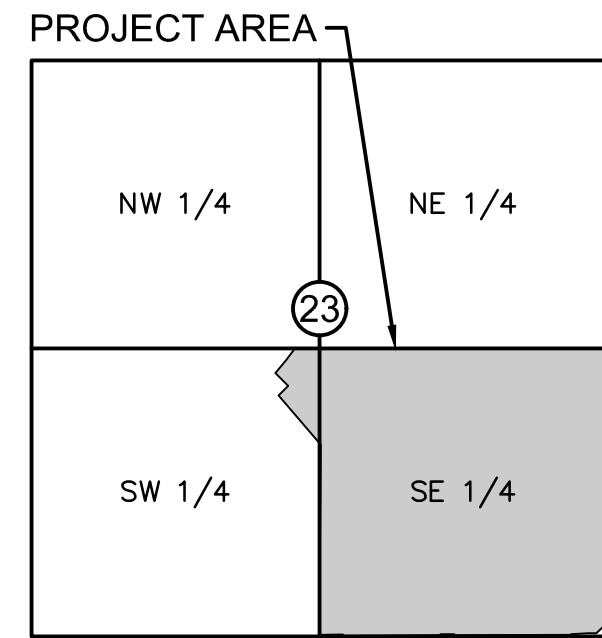


# HOOK FARMS FIRST PLAT SANITARY SEWER PLANS

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



**VICINITY MAP**  
S23, T47N, R32W  
SCALE 1"=2000'

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 EMAIL: ASCHMIDT@HUNTMIDWEST.COM
<b>ENGINEER</b>	OLSSON 1301 BURLINGTON STREET, SUITE 100 NORTH KANSAS CITY, MISSOURI 64116 CONTACT: JULIE E. SELLERS, P.E. PHONE: 816.361.1177
<b>SURVEYOR</b>	OLSSON 1301 BURLINGTON STREET, SUITE 100 NORTH KANSAS CITY, MISSOURI 64116 CONTACT: JASON ROUDEBUSH, P.L.S. PHONE: 816.361.1177

<input type="checkbox"/>	NOT FOR CONSTRUCTION
<input checked="" 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 02°45'34" East, on the East line of said Southeast Quarter, 2,635.08 feet to the Northeast corner of said Southeast Quarter; thence North 87°45'24" West, on the North line of said Southeast Quarter, 50.00 feet to the Southeast corner of Lot 3, EAGLE CREEK—FIRST PLAT, a subdivision in said Lee's Summit recorded as Instrument Number 110409 in Book 165 at Page 01 in Jackson County Recorder of Deeds Office, also being the Northwest corner of SW Pryor Road as described in the Right of Way Deed recorded as Instrument Number 200510087407 in said Jackson County Recorder of Deeds Office, also being Point of Beginning of the tract of land to be herein described; thence South 02°45'34" West, on the existing Westerly right-of-way line of said SW Pryor Road of said Right of Way Deed, 1,220.74 feet; thence leaving said existing Westerly right-of-way line, North 87°00'50" West, 245.56 feet; thence North 02°59'10" East, 25.00 feet; thence North 87°00'50" West, 438.50 feet; thence North 60°49'13" West, 252.48 feet; thence North 67°11'53" West, 74.21 feet; thence North 27°18'12" East, 138.17 feet; thence Westerly, on a curve to the left, having an initial tangent bearing of North 62°41'48" West with a radius of 275.00 feet, a central angle of 11°57'16" and an arc distance of 57.38 feet; thence North 15°20'56" East, 50.00 feet; thence North 29°10'47" East, 375.17 feet; thence North 07°19'52" East, 64.17 feet; thence South 87°00'50" East, 126.12 feet; thence North 02°59'10" East, 116.00 feet; thence North 42°00'50" West, 19.80 feet; thence North 02°59'10" East, 50.00 feet; thence South 87°00'50" East, 36.00 feet; thence North 02°59'10" East, 277.38 feet to a point on the South line of said EAGLE CREEK—FIRST PLAT and said North line of said Southeast Quarter; thence South 87°45'24" East, on said South and said North line, 643.83 feet to the Point of Beginning. Containing 953,270 square feet or 21.88 acres, more or less.

Sheet List Table	
Sheet Number	Sheet Title
C201	TITLE SHEET
C202	GENERAL NOTES
C203	GENERAL LAYOUT
C204	GENERAL LAYOUT (CONT'D)
C205	SANITARY PLAN & PROFILE (LINE 1 )
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 1 CONT'D)
C211	SANITARY PLAN & PROFILE (LINE 1 CONT'D)
C212	SANITARY PLAN & PROFILE (LINE 2)
C213	SANITARY PLAN & PROFILE (LINE 2 CONT'D)
C214	SANITARY PLAN & PROFILE (LINE 2 CONT'D)
C215	SANITARY PLAN & PROFILE (LINE 3)
C216	DESIGN TABLES
C217	DETAIL SHEET
C218	DETAIL SHEET

REVIEWED BY:

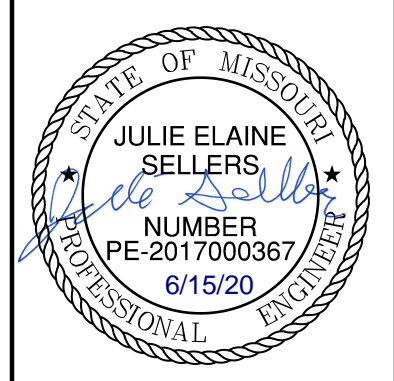
CITY OF LEE'S SUMMIT

DATE

*Julie E. Sellers*  
JULIE E. SELLERS, P.E.  
CIVIL ENGINEER  
MO# PE-2017000367

6/16/20  
DATE

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	06/15/2020	REVISIONS PER CITY COMMENTS	

TITLE SHEET	2020
SANITARY SEWER PLANS	
HOOK FARMS FIRST PLAT	
LEE'S SUMMIT, MO	

drawn by:	CGW
checked by:	JES
approved by:	NDH
QA/QC by:	JES
project no.:	019-4061
drawing no.:	
date:	04/20/2020

SHEET  
C201



DWG: F:\2019\4001-4500\019-4061-Design\AutoCAD\Final Plans\Sanitary Sewer Plans\C\_GEN01\_0194061.dwg  
 DATE: Jun 15, 2020 6:05pm  
 USER: nheiser  
 XREFS: C:\PTBLK\_0194061\_34x22  
 C:\PBDY\_0194061

**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**

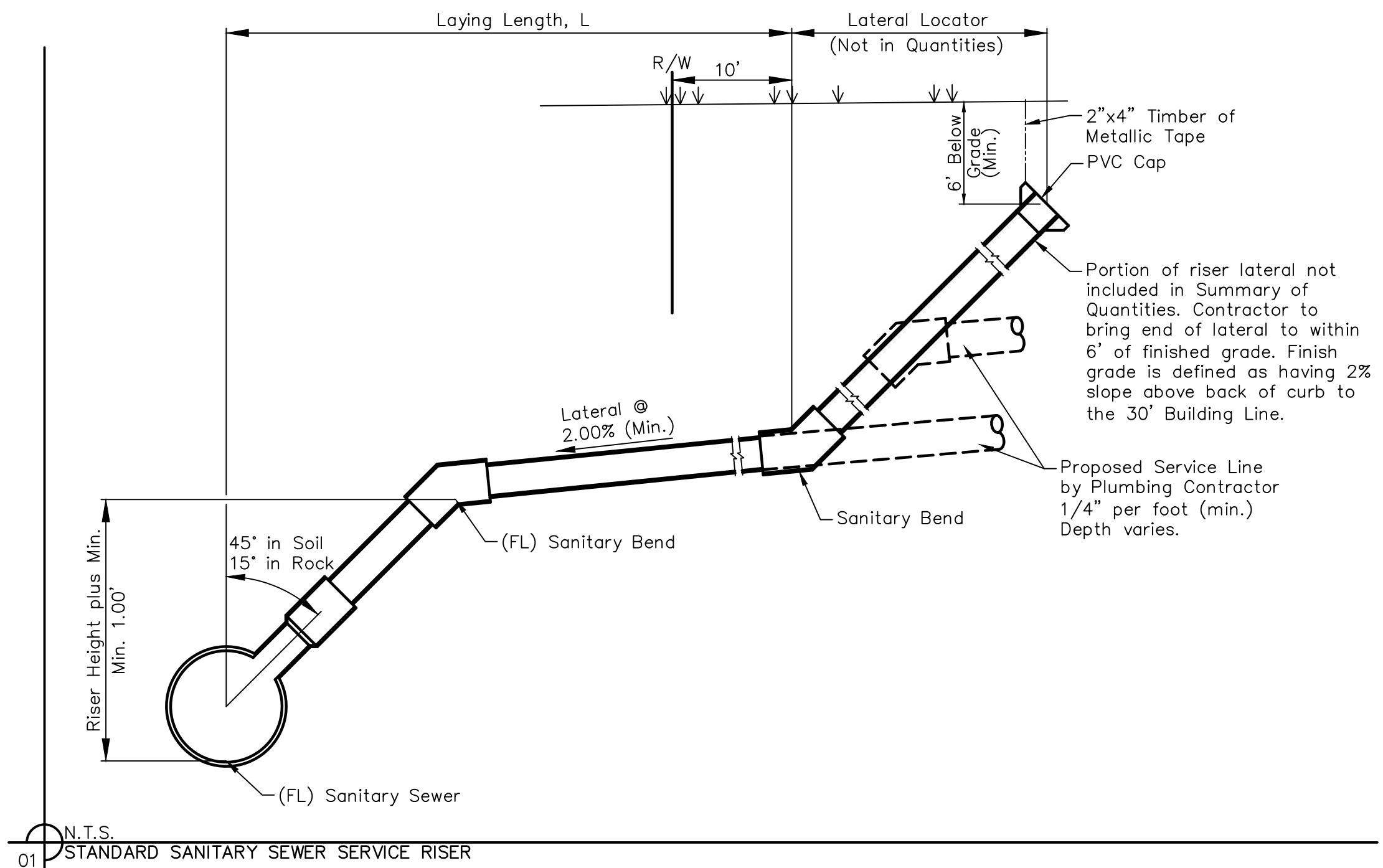
1. THE CONTRACTOR SHALL SUBMIT SHOP DRAWINGS A MINIMUM OF 7 DAYS PRIOR TO THE REQUESTED DATE OF APPROVAL. ENGINEER SHALL REVIEW SHOP DRAWINGS OR SAMPLES FOR CONFORMANCE WITH THE DESIGN FOR THIS PROJECT AS DESCRIBED IN THE PLANS. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ERRORS OR OMISSIONS IN SHOP DRAWINGS. 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**

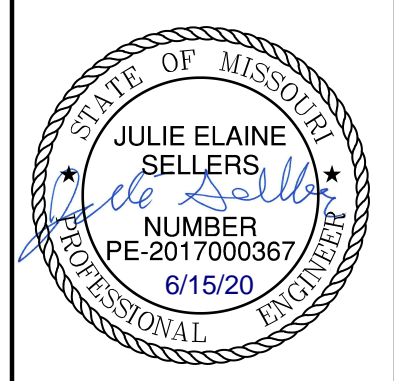
1. PRIOR TO COMMENCEMENT OF WORK THE CONTRACTOR SHALL NOTIFY AND COORDINATE CONSTRUCTION WITH CITY OF LEE'S SUMMIT, MISSOURI.
2. ALL PIPE LENGTHS ARE CALCULATED LINEARLY FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
3. ALL STRUCTURE DIMENSIONS ARE TO INSIDE FACE OF STRUCTURE.
4. COORDINATES ARE PROVIDED AT THE CENTER OF STRUCTURE. ADDITIONAL COORDINATES PROVIDED ARE PER LOCAL CODES AND ORDINANCES OR AS AN AID WHEN ORIENTING THE LID DURING INSTALLATION.
5. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF SANITARY SEWER.
6. 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.
7. MANHOLE INVERT CHANNELS SHALL BE SMOOTH, CIRCULAR, AND CONFORMING TO 1/2 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.
8. PIPE PENETRATIONS SHALL BE USE GASKETS TO ENSURE WATERTIGHT SEALS.
9. TRACING TAPE SHALL BE INSTALLED ALONG ALL NON-METALLIC SURFACES OR AS DIRECTED BY LOCAL CODES AND ORDINANCES.
10. 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 C216 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 ON THIS SHEET.
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.

ESTIMATE OF QUANTITIES				
ITEM NO.	DESCRIPTION	UNIT	QUANTITY	AS-BUILT
STREET				
1	8" SANITARY PVC (SDR-26)	L.F.	2952.76	
2	12" SANITARY PVC (SDR-26)	L.F.	1227.74	
3	12" SANITARY DIP (CLASS 52 WITH ZINC COATING)	L.F.	65.92	
4	MANHOLES, STD. 4' DIA.	EA.	18	
5	CONNECTION TO EXISTING MANHOLE	EA.	1	
6	TRACER WIRE	L.F.	4246	
7	SERVICE WYE	EA.	71	
8	4" LATERAL PIPE	L.F.	3200	
9	6" CONCRETE ENCASEMENT	L.F.	50.28	

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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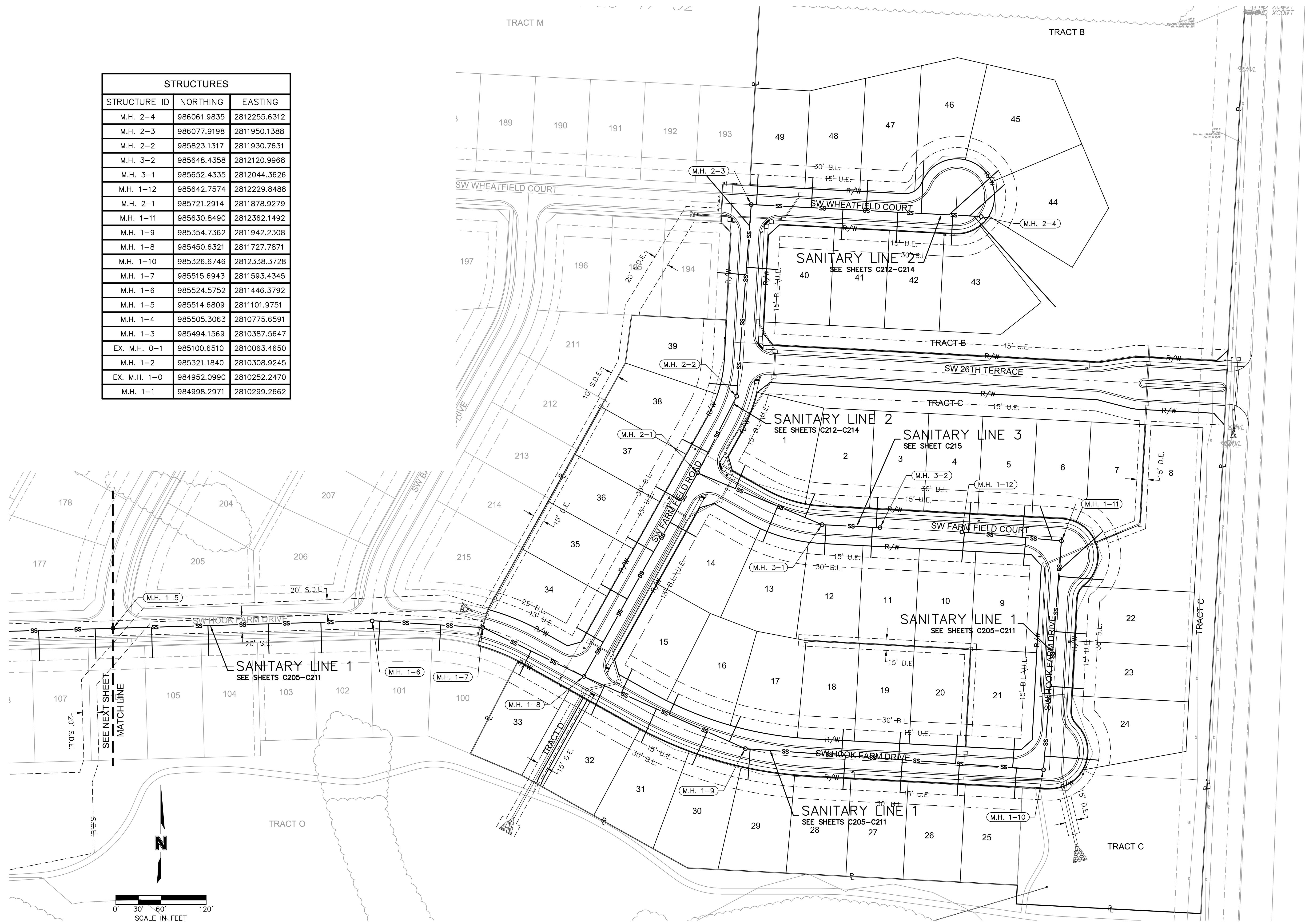
REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	06/15/2020	REVISED PER CITY COMMENTS	

GENERAL NOTES  
 SANITARY SEWER PLANS  
 HOOK FARMS  
 FIRST PLAT  
 LEE'S SUMMIT, MO  
 2020

drawn by: CGW  
 checked by: JES  
 approved by: NDH  
 QA/QC by: JES  
 project no.: 019-4061  
 drawing no.:  
 date: 04/20/2020

DWG: F:\2019\4001-4500\019-4061\40-Design\AutoCAD\Final Plans\Sanitary Sewer Plans\C\_GEN02\_0194061.dwg  
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 USER: nhriser

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M.H. 2-2	985823.1317	2811930.7631
M.H. 3-2	985648.4358	2812120.9968
M.H. 3-1	985652.4335	2812044.3626
M.H. 1-12	985642.7574	2812229.8488
M.H. 2-1	985721.2914	2811878.9279
M.H. 1-11	985630.8490	2812362.1492
M.H. 1-9	985354.7362	2811942.2308
M.H. 1-8	985450.6321	2811727.7871
M.H. 1-10	985326.6746	2812338.3728
M.H. 1-7	985515.6943	2811593.4345
M.H. 1-6	985524.5752	2811446.3792
M.H. 1-5	985514.6809	2811101.9751
M.H. 1-4	985505.3063	2810775.6591
M.H. 1-3	985494.1569	2810387.5647
EX. M.H. 0-1	985100.6510	2810063.4650
M.H. 1-2	985321.1840	2810308.9245
EX. M.H. 1-0	984952.0990	2810252.2470
M.H. 1-1	984998.2971	2810299.2662



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STATE OF MISSOURI  
 JULIE ELAINE SELLERS  
*Julie Sellers*  
 PROFESSIONAL ENGINEER  
 NUMBER PE-2017000367  
 6/15/20

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	06/15/2020	REVISED PER CITY COMMENTS	

GENERAL LAYOUT  
 SANITARY SEWER PLANS  
 HOOK FARMS  
 FIRST FLAT

2020

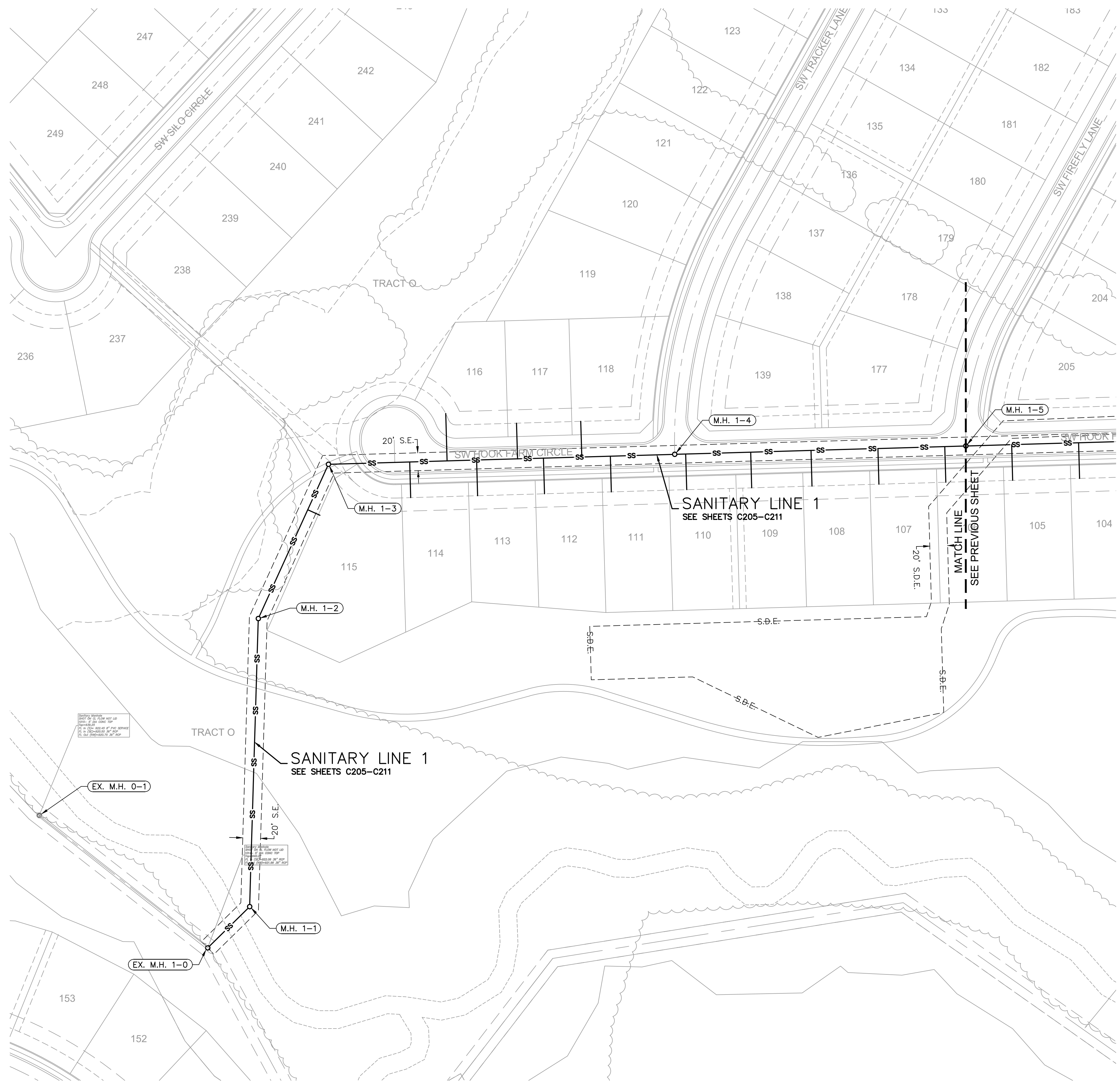
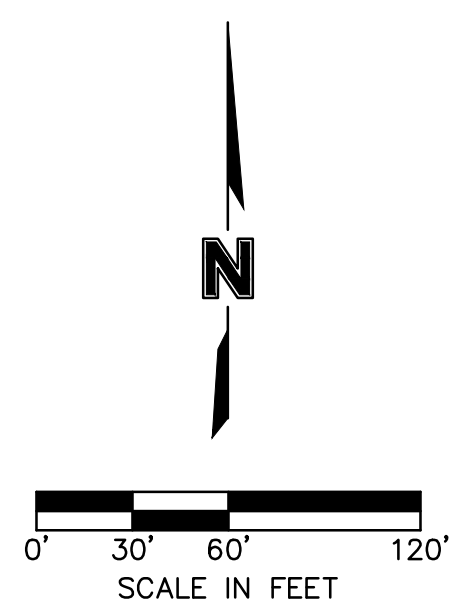
REVISIONS

LEE'S SUMMIT, MO

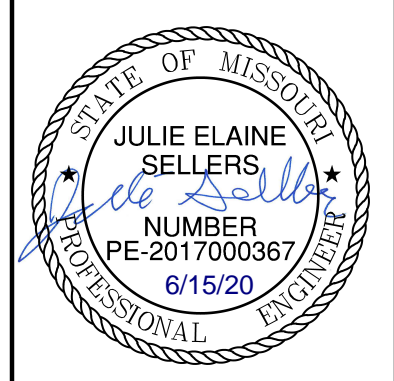
drawn by: CGW  
 checked by: JES  
 approved by: NDH  
 QA/QC by: JES  
 project no.: 019-4061  
 drawing no.:  
 date: 04/20/2020

SHEET  
 C203

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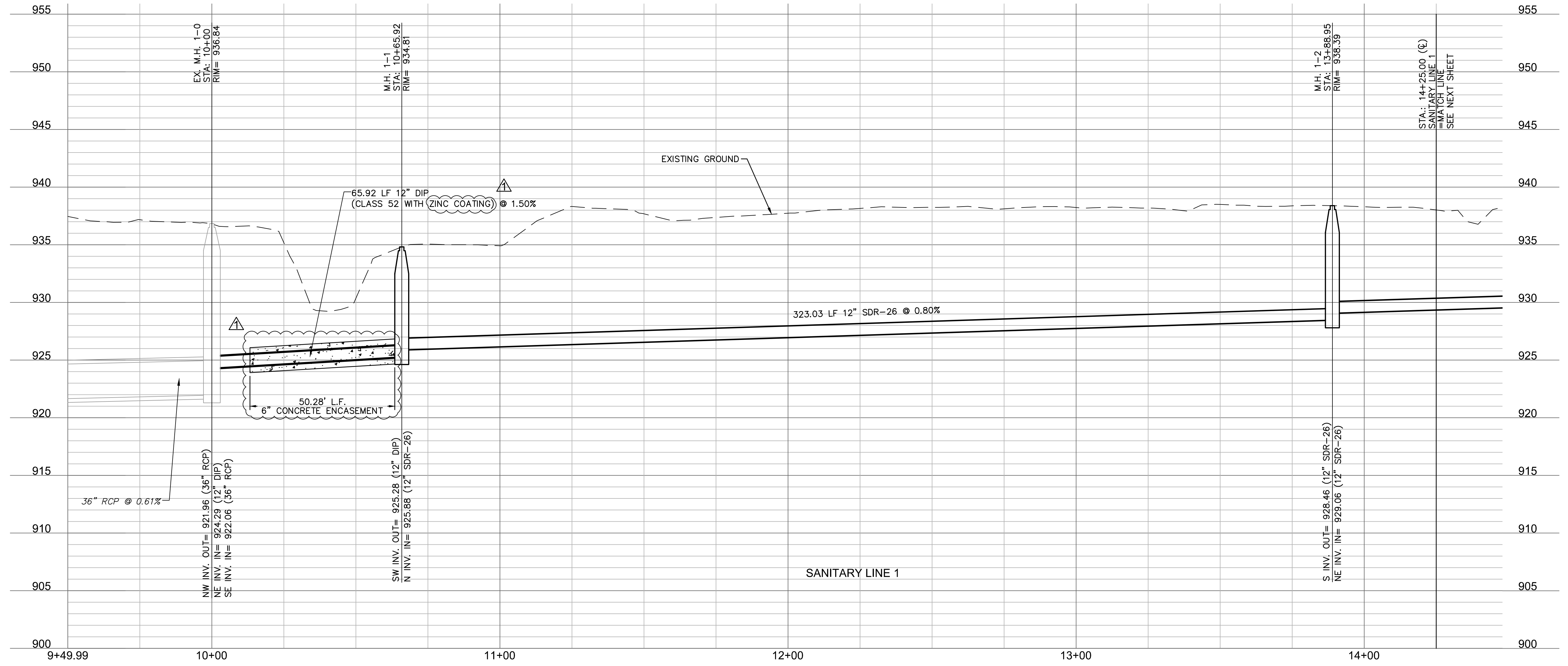
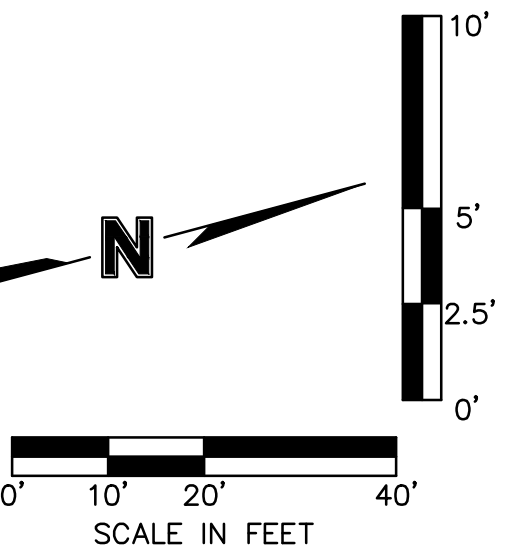
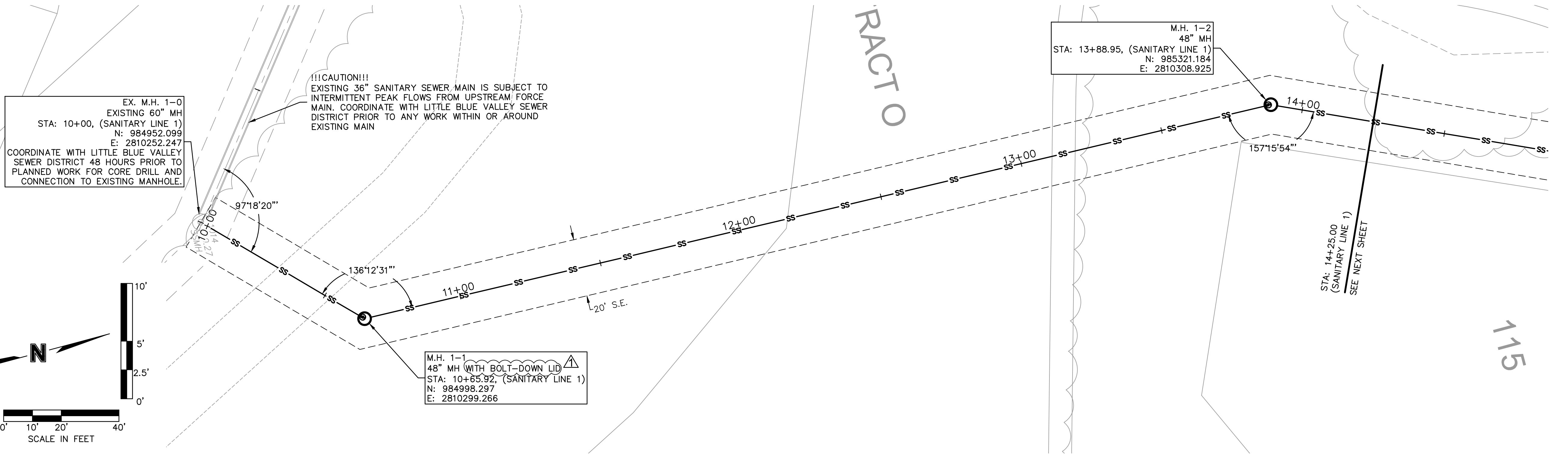
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1	06/15/2020	REVISED PER CITY COMMENTS	

GENERAL LAYOUT SANITARY SEWER PLANS	2020
HOOK FARMS FIRST FLAT	
LEES SUMMIT, MO	

drawn by: CGW  
 checked by: JES  
 approved by: NDH  
 QA/QC by: JES  
 project no.: 019-4061  
 drawing no.:  
 date: 04/20/2020

SHEET  
C204

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 DATE: Jun 15, 2020 6:09pm XREFS: C\_P\BLK\_0194061\_34x22 C\_P\BASE\_0194061 C\_P\BASE\_0194061 C\_P\UTIL\_0194061



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STATE OF MISSOURI  
 JULIE ELAINE SELLERS  
 PROFESSIONAL ENGINEER  
 NUMBER PE-2017000367  
 6/15/20

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SANITARY PLAN & PROFILE (LINE 1)  
 STREET AND STORM SEWER PLANS

HOOK FARMS  
 FIRST PLAT

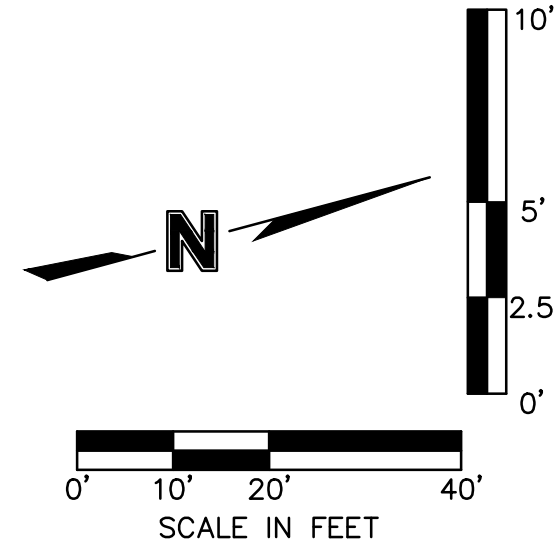
LEE'S SUMMIT, MO

2020

drawn by: CGW  
 checked by: JES  
 approved by: NDH  
 QA/QC by: JES  
 project no.: 019-4061  
 drawing no.:  
 date: 04/20/2020

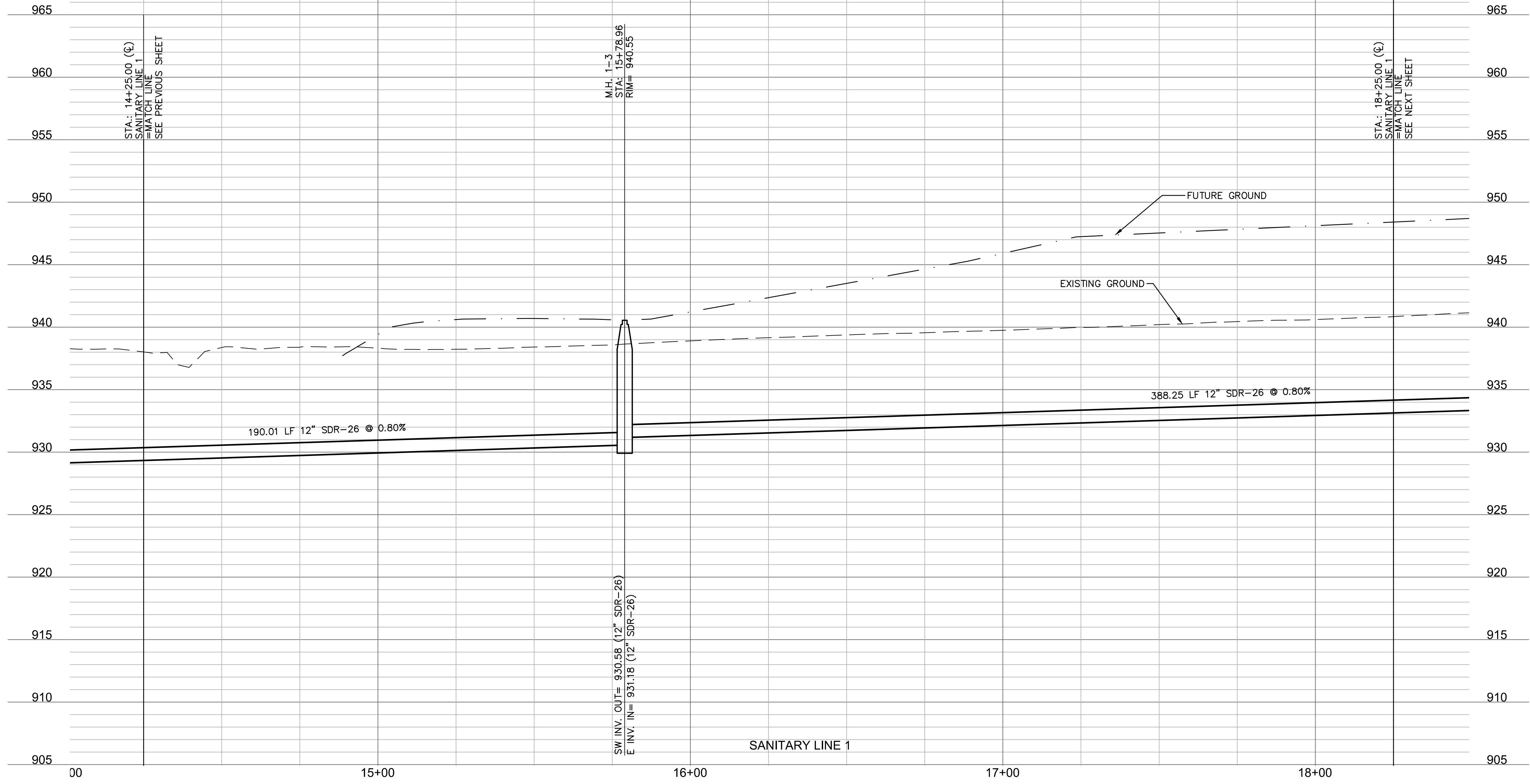
SHEET C205

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M.H. 1-2  
 48" MH  
 STA: 13+88.95, (SANITARY LINE 1)  
 N: 985321.184  
 E: 2810308.925

M.H. 1-3  
 48" MH  
 STA: 15+78.96, (SANITARY LINE 1)  
 N: 985494.157  
 E: 2810387.565



STA: 14+25.00  
 (SANITARY LINE 1)  
 SEE PREVIOUS SHEET

STA: 18+25.00  
 (SANITARY LINE 1)  
 SEE NEXT SHEET

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 North Kansas City, MO 64116  
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 FAX 816.361.1888  
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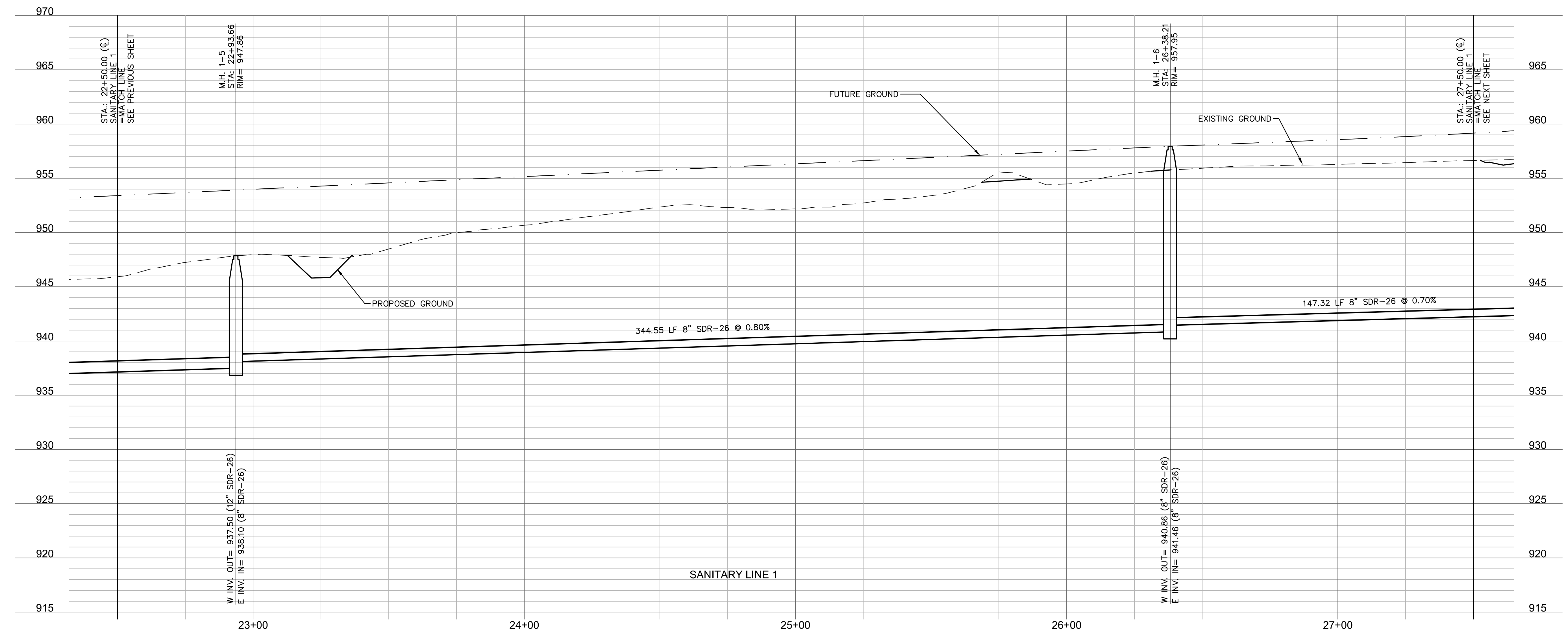
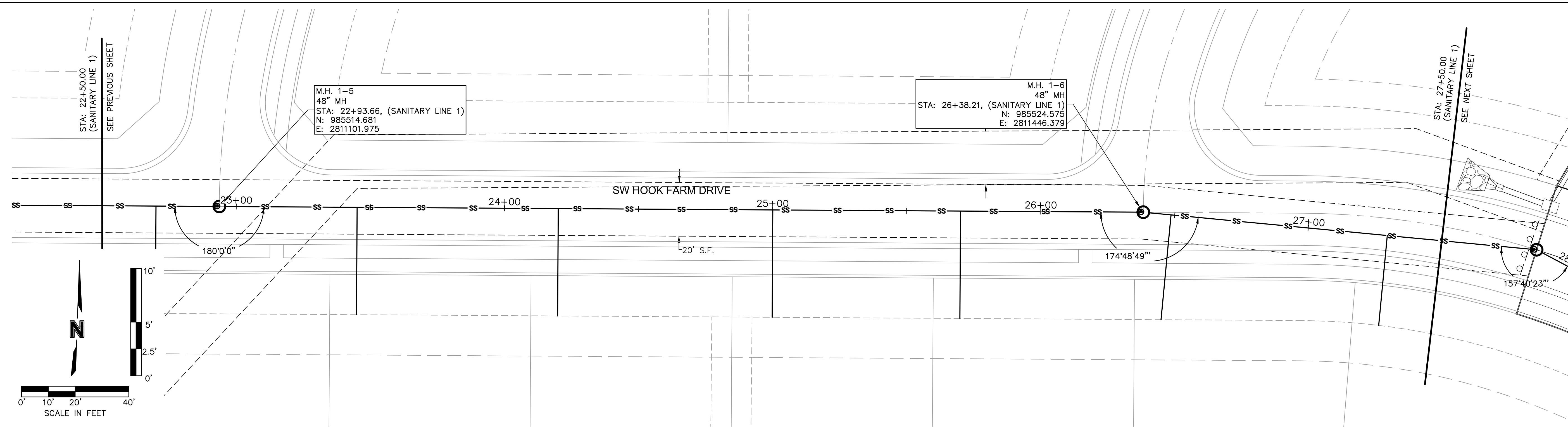


REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	06/15/2020	REVISED PER CITY COMMENTS	

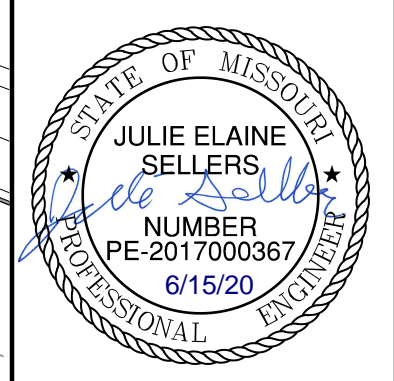
SANITARY PLAN & PROFILE (LINE 1 CONT'D) STREET AND STORM SEWER PLANS		2020
HOOK FARMS FIRST PLAT		
LEE'S SUMMIT, MO		

drawn by: CGW  
 checked by: JES  
 approved by: NDH  
 QA/QC by: JES  
 project no.: 019-4061  
 drawing no.:  
 date: 04/20/2020

DWG: F:\2019\4001-4500\019-4061-40-Design\AutoCAD\Final Plans\Sanitary Sewer Plans\C\_SSWR00\_0194061.dwg USER: nheiser  
 DATE: Jun 15, 2020 6:09pm XREFS: C\_P\BLK\_0194061\_34x22 C\_XBASE\_0194061 C\_PBASE\_0194061 C\_PUTIL\_0194061 C\_PSSWR\_0194061 C\_FBASE\_0194061



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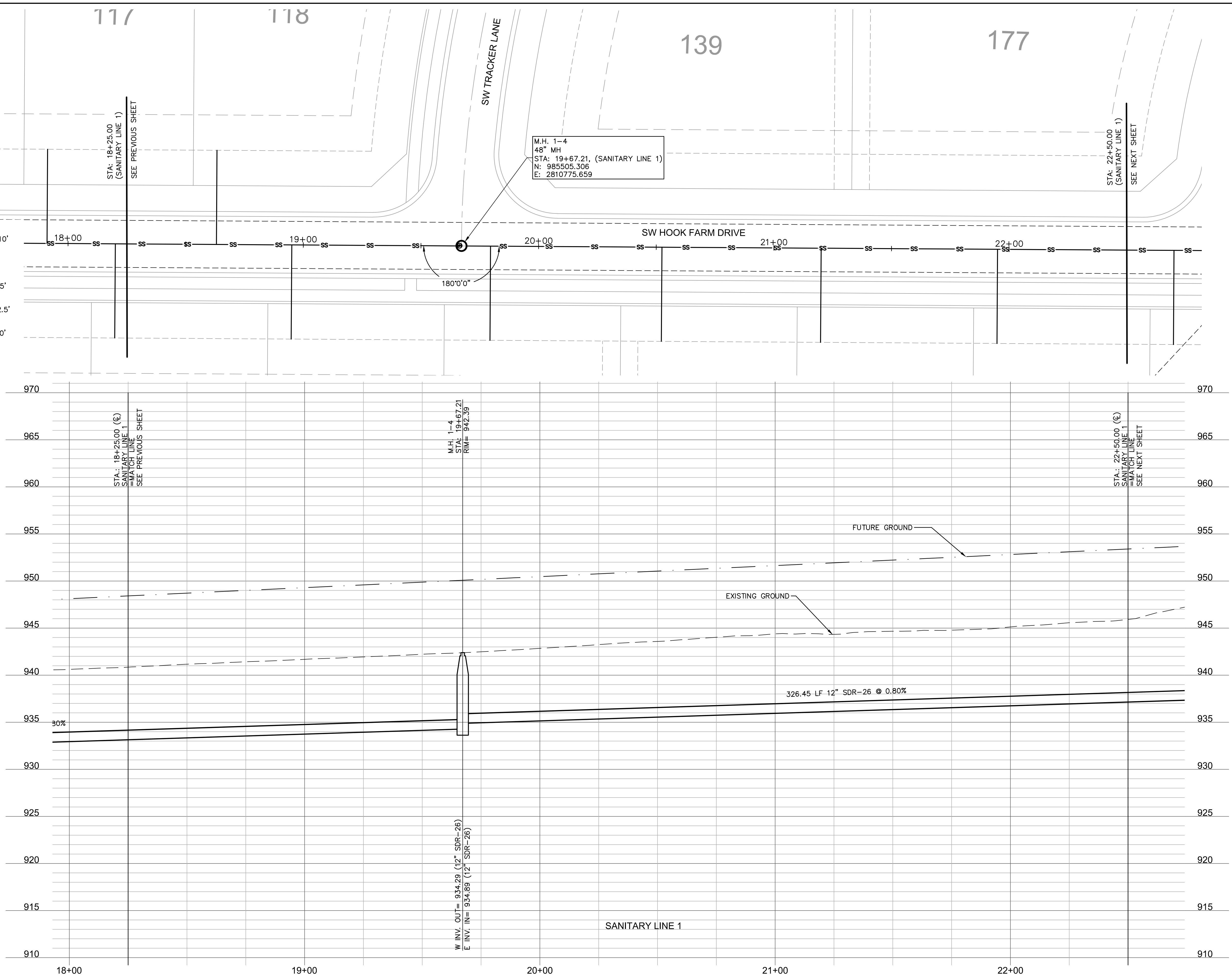
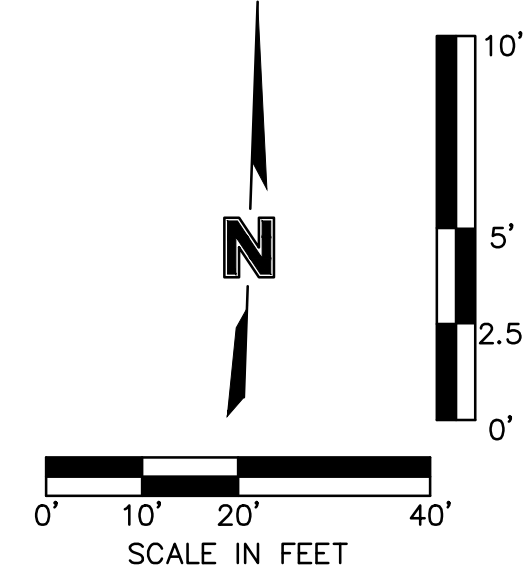


REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	06/15/2020	REVISED PER CITY COMMENTS	

SANITARY PLAN & PROFILE (LINE 1 CONT'D) STREET AND STORM SEWER PLANS		2020
HOOK FARMS FIRST FLAT		
LEE'S SUMMIT, MO		
drawn by:	CGW	
checked by:	JES	
approved by:	NDH	
QA/QC by:	JES	
project no.:	019-4061	
drawing no.:		
date:	04/20/2020	

SHEET C208

DWG: F:\2019\4001-4500\019-4061-40-Design\AutoCAD\Final Plans\Sanitary Sewer Plans\C\_SSWR00\_0194061.dwg USER: nheiser  
 DATE: Jun 15, 2020 6:09pm XREFS: C\_P\BLK\_0194061\_34x22 C\_XBASE\_0194061 C\_PBASE\_0194061 C\_PSSWR\_0194061 C\_PUTIL\_0194061



M.H. 1-4  
 48" MH  
 STA: 19+67.21, (SANITARY LINE 1)  
 N: 985505.306  
 E: 2810775.659

STA: 18+25.00  
 (SANITARY LINE 1)  
 SEE PREVIOUS SHEET

STA: 22+50.00  
 (SANITARY LINE 1)  
 SEE NEXT SHEET

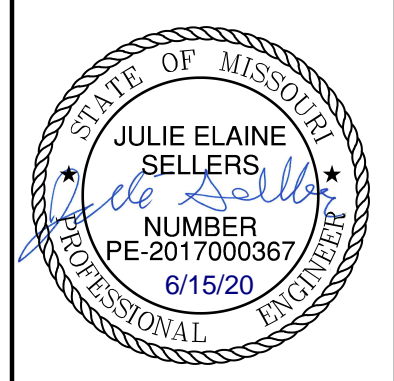
STA: 18+25.00 (E)  
 SANITARY LINE 1  
 MATCH LINE  
 SEE PREVIOUS SHEET

M.H. 1-4  
 STA: 19+67.21  
 RIM= 942.39

W INV. OUT= 934.29 (12" SDR-26)  
 E INV. IN= 934.89 (12" SDR-26)

STA: 22+50.00 (E)  
 SANITARY LINE 1  
 MATCH LINE  
 SEE NEXT SHEET

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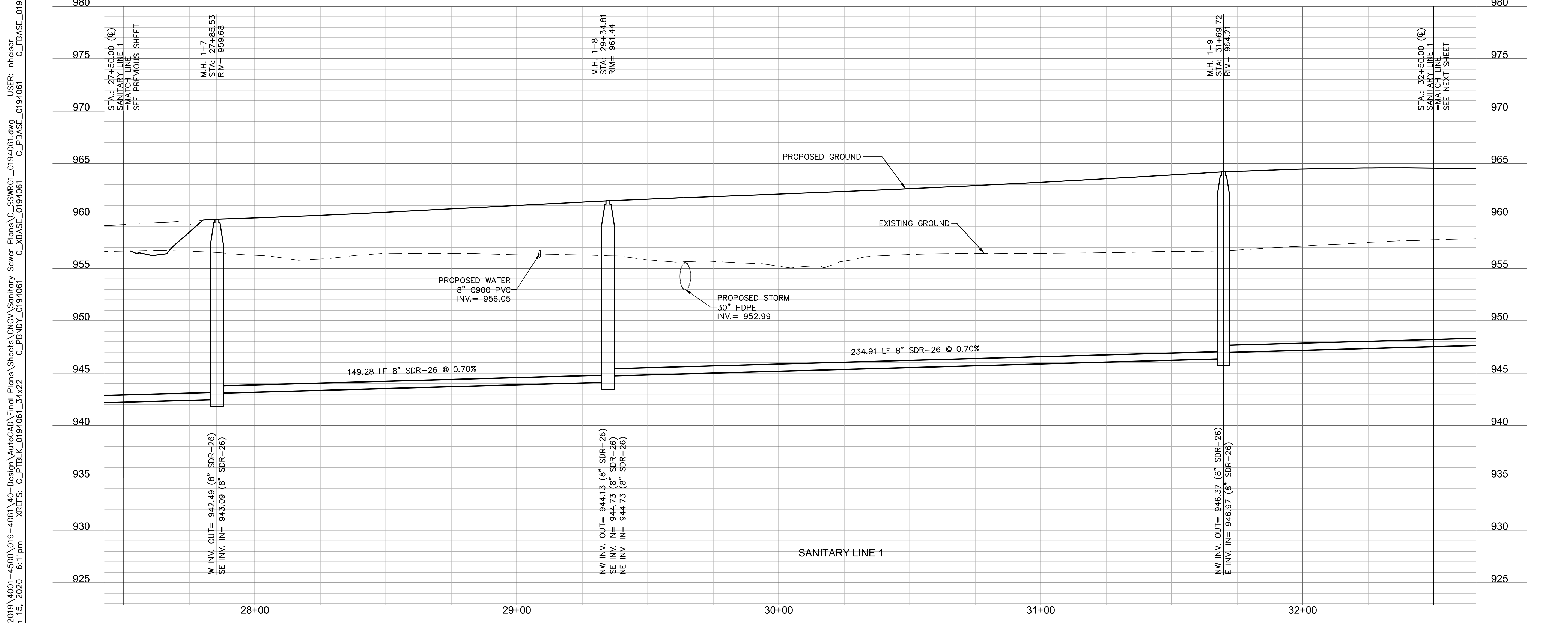
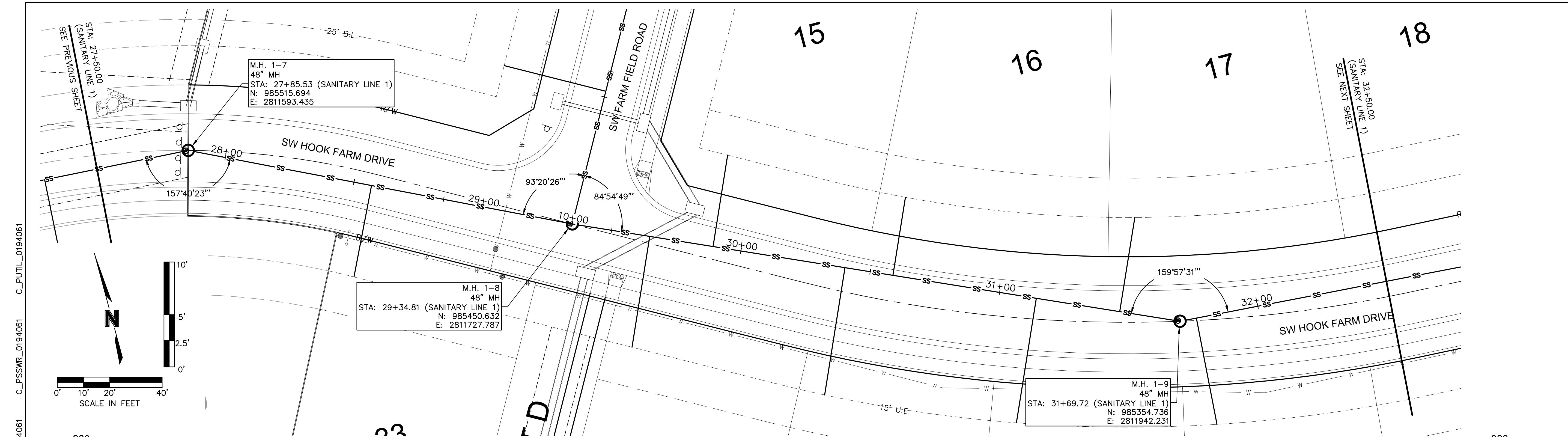
REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	06/15/2020	REVISED PER CITY COMMENTS	

SANITARY PLAN & PROFILE (LINE 1 CONT'D) STREET AND STORM SEWER PLANS		2020
HOOK FARMS FIRST PLAT		
LEE'S SUMMIT, MO		

drawn by: CGW  
 checked by: JES  
 approved by: NDH  
 QA/QC by: JES  
 project no.: 019-4061  
 drawing no.:  
 date: 04/20/2020

SHEET  
 C207

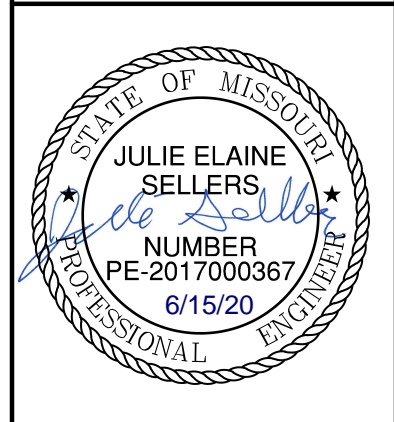




DWG: F:\2019\4001-4500\019-4061\40-Design\AutoCAD\Final Plans\Sanitary Sewer Plans\C\_SSWR01\_0194061.dwg  
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 USER: nheiser  
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 C\_PUTIL\_0194061  
 C\_PBASE\_0194061  
 C\_XBASE\_0194061  
 C\_PENDY\_0194061  
 C\_PTBK\_0194061\_34x22

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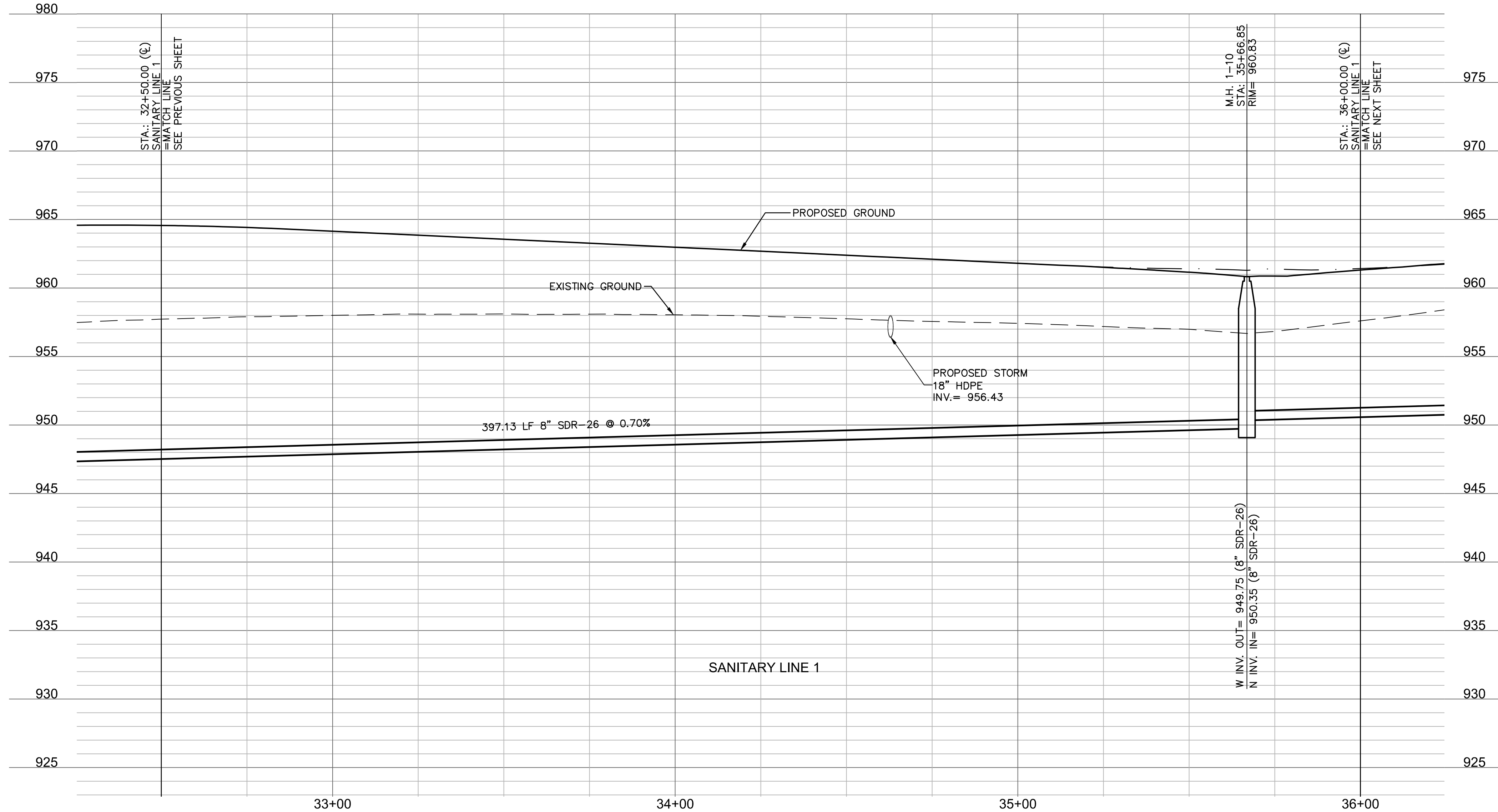
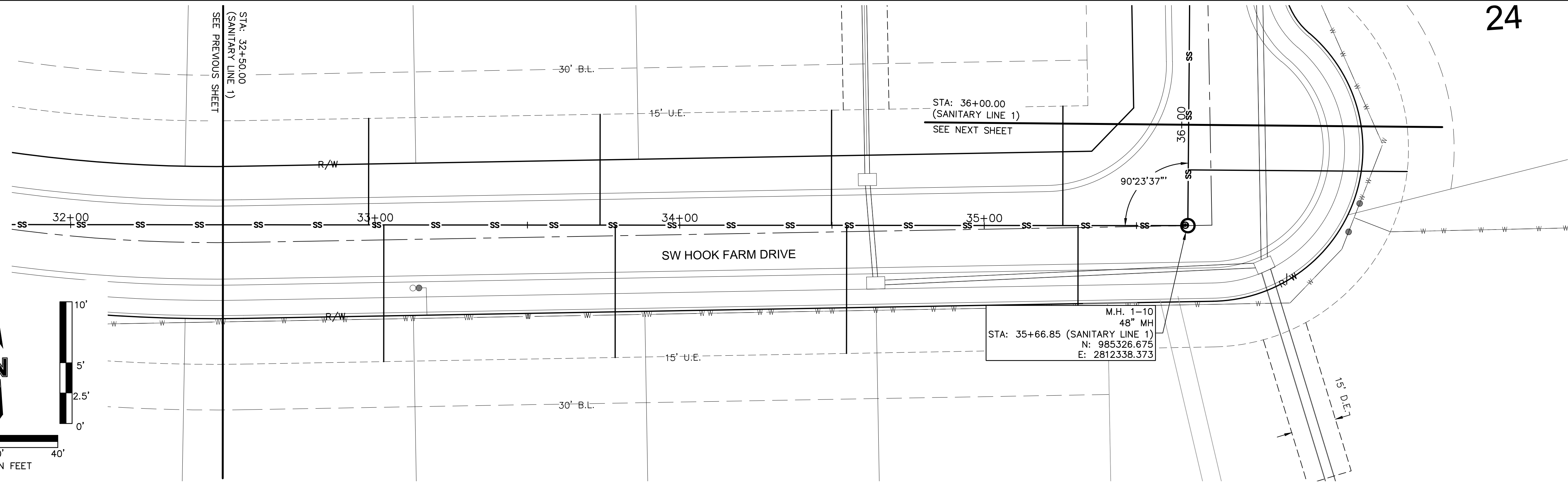
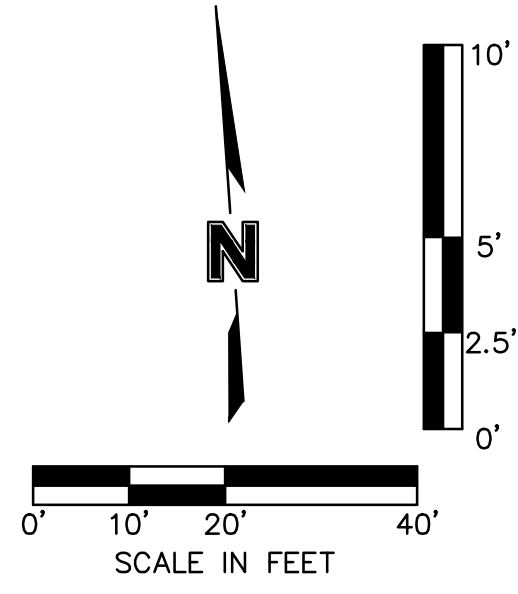


REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	06/15/2020	REVISED PER CITY COMMENTS	

SANITARY PLAN & PROFILE (LINE 1 CONT'D)		2020
STREET AND STORM SEWER PLANS		
HOOK FARMS FIRST PLAT		
LEES SUMMIT, MO		

drawn by: CGW  
 checked by: JES  
 approved by: NDH  
 QA/QC by: JES  
 project no.: 019-4061  
 drawing no.:  
 date: 04/20/2020

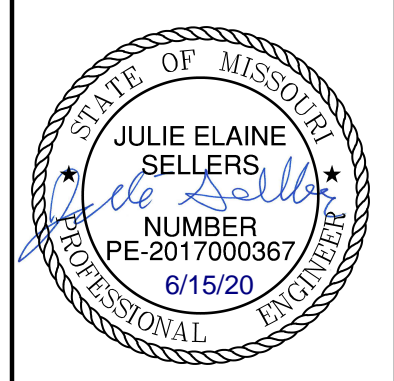
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 XREFS: C\_PTBK\_0194061\_34x22 C\_PBNDY\_0194061 C\_XBASE\_0194061 C\_PBASE\_0194061 C\_PSSWR\_0194061 C\_PUTIL\_0194061 USER: nheiser



24

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1	06/15/2020	REVISED PER CITY COMMENTS	

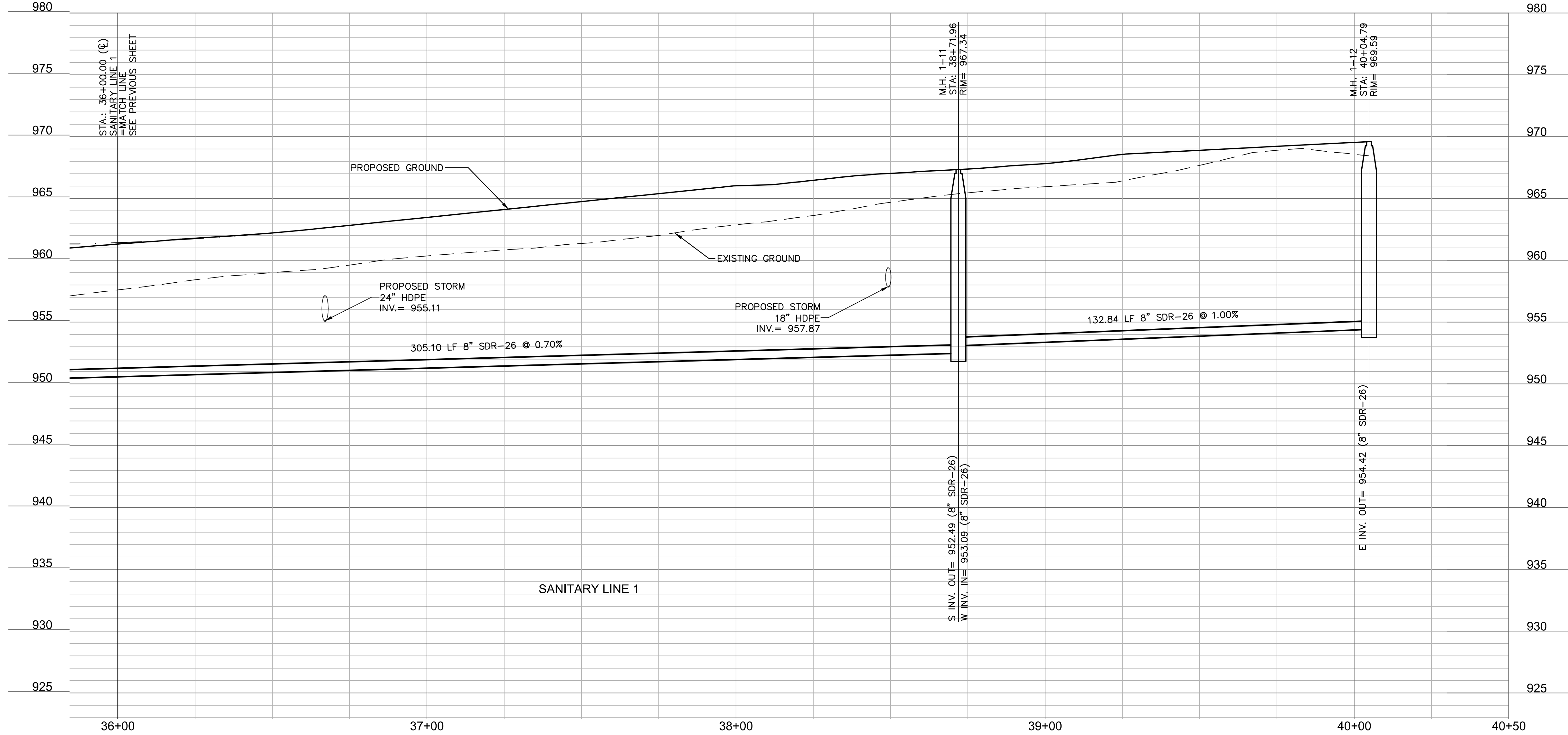
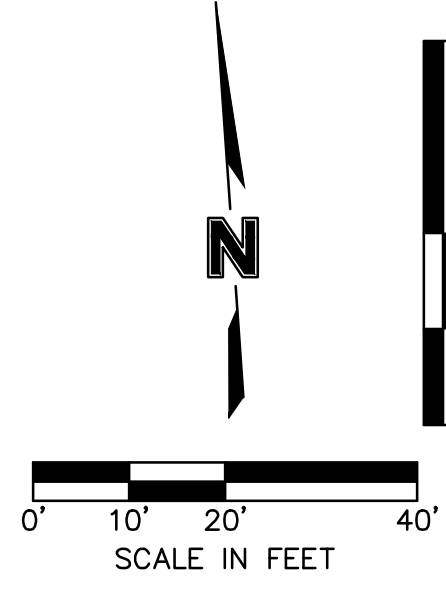
SANITARY PLAN & PROFILE (LINE 1 CONT'D) STREET AND STORM SEWER PLANS		2020
HOOK FARMS FIRST PLAT		
LEE'S SUMMIT, MO		

drawn by: CGW  
 checked by: JES  
 approved by: NDH  
 QA/QC by: JES  
 project no.: 019-4061  
 drawing no.:  
 date: 04/20/2020

SHEET  
C210

DWG: F:\2019\4001-4500\019-4061\40-Design\AutoCAD\Final Plans\Sanitary Sewer Plans\C\_SSWR01\_0194061.dwg  
 DATE: Jun 15, 2020 6:11pm  
 XREFS: C\_PTBK\_0194061\_34x22 C\_PBNDY\_0194061 C\_XBASE\_0194061 C\_PBASE\_0194061 C\_FBASE\_0194061 C\_PUTIL\_0194061

USER: nheiser



25

21

9

M.H. 1-10  
 48" MH  
 STA: 35+66.85 (SANITARY LINE 1)  
 N: 985326.675  
 E: 2812338.373

M.H. 1-12  
 48" MH  
 STA: 40+04.79 (SANITARY LINE 1)  
 N: 985642.757  
 E: 2812229.849

M.H. 1-11  
 48" MH  
 STA: 38+71.96 (SANITARY LINE 1)  
 N: 985630.849  
 E: 2812362.149

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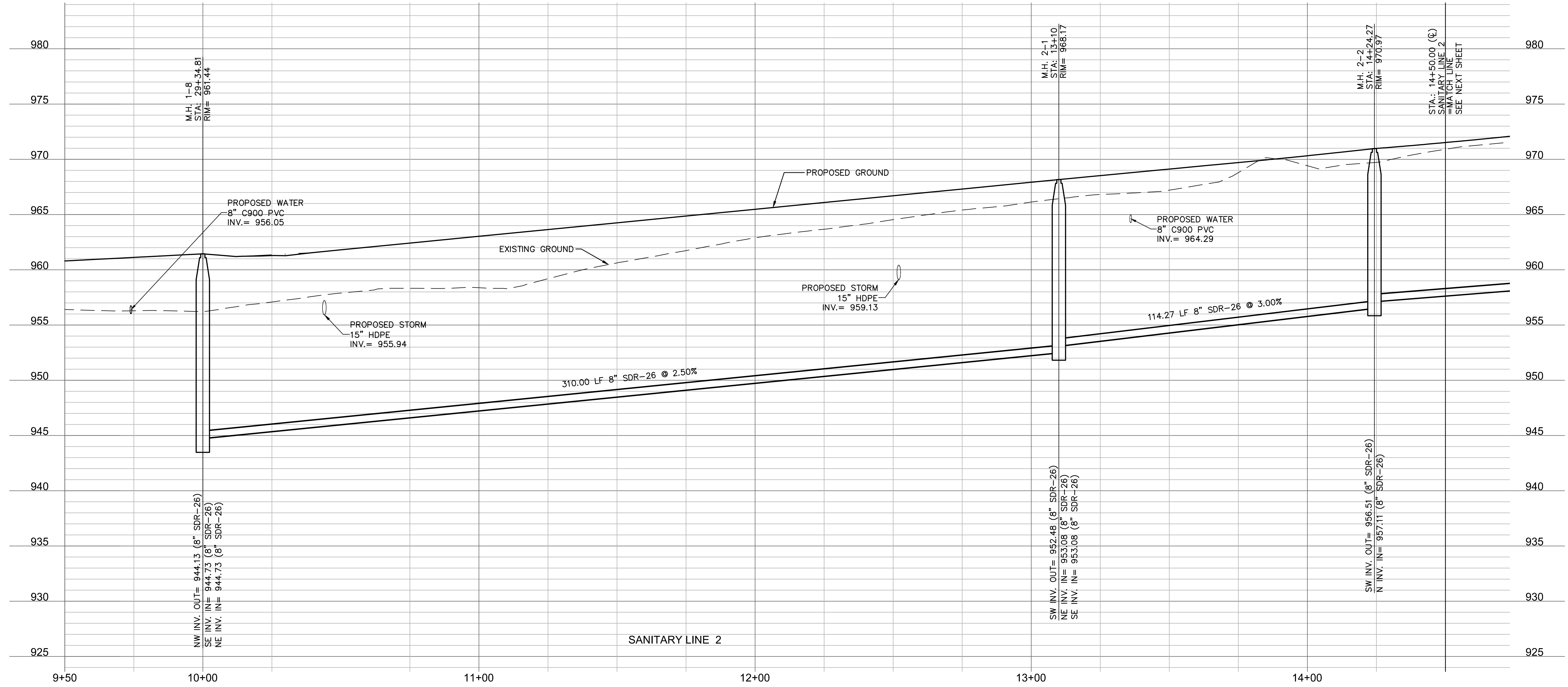
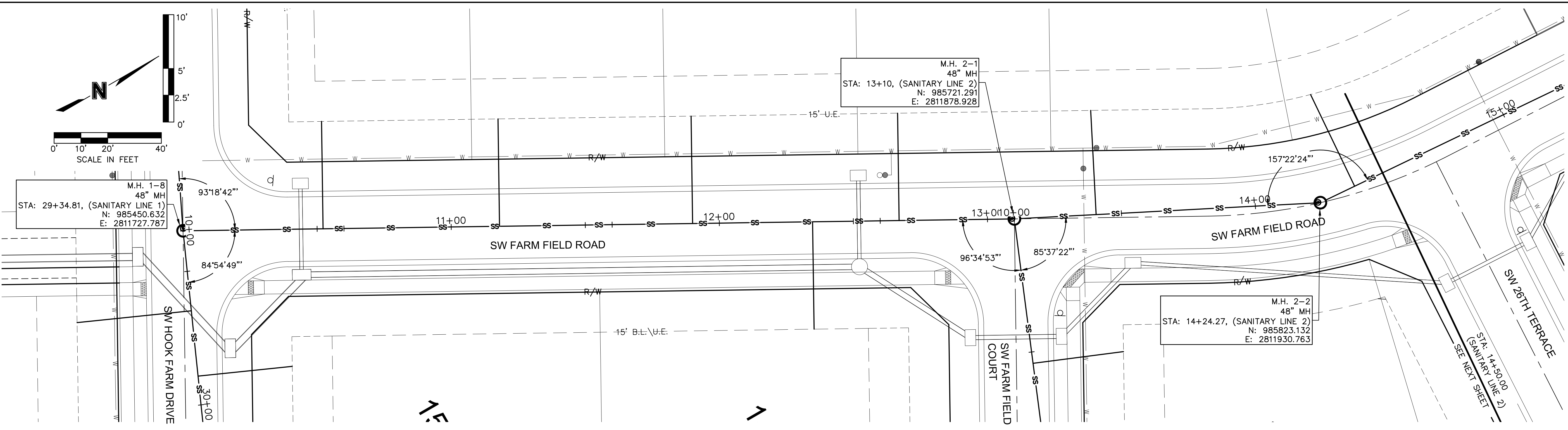
REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	06/15/2020	REVISED PER CITY COMMENTS	

**SANITARY PLAN & PROFILE (LINE 1 CONT'D)**  
**STREET AND STORM SEWER PLANS**  
 HOOK FARMS  
 FIRST FLAT  
 LEES SUMMIT, MO  
 2020

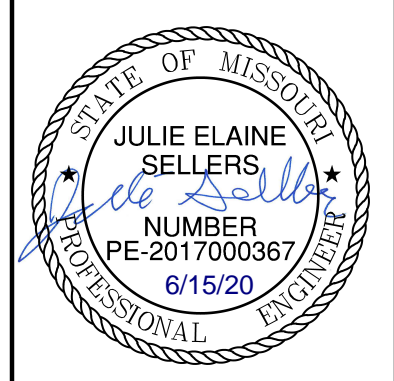
drawn by: CGW  
 checked by: JES  
 approved by: NDH  
 QA/QC by: JES  
 project no.: 019-4061  
 drawing no.:  
 date: 04/20/2020

**SHEET C211**

DWG: F:\2019\4001-4500\019-4061\40-Design\AutoCAD\Final Plans\Sanitary Sewer Plans\C\_SSWR02\_0194061.dwg USER: nheiser  
 DATE: Jun 15, 2020 6:13pm XREFS: C\_PBDY\_0194061 C\_PBASE\_0194061 C\_PSSWR\_0194061 C\_PUTIL\_0194061



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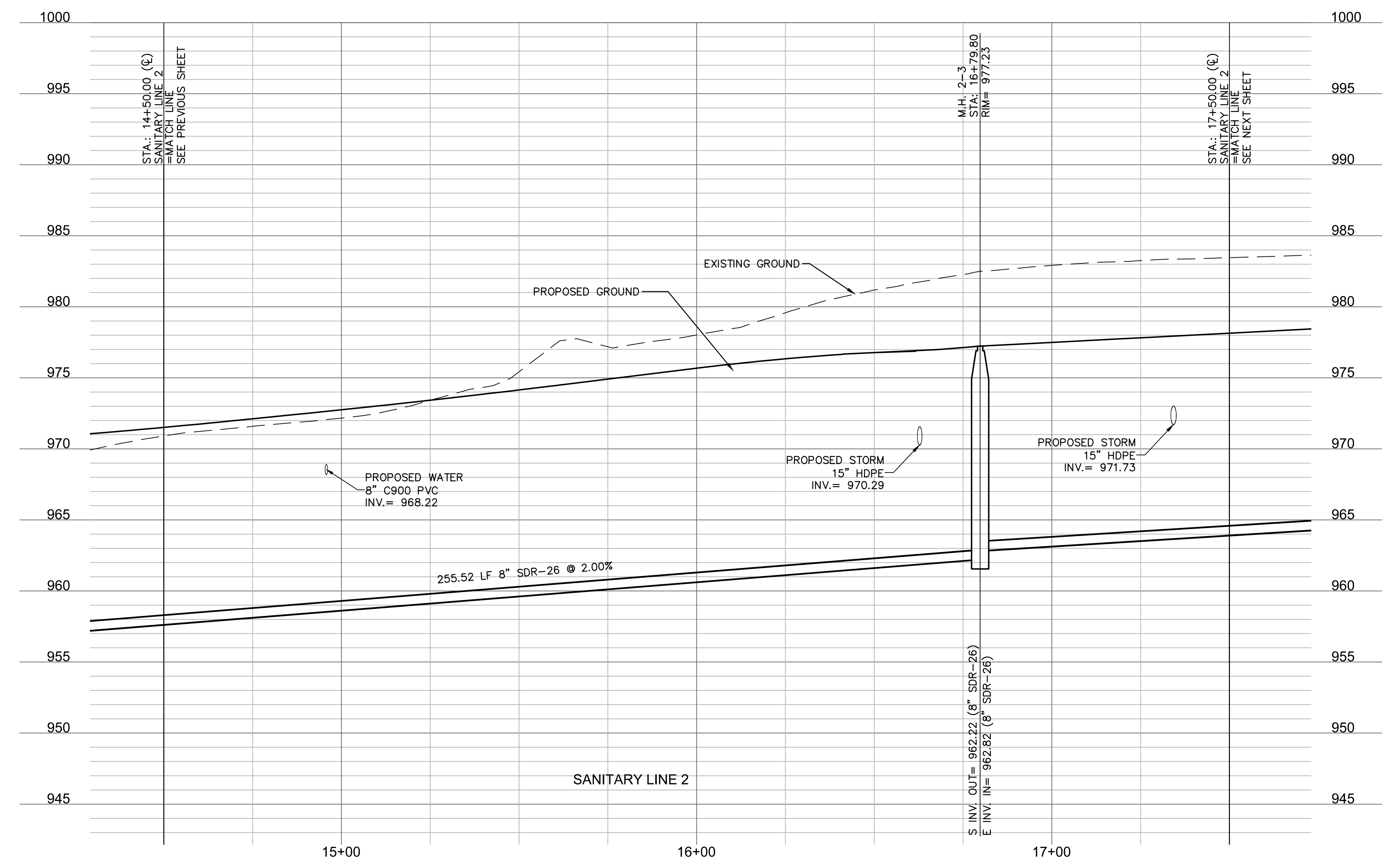
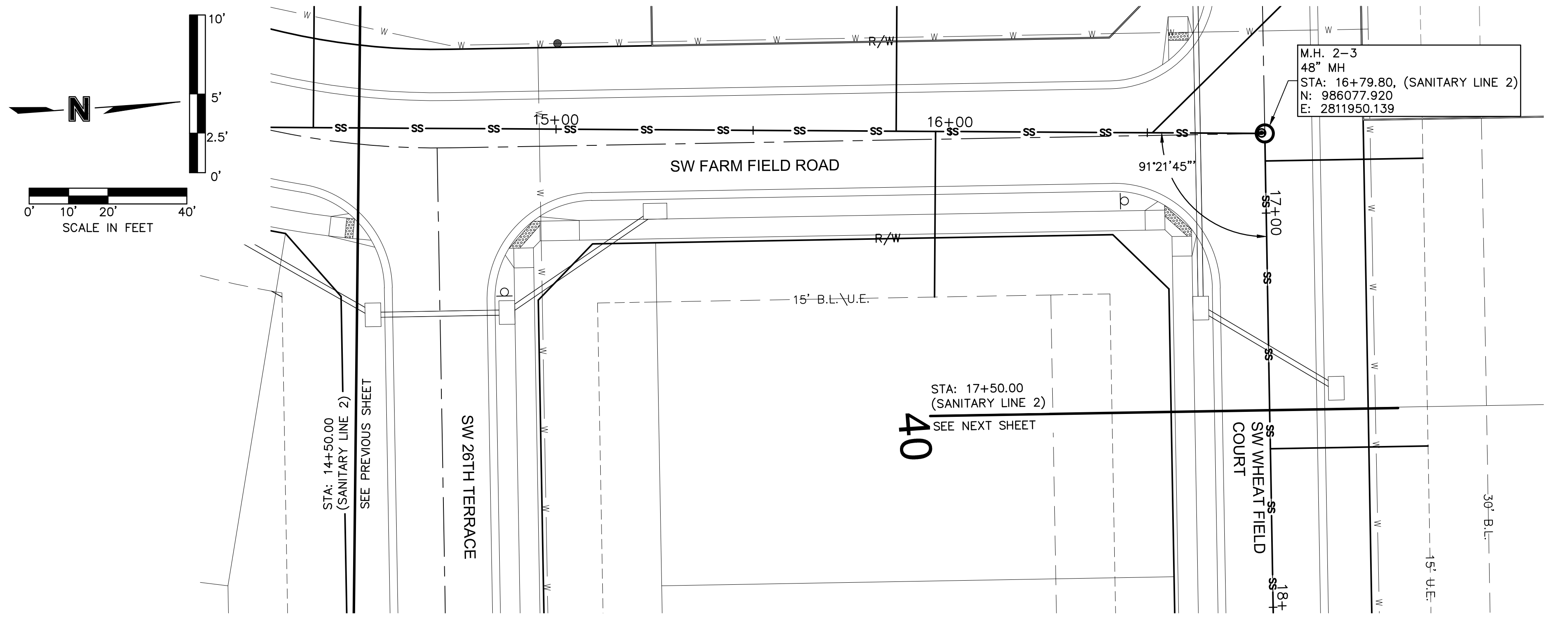


REV. NO.	DATE	REVISIONS DESCRIPTION
1	06/15/2020	REVISED PER CITY COMMENTS

SANITARY PLAN & PROFILE (LINE 2) STREET AND STORM SEWER PLANS		2020
HOOK FARMS FIRST FLAT		
LEE'S SUMMIT, MO		

drawn by: CGW  
 checked by: JES  
 approved by: NDH  
 QA/QC by: JES  
 project no.: 019-4061  
 drawing no.:  
 date: 04/20/2020

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STATE OF MISSOURI  
 JULIE ELAINE  
 SELLERS  
 PROFESSIONAL ENGINEER  
 NUMBER  
 PE-2017000367  
 6/15/20

REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	06/15/2020	REVISED PER CITY COMMENTS	

SANITARY PLAN & PROFILE (LINE 2 CONT'D)  
 STREET AND STORM SEWER PLANS

2020

REVISIONS

HOOK FARMS  
 FIRST PLAT

LEE'S SUMMIT, MO

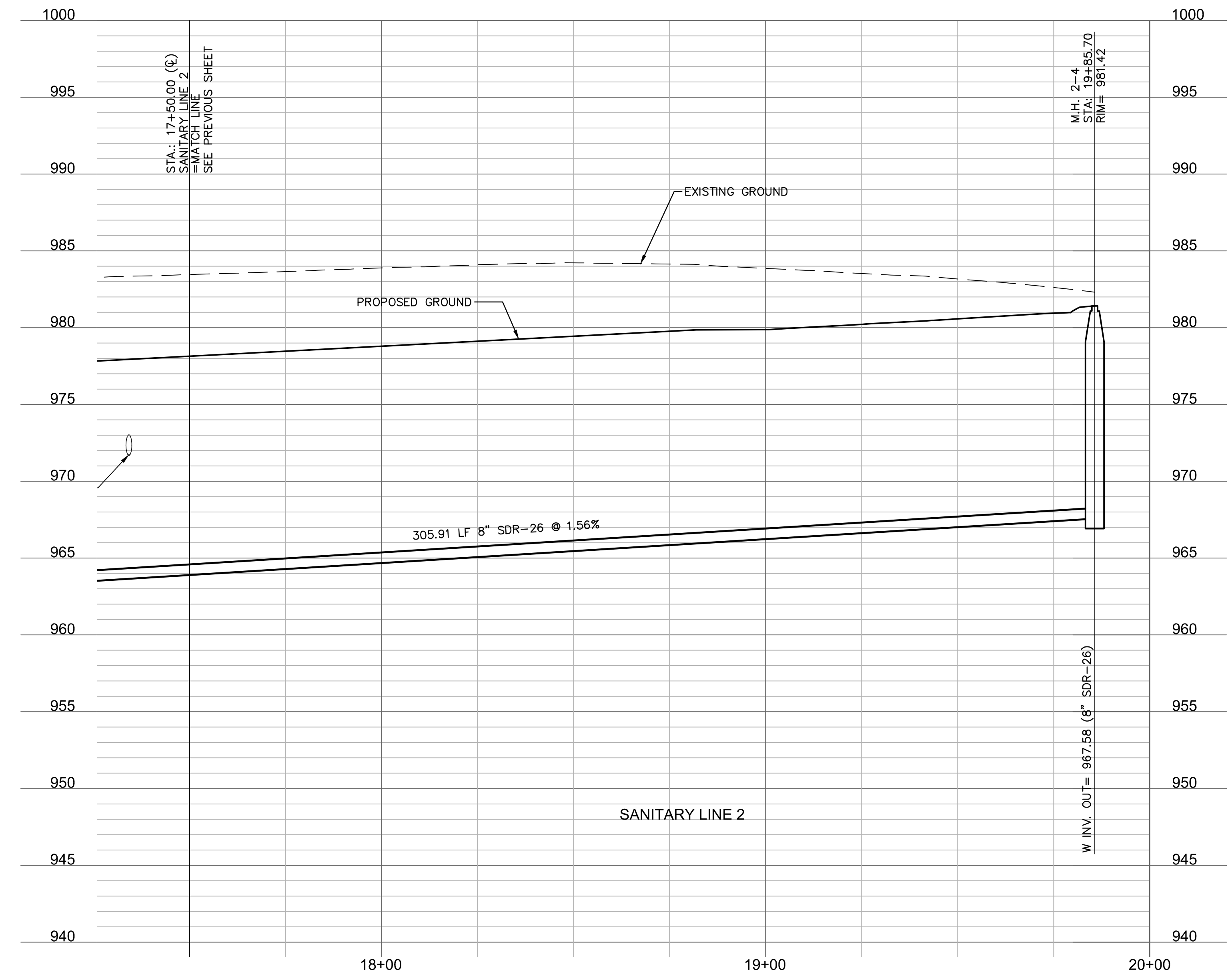
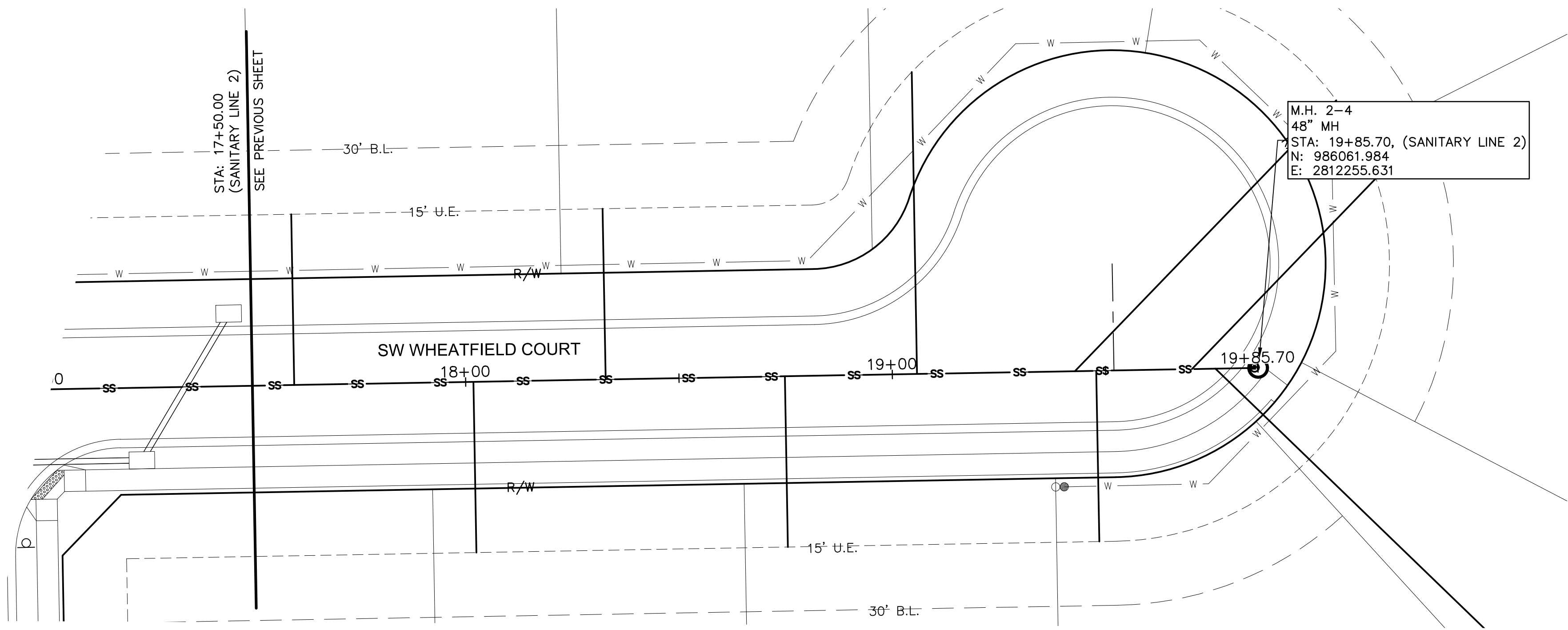
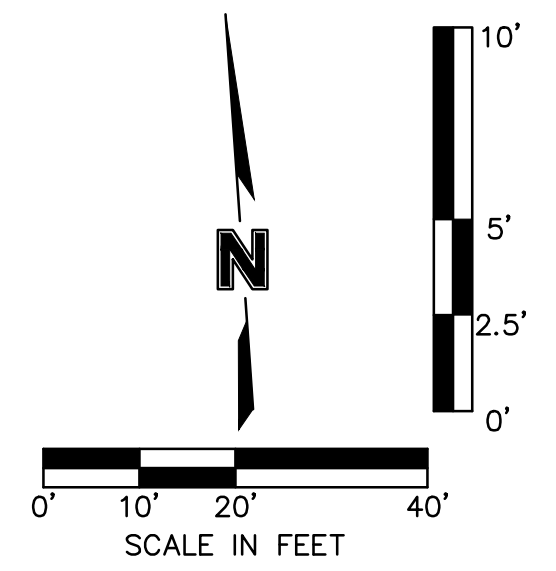
2020

drawn by: CGW  
 checked by: JES  
 approved by: NDH  
 QA/QC by: JES  
 project no.: 019-4061  
 drawing no.:  
 date: 04/20/2020

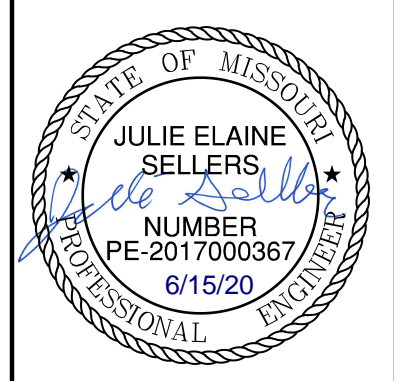
SHEET  
 C213

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USER: nheiser



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 FAX 816.361.1888  
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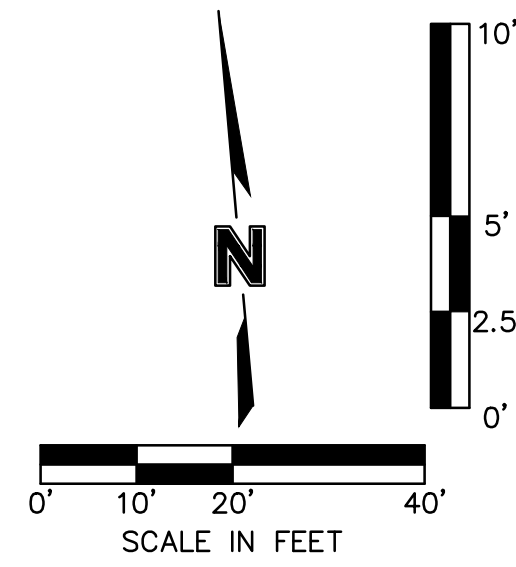
REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	06/15/2020	REVISED PER CITY COMMENTS	

SANITARY PLAN & PROFILE (LINE 2 CONT'D) STREET AND STORM SEWER PLANS		2020
HOOK FARMS FIRST PLAT		
LEE'S SUMMIT, MO		

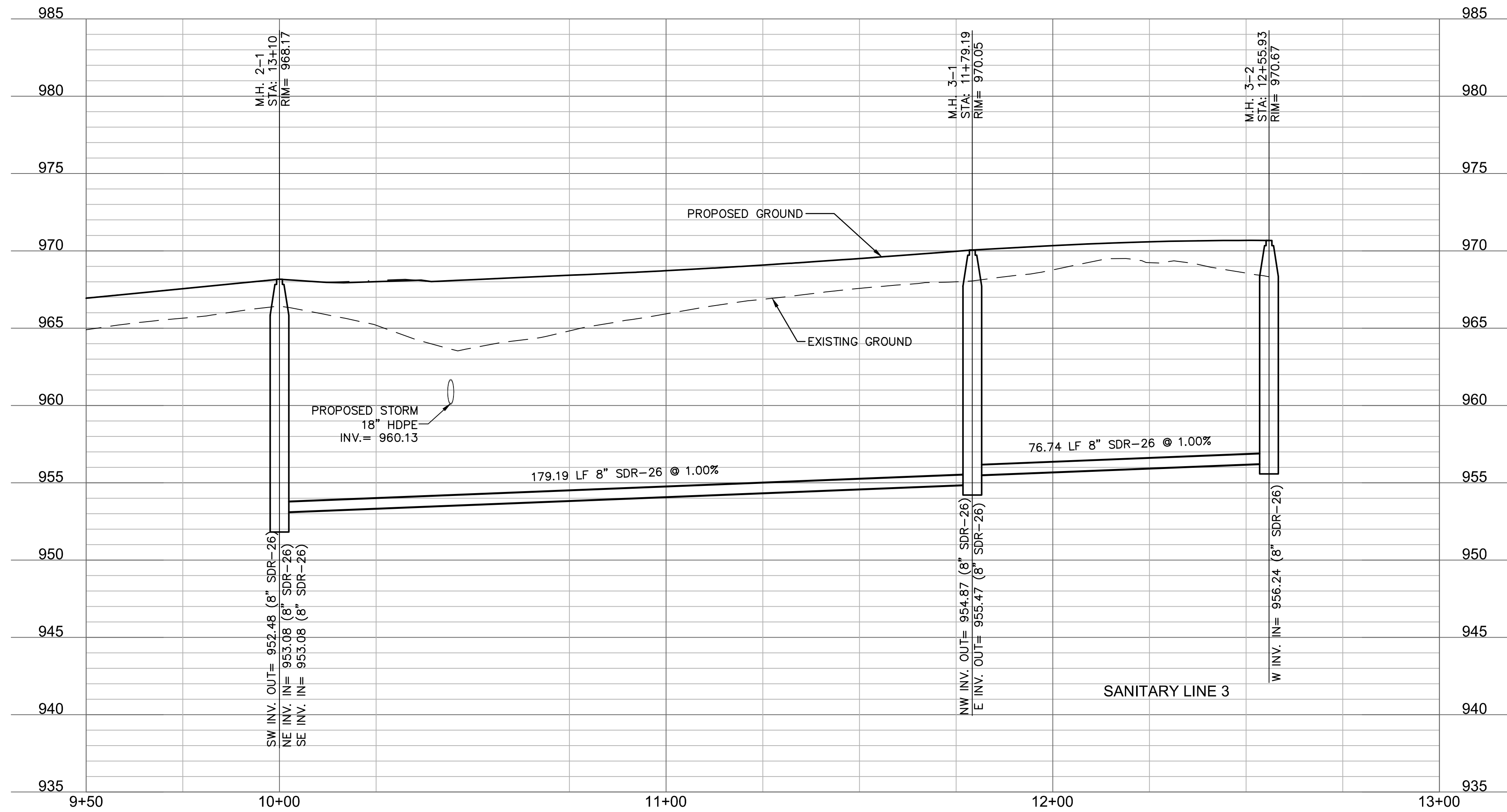
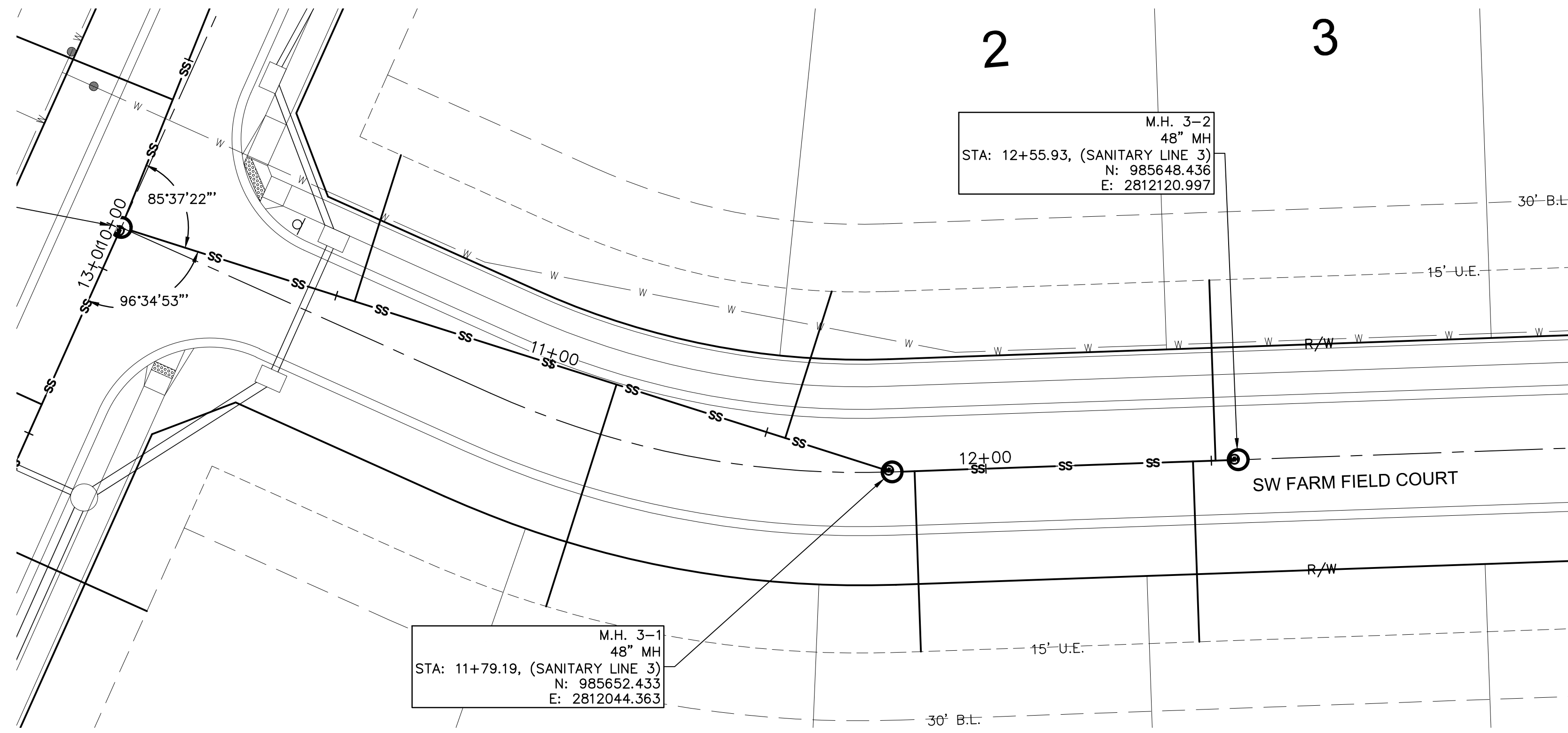
drawn by: CGW  
 checked by: JES  
 approved by: NDH  
 QA/QC by: JES  
 project no.: 019-4061  
 drawing no.:  
 date: 04/20/2020

SHEET  
C214

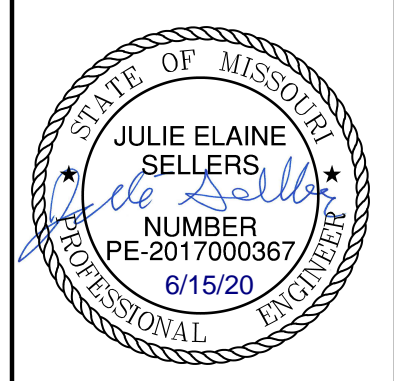
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 DATE: Jun 15, 2020 6:13pm XREFS: C\_PTBK\_0194061\_34x22 C\_XBASE\_0194061 C\_PBASE\_0194061 C\_PSSWR\_0194061 C\_PUTIL\_0194061



SW FARM FIELD ROAD



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REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	06/15/2020	REVISIONS PER CITY COMMENTS	

SANITARY PLAN & PROFILE (LINE 3) STREET AND STORM SEWER PLANS		2020
HOOK FARMS FIRST PLAT		
LEE'S SUMMIT, MO		

drawn by: CGW  
 checked by: JES  
 approved by: NDH  
 QA/QC by: JES  
 project no.: 019-4061  
 drawing no.:  
 date: 04/20/2020

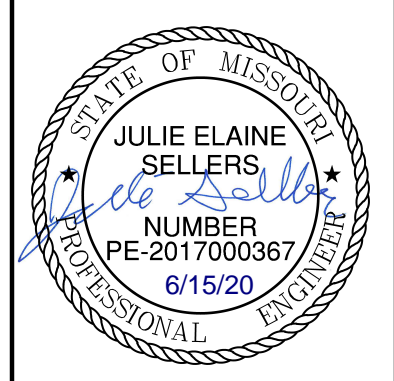
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 DATE: Jun 15, 2020 6:14pm XREFS: C\_PTBK\_0194061\_34x22 C\_XBASE\_0194061 C\_PBASE\_0194061 C\_PBASE\_0194061

Sanitary Sewer Laterals						
Lot Number	Lateral Station	Lateral Length	Riser	Flowline at Main	Flowline at End of Lateral	Minimum Servicable Floor Elevation
		(ft)	(ft)	(ft)	(ft)	(ft)
2	11+54.37	34.09	3.0	954.6	959.2	962.05
3	12+50.93	40.00	1.0	956.2	959.0	961.77
4	39+96.30	40.35	2.0	954.3	958.1	960.90
5	39+24.36	43.06	3.0	953.6	958.4	961.22
6	38+84.32	48.18	2.0	952.6	956.5	959.30
7	38+32.21	78.32	2.0	952.2	956.7	959.54
8	38+24.63	59.49	1.0	952.2	955.3	958.13
9	39+19.36	36.81	3.0	953.6	958.2	961.04
10	40+01.30	39.90	3.0	954.4	959.1	961.92
11	12+45.93	40.00	1.0	956.1	958.9	961.72
12	11+84.19	40.00	2.0	955.5	959.3	962.08
13	11+15.13	51.58	2.0	954.2	958.2	961.02
14	12+34.78	40.00	5.0	950.6	957.3	960.10
15	29+89.23	35.31	4.0	945.1	950.7	953.54
16	30+58.77	30.16	5.0	945.6	952.1	954.90
17	31+46.44	36.39	5.0	946.2	952.8	955.64
18	32+97.85	35.00	4.0	947.9	953.5	956.29
19	33+73.83	36.42	2.0	948.4	952.1	954.89
20	34+49.82	37.86	1.0	948.9	951.7	954.48
21	35+25.81	39.24	0.0	949.5	951.3	954.06
22	37+51.18	43.14	1.0	951.6	954.5	957.29
23	36+78.21	45.03	0.0	951.1	953.0	955.84
24	35+85.21	71.89	0.0	950.5	952.9	955.72
25	35+30.81	40.68	0.0	949.5	951.3	954.12
26	34+54.82	42.09	1.0	949.0	951.8	954.60
27	33+78.83	43.50	2.0	948.4	952.3	955.07
28	33+02.85	44.92	4.0	947.9	953.7	956.53
29	31+76.12	41.30	5.0	947.0	953.7	956.55
30	31+14.21	48.14	5.0	946.0	952.9	955.65
31	30+40.23	49.19	4.0	945.5	951.4	954.18
32	29+64.77	42.62	4.0	944.9	950.7	953.52
33	28+56.79	35.51	4.0	943.6	949.2	952.02
34	10+52.24	40.00	3.0	946.0	950.8	953.58
35	11+18.04	40.00	4.0	947.7	953.4	956.20
36	11+90.04	40.00	4.0	949.5	955.2	958.00
37	12+67.04	40.00	3.0	951.4	956.1	958.95
38	13+40.56	38.85	3.0	954.0	958.7	961.51
39	14+38.45	37.89	2.0	957.4	961.1	963.91
40	15+96.28	42.00	5.0	960.5	967.3	970.09
41	18+01.80	40.00	2.0	964.6	968.4	971.21
42	18+74.80	40.00	1.0	965.7	968.5	971.32
43	19+47.80	40.00	1.0	966.8	969.6	972.42
44	19+70.22	62.12	1.0	967.2	970.4	973.20
45	19+42.80	88.18	1.0	966.8	970.5	973.31
46	19+05.79	70.76	1.0	966.2	969.6	972.40
47	18+32.79	40.00	1.0	965.1	967.9	970.69
48	17+59.79	40.00	2.0	964.0	967.8	970.58
49	16+86.79	40.00	2.0	962.9	966.7	969.48
POOL	19+75.70	162.07	0.0	967.3	971.5	974.30
100	27+29.63	33.63	5.0	942.1	948.7	951.47
101	26+48.62	39.23	4.0	941.5	947.2	950.03
102	25+70.09	40.00	4.0	940.3	946.0	948.83
103	25+00.09	40.00	4.0	939.8	945.5	948.27
104	24+20.09	40.00	4.0	939.1	944.8	947.63
105	23+45.09	40.00	3.0	938.5	943.3	946.05
106	22+70.09	40.00	4.0	937.3	943.0	945.83
107	21+95.09	40.00	3.0	936.7	941.5	944.25
108	21+20.09	40.00	3.0	936.1	940.9	943.65
109	20+52.43	40.00	3.0	935.6	940.3	943.11
110	19+79.58	40.00	3.0	935.0	939.7	942.53
111	18+95.09	40.00	3.0	933.7	938.5	941.75
112	18+20.09	40.00	3.0	933.1	937.9	941.65
113	17+45.09	40.00	2.0	932.5	936.3	941.39*
114	16+70.09	40.00	1.0	931.9	934.7	941.39*
115	15+22.99	15.00	2.0	930.1	933.4	941.39*
116	17+12.00	53.21	1.0	932.2	935.3	941.39*
117	17+91.05	40.00	2.0	932.9	936.6	941.39*
118	18+63.05	40.00	3.0	933.5	938.2	941.50
193	16+51.28	94.66	1.0	961.6	965.5	968.32
194	15+86.28	37.79	3.0	960.3	965.0	967.84

\*BASEMENT SEWER SERVICE MAY NOT BE AVAILABLE. GRINDER PUMP IS REQUIRED IF FINISHED FLOOR OF BASEMENT IS LOWER THAN INDICATED MSFE

Sanitary Sewer Design Information											
Upstream Manhole	Downstream Pipe Slope	Downstream Pipe Diameter	Proposed Cumulative Area	Future Cumulative Area	Peak Base Flow 50-Year Design	Peak Infiltration Flow 50-Year Design	Peak Inflow 50-Year Design	Total Peak Flow	Downstream Pipe Mannings N	Downstream Pipe Capacity	Downstream Pipe Full Flow Velocity
	(%)	(in)	(Ac.)	(Ac.)	(gpd)	(gpd)	(cfs)	(cfs)		(cfs)	(fps)
MH 1-1	1.50%	12	21.08	18.43	59265.00	19755.000	0.950	1.073	0.014	4.05	5.16
MH 1-2	0.80%	12	21.08	18.43	59265.00	19755.000	0.950	1.073	0.014	2.96	3.77
MH 1-3	0.80%	12	21.08	18.43	59265.00	19755.000	0.950	1.073	0.014	2.96	3.77
MH 1-4	0.80%	12	20.54	18.43	58455.00	19485.000	0.939	1.060	0.014	2.96	3.77
MH 1-5	0.80%	8	18.43	10.97	44100.00	14700.000	0.741	0.832	0.014	1.00	2.88
MH 1-6	0.80%	8	16.92	5.23	33225.00	11075.000	0.581	0.650	0.014	1.00	2.88
MH 1-7	0.70%	8	15.78	0.00	23670.00	7890.000	0.432	0.481	0.014	0.94	2.69
MH 1-8	0.70%	8	15.15	0.00	22725.00	7575.000	0.417	0.464	0.014	0.94	2.69
MH 1-9	0.70%	8	7.04	0.00	10560.00	3520.000	0.209	0.231	0.014	0.94	2.69
MH 1-10	0.70%	8	5.29	0.00	7935.00	2645.000	0.161	0.178	0.014	0.94	2.69
MH 1-11	0.70%	8	2.81	0.00	4215.00	1405.000	0.090	0.098	0.014	0.94	2.69
MH 1-12	1.00%	8	1.08	0.00	1620.00	540.000	0.036	0.040	0.014	1.12	3.21
MH 2-1	2.50%	8	7.83	0.00	11745.00	3915.000	0.231	0.255	0.014	1.77	5.08
MH 2-2	3.00%	8	4.65	0.00	6975.00	2325.000	0.143	0.158	0.014	1.94	5.57
MH 2-3	2.00%	8	4.36	0.00	6540.00	2180.000	0.135	0.148	0.014	1.59	4.55
MH 2-4	1.50%	8	3.42	0.00	5130.00	1710.000	0.108	0.118	0.014	1.37	3.94
MH 3-1	1.00%	8	1.75	0.00	2625.00	875.000	0.057	0.063	0.014	1.12	3.21
MH 3-2	1.00%	8	0.52	0.00	780.00	260.000	0.018	0.020	0.014	1.12	3.21

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REV. NO.	DATE	REVISIONS DESCRIPTION	BY
1	06/15/2020	REVISED PER CITY COMMENTS	

DESIGN TABLES  
 SANITARY SEWER PLANS  
 HOOK FARMS  
 FIRST PLAT  
 LEE'S SUMMIT, MO  
 2020

drawn by: CGW  
 checked by: JES  
 approved by: NDH  
 QA/QC by: JES  
 project no.: 019-4061  
 drawing no.:  
 date: 04/20/2020

SHEET  
 C216



USER: nheiser

DWG: F:\2019\4001-4500\019-4061-Design\AutoCAD\Final Plans\Sheets\Sanitary Sewer Plans\C\_DET01\_0194061.dwg  
DATE: Jun 15, 2020 6:14pm XREFS: C\_PTBK\_0194061\_34x22

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

Date:	09/16/04
Drawn By:	JN
Checked By:	
FILE:	SANITARY SEWER-2
Rev:	04/05/07
Rev:	12/12

**CITY OF LEE'S SUMMIT, MO**  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION

STANDARD 24" MANHOLE COVER

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

Date:	09/16/04
Drawn By:	JN
Checked By:	
FILE:	SANITARY SEWER-1
Rev:	01/04/07
Rev:	1/13

**CITY OF LEE'S SUMMIT, MO**  
PUBLIC WORKS DEPARTMENT  
ENGINEERING DIVISION

STANDARD 24" MANHOLE FRAME

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 THAN 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.

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

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

STANDARD PRECAST MANHOLE - SANITARY SEWER

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.

Date:	04/17
Drawn By:	MPF
Checked By:	DL

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

BUILDING SEWER STUB AND RISER

SAN-1

REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FLEXIBLE PIPE-TO-MANHOLE CONNECTORS/GASKETS CAST INTO THE PRECAST WALL STRUCTURE.

REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FLEXIBLE PIPE-TO-MANHOLE CONNECTORS/GASKETS BOOT SYSTEM

Date:	02/13
Drawn By:	JN
Checked By:	DL
FILE:	SAN-5
Rev:	1/14
Rev:	

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

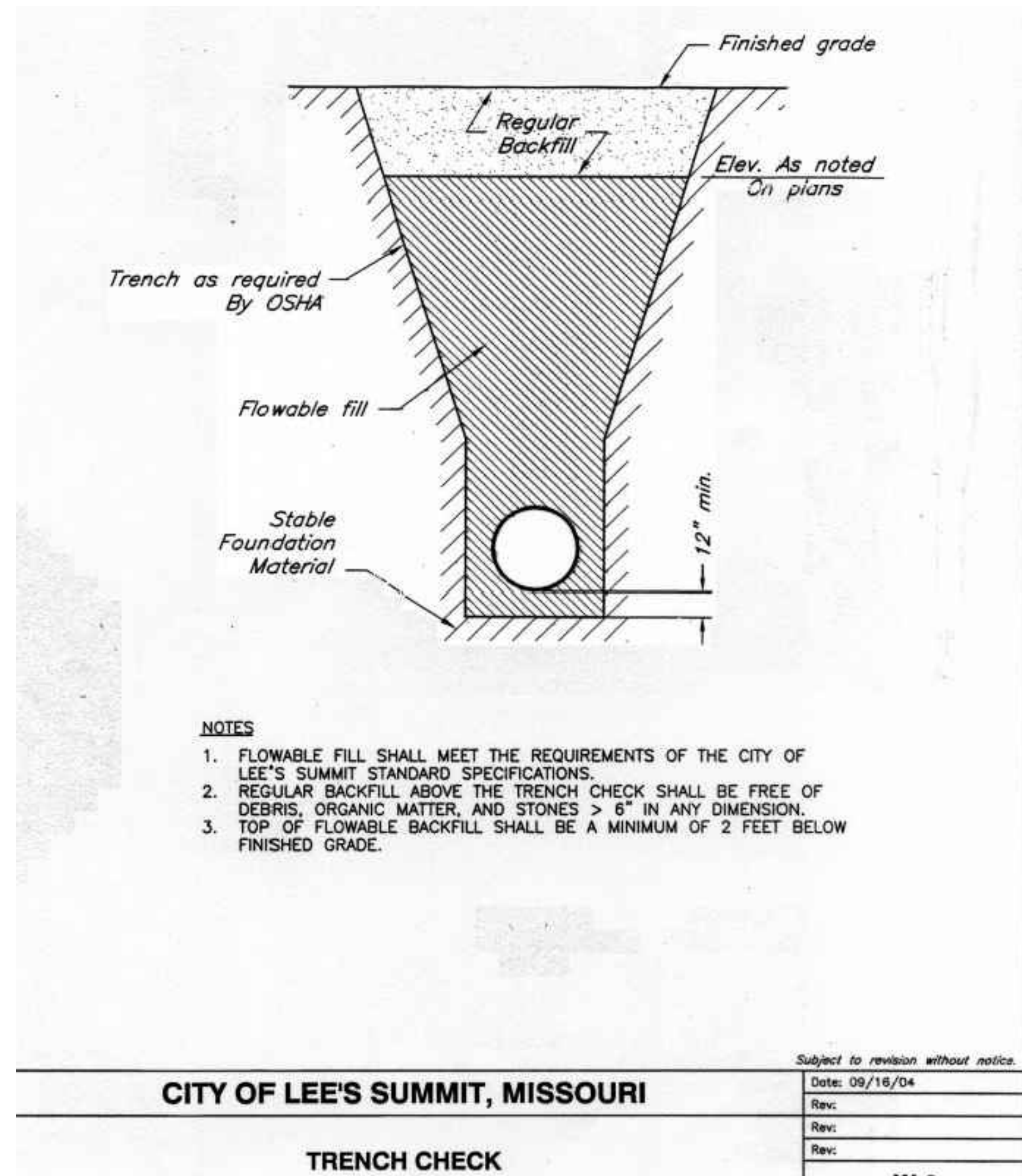
MANHOLE WALL CONNECTIONS

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REV. NO.	DATE	REVISIONS DESCRIPTION
1	06/15/2020	REVISED PER CITY COMMENTS

DETAIL SHEET SANITARY SEWER PLANS	2020
HOOK FARMS FIRST PLAT	
LEE'S SUMMIT, MO	
drawn by: CGW	
checked by: JES	
approved by: NDH	
QA/QC by: JES	
project no.: 019-4061	
drawing no.:	
date: 04/20/2020	

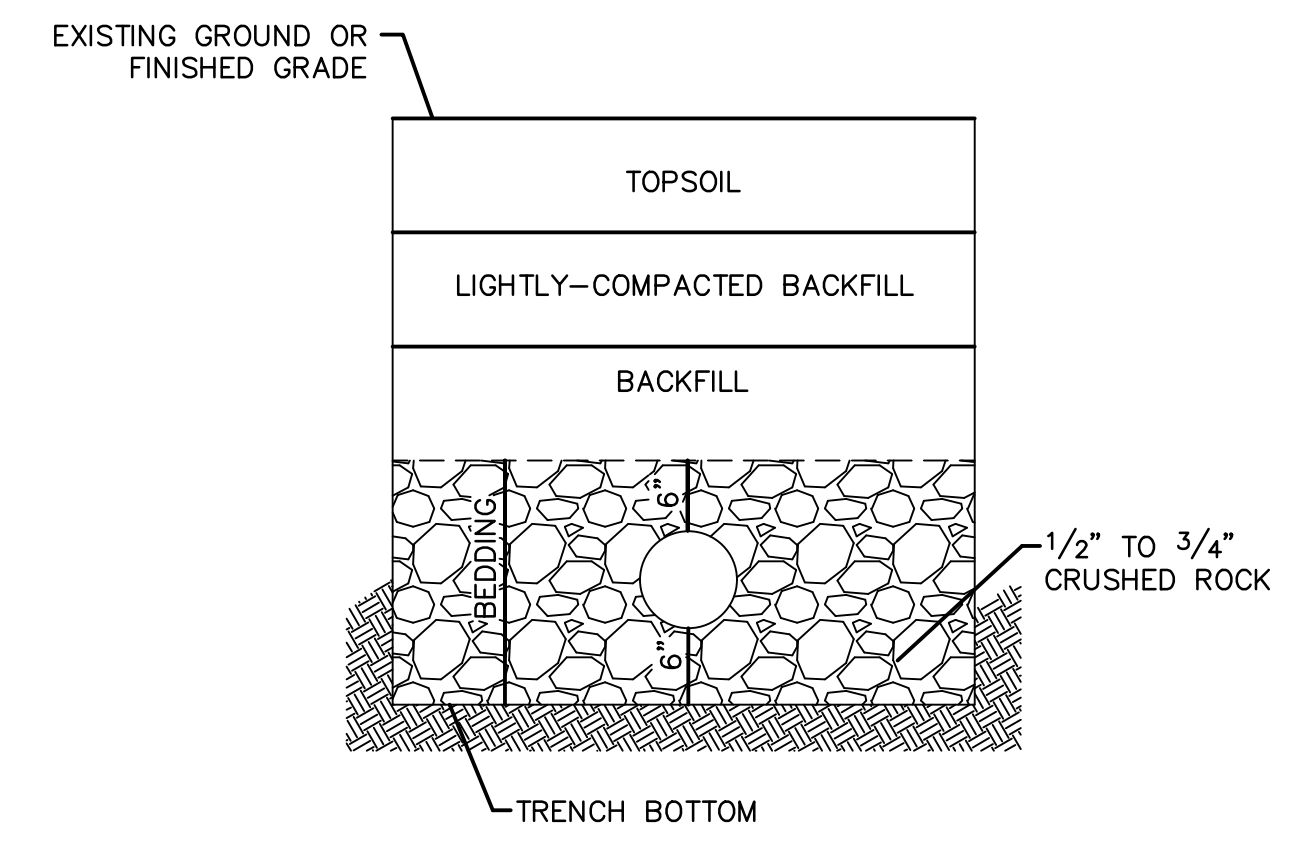
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 DATE: Jun 15, 2020 6:14pm  
 USER: nheiser  
 XREFS: C\_PTBK\_0194061\_34x22



**CITY OF LEE'S SUMMIT, MISSOURI**

**TRENCH CHECK**

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



**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.

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**DETAIL SHEET**  
**SANITARY SEWER PLANS**  
**HOOK FARMS**  
**FIRST PLAT**

LEE'S SUMMIT, MO

2020

drawn by: CGW  
 checked by: JES  
 approved by: NDH  
 QA/QC by: JES  
 project no.: 019-4061  
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