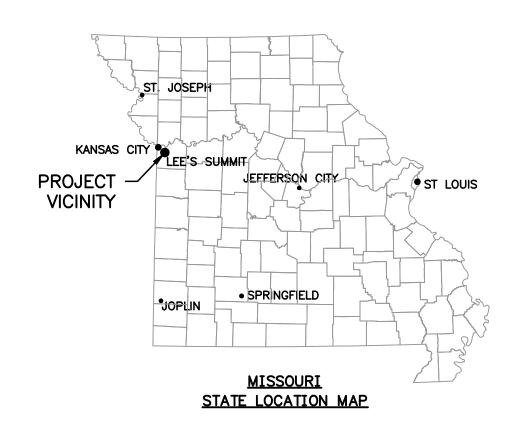
# SUMMIT VIEW FARMS 4TH PLAT LOTS 75-120 AND TRACT D

# SANITARY SEWER PLANS LEE'S SUMMIT, JACKSON COUNTY, MISSOURI SECTION 26, TOWNSHIP 47 N, RANGE 32W LAMP RYNEARSON NO. 0318050.02

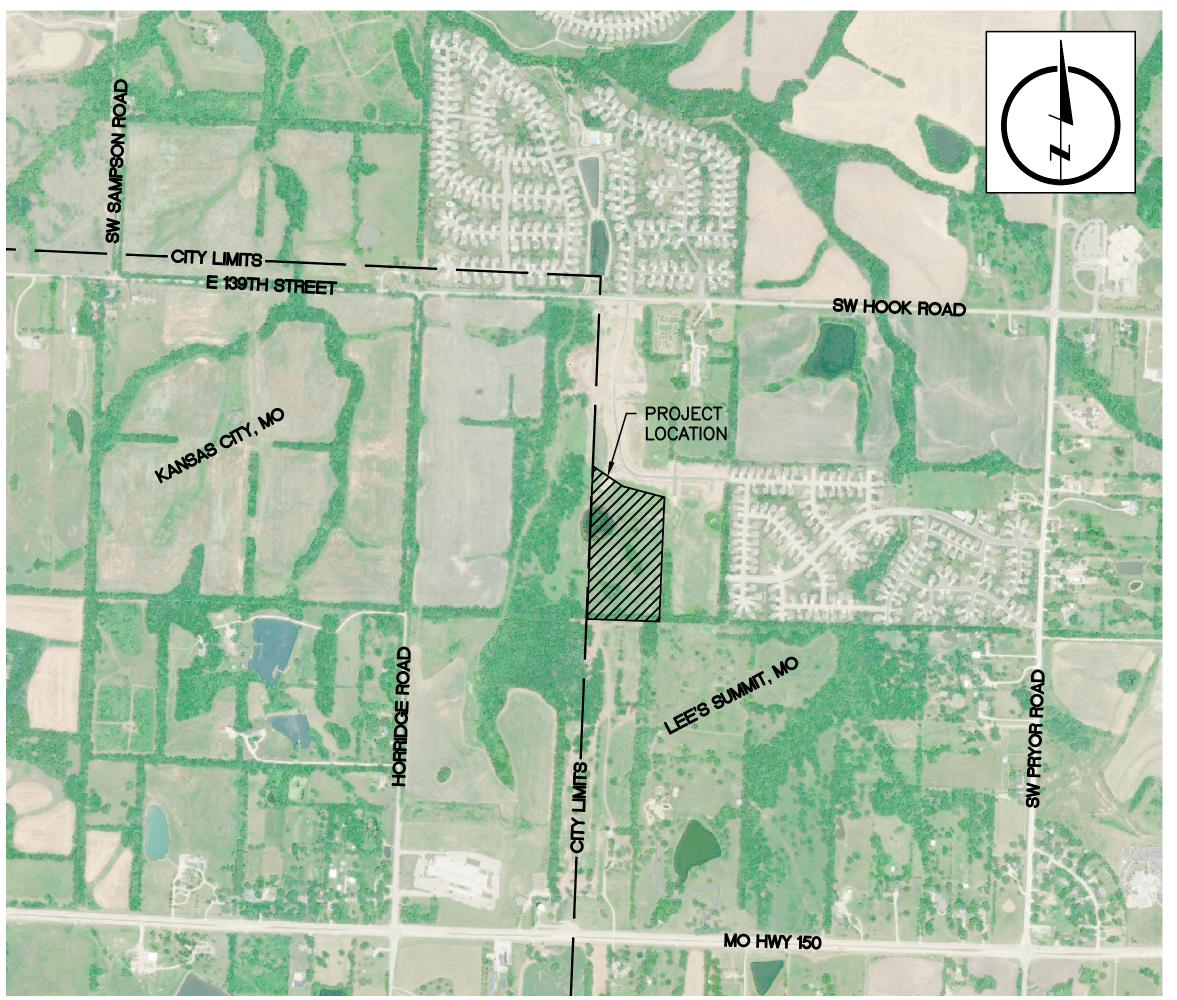


OWNER CONTACT BILL KENNEY SUMMIT VIEW FARMS DEVELOPMENT GROUP, LLC P.O. BOX 291 LEE'S SUMMIT, MO 64063 billkenney9@gmail.com (816) 838-0552

> CONSULTANT CONTACT
> DAN MCGHEE LAMP RYNEARSON 9001 STATE LINE ROAD, SUITE 200 KANSAS CITY, MO 64114 Dan.McGhee@lamprynearson.com (816) 361-0440



<u>UTILITIES</u>		
ELECTRIC:	EVERGY	(816) 471-5275
GAS:	SPIRE ENERGY	(816) 756-5252
TELEPHONE:	AT&T	(816) 325-5607
CABLE:	SPECTRUM	(816) 358-8833
WATER:	LEE'S SUMMIT WATER UTILITIES	(816) 969-1900
SEWER:	LEE'S SUMMIT WATER UTILITIES	(816) 969-1900



	ESTIMATED SUMMARY OF QUANTITIES					
ITEM		ESTIMATED				
NO.	ITEM DESCRIPTION	QUANTITY	UNIT			
1	4" SANITARY SEWER (PVC, SDR-26)	1,630	LF			
2	8" SANITARY SEWER (PVC, SDR-26)	2,750	LF			
3	4' DIA. MANHOLE (LS SAN-2)	16	EA			
4	4' DIA. DROP MANHOLE (LS SAN-4)	1	EA			
5	SANITARY SERVICE WYE	47	EA			
6	SERVICE LATERAL IMPERVIOUS TRENCH CHECKS	47	EA			

## RECORD DRAWING

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"100.00 100.10", "1.00% 1.15% slope", or "8-inch HDPE PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

Certified by: \_\_Mark Daniel McGhee Jr.

Date: 05-13-2022

Title: Senior Project Manager Firm: Lamp Rynearson



9001 State Line Rd., Ste. 200 Kansas City, MO 64114 LampRynearson.com

# INDEX OF SHEETS

COVER SHEET

GENERAL LAYOUT PLAN SHEET

SANITARY SEWER PLAN AND PROFILE LINE 4-A SHEET

SANITARY SEWER PLAN AND PROFILE LINES 4-A AND 4-B SHEET

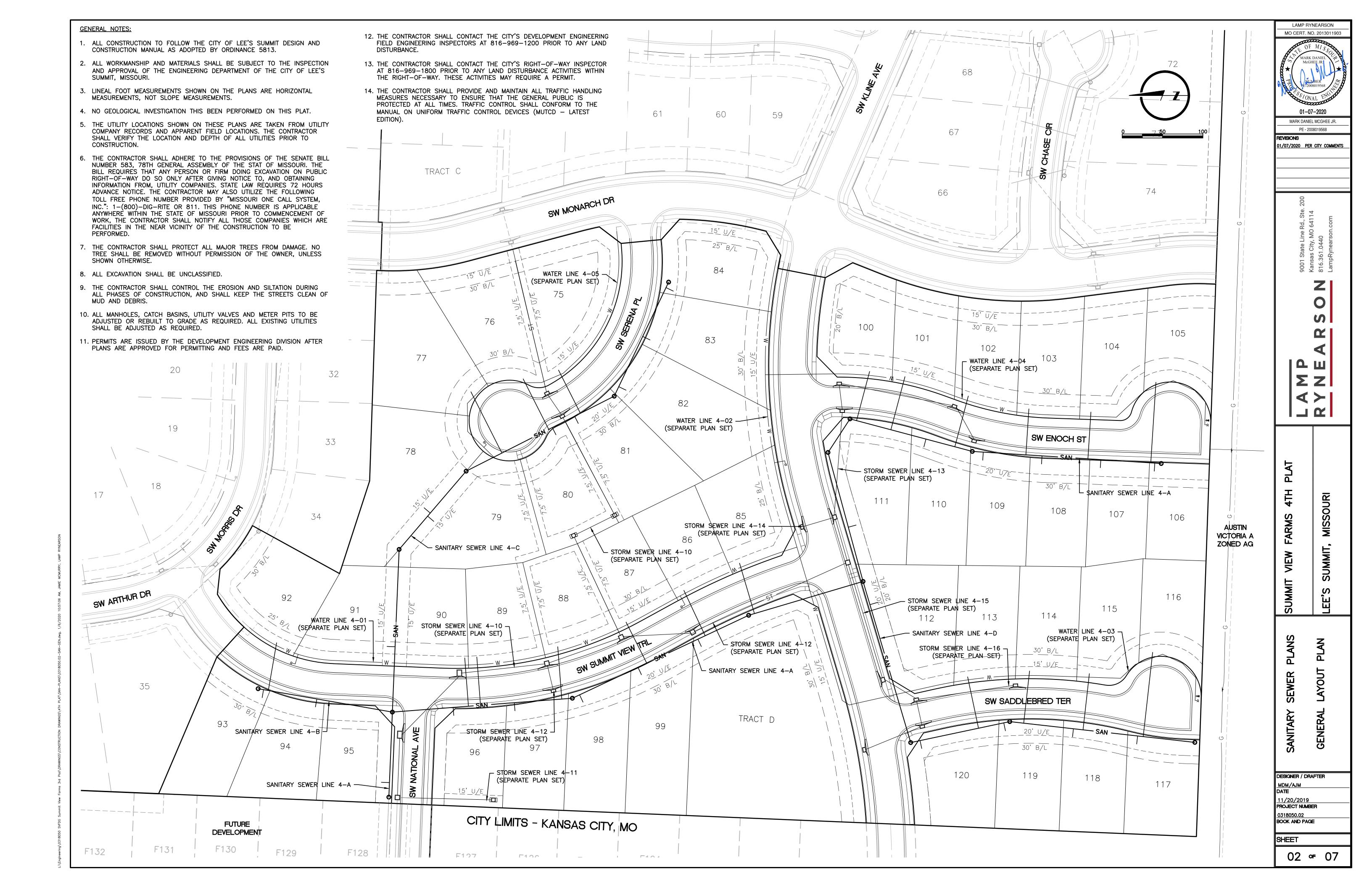
05 SANITARY SEWER PLAN AND PROFILE LINE 4-C SHEET SANITARY SEWER PLAN AND PROFILE LINE 4-D SHEET

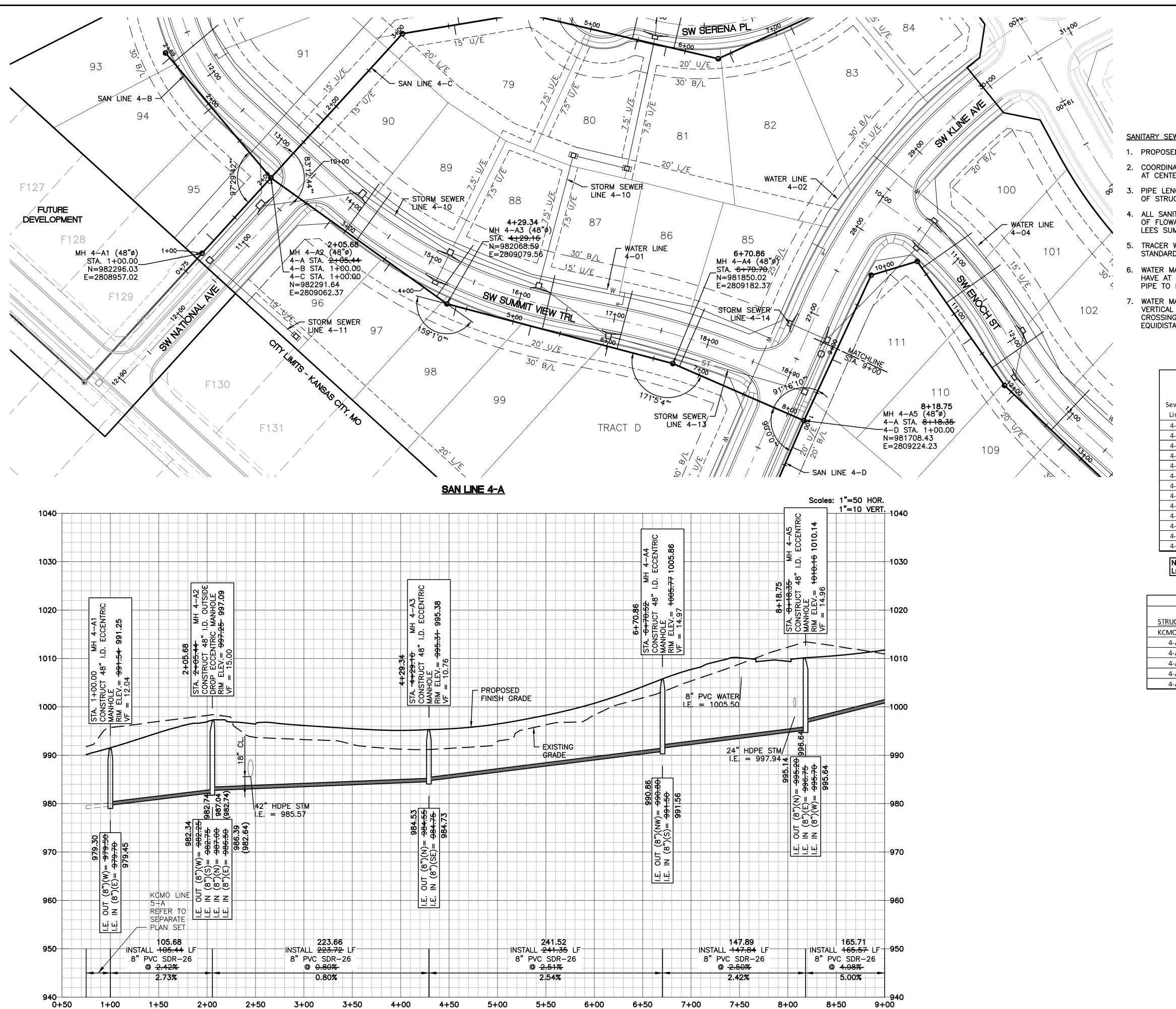
07 SANITARY DETAILS SHEET

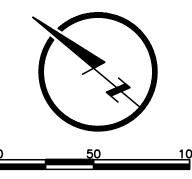


05-13-2022

MISSOURI CERTIFICATE OF AUTHORITY NO. 2013011903







#### **SANITARY SEWER NOTES:**

- 1. PROPOSED MANHOLES SHALL CONFORM TO CITY STANDARD DETAIL SAN-2.
- 2. COORDINATES, ROAD OFFSETS, AND TOP ELEVATIONS SHOWN ARE LOCATED AT CENTER OF STRUCTURES.
- 3. PIPE LENGTHS AND SLOPES ARE FROM CENTER OF STRUCTURE TO CENTER OF STRUCTURE.
- 4. ALL SANITARY SEWER LATERALS SHALL OF A TRENCH CHECK, CONSISTING OF FLOWABLE BACKFILL, INSTALLED DURING CONSTRUCTION. REFER TO LEES SUMMIT SPECIFICATION SECTION 3500.
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- WATER MAINS AND SANITARY SEWER MAINS (INCLUDING STRUCTURES) SHALL HAVE AT LEAST 10-FT OF HORIZONTAL SEPÄRATION FROM EDGE OF WATER PIPE TO EDGE OF SEWER PIPE OR SEWER STRUCTURE.
- 7. WATER MAINS AND SANITARY SEWERS SHALL HAVE AT LEAST 18-INCHES OF VERTICAL SEPARATION FROM EDGE OF PIPE TO EDGE OF PIPE. THE CROSSING SHALL BE ARRANGED SO THAT THE SEWER JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE WATER MAIN JOINTS.

					1	
		Sewer Main	Lateral	Minimum Lateral	Minimum	
	l				Service	
Sewer	Main	Invert	Stub	Stub	Floor	
Line	Station	Elevation	Length	Elevation	Elevation	Lot
4-A	1+18	980.14	10	987.00	988.70	95
4-A	2+81	983.36	10	984.89	986.90	96
4-A	3+00	983.51	60	986.04	987.70	90
4-A	3+15	983.63	60	986.16	987.90	89
4-A	3+57	983.97	10	985.50	987.50	97
4-A	4+16	984.44	65	987.07	989.00	88
4-A	4+39	985.00	10	986.53	988.40	98
4-A	5+19	987.00	10	988.53	990.50	99
4-A	5+31	987.30	57	989.77	991.80	87
4-A	6+01	989.06	10	990.59	992.50	TRACT D
4-A	6+11	989.31	62	991.88	993.90	86
4-A	6+78	991.69	65	994.32	996.30	85
4-A	8+88	1000.22	10	1001.75	1003.50	111

#### NOTE: DESIGN LATERAL INFORMATION SHOWN. LATERAL LOCATIONS AND ELEVATIONS WERE NOT AS-BUILT.

	SANITARY SEWER STRUCTURE TABLE				
<u>STRUCTURE</u>	STATION & OFFSET	STREET NAME			
KCMO 5-A3					
4-A1	11+37.38, 28.59' RT.	SW NATIONAL AVE.			
4-A2	10+31.93, 28.59' RT.	SW NATIONAL AVE.			
4-A3	15+33.57, 31.74' RT.	SW SUMMIT VIEW TRL.			
4-A4	17+71.17, 29.52' RT.	SW SUMMIT VIEW TRL.			
4-A5	25+94.48, 32.49' RT.	SW KLINE AVE.			

## RECORD DRAWING

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'<del>100.00</del> 100.10", "<del>1.00%</del> 1.15% slope", or "8-inch HDPE PVC pipe" are all typical examples of revisions that indicate that design data has been replaced with "as-built" information. All other data is as designed and has not been field verified.

Date: 05-13-2022

Certified by: <u>Mark Daniel McGhee Jr.</u>

Title: Senior Project Manager Firm: Lamp Rynearson

MO AUTH. NO. F01294734

MARK DANIEL MCGHEE JR. PE - 2008019568

01/07/2020 PER CITY COMMENTS 05/13/2022 RECORD DRAWING

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VIEW

PROFILE

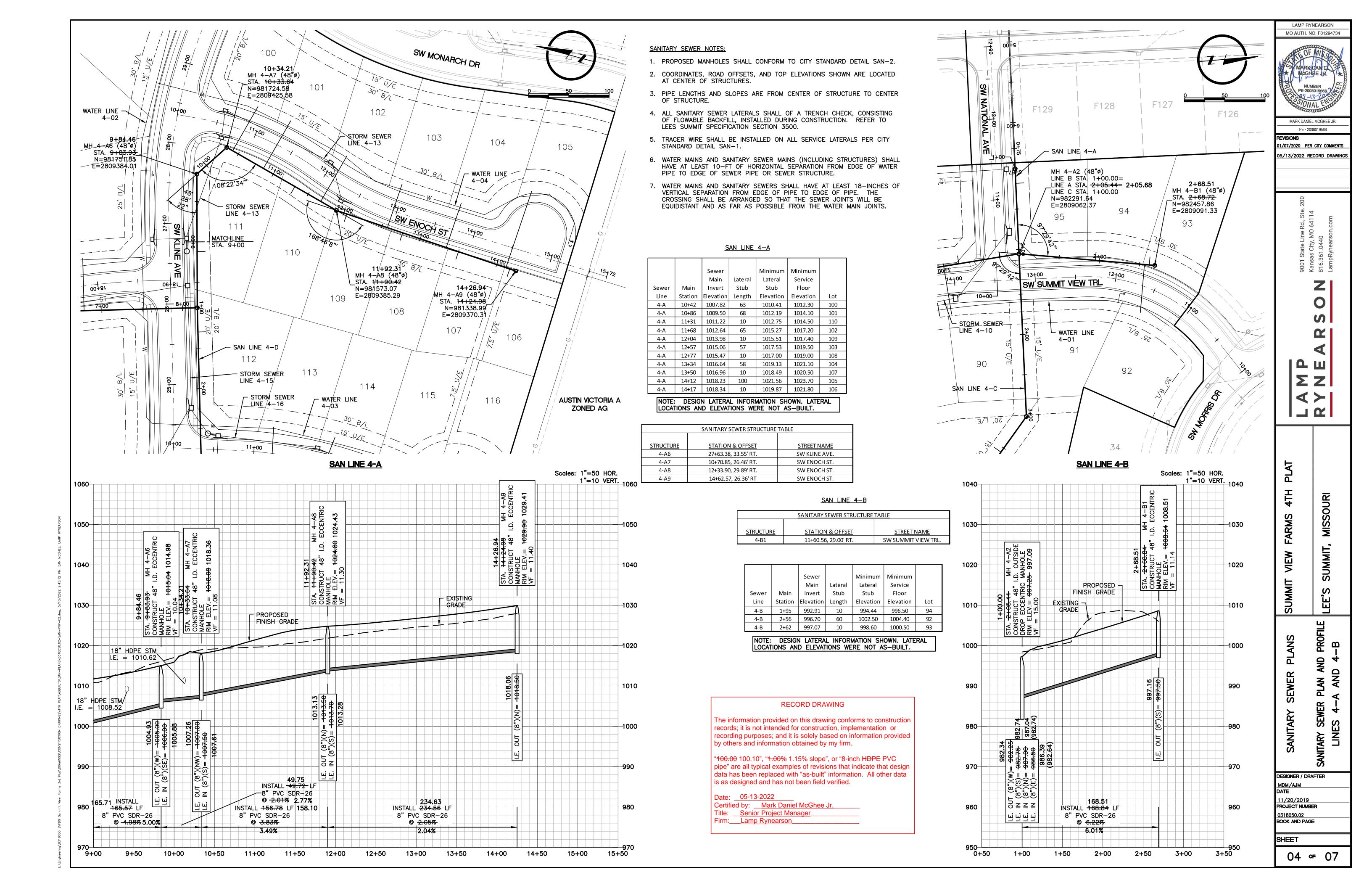
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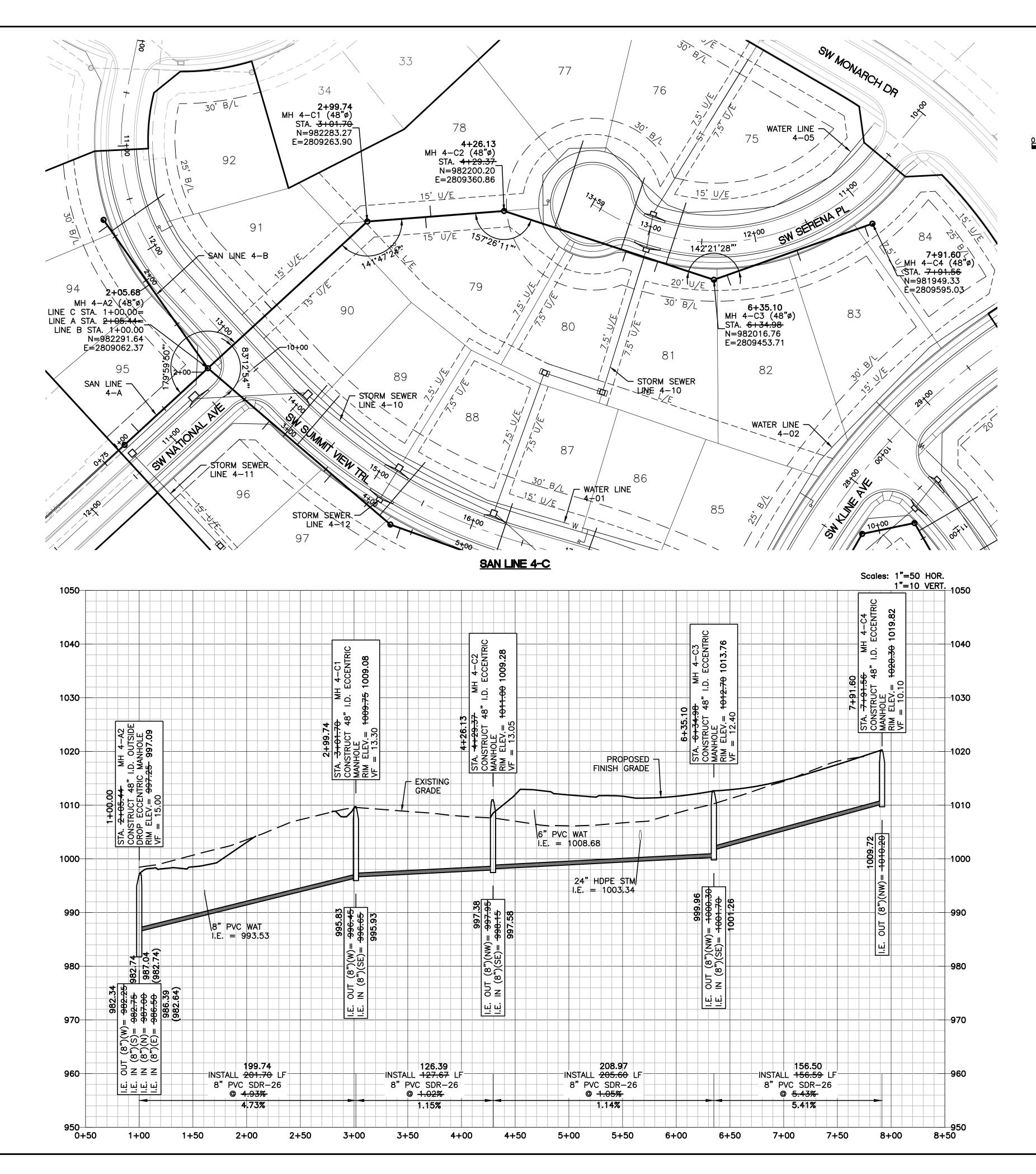
DESIGNER / DRAFTER MDM/AJM DATE

11/20/2019 PROJECT NUMBER 0318050.02 BOOK AND PAGE

SHEET

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#### **SANITARY SEWER NOTES:**

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		Sewer		Minimum	Minimum	
		Main	Lateral	Lateral	Service	
Sewer	Main	Invert	Stub	Stub	Floor	
Line	Station	Elevation	Length	Elevation	Elevation	Lot
4-C	1+81	990.50	10	992.03	993.80	91
4-C	3+56	997.20	10	998.73	1000.70	79
4-C	3+61	997.25	10	998.78	1000.70	78
4-C	4+79	998.67	85	1001.70	1003.70	77
4-C	5+44	999.35	70	1002.08	1004.30	76
4-C	5+49	999.40	10	1000.93	1003.00	80
4-C	5+80	999.73	10	1001.26	1003.20	81
4-C	5+88	999.81	60	1002.34	1004.30	75
4-C	6+48	1002.41	10	1003.94	1005.80	82
4-C	7+17	1006.15	10	1007.68	1009.70	83
4-C	7+84	1009.79	10	1011.32	1013.10	84

NOTE: DESIGN LATERAL INFORMATION SHOWN. LATERAL LOCATIONS AND ELEVATIONS WERE NOT AS-BUILT.

SANITARY SEWER STRUCTURE TABLE				
<u>STRUCTURE</u>	STATION & OFFSET	STREET NAME		
4-C1	13+18.66, 169.77' LT.	SW SUMMIT VIEW TRL.		
4-C2	14+23.09, 269.06' LT.	SW SUMMIT VIEW TRL.		
4-C3	12+38.46, 35.00' LT.	SW SERENA PL.		
4-C4	11+02.31, 34.02' LT.	SW SERENA PL.		

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Firm: Lamp Rynearson\_

Certified by: <u>Mark Daniel McGhee Jr.</u> Title: <u>Senior Project Manager</u>

MO AUTH. NO. F01294734

MARK DANIEL MCGHEE JR.

PE - 2008019568 REVISIONS

01/07/2020 PER CITY COMMENTS 05/13/2022 RECORD DRAWING

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VIEW

PROFILE

SANITARY

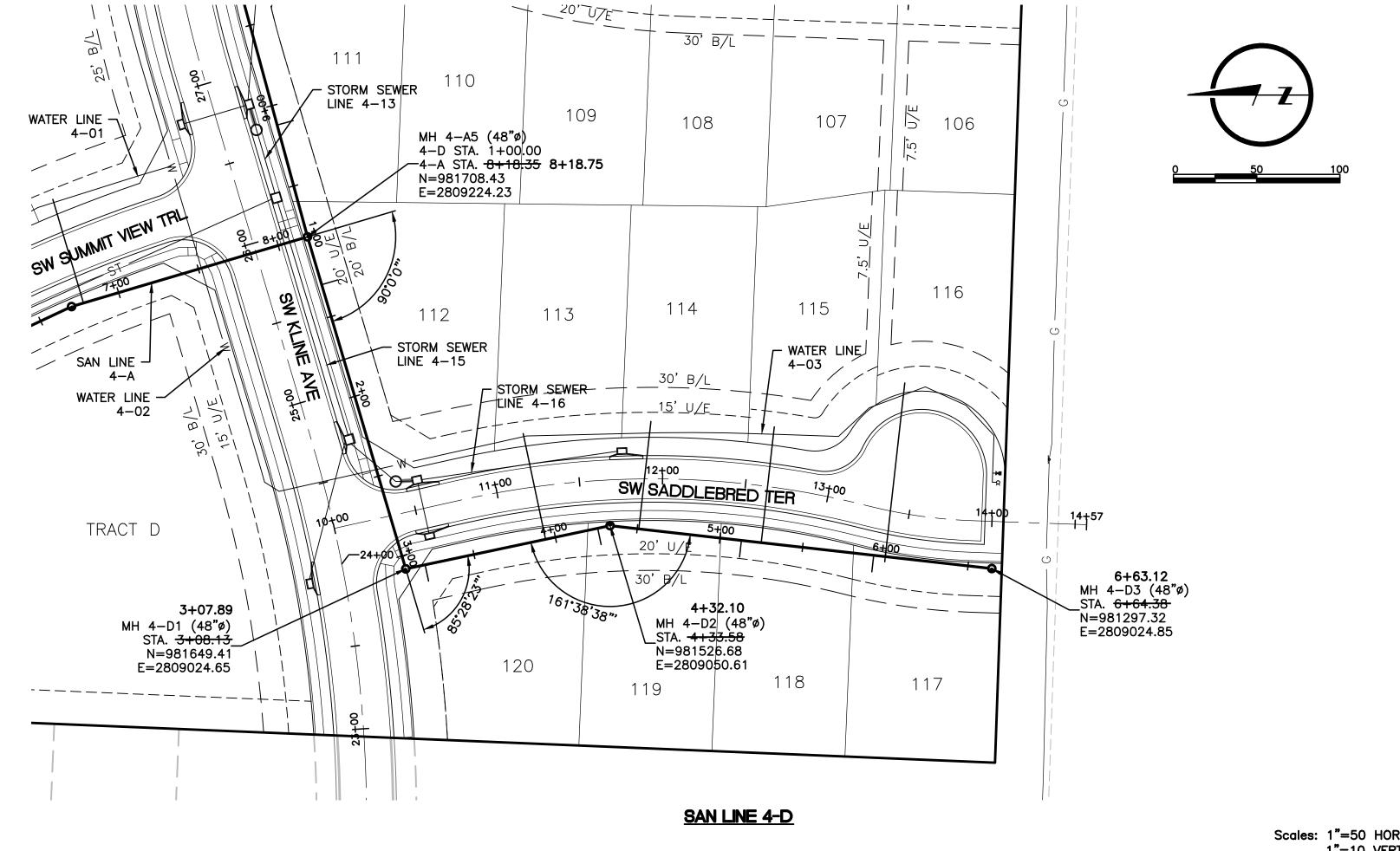
DESIGNER / DRAFTER MDM/AJM DATE

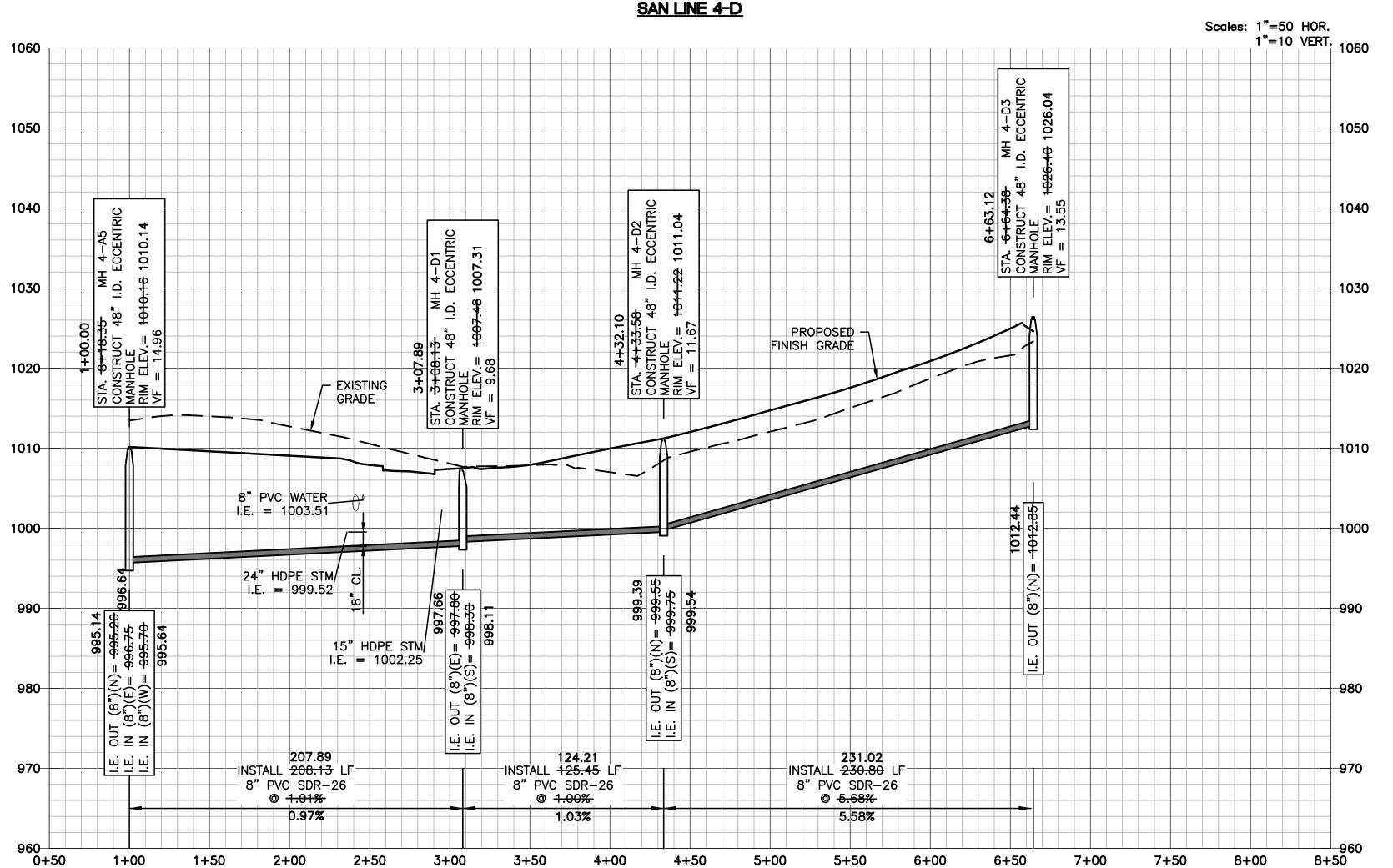
11/20/2019 PROJECT NUMBER 0318050.02

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		Sewer		Minimum	Minimum	
		Main	Lateral	Lateral	Service	
Sewer	Main	Invert	Stub	Stub	Floor	
Line	Station	Elevation	Length	Elevation	Elevation	Lot
4-D	1+30	996.00	10	997.53	999.50	112
4-D	3+20	998.42	10	999.95	1001.70	120
4-D	3+94	999.16	65	1001.79	1003.80	113
4-D	4+26	999.47	10	1001.00	1002.90	119
4-D	4+51	1000.74	65	1003.37	1005.30	114
4-D	5+13	1004.26	10	1005.79	1007.60	118
4-D	5+25	1004.94	70	1007.67	1009.60	115
4-D	5+93	1008.80	10	1010.33	1012.20	117
4-D	6+00	1009.20	105	1012.63	1014.70	116

NOTE: DESIGN LATERAL INFORMATION SHOWN. LATERAL LOCATIONS AND ELEVATIONS WERE NOT AS-BUILT.

SANITARY SEWER STRUCTURE TABLE				
<u>STRUCTURE</u>	STATION & OFFSET	STREET NAME		
4-D1	10+36.53, 33.12' RT	SW SADDLEBRED TER.		
4-D2	11+67.02, 27.50' RT	SW SADDLEBRED TER.		
4-D3	14+00.90, 28.34' RT	SW SADDLEBRED TER.		

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LAMP RYNEARSON MO AUTHO. NO. F01294734



MARK DANIEL MCGHEE JR. PE - 2008019568

REVISIONS 01/07/2020 PER CITY COMMENTS

05/13/2022 RECORD DRAWINGS

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VIEW

PROFILE

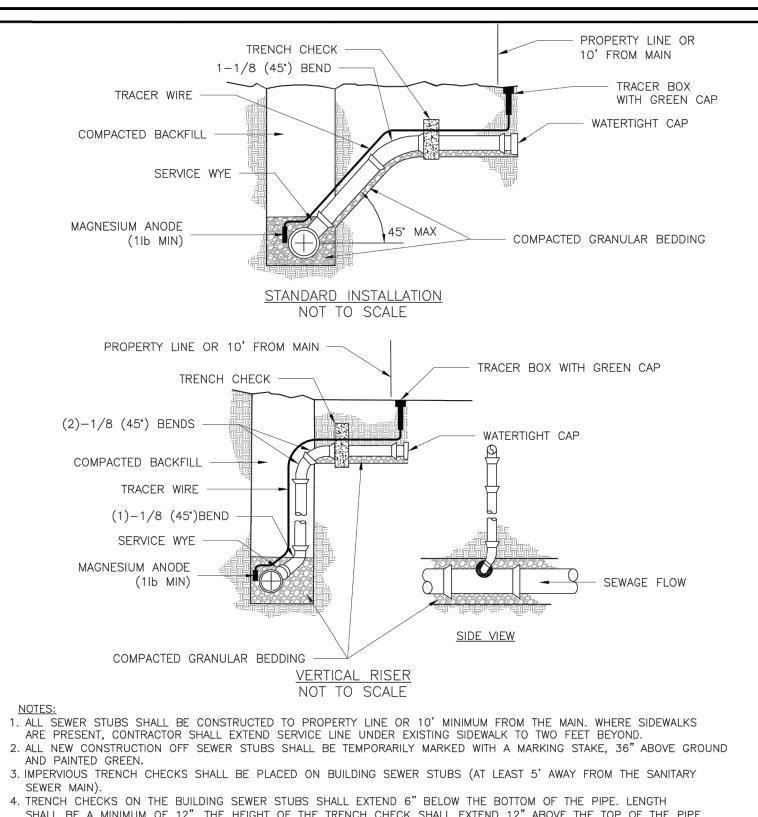
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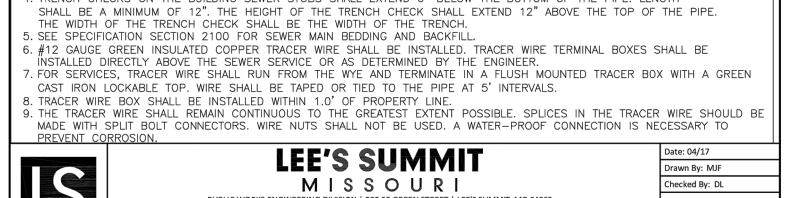
MDM/AJM DATE

11/20/2019 PROJECT NUMBER 0318050.02 BOOK AND PAGE

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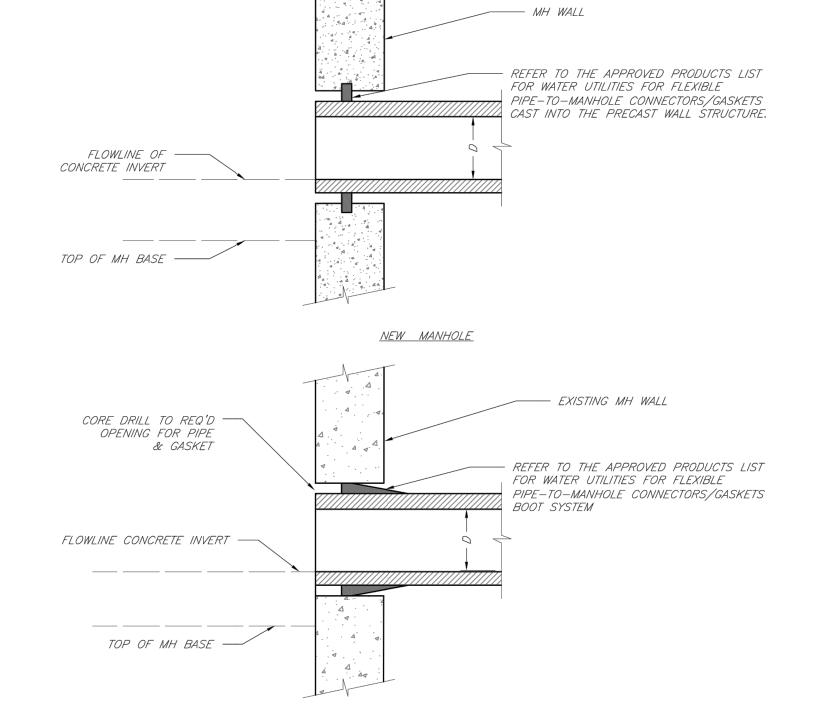
BUILDING SEWER STUB AND RISER

SAN-1

Date: 02/13

Drawn Bv: JN

Checked By: DL FILE: SAN-5 Rev: 1/14

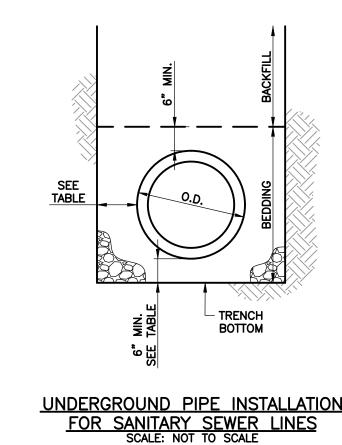


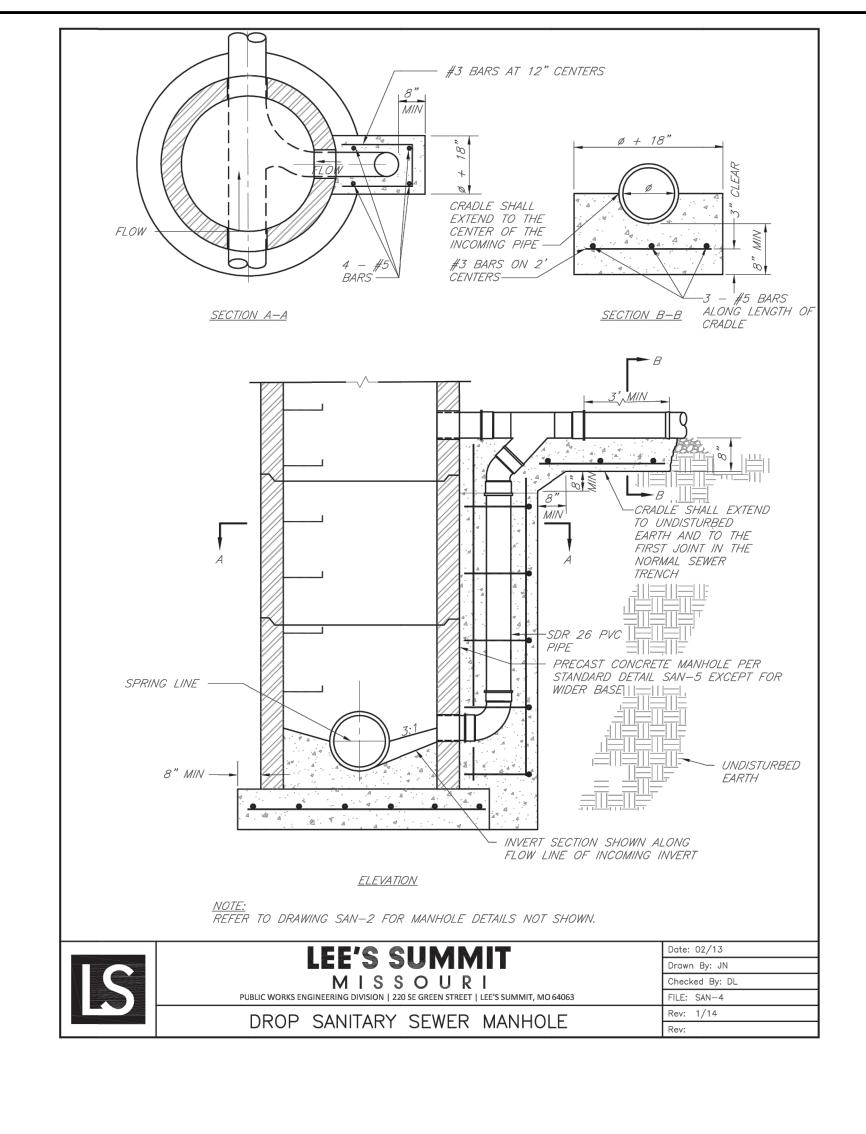
EXISTING MANHOLE

**LEE'S SUMMIT** 

MISSOURI

MANHOLE WALL CONNECTIONS





## **GENERAL NOTES:**

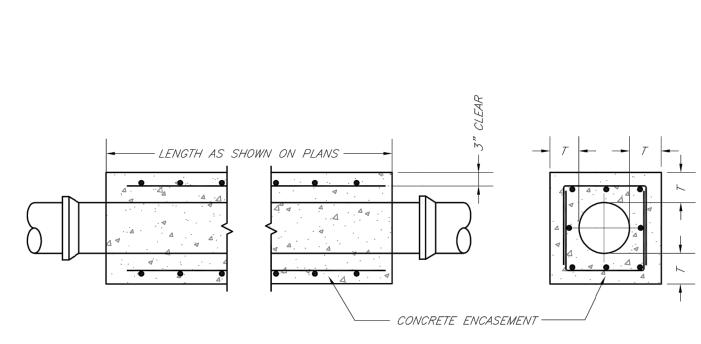
- TRENCH BANKS SHALL BE CUT BACK ON SLOPES IN ACCORDANCE WITH CURRENT OSHA REGULATIONS. SLOPES MUST NOT EXTEND BELOW TOP OF BEDDING.
- 2. ALL SEWER LINES SHALL HORIZONTALLY CLEAR STORM SEWER STRUCTURES BY 5' AND SANITARY SEWER STRUCTURES BY 10'. SEWER MAINS SHALL VERTICALLY CLEAR STORM SEWER STRUCTURES AND BY 18".
- 3. MAXIMUM WIDTHS:
- A) MAXIMUM TRENCH WIDTHS SHALL NOT EXCEED THE MANUFACTURER'S RECOMMENDATIONS.
- B) THE ALLOWABLE MAXIMUM TRENCH WIDTHS HEREINAFTER SPECIFIED APPLY ONLY TO THAT PORTION OF THE TRENCH BELOW THE HORIZONTAL PLANE PARALLEL TO AND 6 INCHES ABOVE THE TOP OF THE PIPE.
- C) THE ALLOWABLE MAXIMUM WIDTHS MAY BE EXCEEDED AT MANHOLES, BORE PITS, TEES, AND IN UNSTABLE EARTH MATERIAL. WHERE THE MAXIMUM TRENCH WIDTH IS EXCEEDED, THE CONTRACTOR SHALL PROVIDE APPROPRIATE EMBEDMENT AS INDICATED BY THE DESIGN ENGINEER AND THE CITY ENGINEER.

MINIMUM TRENCH WIDTHS AND PIPE CLEARANCES (IN)				
NOMINAL		PIPE SIDE	PIPE BOTTOM	
PIPE	TRENCH	CLEARANCE 2	CLEARANCE	
DIAMETER	WIDTH 1	(SOIL/ROCK)	(SOIL/ROCK)	
6	22	6/6	6/6	
8	22	6/6	6/6	
10	24	6/6	6/6	
12	27	6/6	6/6	
1 - MEASURED BELOW A HORIZONTAL PLANE 6" ABOVE THE TOP OF THE PIPELINE				
2 - MEASURED FROM THE OUTSIDE FACE OF PIPE BARREL TO INSIDE				

4. TRENCH SLOPE: SEE SECTION 2100.

FACE OF TRENCH

- TRENCH SHIELDS: SEE SECTION 2100.
- 6. COMPACTED FILL: SEE SECTION 2100.
- 7. PIPE EMBEDMENT: SEE SECTION 2100.
- BEDDING INSTALLATION: SEE SECTION 2100.
- 9. BACKFILL: SEE SECTION 2100.



## NOTES:

- 1. FOR PIPES LESS THAN 15", T = 6" MIN.
- 2. FOR PIPES 15" THRU 36", T = 8" MIN. 3. INTERMEDIATE BELLS SHALL BE ENCASED.
- 4. REINFORCING STEEL SHALL BE #4 @ 12" O.C. EACH WAY WITH A MINIMUM REBAR LAP OF 12".

-	LEE'S SUMMIT	Date: 02/13
	ree 3 20 IAIIAII I	Drawn By: JN
	MISSOURI	Checked By: DL
	PUBLIC WORKS ENGINEERING DIVISION   220 SE GREEN STREET   LEE'S SUMMIT, MO 64063	FILE: SAN-7
	SANITARY PIPE ENCASEMENT	Rev: 1/14
	SANITART FIFE ENGASEMENT	Rev:

REFER TO THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR MANHOLE CASTINGS - FINISH GRADE - PROVIDE JOINT SEALANT BETWEEN ALL JOINTS AND WRAP EXTERIOR OF JOINTS IN ACCORDANCE WITH SECTION - 12" MAXIMUM ADJUSTING RINGS AS REQUIRED 4" MIN (SEE NOTE 2) 1' MIN IF < 24"Ø PIPE ' MIN IF > 24"Ø PIPI SPRING LINE INTEGRAL CAST BASE — 6" OF COMPACTED BEDDING AGGREGATE - COMPACTED OR UNDISTURBED EARTH 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 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.

	I E E'C CI INANAIT	Date: 02/13
	LEE'S SUMMIT	
MISSOURI		Checked By: DL
PUBLIC WORKS ENGINEERING DIVISION   220 SE GREEN STANDARD PRECAST MANHOLE	PUBLIC WORKS ENGINEERING DIVISION   220 SE GREEN STREET   LEE'S SUMMIT, MO 64063	FILE: SAN-2
	STANDADD DDECAST MANHOLE SANITADY SEWED	Rev: 1/14
	STANDARD PRECAST MANHOLE - SANHART SEWER	Rev:

MARK DANIEL MCGHEE JR. PE - 2008019568 REVISIONS 01/07/2020 PER CITY COMMENTS

LAMP RYNEARSON MO CERT. NO. 2013011903

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DESIGNER / DRAFTER MDM/AJM 11/20/2019 PROJECT NUMBER

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