTY. IT IS 7.5 FT EAST OF THE FENCE LINE, AND 45 FT SOUTH OF OF THE TREE LINE.
18	978446.811	2810956.695	1050.47	5/8" IB/CAP SET IN THE CENTER MEDIAN OF ROUTE 150. THE POINT IS DIRECTLY SOUTH OF A WHITE MAILBOX ON AN ORANGE POST FOR HOUSE ADDRESS 2144 ROUTE 150. IT IS 6.6 FT SOUTH OF THE BACK OF CURB, 5.8 FT NORTH OF THE BACK OF CURB, AND 31 FT EAST OF A LIGHT POLE.
BENCHMARK				
BMK1	977045.350	2812211.924	1014.83	CHISELED PLUS ON THE EAST FLANGED BOLT OF THE FIRE HYDRANT ON THE WEST SIDE OF SW PRYOR ROAD ON ADJOINING PROPERTY SOUTH OF THE SOUTHWEST CORNER OF SUBJECT PROPERTY.
BMK2	978357.416	2811627.737	1031.31	RAILROAD SPIKE IN THE NORTH FACE OF POWER POLE LOCATED ON THE SOUTH SIDE MISSOURI STATE HIGHWAY 150 AT THE WEST SIDE OF THE DRIVEWAY TO 2025 MISSOURI STATE HIGHWAY 150, LEE'S SUMMIT, MO.

AS-BUILT

3/10/2021

ESTIMATE OF QUANTITIES

ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
	STREET			
1	8" SANITARY PVC (SDR-26)	L.F.	~~4178.11~~	4,185.40
2	12" SANITARY PVC (SDR-26)	L.F.	~~858.49~~	857.78
3	MANHOLES, STD. 4' DIA.	EA.	~~21~~	21
4	CONNECTION TO EXISTING STUB	EA.	~~1~~	1
5	TRACER WIRE	L.F.	~~3349.81~~	3349.81*
6	TRACER WIRE BOX	EA.	~~101~~	101*
7	SERVICE WYE	EA.	~~101~~	101*
8	4" LATERAL PIPE	L.F.	~~3349.81~~	3349.81*

AS PROVIDED BY CONTRACTOR*

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.

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TEL 816.361.1177
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STATE OF MISSOURI
BROCK M. WORTHLEY
NUMBER PE-2019000237
3/10/2021
PROFESSIONAL ENGINEER

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
2	7/24/2020	ESTIMATE OF QUANTITIES UPDATED	

GENERAL NOTES
SANITARY SEWER PLANS

OSAGE
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2020

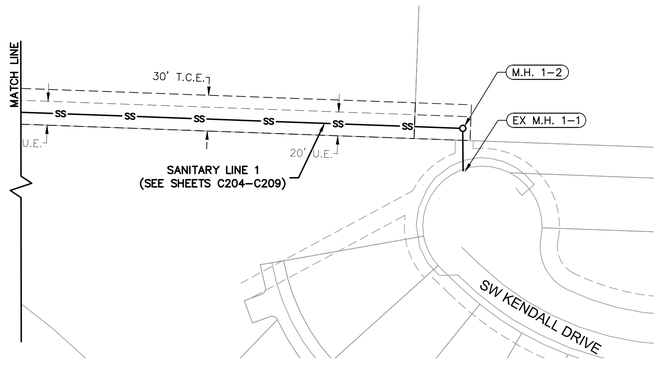
drawn by: AA
checked by: SS
designed by: AA
QA/QC by: JES
project no.: A19-2339
drawing no.: C TTL01 A192339
date: 3/17/2020

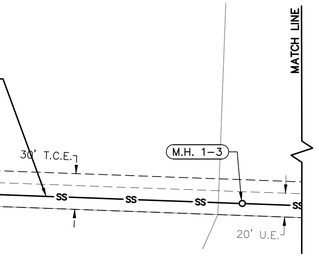
SHEET
C202

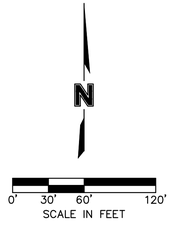
DWG: F:\2019\2001-2500\019-2339-A\40-Design\AutoCAD\Final Plans - Asbuilts\Sheets\GNCV\SANITARY\C_TTL01_A192339.dwg USER: bworthley
DATE: Mar 10, 2021 3:42pm XREFS: C_PTBLK_A192339 C_PBNDY_A192339

STRUCTURES		
STRUCTURE ID	NORTHING	EASTING
EX M.H. 1–1	977050.6180	2813007.8630
M.H. 1–2	977088.6386	2813007.5150
M.H. 1–3	977102.6786	2812623.6045
M.H. 1–4	977115.8940	2812262.2375
M.H. 1–5	977123.3798	2812187.9232
M.H. 1–6	977452.5727	2812200.1858
M.H. 1–7	977502.2385	2812010.2904
M.H. 1–8	977562.1899	2812012.1899
M.H. 1–9	977834.6532	2812020.8230
M.H. 1–10	978173.4941	2812031.5592
M.H. 1–11	978186.5102	2811620.7654
M.H. 1–12	978196.7501	2811297.5874
M.H. 2–1	977570.4687	2811754.3228
M.H. 2–2	977578.8528	2811489.8379
M.H. 3–1	977135.9030	2811797.5849
M.H. 3–2	977139.6553	2811680.6423
M.H. 3–3	977266.8932	2811684.6738
M.H. 3–4	977422.4460	2811689.6326
M.H. 4–1	977274.0858	2811457.6700
M.H. 4–2	977279.3112	2811292.7528
M.H. 7–1	977838.1830	2811762.8054
M.H. 7–2	978108.4677	2811771.3694

NOT AS-BUILT







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NUMBER PE-2019000237
3/10/2021
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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

GENERAL LAYOUT
SANITARY SEWER PLANS

OSAGE
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2020

drawn by:	AA
checked by:	SS
designed by:	AA
QA/QC by:	JES
project no.:	A19-2339
drawing no.:	C_GEN01_A192339
date:	3/17/2020

SHEET
C203

DWG: F:\2019\2001-2500\019-2339-A\40-Design\AutoCAD\Final Plans - Asbuilts\Sheets\GNCV\SANITARY\C_GEN01_A192339.dwg USER: bworthley
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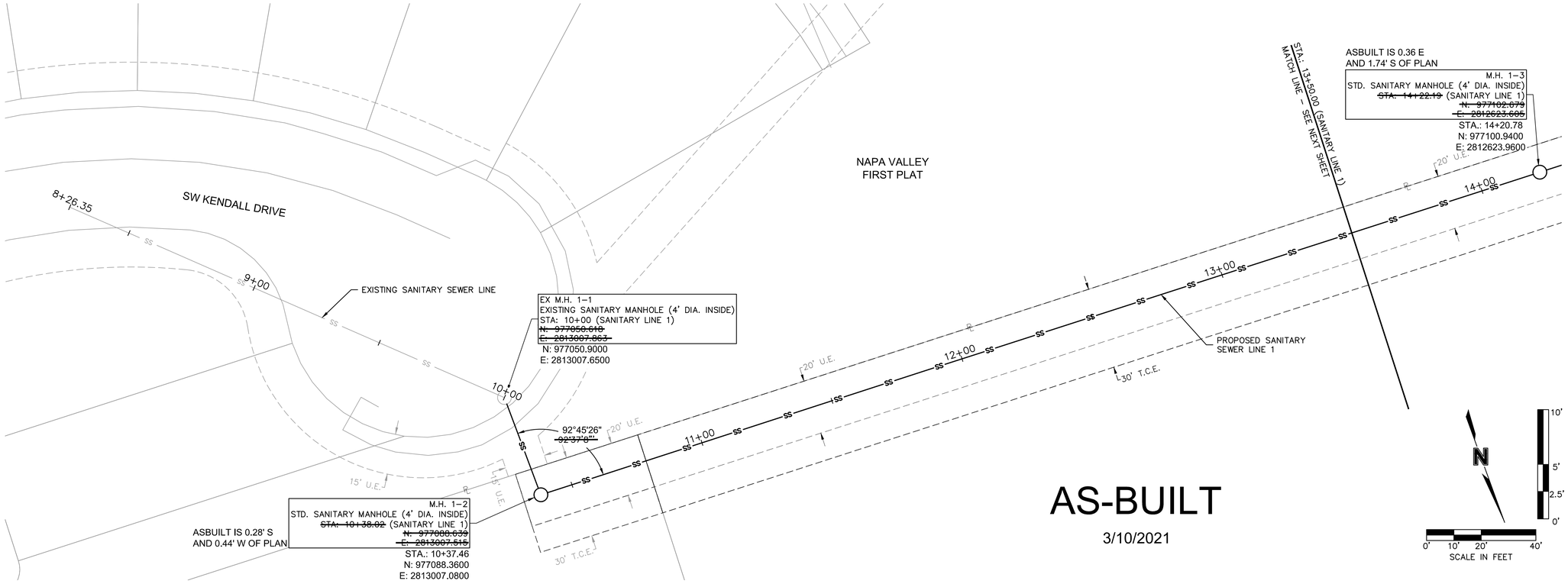

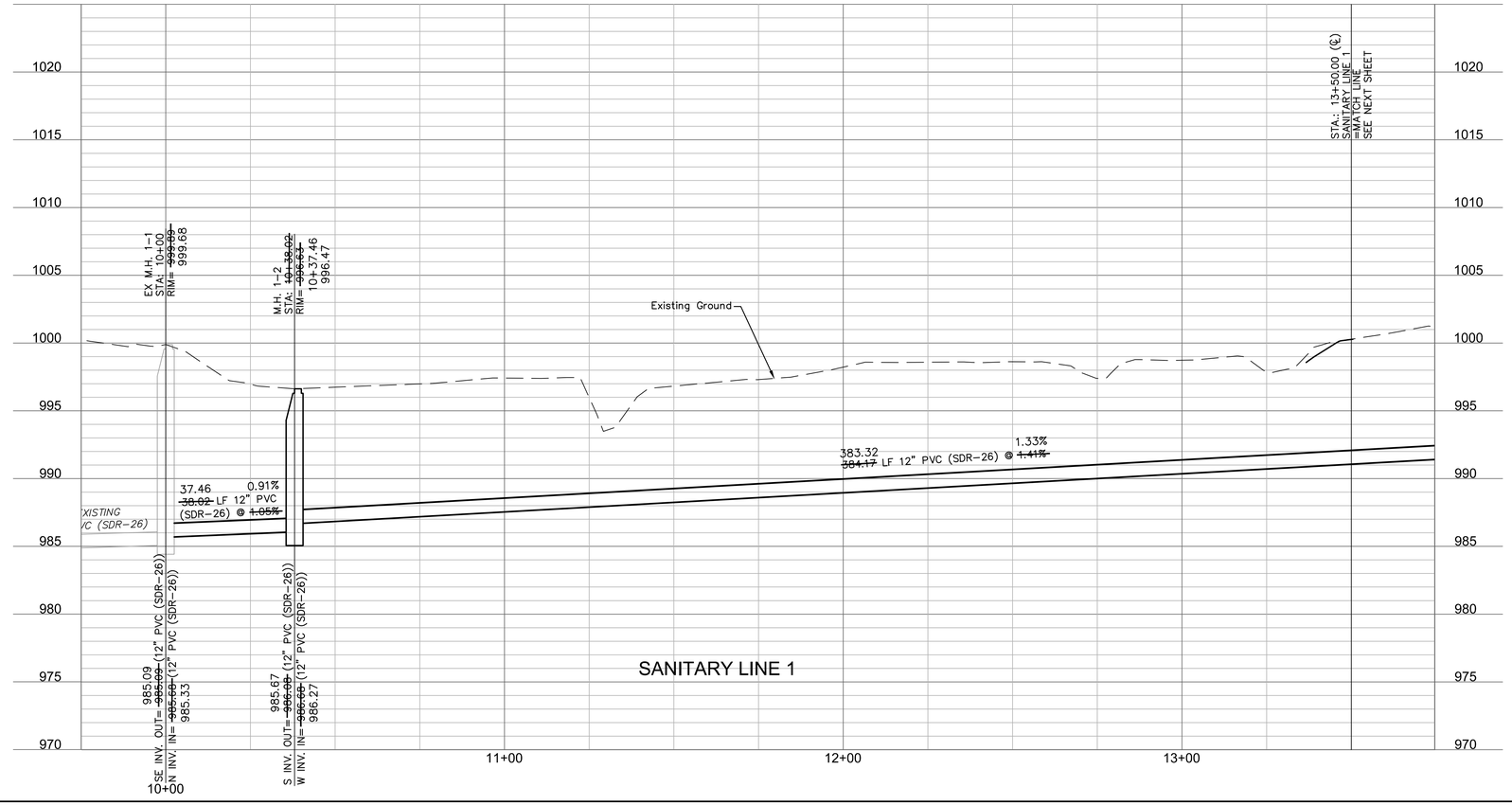

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY
2	7/24/2020	MH 1-2 AND CONNECTED PIPES ADJUSTED BASED ON FINDINGS ON SITE	

SANITARY PLAN & PROFILE (LINE 1)
SANITARY SEWER PLANS

OSAGE
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2020

drawn by: AA
checked by: SS
designed by: AA
QA/QC by: JES
project no.: A19-2339
drawing no.: C_SSWR01_A192339
date: 3/17/2020

SHEET
C204

DWG: F:\2019\2001-2500\019-2339-A\40-Design\AutoCAD\Final Plans – Asbuilts\Sheets\GNCV\SANITARY\C_SSWR01_A192339.dwg USER: bworthley
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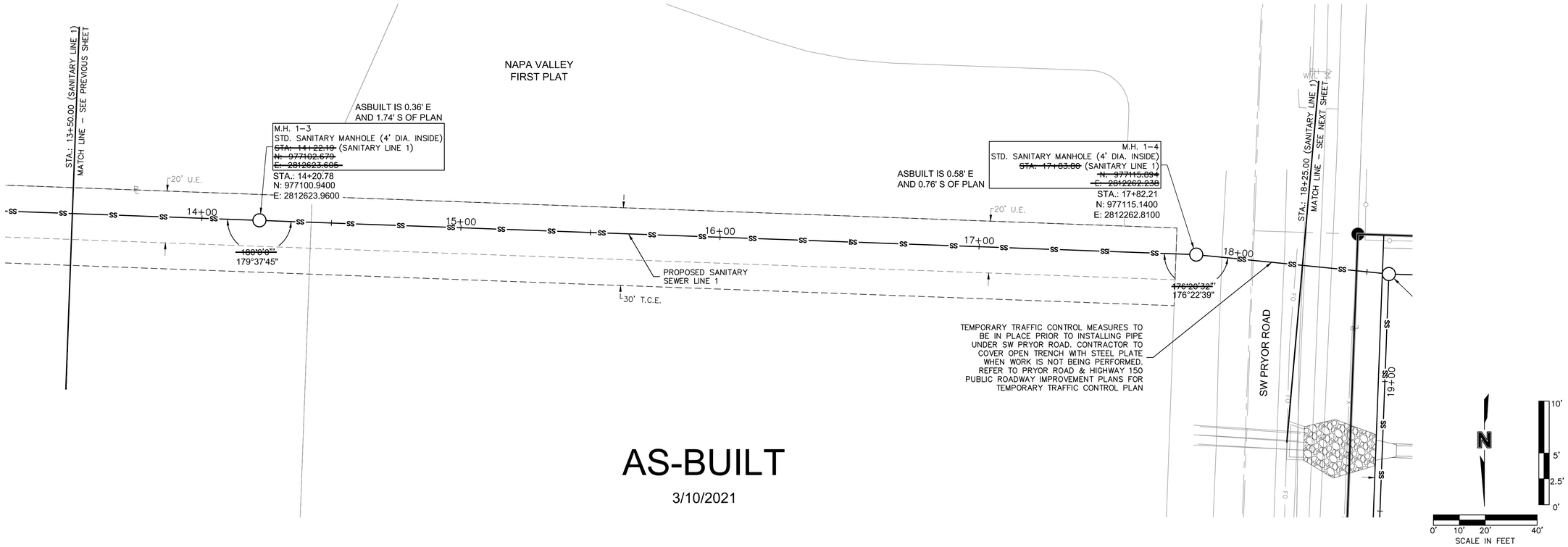
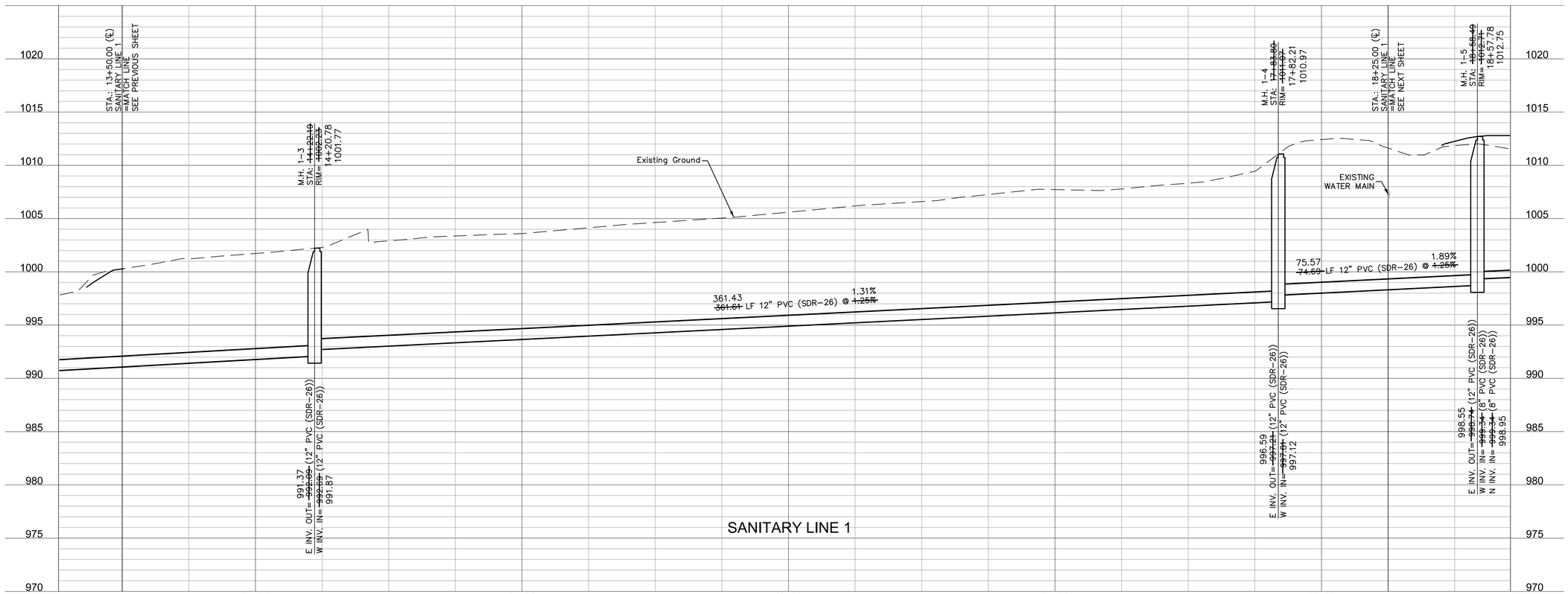


AS-BUILT

3/10/2021



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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	4/24/2020	TEMPORARY TRAFFIC CONTROL NOTE ADDED	

SANITARY PLAN & PROFILE (LINE 1 CONT'D)
SANITARY SEWER PLANS

OSAGE
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2020

drawn by: AA
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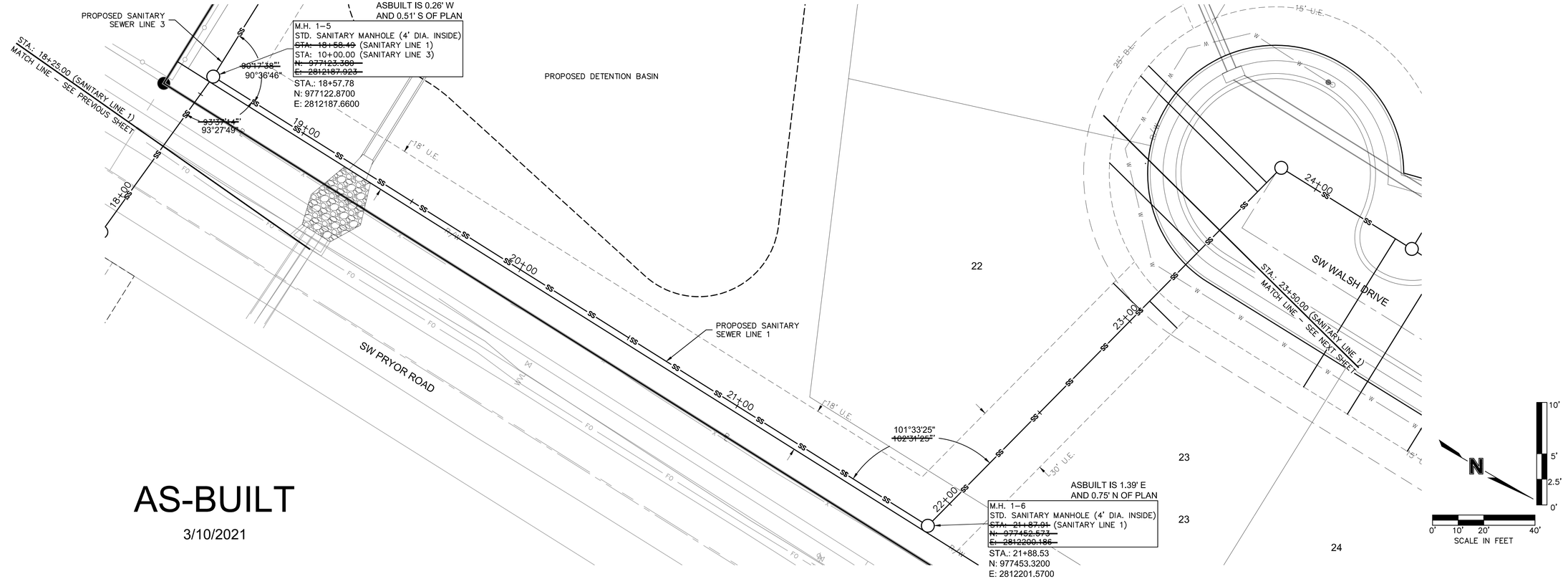
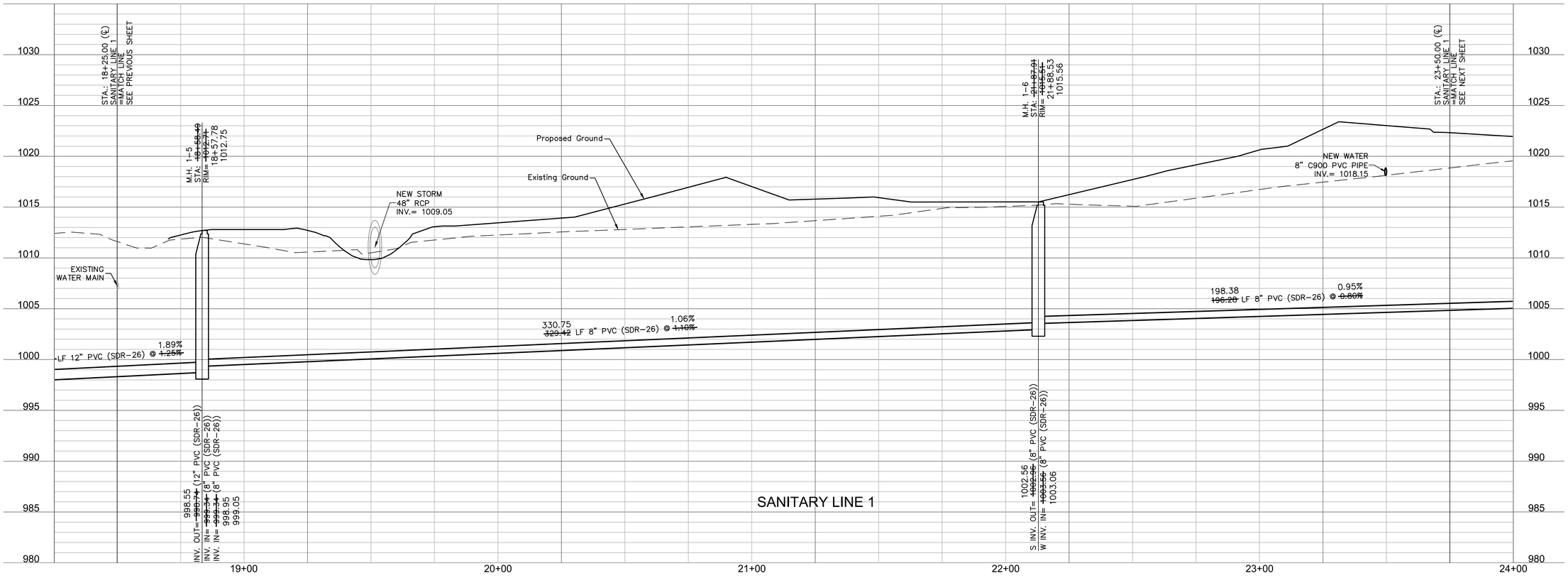
QA/QC by: JES
project no.: A19-2339
drawing no.: C_SSWR01_A192339
date: 3/17/2020

SHEET
C205



AS-BUILT

3/10/2021



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SANITARY PLAN & PROFILE (LINE 1 CONT'D)
SANITARY SEWER PLANS

OSAGE
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2020

drawn by: AA
checked by: SS
designed by: AA
QA/QC by: JES
project no.: A19-2339
drawing no.: C_SSWR01_A192339
date: 3/17/2020

SHEET
C206

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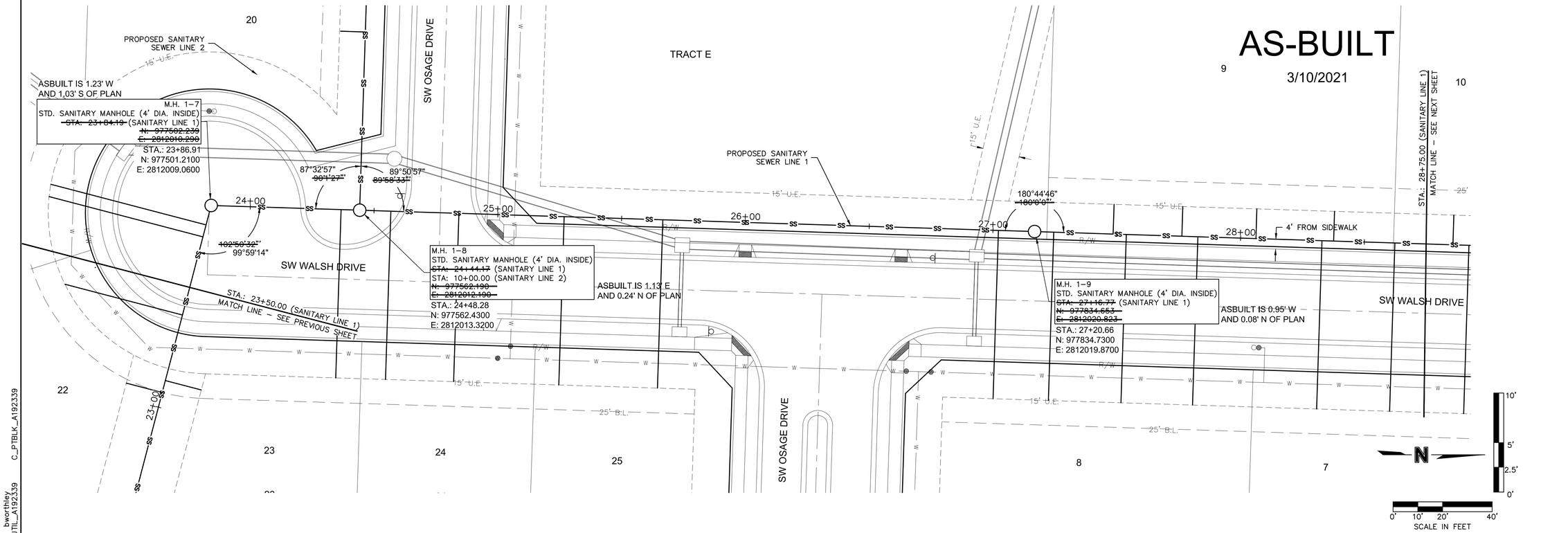
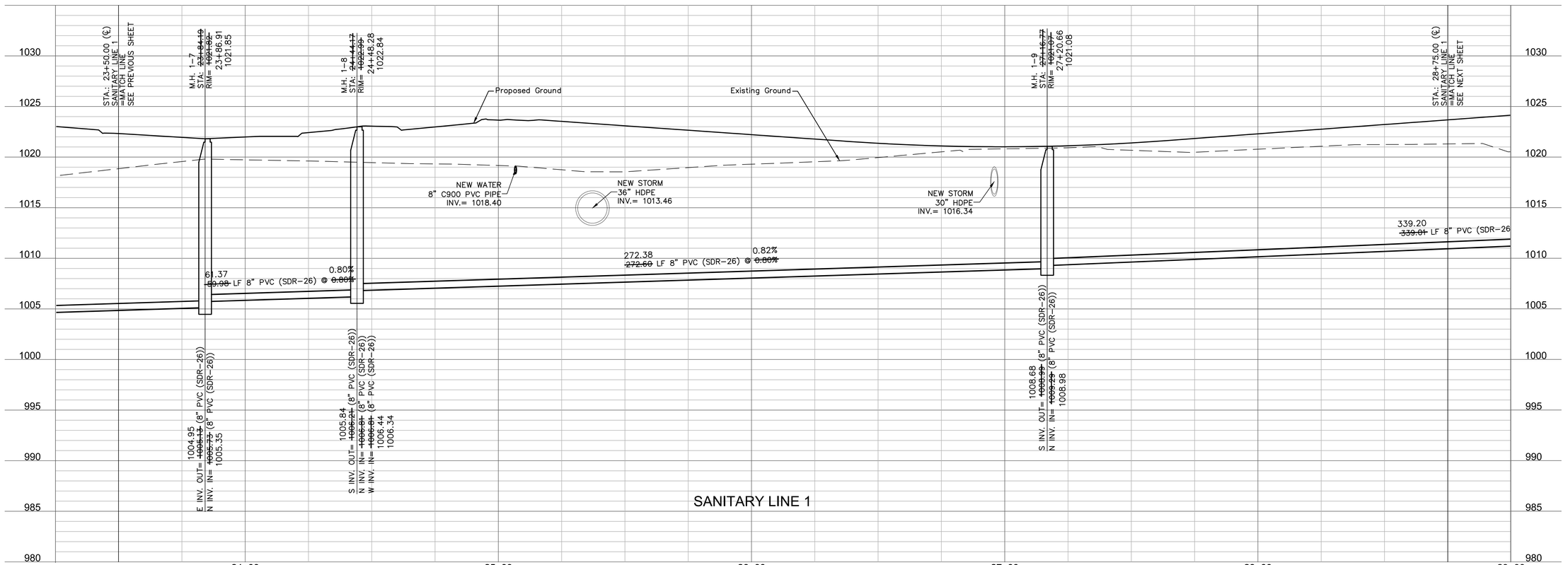
AS-BUILT

3/10/2021





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REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

SANITARY PLAN & PROFILE (LINE 1 CONT'D)
SANITARY SEWER PLANS

OSAGE
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2020

drawn by: AA
checked by: SS
designed by: AA
QA/QC by: JES
project no.: A19-2339
drawing no.: C_SSWR01_A192339
date: 3/17/2020

SHEET
C207

DWG: F:\2019\2001-2500\019-2339-A\40-Design\AutoCAD\Final Plans - Asbuilts\Sheets\GNCV\SANITARY\C_SSWR01_A192339.dwg USER: bworthley
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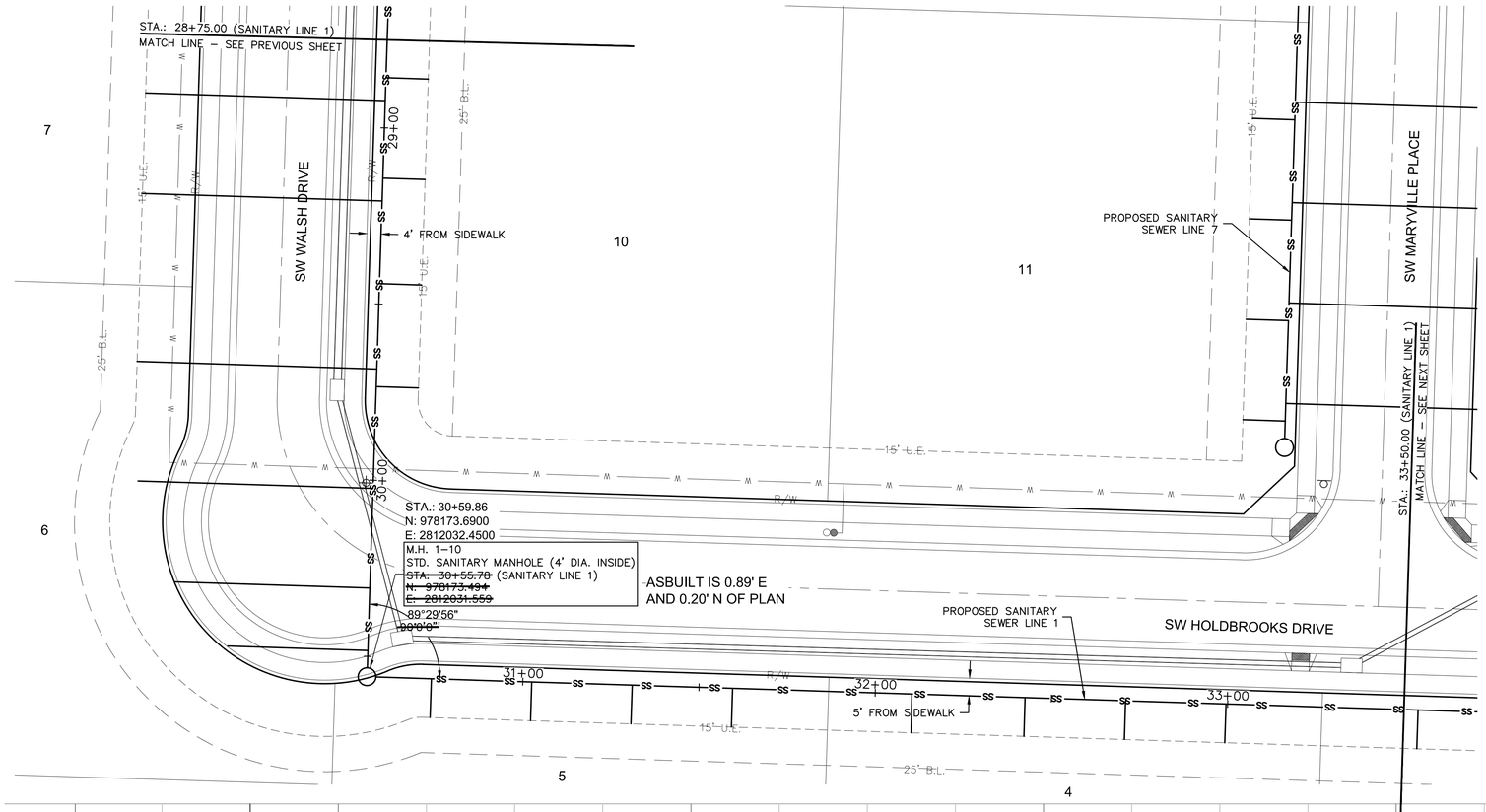
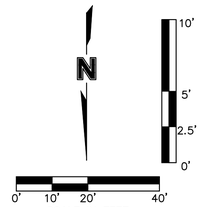
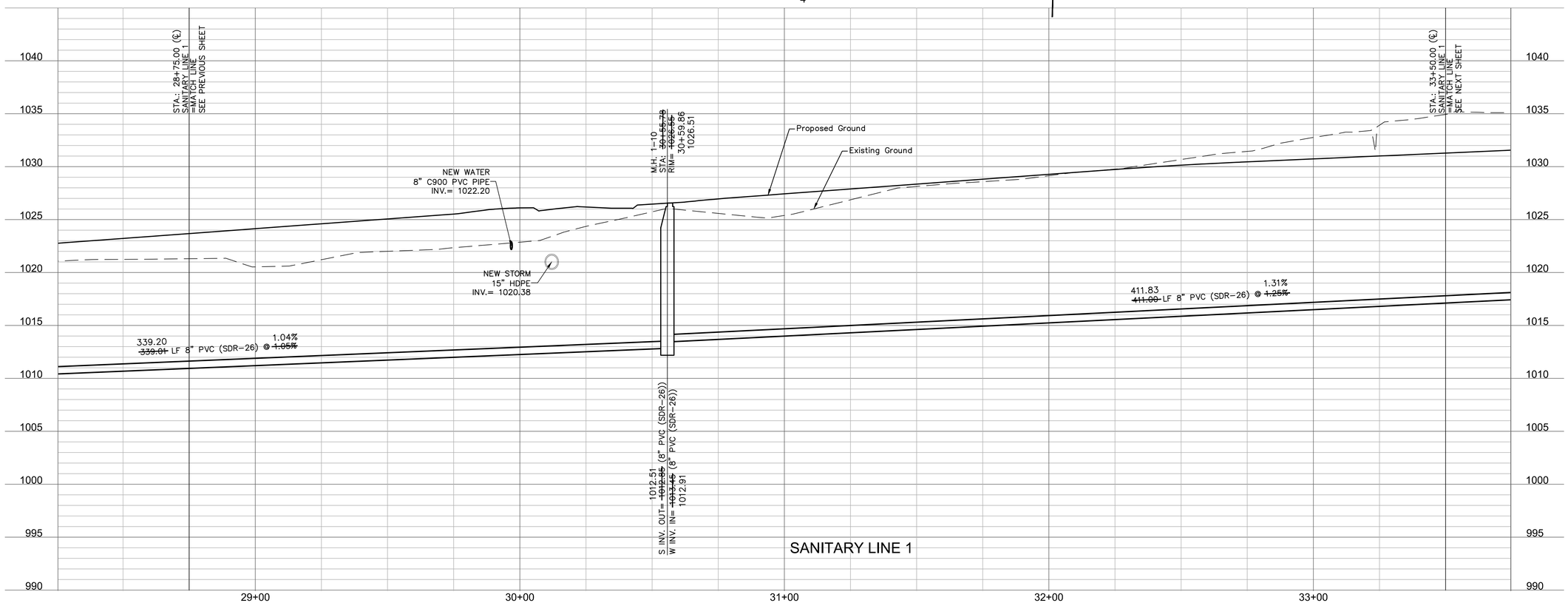


AS-BUILT

3/10/2021





SANITARY LINE 1

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SANITARY PLAN & PROFILE (LINE 1 CONT'D)
SANITARY SEWER PLANS

OSAGE
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2020

drawn by: AA
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QA/QC by: JES
project no.: A19-2339
drawing no.: C_SSWR01_A192339
date: 3/17/2020

SHEET
C208

DWG: F:\2019\2001-2500\019-2339-A\40-Design\AutoCAD\Final Plans - Asbuilts\Sheets\GNCV\SANITARY\C_SSWR01_A192339.dwg USER: bworthley
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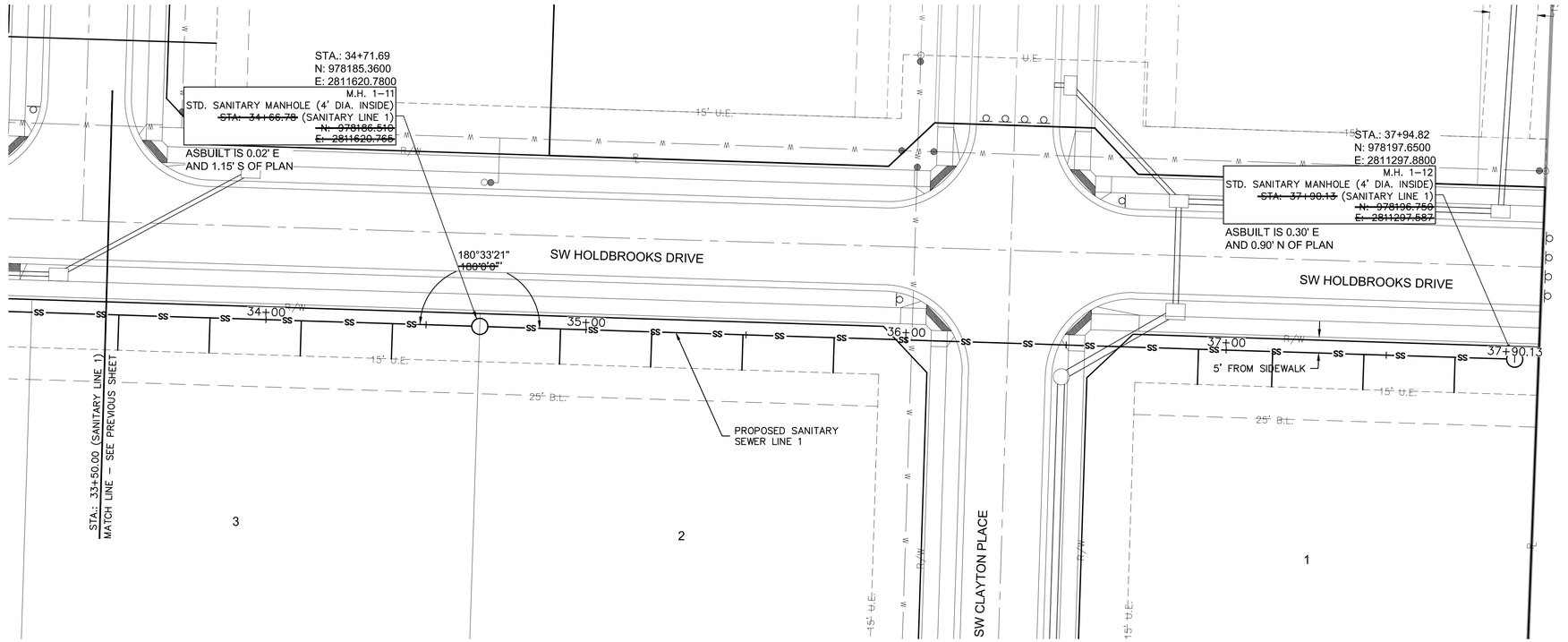
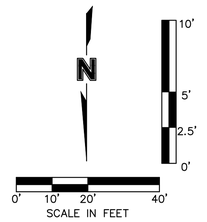
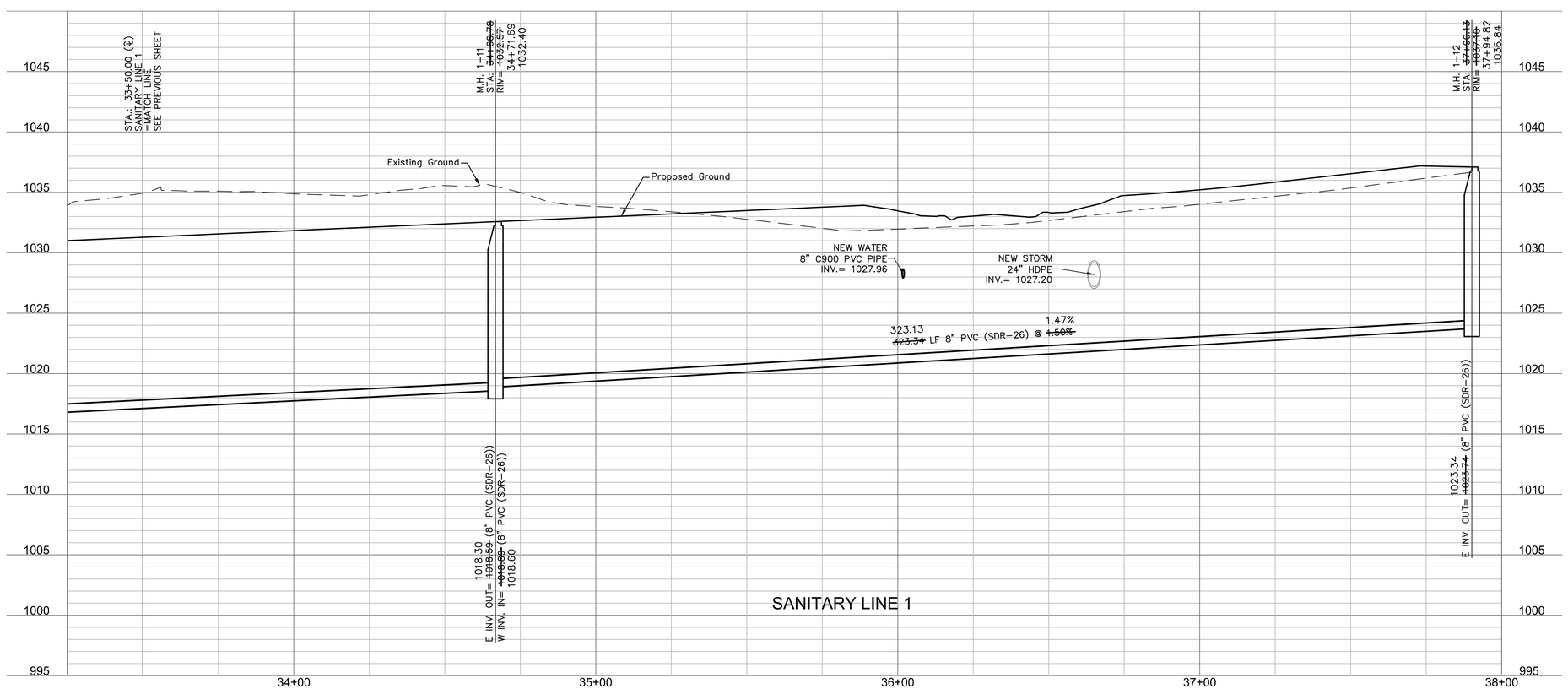


AS-BUILT

3/10/2021





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SANITARY PLAN & PROFILE (LINE 1 CONT'D)
SANITARY SEWER PLANS

OSAGE
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2020

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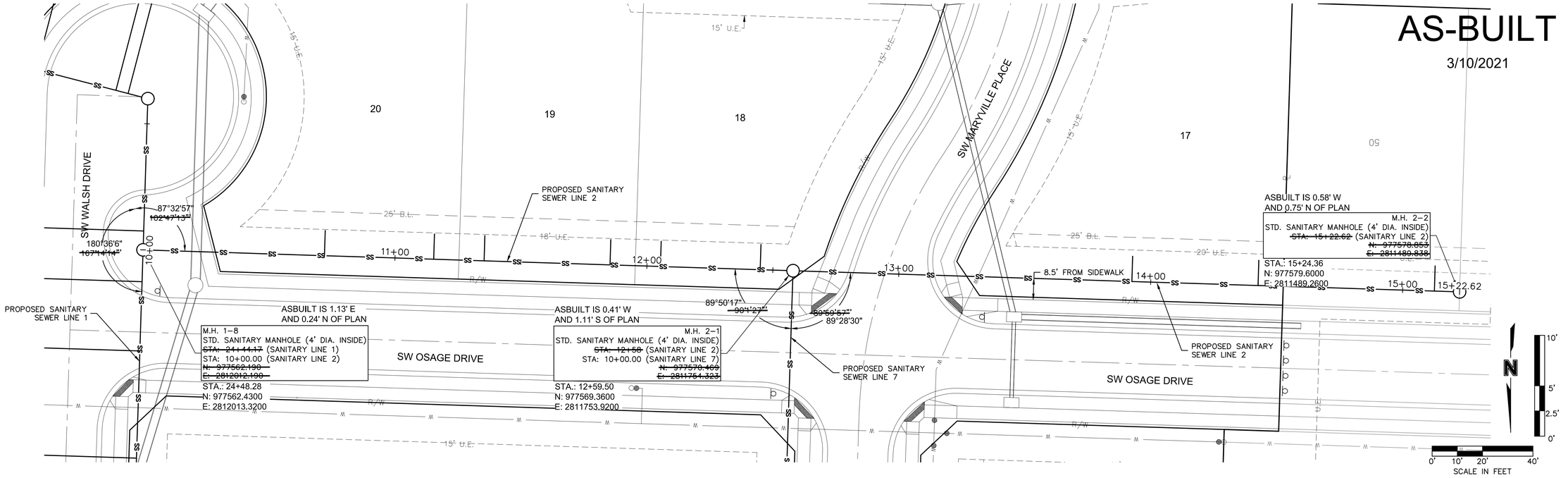
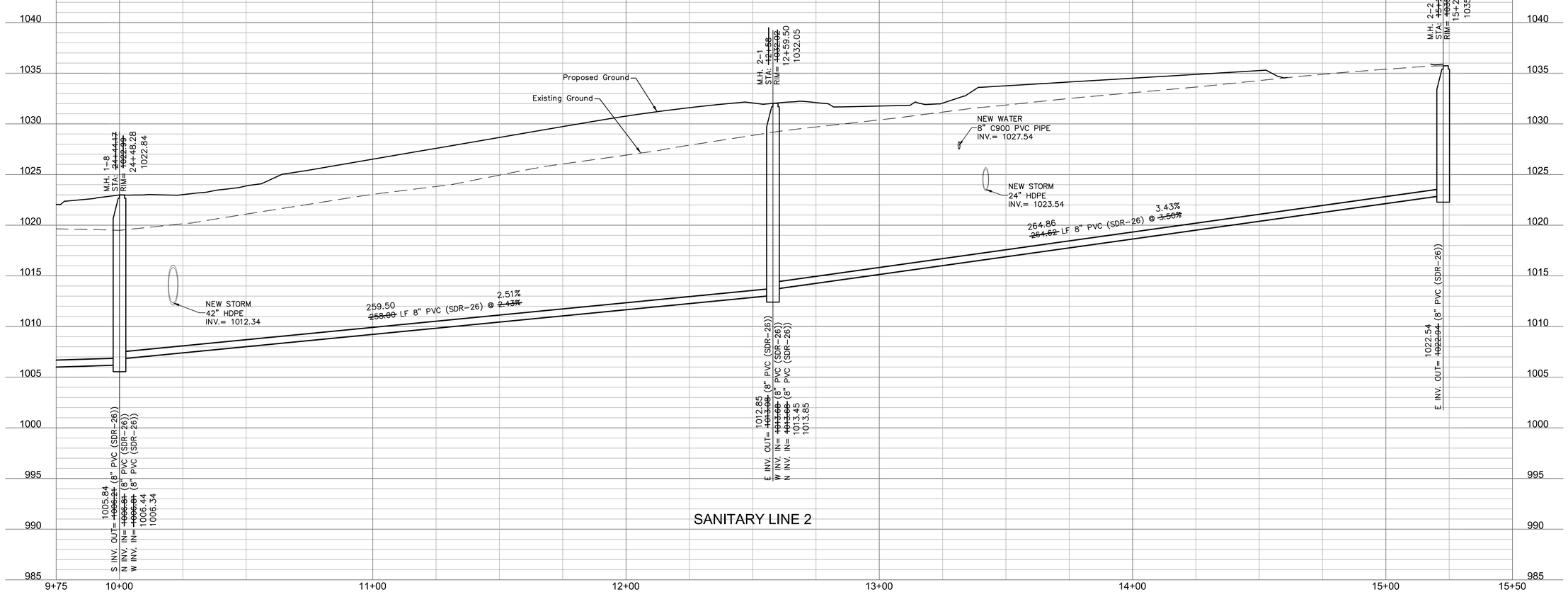
checked by:	SS
designed by:	AA
QA/QC by:	JES
project no.:	A19-2339
drawing no.:	C_SSWR01_A192339
date:	3/17/2020

SHEET
C209

AS-BUILT

3/10/2021





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SANITARY PLAN & PROFILE (LINE 2)
SANITARY SEWER PLANS

OSAGE
FIRST PLAT

2020

LEE'S SUMMIT, MISSOURI

drawn by: AA
checked by: SS
designed by: AA
QA/QC by: JES
project no.: A19-2339
drawing no.: C_SSWR02_A192339
date: 3/17/2020

SHEET
C210

DWG: F:\2019\2001-2500\019-2339-A\40-Design\AutoCAD\Final Plans - Asbuilts\Sheets\GNCV\SANITARY\C_SSWR02_A192339.dwg USER: bworthley
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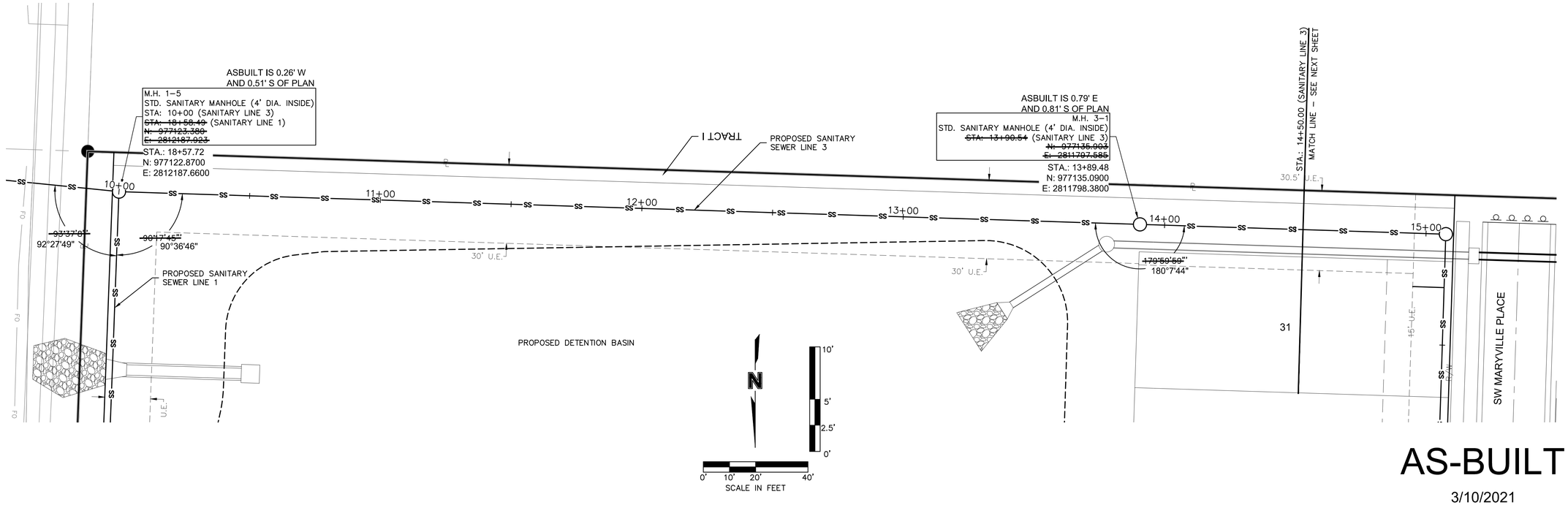
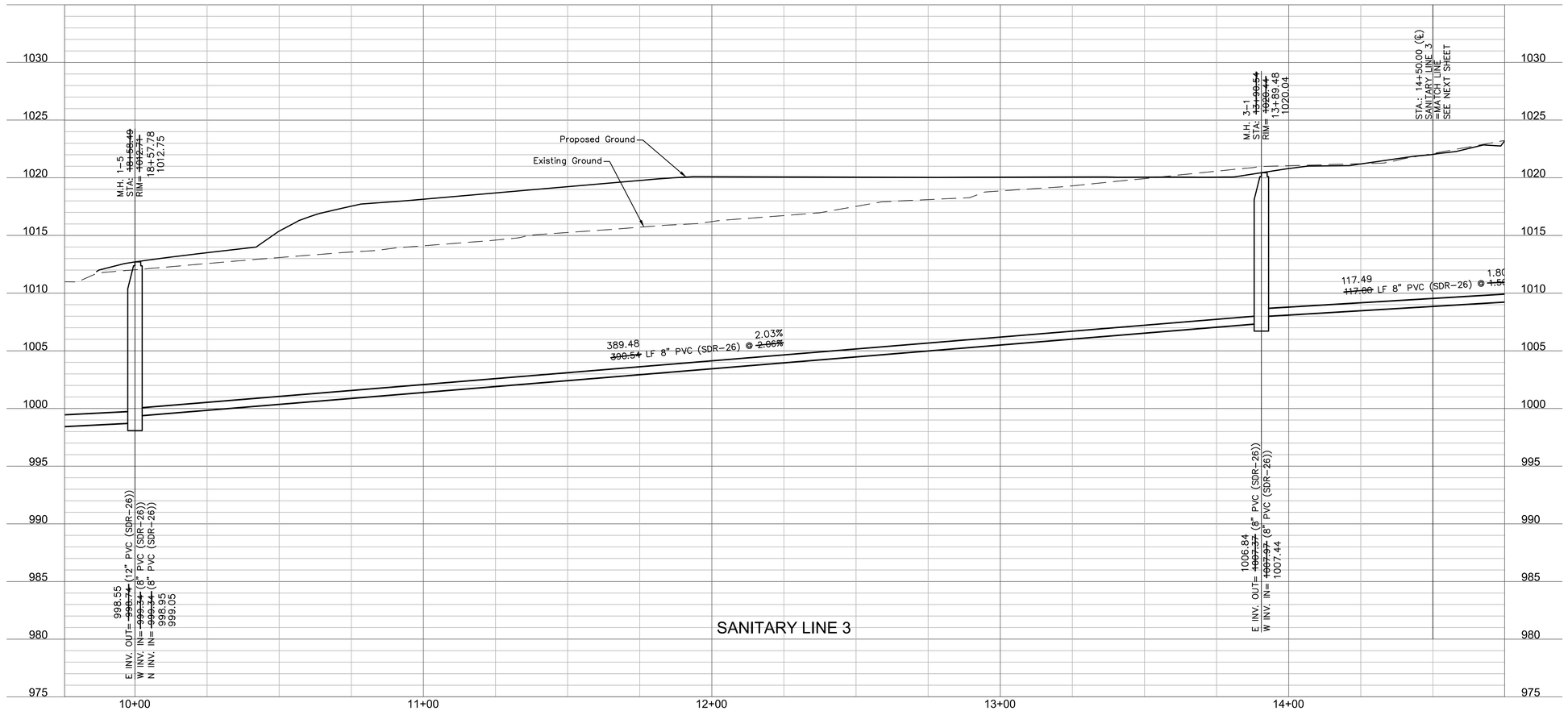


AS-BUILT

3/10/2021



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REV. NO.	DATE	REVISIONS DESCRIPTION	BY

REVISIONS

SANITARY PLAN & PROFILE (LINE 3)
SANITARY SEWER PLANS

OSAGE
FIRST PLAT

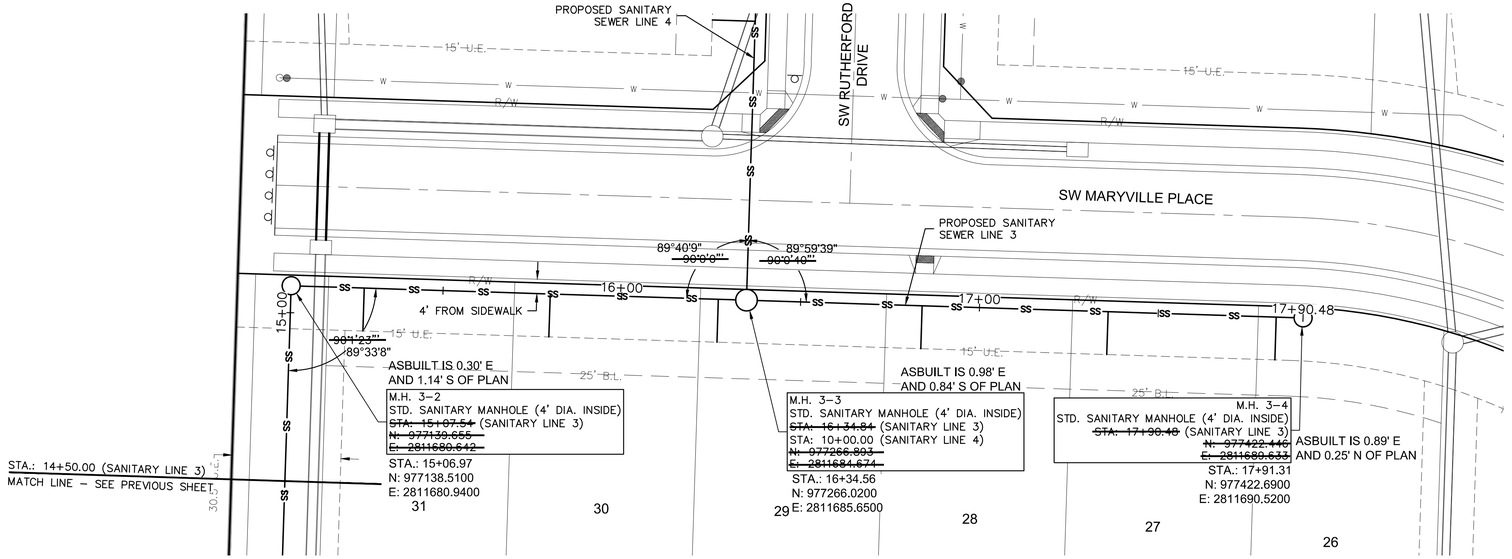
2020

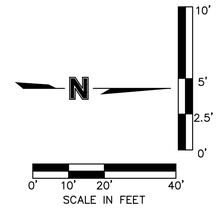
LEE'S SUMMIT, MISSOURI

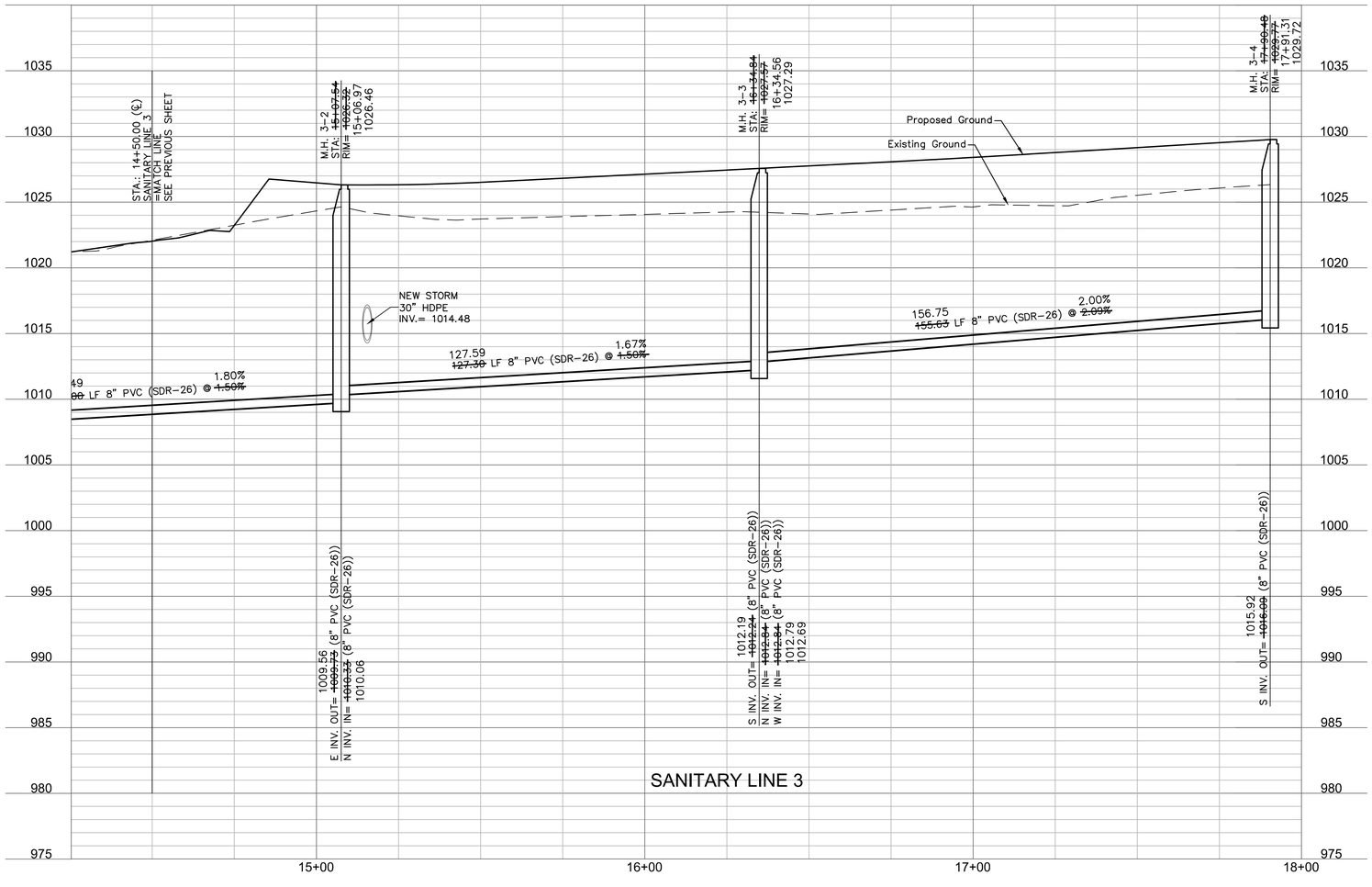
drawn by: AA
checked by: SS
designed by: AA
QA/QC by: JES
project no.: A19-2339
drawing no.:C_SSWR02_A192339
date: 3/17/2020

SHEET
C211

DWG: F:\2019\2001-2500\019-2339-A\40-Design\AutoCAD\Final Plans - Asbuilts\Sheets\GNCV\SANITARY\C_SSWR02_A192339.dwg USER: bworthley
DATE: Mar 10, 2021 3:45pm XREFS: C_XBASE_A192339 C_FBASE_A192339 C_PBASE_A192339 C_PBNDY_A192339 C_PUTIL_A192339 C_PTBLK_A192339







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SANITARY PLAN & PROFILE (LINE 3 CONT'D)
SANITARY SEWER PLANS

OSAGE
FIRST PLAT

2020

LEE'S SUMMIT, MISSOURI

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checked by:	SS
designed by:	AA
QA/QC by:	JES
project no.:	A19-2339
drawing no.:	C_SSWR02_A192339
date:	3/17/2020

SHEET
C212

DWG: F:\2019\2001-2500\019-2339-A\40-Design\AutoCAD\Final Plans - Asbuilts\Sheets\GNCV\SANITARY\C_SSWR02_A192339.dwg USER: bworthley
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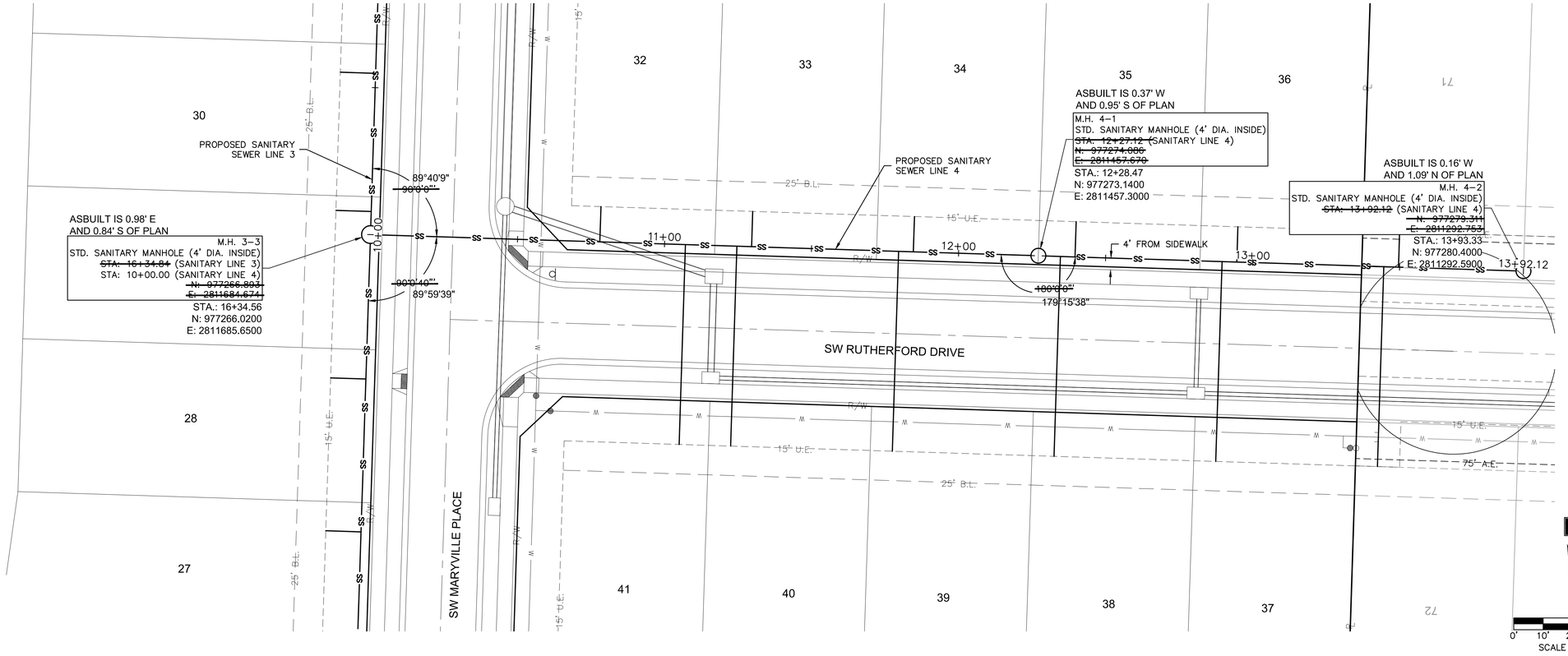
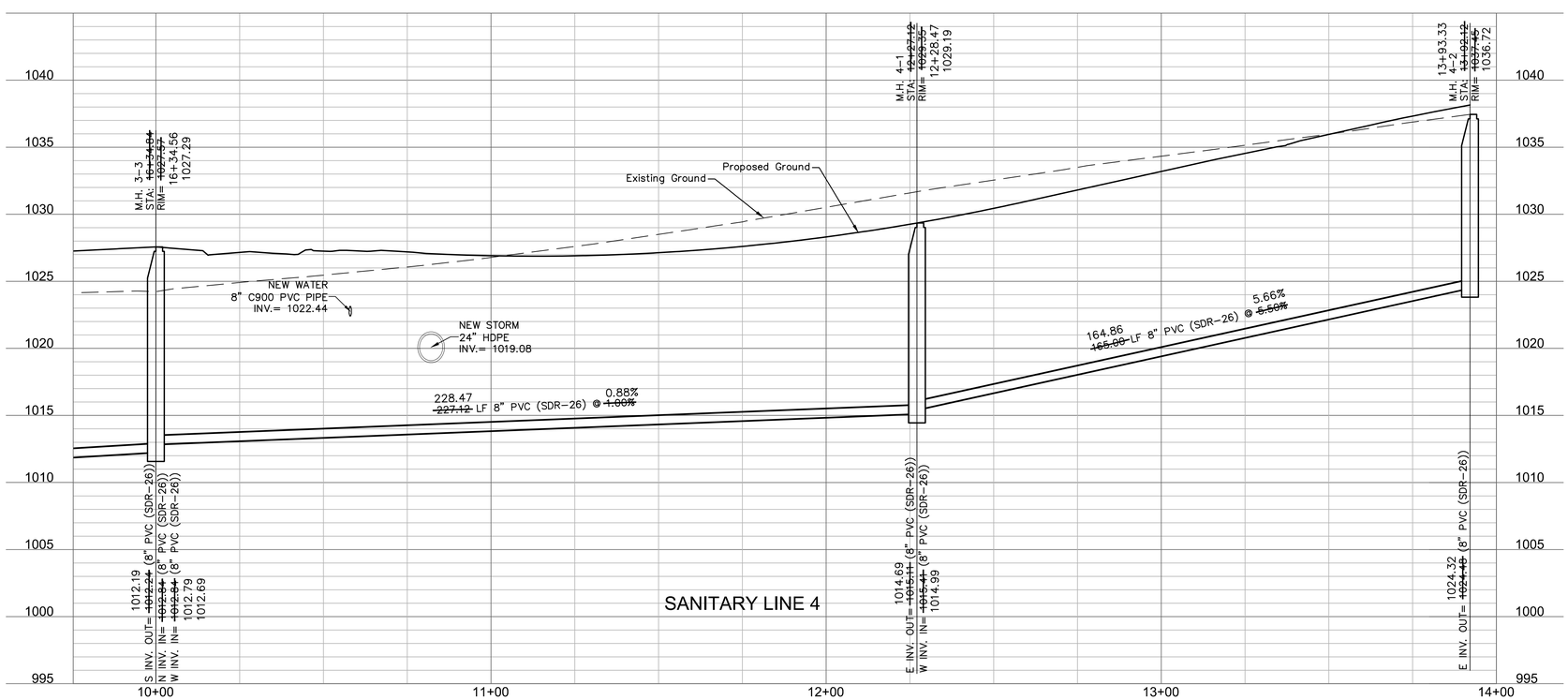


AS-BUILT

3/10/2021



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REVISIONS

SANITARY PLAN & PROFILE (LINE 4)
SANITARY SEWER PLANS

OSAGE
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2020

drawn by: AA
checked by: SS
designed by: AA
QA/QC by: JES
project no.: A19-2339
drawing no.:C_SSWR02_A192339
date: 3/17/2020

SHEET
C213

DWG: F:\2019\2001-2500\019-2339-A\40-Design\AutoCAD\Final Plans - Asbuilts\Sheets\GNCV\SANITARY\C_SSWR02_A192339.dwg
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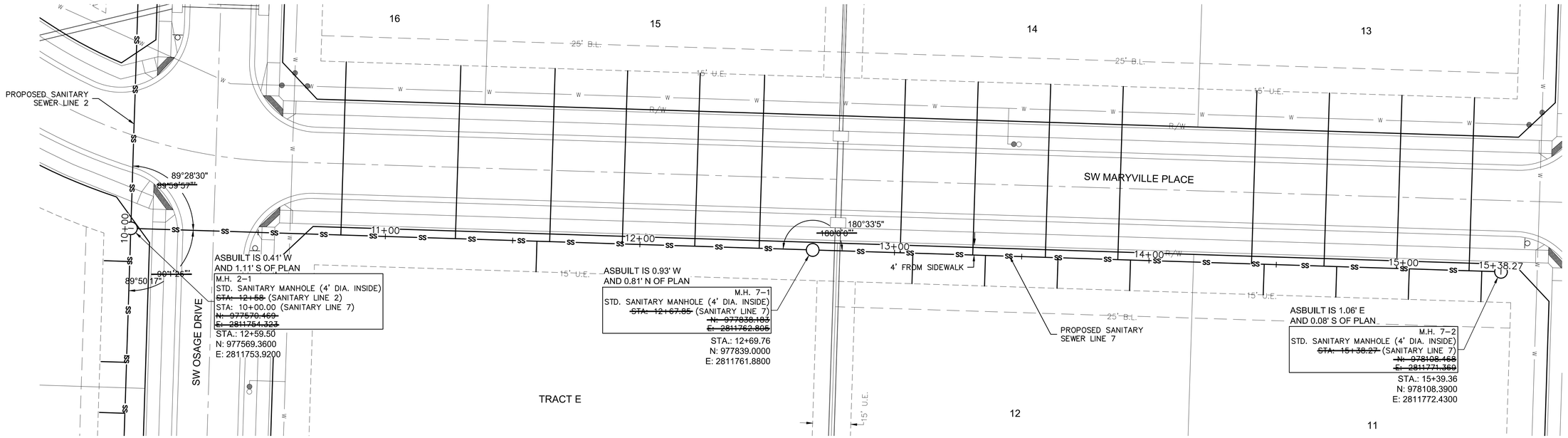

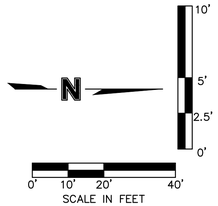

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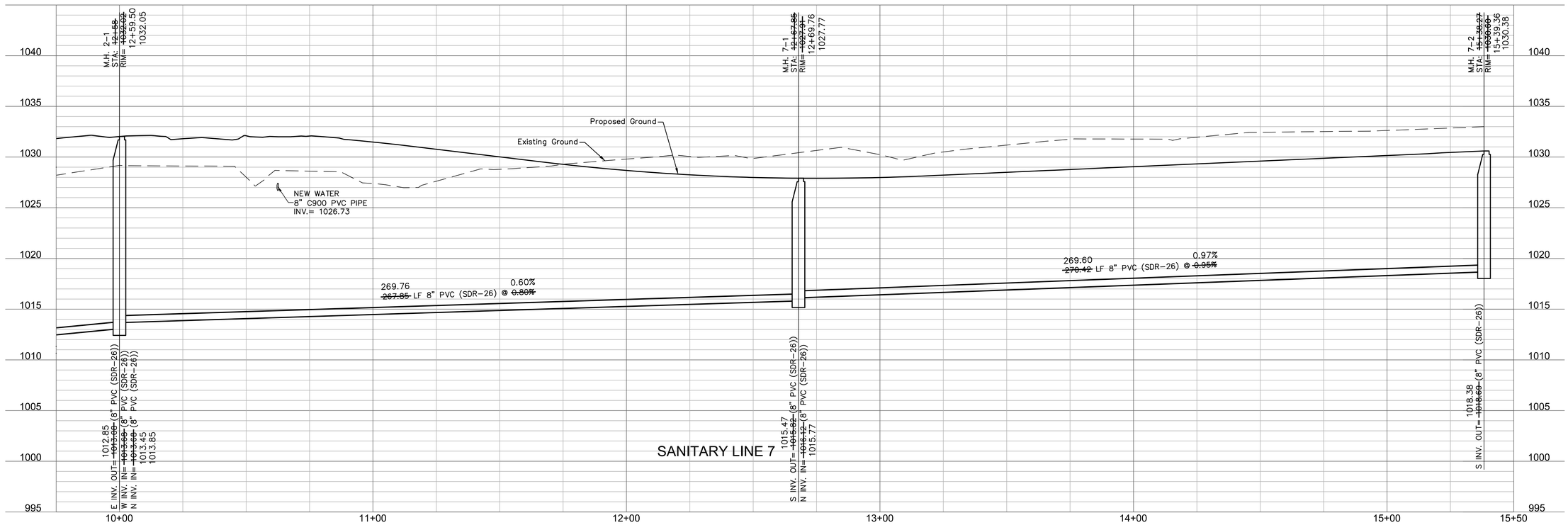

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North Kansas City, MO 64116
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STATE OF MISSOURI
BROCK M. WORTHLEY
NUMBER PE-2019000237
3/10/2021
PROFESSIONAL ENGINEER

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

SANITARY PLAN & PROFILE (LINE 7)
SANITARY SEWER PLANS

OSAGE
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2020

drawn by:	AA
checked by:	SS
designed by:	AA
QA/QC by:	JES
project no.:	A19-2339
drawing no.:	C_SSWR02_A192339
date:	3/17/2020

SHEET
C214

DWG: F:\2019\2001-2500\019-2339-A\40-Design\AutoCAD\Final Plans - Asbuilts\Sheets\GNCV\SANITARY\C_SSWR02_A192339.dwg
DATE: Mar 10, 2021 3:46pm
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USER: bworthley C_PUTIL_A192339 C_PTBLK_A192339

Sanitary Sewer Laterals						
Lot Number	Lateral Station	Lateral Length (ft)	Riser (ft)	Flowline at Main (ft)	Flowline at End of Lateral (ft)	Minimum Servicable Floor Elevation (ft)
1A	37+71.53	11.00	0.0	1023.5	1024.7	1027.49
1B	37+43.03	11.00	0.0	1023.0	1024.3	1027.06
1C	37+14.53	11.00	0.0	1022.6	1023.8	1026.63
1D	36+91.36	11.00	0.0	1022.3	1023.5	1026.29
2A	35+77.53	11.00	0.0	1020.6	1021.8	1024.58
2B	35+49.03	11.00	0.0	1020.1	1021.4	1024.15
2C	35+20.53	11.00	0.0	1019.7	1020.9	1023.72
2D	34+92.03	11.00	0.0	1019.3	1020.5	1023.30
3A	34+39.53	11.00	1.0	1018.3	1020.5	1023.26
3B	34+11.03	11.00	1.0	1017.9	1020.1	1022.90
3C	33+82.53	11.00	1.0	1017.5	1019.7	1022.54
3D	33+54.03	11.00	1.0	1017.2	1019.4	1022.19
4A	32+99.53	11.00	1.0	1016.5	1018.7	1021.51
4B	32+71.03	11.00	1.0	1016.2	1018.4	1021.15
4C	32+42.53	11.00	1.0	1015.8	1018.0	1020.79
4D	32+10.46	11.00	1.0	1015.4	1017.6	1020.39
5A	31+59.53	11.00	0.0	1014.8	1016.0	1018.78
5B	31+31.03	11.00	0.0	1014.4	1015.6	1018.42
5C	31+02.53	11.00	1.0	1014.0	1016.2	1019.04
5D	30+74.03	11.00	1.0	1013.7	1015.9	1018.69
6A	30+48.33	39.74	0.0	1012.8	1014.6	1017.38
6B	30+30.62	55.38	0.0	1012.6	1014.7	1017.50
6C	30+02.33	66.65	0.0	1012.3	1014.6	1017.43
6D	29+68.45	68.00	0.0	1011.9	1014.3	1017.10
7A	29+20.77	68.00	0.0	1011.4	1013.8	1016.60
7B	28+92.27	68.00	0.0	1011.1	1013.5	1016.30
7C	28+62.35	68.00	0.0	1010.8	1013.2	1015.99
7D	28+32.90	68.00	0.0	1010.5	1012.9	1015.68
8A	27+82.77	68.00	0.0	1010.0	1012.4	1015.15
8B	27+53.84	68.00	0.0	1009.7	1012.1	1014.85
8C	27+24.53	68.00	0.0	1009.4	1011.7	1014.54
8D	27+02.19	68.00	0.0	1008.9	1011.2	1014.04
9A	28+37.58	12.00	0.0	1010.6	1011.8	1014.61
9B	28+06.22	12.00	0.0	1010.2	1011.5	1014.28
9C	27+76.30	12.00	0.0	1009.9	1011.2	1013.97
9D	27+48.53	12.00	0.0	1009.6	1010.9	1013.67
10A	29+73.45	12.00	0.0	1012.0	1013.2	1016.04
10B	29+44.21	12.00	0.0	1011.7	1012.9	1015.73
10C	29+14.29	12.00	0.0	1011.4	1012.6	1015.41
10D	28+85.79	12.00	0.0	1011.1	1012.3	1015.12
11A	15+30.75	12.00	0.0	1018.6	1019.9	1022.66
11B	15+02.25	12.00	0.0	1018.3	1019.6	1022.39
11C	14+73.75	12.00	0.0	1018.1	1019.3	1022.12
11D	14+45.25	12.00	0.0	1017.8	1019.0	1021.85
12A	13+92.75	12.00	0.0	1017.3	1018.5	1021.35
12B	13+64.25	12.00	0.0	1017.0	1018.3	1021.08
12C	13+35.75	12.00	0.0	1016.8	1018.0	1020.81
12D	13+07.25	12.00	0.0	1016.5	1017.7	1020.54
13A	15+25.75	68.00	0.0	1018.6	1020.9	1023.73
13B	14+97.25	68.00	0.0	1018.3	1020.7	1023.46
13C	14+68.75	68.00	0.0	1018.0	1020.4	1023.19
13D	14+40.25	68.00	0.0	1017.8	1020.1	1022.92
14A	13+87.75	68.00	0.0	1017.3	1019.6	1022.42
14B	13+59.25	68.00	0.0	1017.0	1019.4	1022.15
14C	13+30.75	68.00	0.0	1016.7	1019.1	1021.88
14D	13+02.25	68.00	0.0	1016.4	1018.8	1021.61
15A	12+46.86	68.00	0.0	1015.7	1018.0	1020.81
15B	12+21.55	68.00	0.0	1015.5	1017.8	1020.61
15C	11+93.05	68.00	0.0	1015.2	1017.6	1020.38
15D	11+64.55	68.00	0.0	1015.0	1017.4	1020.16
16A	11+27.50	68.00	3.0	1014.7	1020.0	1022.80
16B	10+82.50	68.00	3.0	1014.3	1019.6	1022.44
17A	14+42.62	10.00	2.0	1020.1	1023.3	1026.10
17B	13+92.52	10.00	3.0	1018.4	1022.5	1025.33
18A	12+44.97	10.00	6.0	1012.8	1019.8	1022.64
18B	12+05.37	10.00	7.0	1011.8	1019.9	1022.66
19A	11+85.37	10.00	5.0	1011.3	1017.4	1020.21
19B	11+35.37	10.00	6.0	1010.1	1017.2	1019.98
20A	11+15.37	10.00	4.0	1009.6	1014.7	1017.53
20B	10+72.00	10.00	5.0	1008.6	1014.7	1017.46
21A	23+76.10	64.81	3.0	1005.1	1010.3	1013.11
21B	23+71.10	64.22	3.0	1005.0	1010.3	1013.06
22A	23+38.47	49.06	4.0	1004.8	1010.7	1013.48
22B	23+06.12	15.00	5.0	1004.5	1010.7	1013.52
23A	24+36.67	68.00	3.0	1006.2	1011.5	1014.26
23B	23+11.12	15.00	6.0	1004.6	1011.7	1014.54
24A	24+84.28	68.00	3.0	1007.1	1012.4	1015.24
24B	24+56.78	68.00	3.0	1006.9	1012.2	1015.02
25A	25+66.64	68.00	1.0	1007.8	1011.1	1013.94
25B	25+26.78	68.00	2.0	1007.5	1011.8	1014.60
26	17+82.98	11.97	1.0	1015.9	1018.2	1020.97
27	17+35.98	11.98	1.0	1015.0	1017.2	1019.98
28	16+83.98	11.99	2.0	1013.9	1017.1	1019.88
29	16+26.98	12.00	3.0	1012.1	1016.3	1019.11
30	15+79.98	12.00	3.0	1011.4	1015.6	1018.41
31	15+27.98	12.00	3.0	1010.6	1014.8	1017.63
32	10+78.00	12.00	0.0	1013.6	1014.9	1017.66
33	11+29.62	12.00	0.0	1014.1	1015.4	1018.18
34	11+84.62	12.00	1.0	1014.7	1016.9	1019.71
35	12+39.62	12.00	2.0	1016.1	1019.3	1022.10
36	12+94.62	12.00	2.0	1019.1	1022.3	1025.12
37	12+89.62	68.00	1.0	1018.8	1022.2	1024.99
38	12+34.62	68.00	1.0	1015.8	1019.2	1021.96
39	11+79.62	68.00	0.0	1014.6	1017.0	1019.80
40	11+24.62	68.00	0.0	1014.1	1016.4	1019.25
41	11+07.12	68.00	0.0	1013.9	1016.3	1019.07
50A	15+12.62	10.00	0.0	1022.6	1023.8	1026.59
50B	14+62.62	10.00	2.0	1020.8	1024.0	1026.80
71	13+49.62	12.00	2.0	1022.1	1025.3	1028.15
72	13+44.62	68.00	1.0	1021.9	1025.2	1028.01
Tract E	11+59.55	12.00	3.0	1015.0	1019.1	1021.94

Note: Lots are labeled assuming A is the farthest North of West Unit and B-D is farthest South or East Unit

Sanitary Sewer Design Information											
Upstream Manhole	Downstream Pipe Slope	Downstream Pipe Diameter	Proposed Cumulative Area	Future Cumulative Area	Peak Base Flow	Peak Inflitration Flow	Peak Inflow	Total Peak Flow	Downstream Pipe Mannings N	Downstream Pipe Capacity	Downstream Pipe Full Flow Velocity
	(%)	(in)	(Ac.)	(Ac.)	(gpd)	(gpd)	(cfs)	(cfs)		(cfs)	(fps)
EX MH 1-1	0.80%	12	15.66	48.95	96915.00	32305.000	1.416	1.616	0.013	3.19	4.06
MH 1-2	0.50%	12	14.32	48.95	94905.00	31635.000	1.393	1.589	0.013	2.52	3.21
MH 1-3	1.50%	12	14.32	38.66	79470.00	26490.000	1.208	1.372	0.013	4.36	5.56
MH 1-4	1.25%	12	14.32	29.19	65265.00	21755.000	1.029	1.164	0.013	3.98	5.07
MH 1-5	1.25%	12	14.32	29.19	65265.00	21755.000	1.029	1.164	0.013	3.98	5.07
MH 1-6	1.10%	8	11.21	18.68	44835.00	14945.000	0.752	0.844	0.013	1.27	3.63
MH 1-7	0.80%	8	11.21	18.68	44835.00	14945.000	0.752	0.844	0.013	1.08	3.10
MH 1-8	0.80%	8	10.34	18.68	43530.00	14510.000	0.733	0.823	0.013	1.08	3.10
MH 1-9	0.80%	8	5.76	9.41	22755.00	7585.000	0.417	0.464	0.013	1.08	3.10
MH 1-10	1.05%	8	4.88	9.41	21435.00	7145.000	0.396	0.440	0.013	1.24	3.55
MH 1-11	1.25%	8	2.50	9.41	17865.00	5955.000	0.337	0.374	0.013	1.35	3.87
MH 1-12	1.50%	8	1.10	9.41	15765.00	5255.000	0.301	0.334	0.013	1.48	4.24
MH 2-1	2.43%	8	4.44	9.27	20565.00	6855.000	0.382	0.424	0.013	1.88	5.40
MH 2-2	3.50%	8	0.46	8.17	12945.00	4315.000	0.252	0.279	0.013	2.26	6.48
MH 3-1	2.06%	8	3.11	10.51	20430.00	6810.000	0.379	0.422	0.013	1.73	4.97
MH 3-2	1.50%	8	3.11	10.51	20430.00	6810.000	0.379	0.422	0.013	1.48	4.24
MH 3-3	1.50%	8	3.11	10.51	20430.00	6810.000	0.379	0.422	0.013	1.48	4.24
MH 3-4	2.09%	8	0.53	0.00	795.00	265.000	0.018	0.020	0.013	1.75	5.00
MH 4-1	1.00%	8	2.06	10.51	18855.00	6285.000	0.353	0.392	0.013	1.21	3.46
MH 4-2	5.50%	8	0.73	10.51	16860.00	5620.000	0.320	0.354	0.013	2.83	8.12
MH 7-1	0.80%	8	2.93	1.10	6045.00	2015.000	0.125	0.138	0.013	1.08	3.10
MH 7-2	0.95%	8	2.11	0.00	3165.00	1055.000	0.069	0.075	0.013	1.18	3.37

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3/10/2021

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

SANITARY SEWER DESIGN TABLES
SANITARY SEWER PLANS

OSAGE
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2020

drawn by: AA
checked by: SS
designed by: AA
QA/QC by: JES
project no.: A19-2339
drawing no.: C_TAB01_A192339
date: 3/17/2020

SHEET
C215

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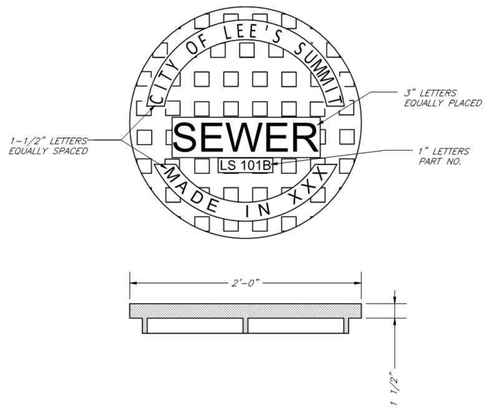
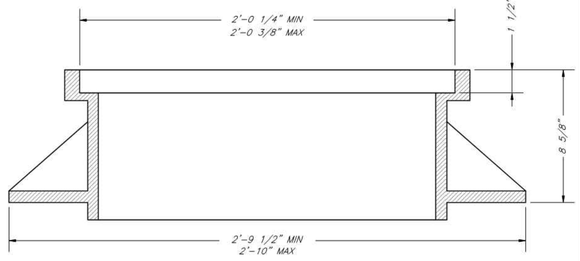


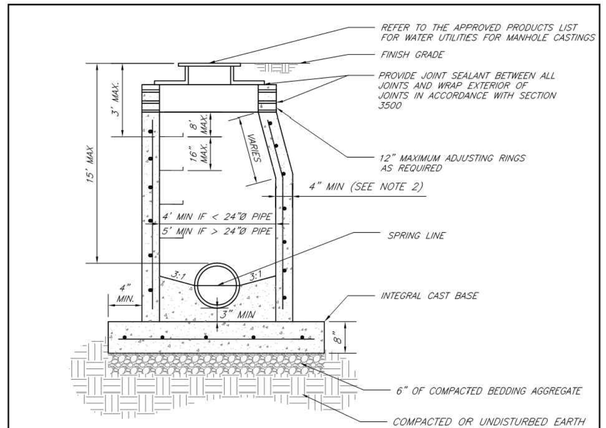
STANDARD 24" MANHOLE COVER
LEE'S SUMMIT PART NO: LS101B
MINIMUM WEIGHT = 160 LB
MATCHING FRAME: LS101A
NOTE: PICK HOLES NOT SHOWN

CITY OF LEE'S SUMMIT, MO PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	Date: 09/16/04 Drawn By: JN Checked By: - FILE: SANITARY SEWER-2
STANDARD 24" MANHOLE COVER	Rev: 04/05/07 Rev: 12/12



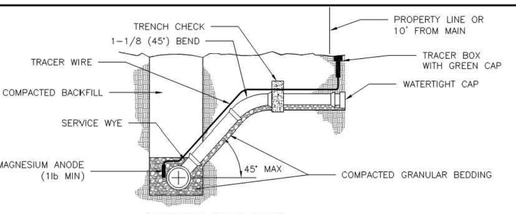
STANDARD 24" MANHOLE FRAME
LEE'S SUMMIT PART NO.: LS101A
MINIMUM WEIGHT = 250 LB
MATCHING COVER: LS101B

CITY OF LEE'S SUMMIT, MO PUBLIC WORKS DEPARTMENT ENGINEERING DIVISION	Date: 09/16/04 Drawn By: JN Checked By: FILE: SANITARY SEWER-1
STANDARD 24" MANHOLE FRAME	Rev: 01/04/07 Rev: 1/13

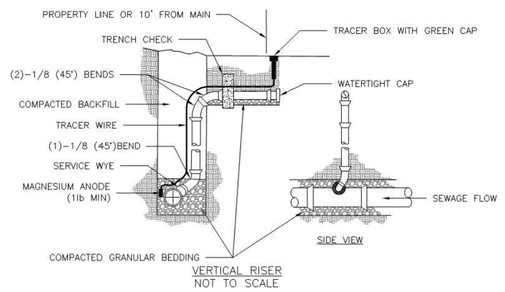


NOTES:
1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
2. A WALL THICKNESS NOT LESS THAN ONE-TWELFTH (1/12) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER, SHALL BE USED WHEN THE MANHOLE DEPTH IS LESS THEN 15'.
3. WATERPROOFING SHALL BE REQUIRED ON THE OUTSIDE OF MANHOLES. THE WATERPROOFING SHALL CONSIST OF A TOTAL DRY FILM THICKNESS OF NOT LESS THAN 14 MILS OF BITUMINOUS COATING.
4. ONLY ECCENTRIC MANHOLE CONES WILL BE ALLOWED UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
5. THE FILL CONCRETE FLOW CHANNEL FOR SIDE BRANCHES SHALL BE PLACED TO PROVIDE A SMOOTH TRANSITION INTO THE FLOW LINE.
6. REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR APPROVED MANHOLE GASKET MODELS.
7. REFER TO THE APPROVED PRODUCTS LIST FOR APPROVED STEPS.

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: SAN-2
STANDARD PRECAST MANHOLE – SANITARY SEWER	Rev: 1/14 Rev:



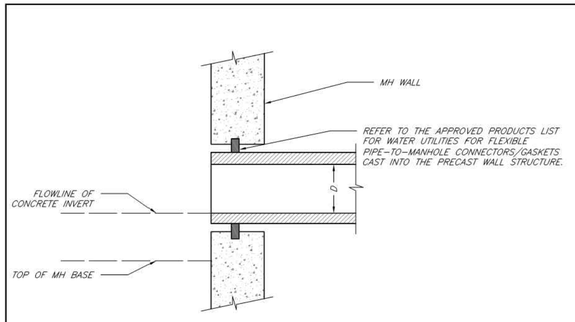
STANDARD INSTALLATION
NOT TO SCALE



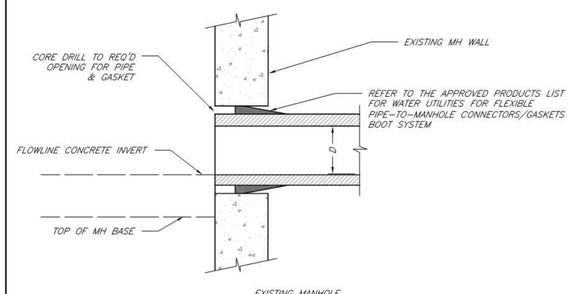
VERTICAL RISER
NOT TO SCALE

NOTES:
1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN, WHERE SIDEWALKS ARE PRESENT, CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
2. ALL NEW CONSTRUCTION OFF SEWER STUBS SHALL BE TEMPORARILY MARKED WITH A MARKING STAKE, 36" ABOVE GROUND AND PAINTED GREEN.
3. IMPERVIOUS TRENCH CHECKS SHALL BE PLACED ON BUILDING SEWER STUBS (AT LEAST 5' AWAY FROM THE SANITARY SEWER MAIN).
4. TRENCH CHECKS ON THE BUILDING SEWER STUBS SHALL EXTEND 6" BELOW THE BOTTOM OF THE PIPE. LENGTH SHALL BE A MINIMUM OF 12". THE HEIGHT OF THE TRENCH CHECK SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE. THE WIDTH OF THE TRENCH CHECK SHALL BE THE WIDTH OF THE TRENCH.
5. SEE SPECIFICATION SECTION 2100 FOR SEWER MAIN BEDDING AND BACKFILL.
6. #12 GAUGE GREEN INSULATED COPPER TRACER WIRE SHALL BE INSTALLED. TRACER WIRE TERMINAL BOXES SHALL BE INSTALLED DIRECTLY ABOVE THE SEWER SERVICE OR AS DETERMINED BY THE ENGINEER.
7. FOR SERVICES, TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GREEN CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.
8. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 1.0' OF PROPERTY LINE.
9. THE TRACER WIRE SHALL REMAIN CONTINUOUS TO THE GREATEST EXTENT POSSIBLE. SPLICES IN THE TRACER WIRE SHOULD BE MADE WITH SPLIT BOLT CONNECTORS. WIRE NUTS SHALL NOT BE USED. A WATER-PROOF CONNECTION IS NECESSARY TO PREVENT CORROSION.

LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063	Date: 04/17 Drawn By: MJF Checked By: DL
BUILDING SEWER STUB AND RISER	SAN-1



NEW MANHOLE



EXISTING MANHOLE

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: SAN-5
MANHOLE WALL CONNECTIONS	Rev: 1/14 Rev:

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DETAIL SHEET
SANITARY SEWER PLANS

OSAGE
FIRST PLAT

LEE'S SUMMIT, MISSOURI

2020

drawn by:	AA
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project no.:	A19-2339
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SHEET
C216

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DATE: Mar 10, 2021 3:47pm
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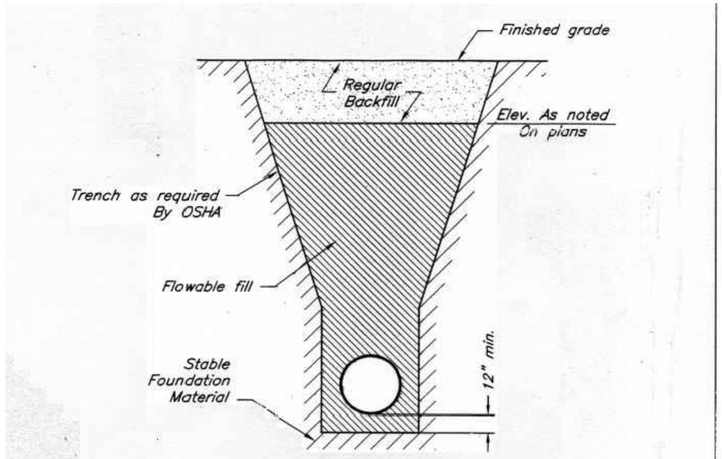
USER: bworthley



NOTES

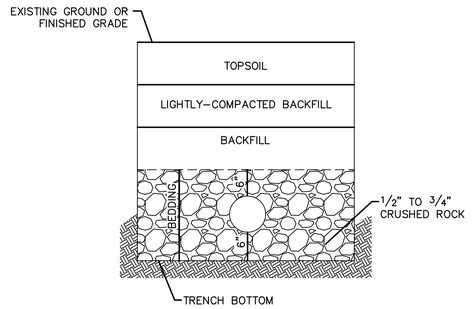
1. FLOWABLE FILL SHALL MEET THE REQUIREMENTS OF THE CITY OF LEE'S SUMMIT STANDARD SPECIFICATIONS.
2. REGULAR BACKFILL ABOVE THE TRENCH CHECK SHALL BE FREE OF DEBRIS, ORGANIC MATTER, AND STONES > 6" IN ANY DIMENSION.
3. TOP OF FLOWABLE BACKFILL SHALL BE A MINIMUM OF 2 FEET BELOW FINISHED GRADE.

Subject to revision without notice.

CITY OF LEE'S SUMMIT, MISSOURI

Date: 09/16/04
Rev:
Rev:
Rev:

TRENCH CHECK



UNDERGROUND PIPE INSTALLATION FOR SANITARY SEWER

NOTES:
1. A MINIMUM OF 36 INCHES OF COVER SHALL BE OVER THE TOP OF THE PIPE. THIS MINIMUM OF COVER SHALL BE FROM THE TOP OF PIPE TO THE FINISHED GRADE.
2. BEDDING AGGREGATE SHALL BE PLACED 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 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.

NOT AS-BUILT

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STATE OF MISSOURI
BROCK M. WORTHLEY
NUMBER PE-2019000237
PROFESSIONAL ENGINEER
3/10/2021

REVISIONS

REV. NO.	DATE	REVISIONS DESCRIPTION	BY

DETAIL SHEET
SANITARY SEWER PLANS

OSAGE
FIRST PLAT

2020

LEE'S SUMMIT, MISSOURI

drawn by: AA
checked by: SS
designed by: AA
QA/QC by: JES
project no.: A19-2339
drawing no.: C_DET01_A192339
date: 3/17/2020

SHEET
C217

DWG: F:\2019\2001-2500\019-2339-A\40-Design\AutoCAD\Final Plans - Asbuilts\Sheets\GNCV\SANITARY\C_DET01_A192339.dwg USER: bworthley
DATE: Mar 10, 2021 3:47pm XREFS: C_PTBLK_A192339