

CONSTRUCTION PLANS FOR TERTIARY SEWER IMPROVEMENT TO SERVE STREETS OF WEST PRYOR LEE'S SUMMIT, MISSOURI

JANUARY 2019

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1-800-344-7483
(TOLL FREE)

MISSOURI ONE CALL SYSTEM, INC.

UTILITY STATEMENT:

THE UNDERGROUND UTILITIES SHOWN HEREON ARE FROM FIELD SURVEY INFORMATION OF ONE-CALL LOCATED UTILITIES, FIELD SURVEY INFORMATION OF A PROFESSIONAL OBSERVER, AND/OR THE RECORDS, MAPS, AND PLANNING OF EXISTING UTILITIES, AND DRAWINGS AVAILABLE TO THE SURVEYOR AT THE TIME OF SURVEY. THE SURVEYOR MAKES NO GUARANTEE THAT THE UNDERGROUND UTILITIES SHOWN COMPRISE ALL SUCH UTILITIES IN THE AREA, EITHER IN SERVICE OR ABANDONED. FURTHERMORE, THE SURVEYOR DOES NOT WARRANT THAT THE UNDERGROUND UTILITIES SHOWN ARE IN THE EXACT LOCATION INDICATED. ALTHOUGH HE DOES CERTIFY THAT THEY ARE LOCATED AS ACCURATELY AS POSSIBLE, THE INFORMATION AVAILABLE TO THE SURVEYOR HAS NOT PHYSICALLY LOCATED THE UNDERGROUND UTILITIES BY EXCAVATION UNLESS OTHERWISE NOTED ON THIS SURVEY.

CAUTION – NOTICE TO CONTRACTOR

THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANIES AT LEAST 48 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. THE CONTRACTOR **SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.**

SAFETY NOTICE TO CONTRACTOR

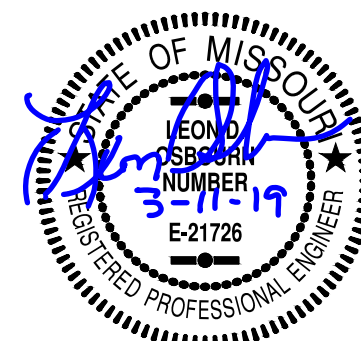
IN ACCORDANCE WITH GENERALLY ACCEPTED CONSTRUCTION PRACTICES, THE CONTRACTOR WILL BE SOLELY AND COMPLETELY RESPONSIBLE FOR CONDITIONS OF THE JOB SITE, INCLUDING SAFETY OF ALL PERSONS AND PROPERTY DURING PERFORMANCE OF THE WORK. THIS REQUIREMENT WILL APPLY CONTINUOUSLY AND NOT BE LIMITED TO NORMAL WORKING HOURS.

WARRANTY / DISCLAIMER

THE DESIGNS REPRESENTED IN THESE PLANS ARE IN ACCORDANCE WITH ESTABLISHED PRACTICES OF CIVIL ENGINEERING FOR THE DESIGN FUNCTIONS AND USES INTENDED BY THE OWNER AT THIS TIME. HOWEVER, NEITHER KAW VALLEY ENGINEERING, INC NOR ITS PERSONNEL CAN OR DO WARRANTY THESE DESIGNS OR PLANS AS CONSTRUCTED, EXCEPT IN THE SPECIFIC CASES WHERE KAW VALLEY ENGINEERING PERSONNEL INSPECT AND CONTROL THE PHYSICAL CONSTRUCTION ON A CONTEMPORARY BASIS AT THE SITE.

LOCATION MAP
CITY OF LEE'S SUMMIT, MISSOURI

Summary of Quantities			
Sanitary Sewer			
Item No.	Item	Estimated Quantity	Unit
1	Connect to Existing Manhole	3	Ea.
2	8" Sanitary Sewer Main	4128	L.F.
3	8" Sanitary Sewer Main (Private)	218	L.F.
4	Manhole (Less than 10')	8	Ea.
5	Manhole (10'-15')	6	Ea.
6	Manhole (10'-15' - Private)	1	Ea.
7	Manhole (greater than 15')	6	Ea.
8	Drop Manhole	2	Ea.
Erosion Control			
Item No.	Item	Estimated Quantity	Unit
1	Erosion Control Devices, Straw Wattles	1,497	L.F.
2	Erosion Control Devices, Sedimentation Fence	661	L.F.
3	Erosion Control Devices, Curb Inlet Protection	28	L.F.
4	Seed	3.18	AC



LEON D. OSBOURN
PROFESSIONAL ENGINEER

OWNER:
STREETS OF WEST PRYOR, LLC
7200 WEST 132ND STREET
OVERLAND PARK, KS 66213
CONTACT: MATT PENNINGTON
email: matt@drakekc.com

DEVELOPER:
STREETS OF WEST PRYOR, LLC
7200 WEST 132ND STREET
OVERLAND PARK, KS 66213
AGENT: DAVID N. OLSON
email: daveolson@monarchprojectllc.com

PREPARED BY:
KAW VALLEY ENGINEERING, INC
2319 N. JACKSON
JUNCTION CITY, KS 66441
785-762-5040
CONTACT: LEON D OSBOURN
EMAIL: ldo@kvenq.com

DATUM BENCHMARK:
VERTICAL DATUM IS NAVD 88 ESTABLISHED USING OPUS PROJECTS ON PROJECT CONTROL.


BENCHMARKS:

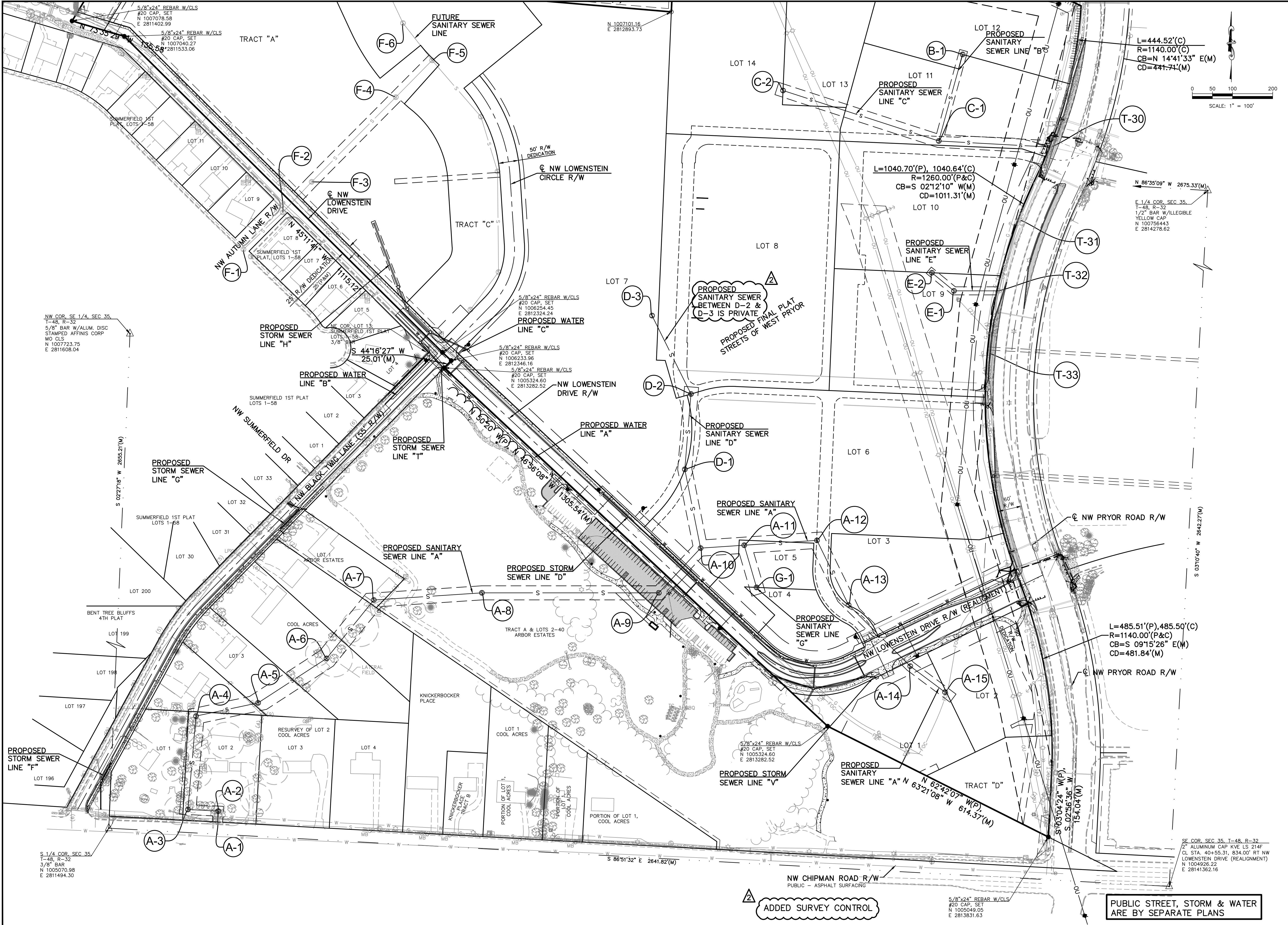
BM #1: CHISELED "SQUARE" ON TOP OF CURB POINT OF INTERSECTION OF WEST PARK
PARKING LOT AT EAST DRIVE ENTRANCE. ELEV=985.05

BM #2: CHISELED "SQUARE" ON NORTHWEST CORNER AREA INLET, 25'± EAST OF CURB
LINE AND ON-LINE WITH SOUTH CURB OF LOWENSTEIN DRIVE AT 90° BEND IN ROAD.
ELEV=971.06

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STREETS OF WEST PRYOR NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE LEE'S SUMMIT, MISSOURI		 KAW VALLEY ENGINEERING KAW VALLEY ENGINEERING, INC., IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/19		LEON D. OSBOURN ENGINEER MO # 021726							
PROJ. NO. A14_7067-1		DESIGNER LDO		DRAWN BY JT/BKR							
CFN 7067-1S-TS		SHEET C-1		REV 2							
						2-26-19 1-23-19 0-1-8-19		REVISED PER CITY COMMENT REVISED PER CITY COMMENT INITIAL ISSUE		LDO LDO LDO	
						REV DATE		DESCRIPTION		DSN DWN CHK	



THIS DRAWING SHALL NOT BE UTILIZED BY ANY PERSON, FIRM, OR CORPORATION IN WHOLE OR IN PART WITHOUT THE SPECIFIC PERMISSION OF KAW VALLEY ENGINEERING, INC.

REV	DATE	DESCRIPTION
0	1-8-19	INITIAL ISSUE
1	1-23-19	REVISED PER CITY COMMENT
2	2-26-19	REVISED PER CITY COMMENT

CHK	DSN
LDO	JT/BKR
LDO	JT
LDO	LDO

STATE OF MISSOURI
LEON D. OSBOURN
ENGINEER
MO # 021726

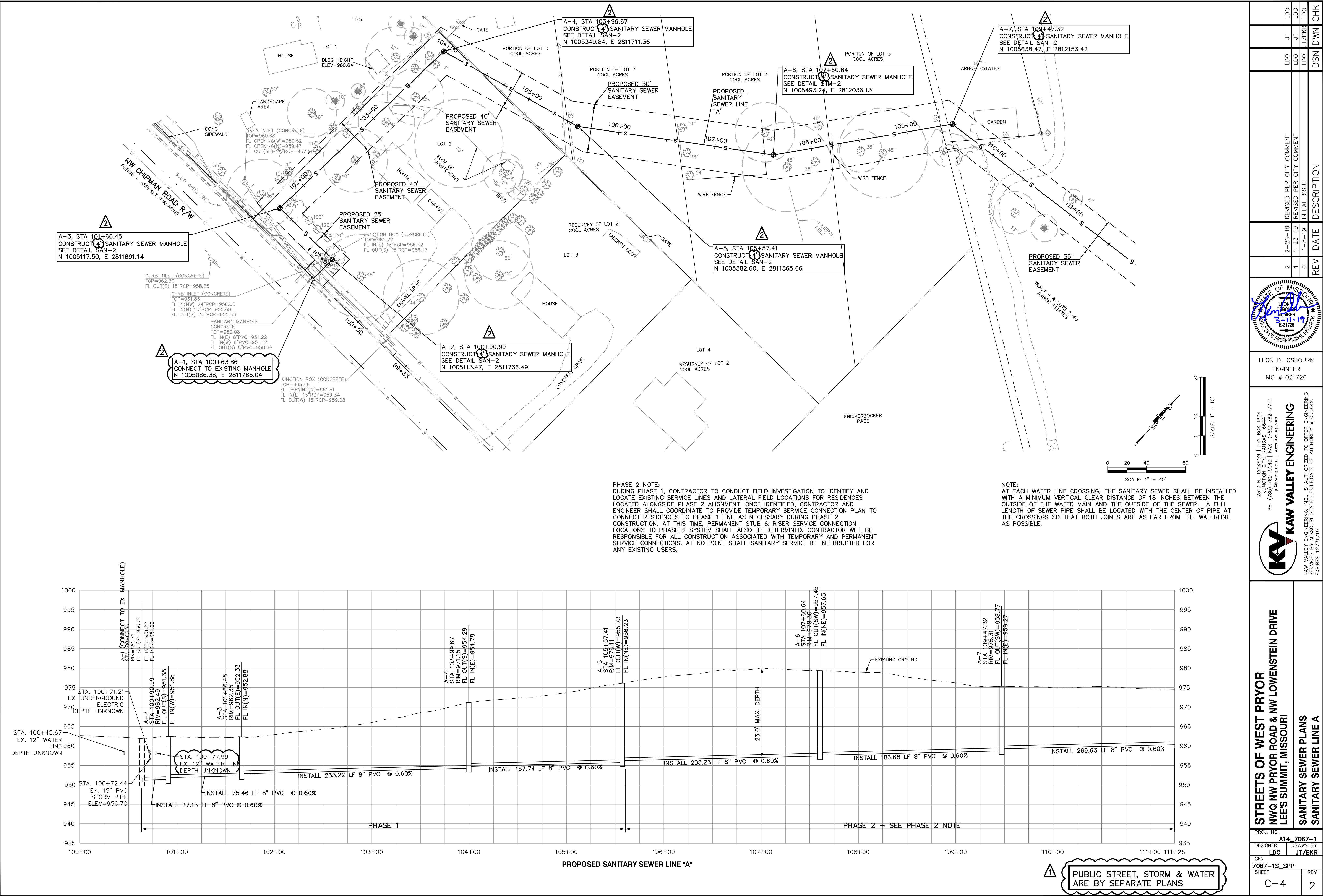
2319 N. JACKSON | P.O. BOX 1304
JUNCTION CITY, KANSAS 66441
PH. (785) 762-5040 | FAX (785) 762-7744
joe@kvw.com | www.kvw.com

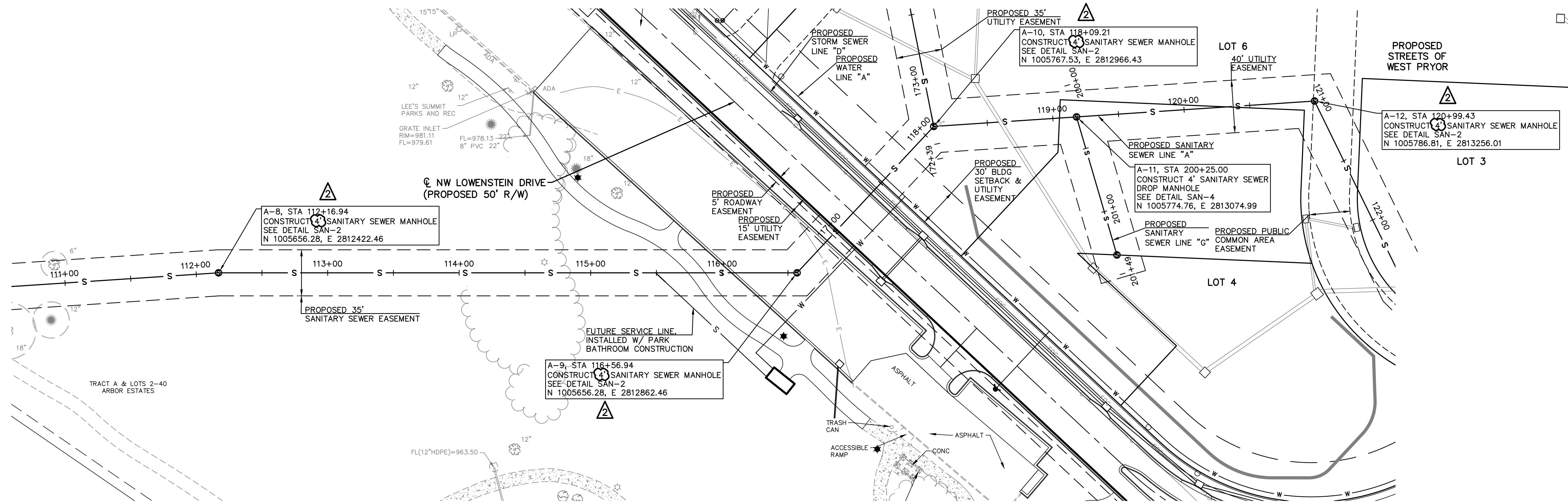
KAW VALLEY ENGINEERING
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STREETS OF WEST PRYOR
NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE
LEE'S SUMMIT, MISSOURI

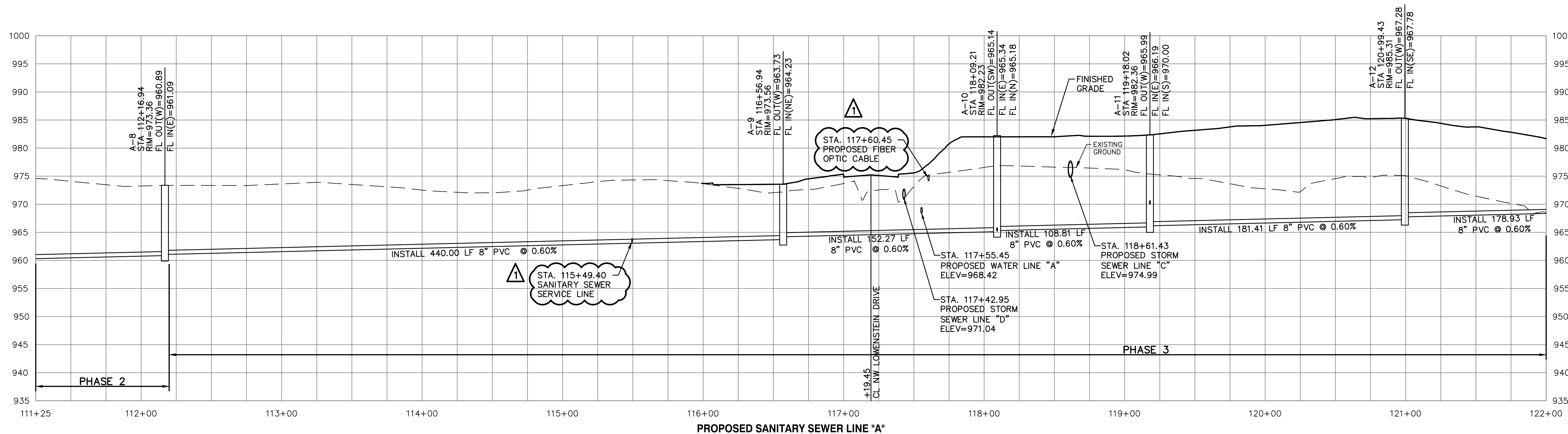
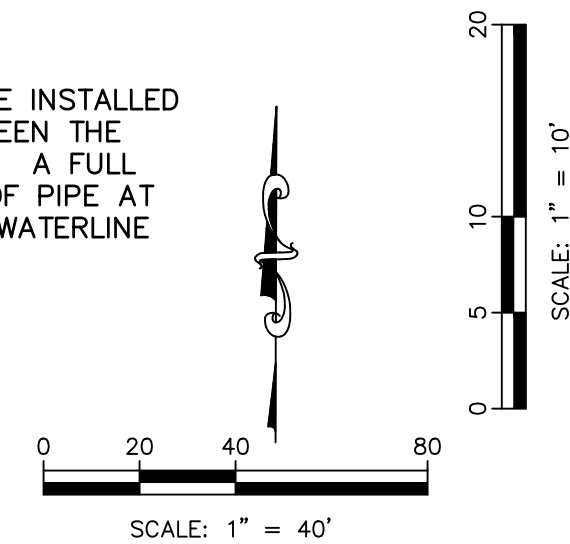
SANITARY SEWER PLANS
GENERAL LAYOUT SHEET

PROJ. NO. **A14-7067-1**
DESIGNER **LDO** DRAWN BY **JT/BKR**
CFN **7067-1S-GLS**
SHEET **C-3** REV **2**





NOTE:
AT EACH WATER LINE CROSSING, THE SANITARY SEWER SHALL BE INSTALLED WITH A MINIMUM VERTICAL CLEAR DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. A FULL LENGTH OF SEWER PIPE SHALL BE LOCATED WITH THE CENTER OF PIPE AT THE CROSSINGS SO THAT BOTH JOINTS ARE AS FAR FROM THE WATERLINE AS POSSIBLE.



PUBLIC STREET & WATER ARE BY SEPARATE PLANS

PROJ. NO.	A14-7067-1	DESIGNER	LDO	DRAWN BY	JT/BKR
CFN	7067-1S_SPP	REV	C-5	2	

STREETS OF WEST PRYOR
NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE
LEE'S SUMMIT, MISSOURI

SANITARY SEWER PLANS
SANITARY SEWER LINE A

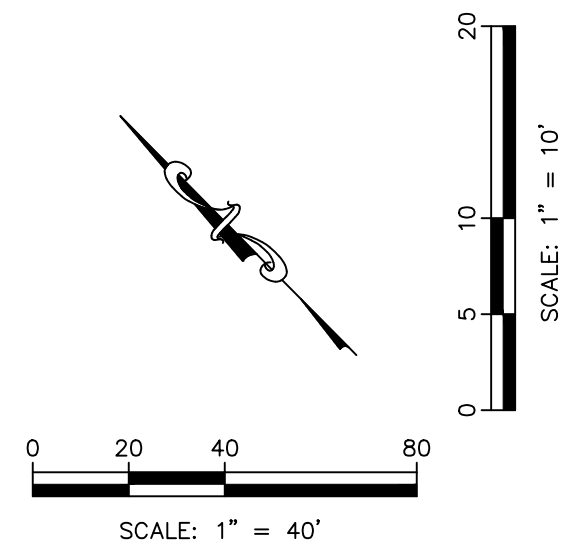
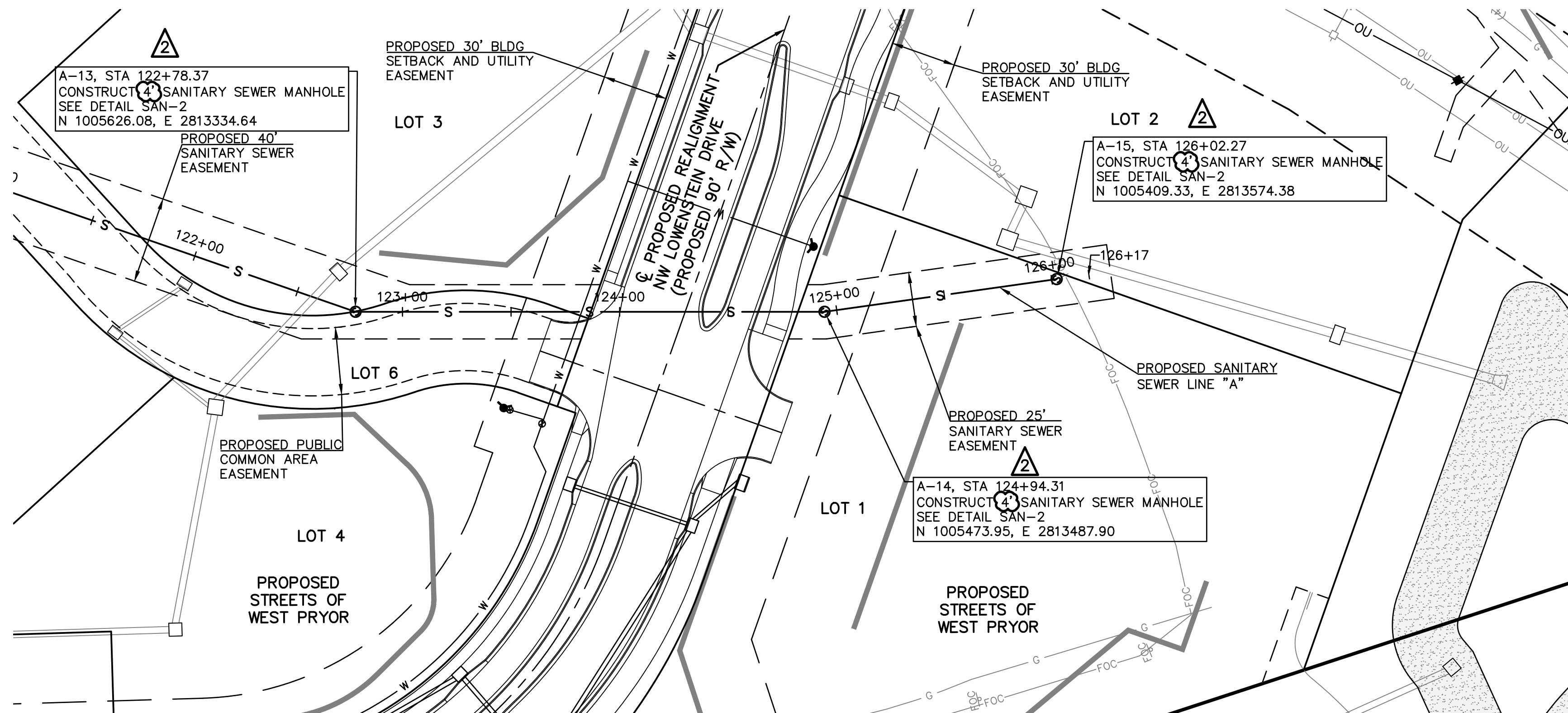
LEON D. OSBOURN
ENGINEER
MO # 021726

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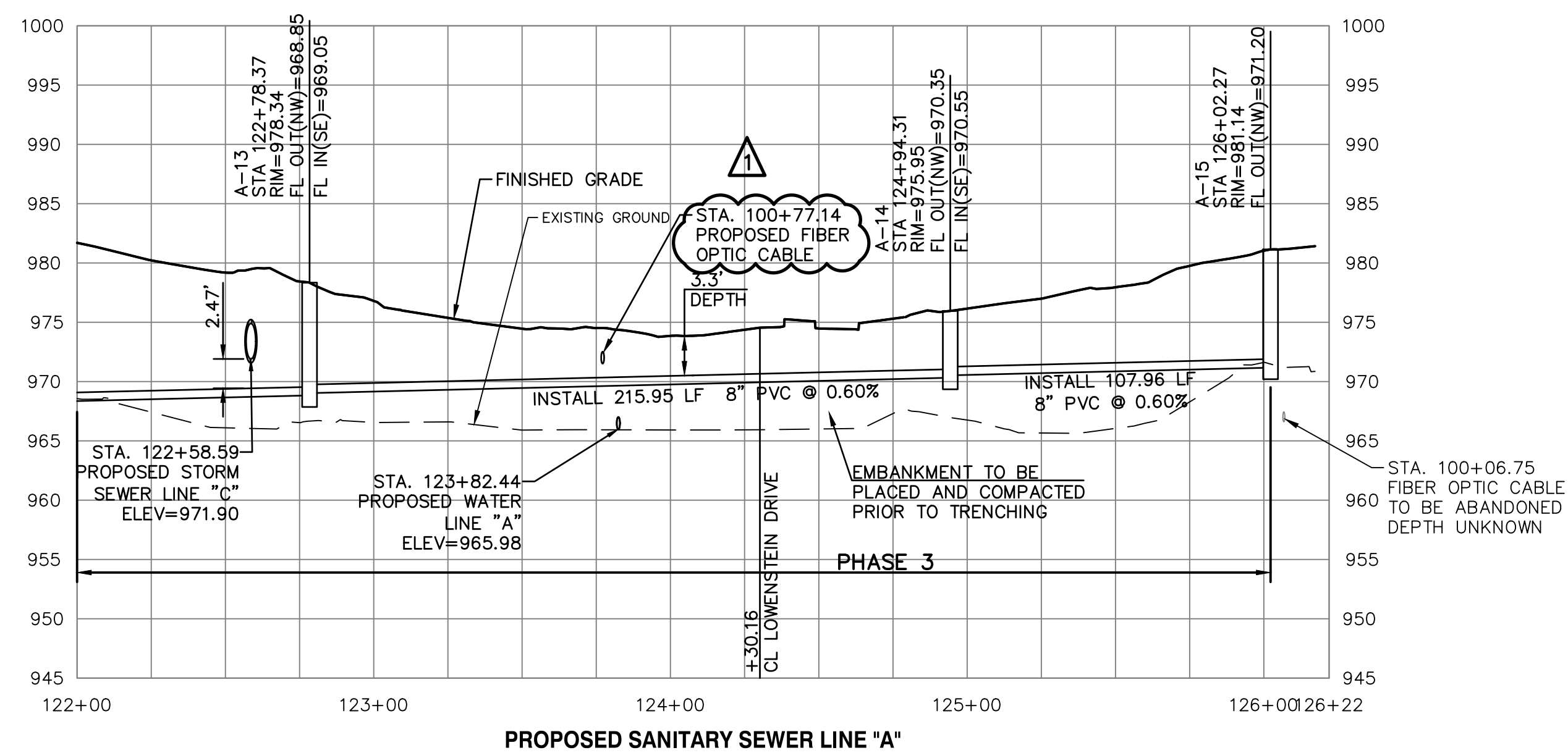
KAW VALLEY ENGINEERING
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842.
EXPIRES 12/31/19

REV	DATE	DESCRIPTION
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1	1-23-19	REVISED PER CITY COMMENT
0	1-8-19	INITIAL ISSUE

DSN	DWN	CHK
LDO	JT	LDO
LDO	JT	LDO
LDO	JT/BKR	LDO



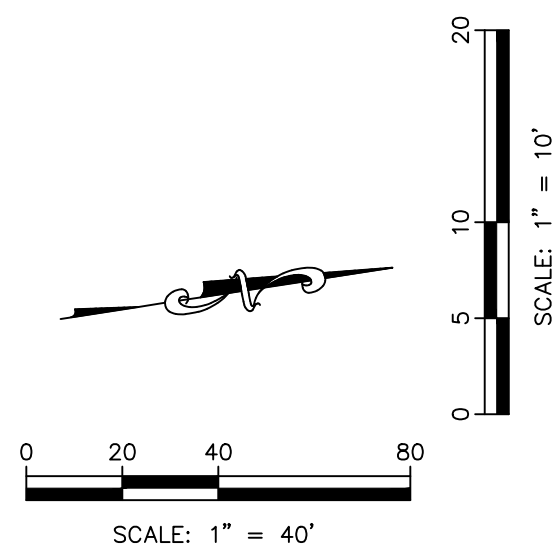
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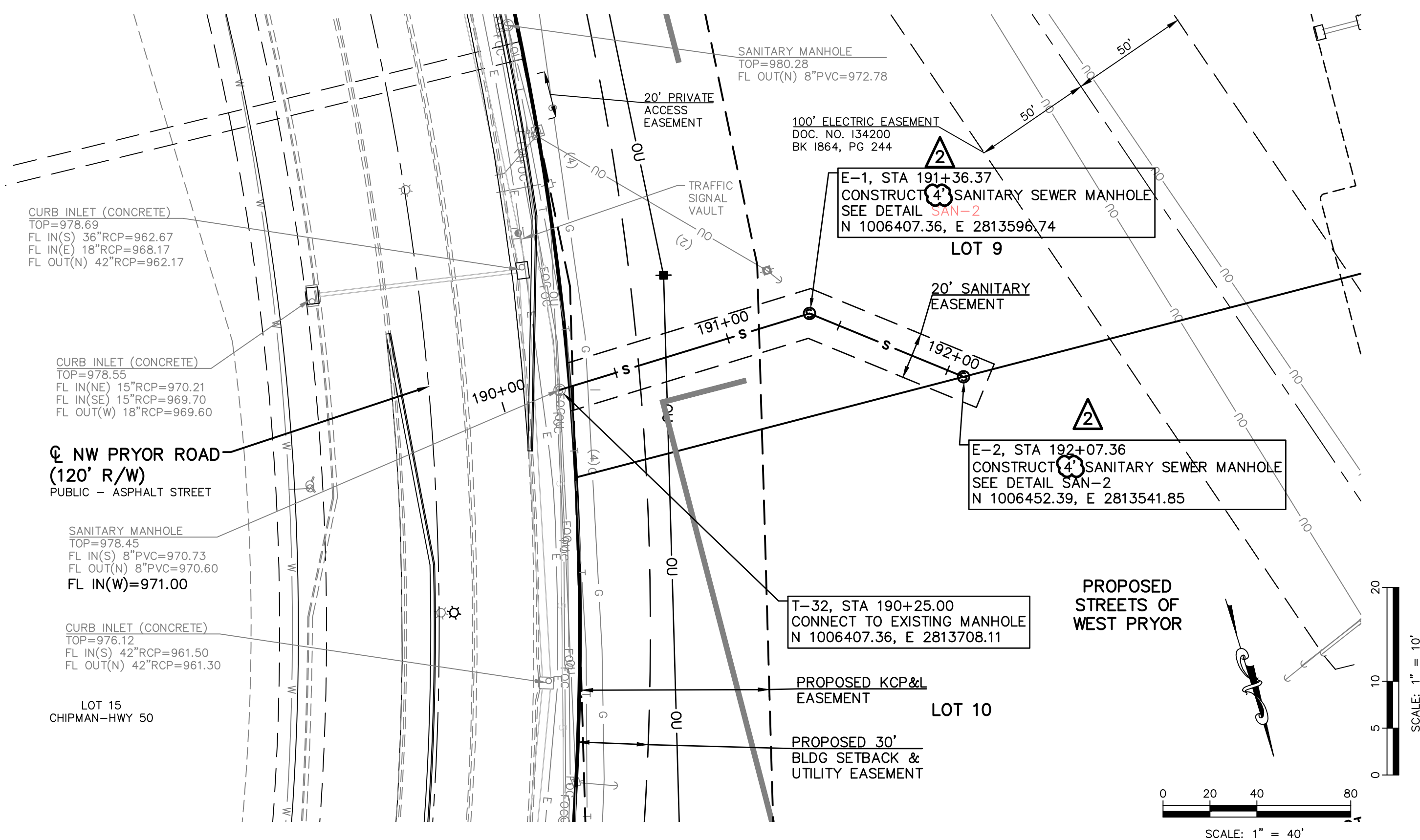
PROPOSED SANITARY SEWER LINE "A"

⚠ PUBLIC STREET, STORM & WATER ARE BY SEPARATE PLANS

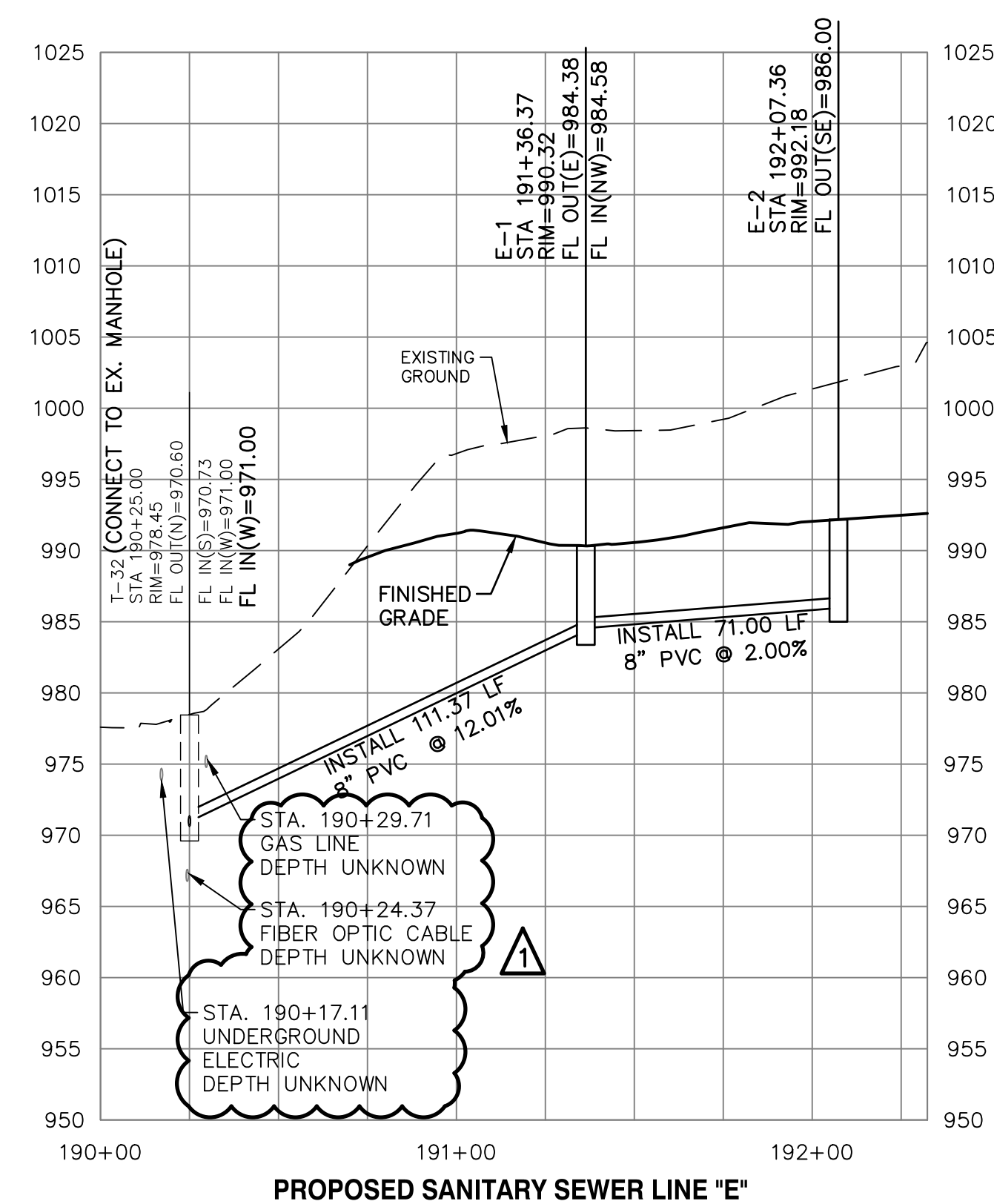
2319 N. JACKSON P.O. BOX 1304 JUNCTION CITY, KANSAS 66441 PH. (785) 762-5040 FAX (785) 762-7744 jke@kveeng.com www.kveeng.com		KAW VALLEY ENGINEERING		KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/19	
LEON D. OSBOURN ENGINEER MO # 021726					
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		DSN	DWN	CHK	
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PROJ. NO. A14_7067-1 DESIGNER LDO DRAWN BY JT/BKR CFN 7067-1S_SPP SHEET C-6 REV 2					



NOTE:
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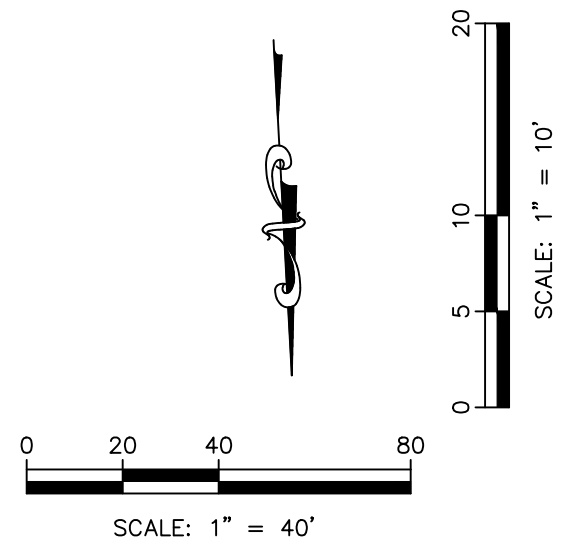
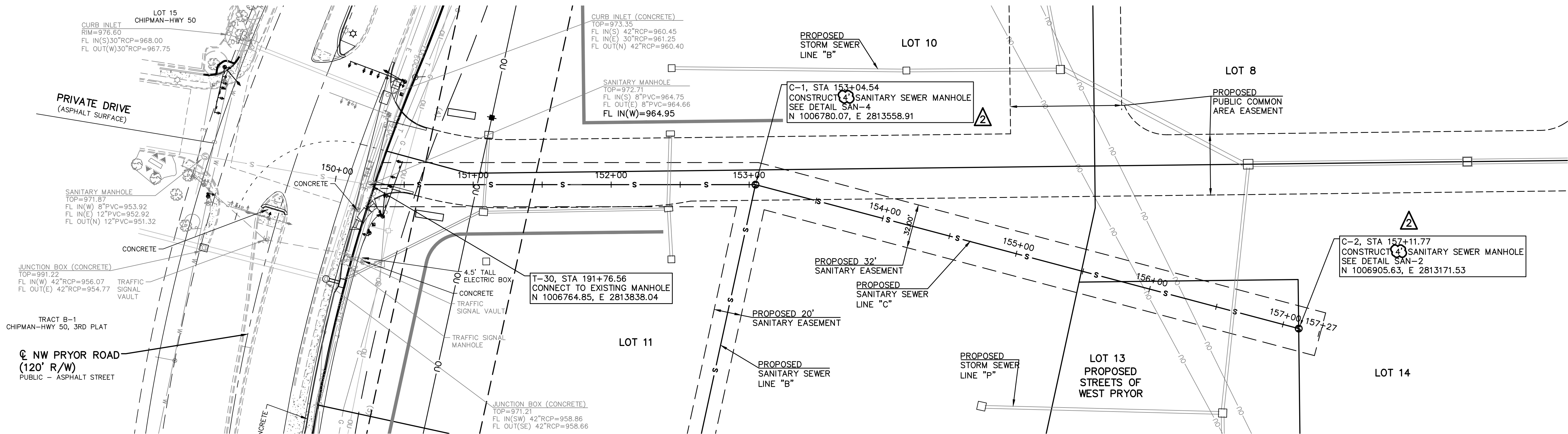


NOTE:
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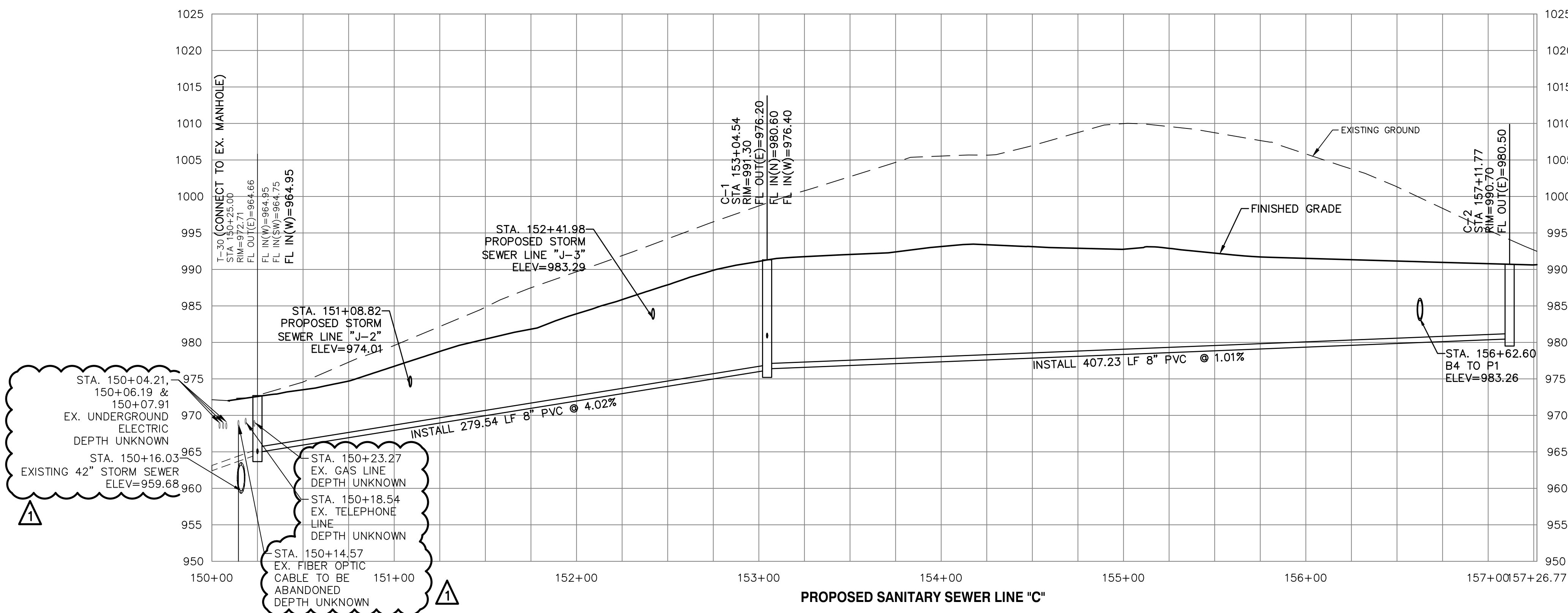


PUBLIC STREET, STORM & WATER
ARE BY SEPARATE PLANS

STREETS OF WEST PRYOR											
NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE											
LEE'S SUMMIT, MISSOURI											
SANITARY SEWER PLANS											
SANITARY SEWER LINE B & E - PLAN & PROFILE											
PROJ. NO.						A14-7067-1					
DESIGNER						LDO		DRAWN BY		JT/BKR	
CFN						7067-1S_SPP					
SHEET						C-7		REV		2	

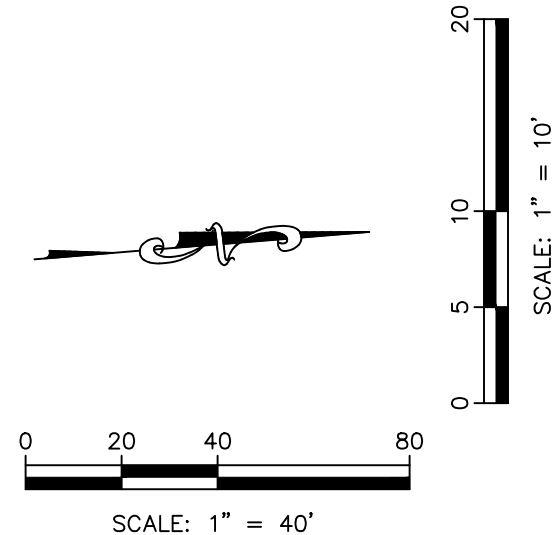


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PUBLIC STREET, STORM & WATER ARE BY SEPARATE PLANS

PROJ. NO. A14-7067-1		DESIGNER LDO	DRAWN BY JT/BKR	CFN 7067-1S_SPP	SHEET	REV	2
STREETS OF WEST PRYOR NW/4 NW PRYOR ROAD & NW LOWENSTEIN DRIVE LEE'S SUMMIT, MISSOURI		SANITARY SEWER PLANS SANITARY SEWER LINE C - PLAN & PROFILE		C-8			
LEON D. OSBOURN ENGINEER MO # 021726		KAW VALLEY ENGINEERING 2319 N. JACKSON P.O. BOX 1304 JUNCTION CITY, KANSAS 66441 PH. (785) 762-5040 FAX (785) 762-7744 jke@kve.com www.kve.com		KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/19			CHK
REV		DATE	DESCRIPTION	DSN			
2	2-26-19	REVISED PER CITY COMMENT		LDO			
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0	1-8-19	INITIAL ISSUE		LDO			
DWN				CHK			



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KAW VALLEY ENGINEERING

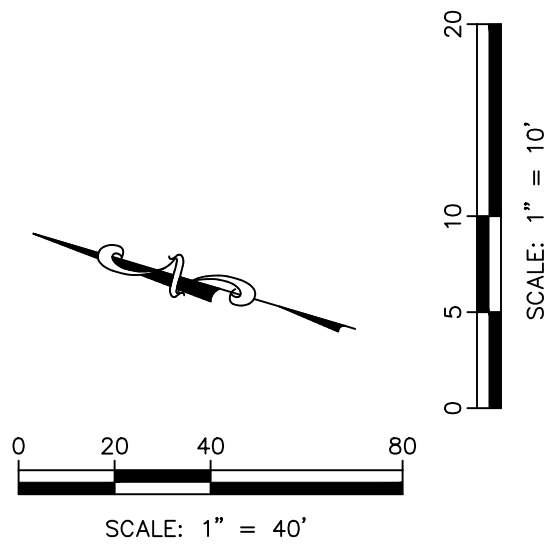
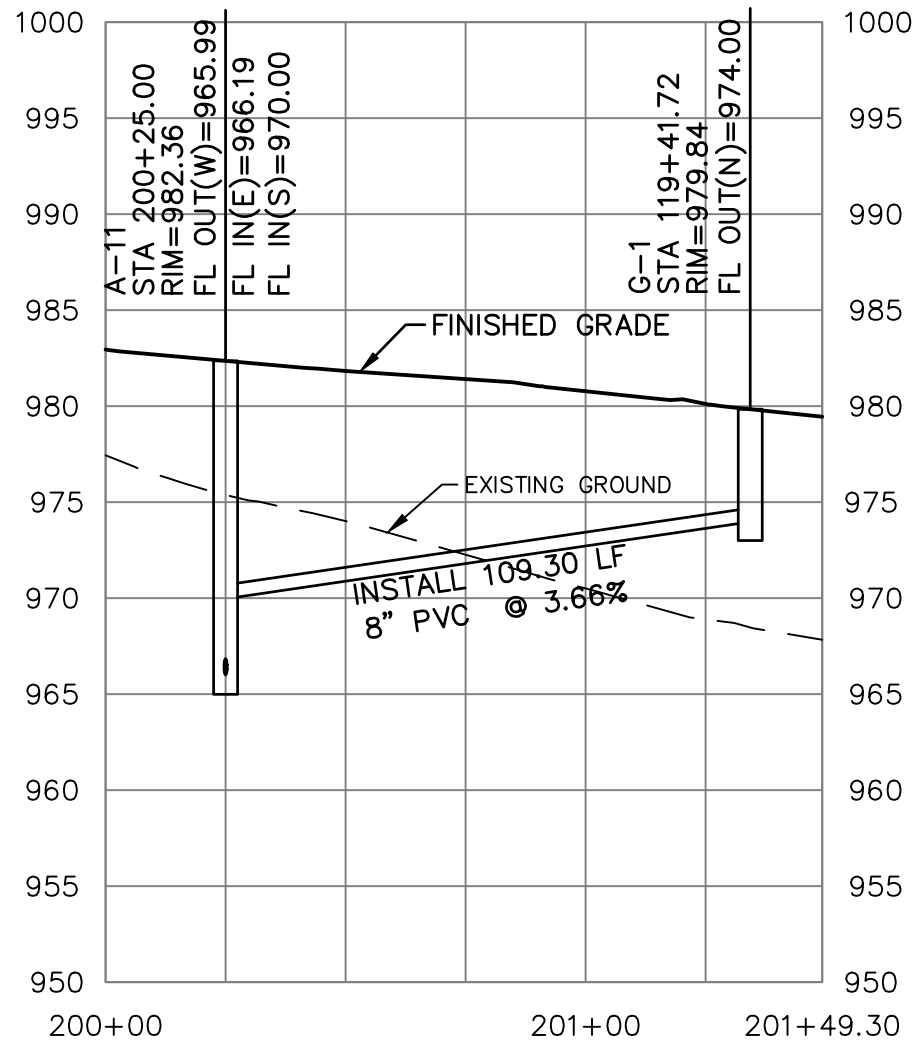
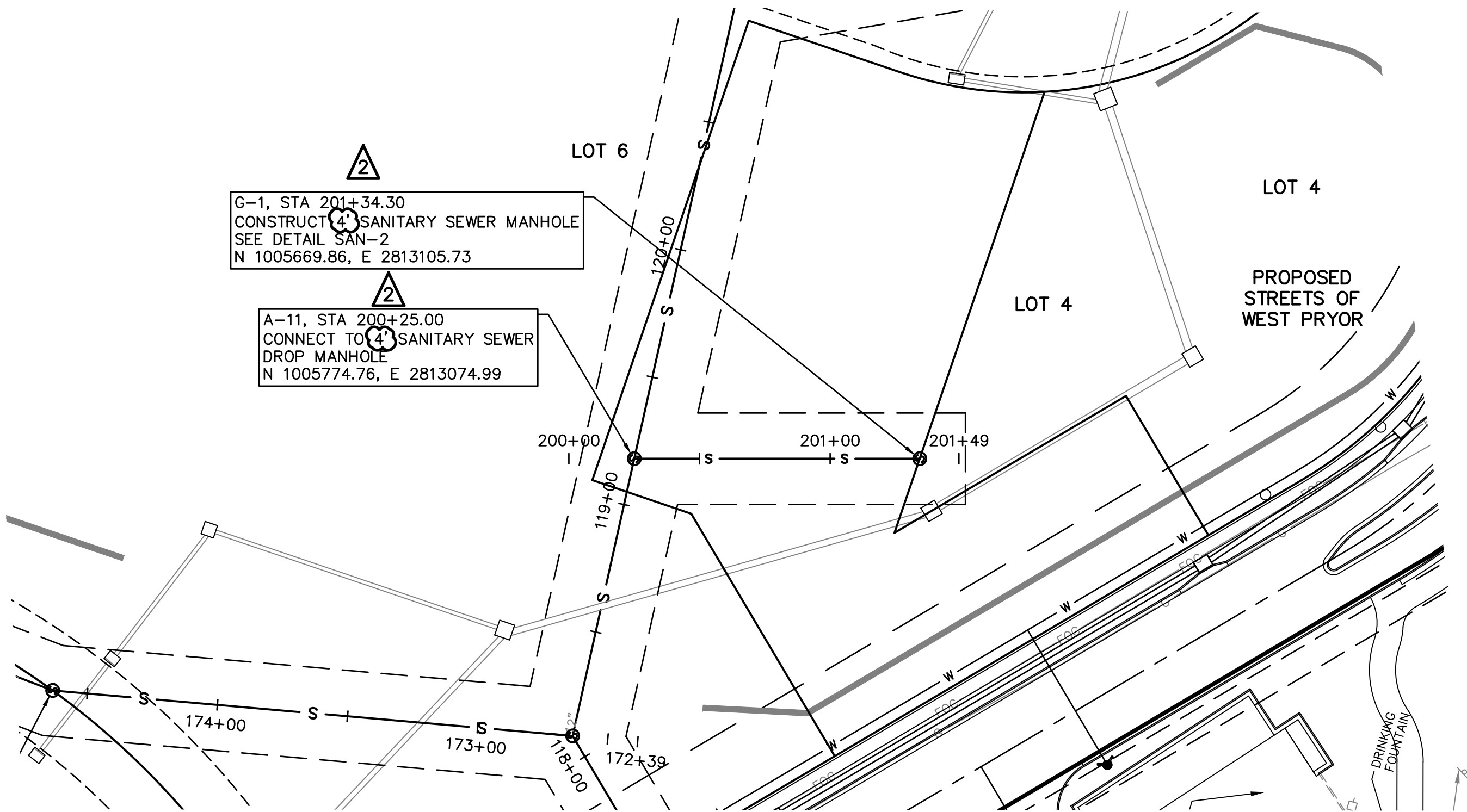
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STREETS OF WEST PRYOR
NW/4 NW PRYOR ROAD & NW LOWENSTEIN DRIVE
LEE'S SUMMIT, MISSOURI

SANITARY SEWER PLANS
SANITARY SEWER LINE FROM AN 8' PROFILE

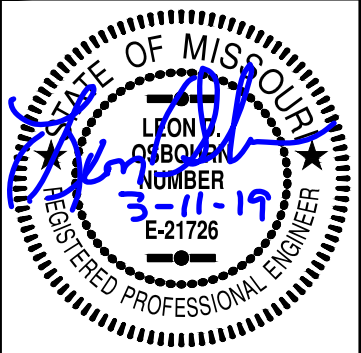
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DESIGNER	LDO	DRAWN BY	JT/BK
CFN		7067-1S_SPP	
SHEET		REVISION	
C-9			2



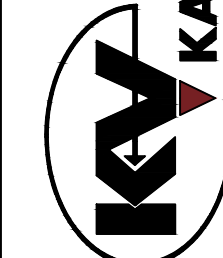
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STREETS OF WEST PRYOR NW/4 NW PRYOR ROAD & NW LOWENSTEIN DRIVE LEE'S SUMMIT, MISSOURI		SANITARY SEWER PLANS SANITARY SEWER LINE G - PLAN & PROFILE	
PROJ. NO. A14-7067-1			
DESIGNER LDO	DRAWN BY JT/BKR	CFN 7067-1S_SPP	
SHEET C-10		REV 2	CHK DWN
REV 0		DATE 1-8-19	DESCRIPTION INITIAL ISSUE
REV 1		DATE 1-23-19	DESCRIPTION REVISED PER CITY COMMENT
REV 2		DATE 2-26-19	DESCRIPTION REVISED PER CITY COMMENT
REV 3		DATE 3-11-19	DESCRIPTION REVISED PER CITY COMMENT



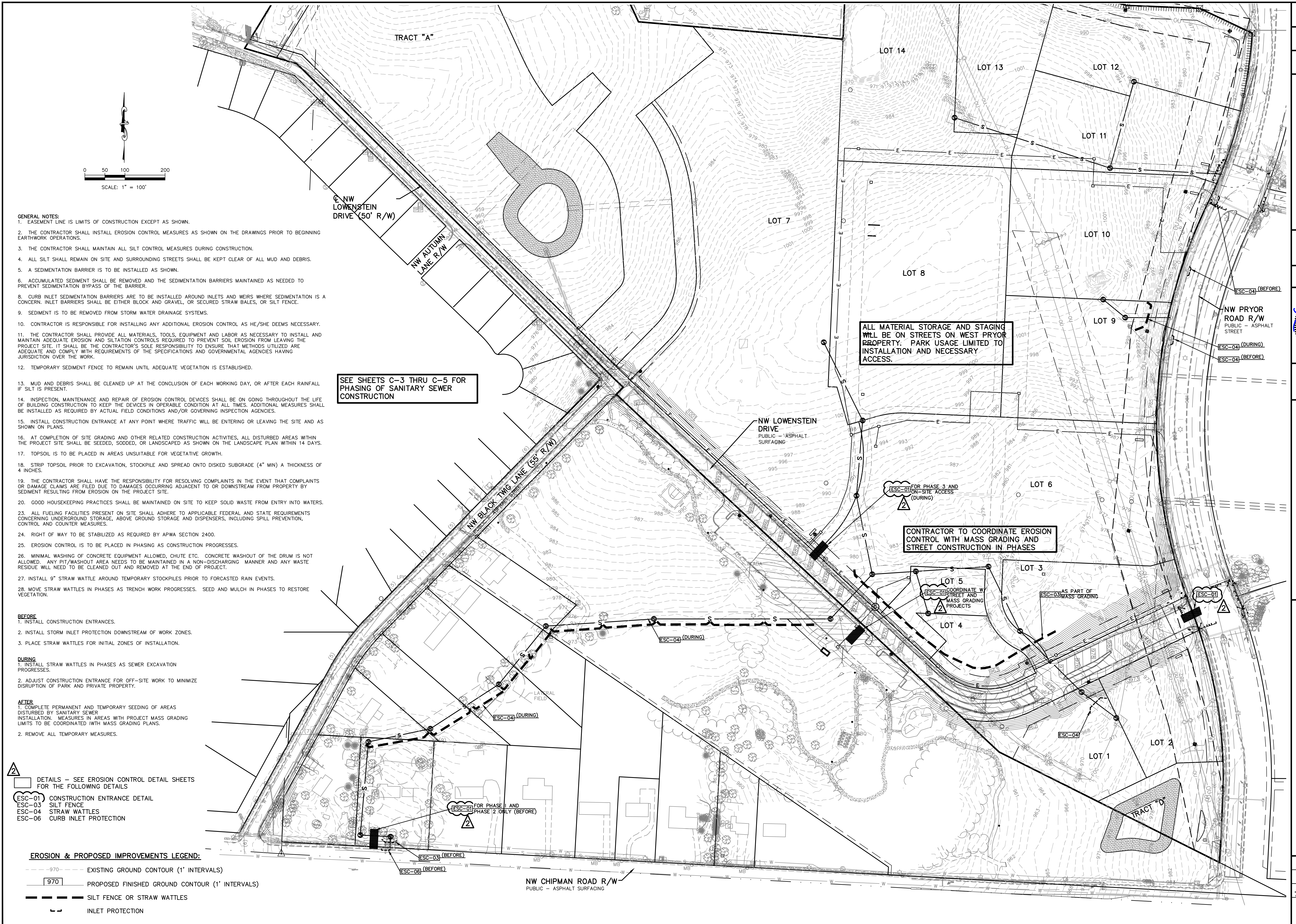
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KAW VALLEY ENGINEERING

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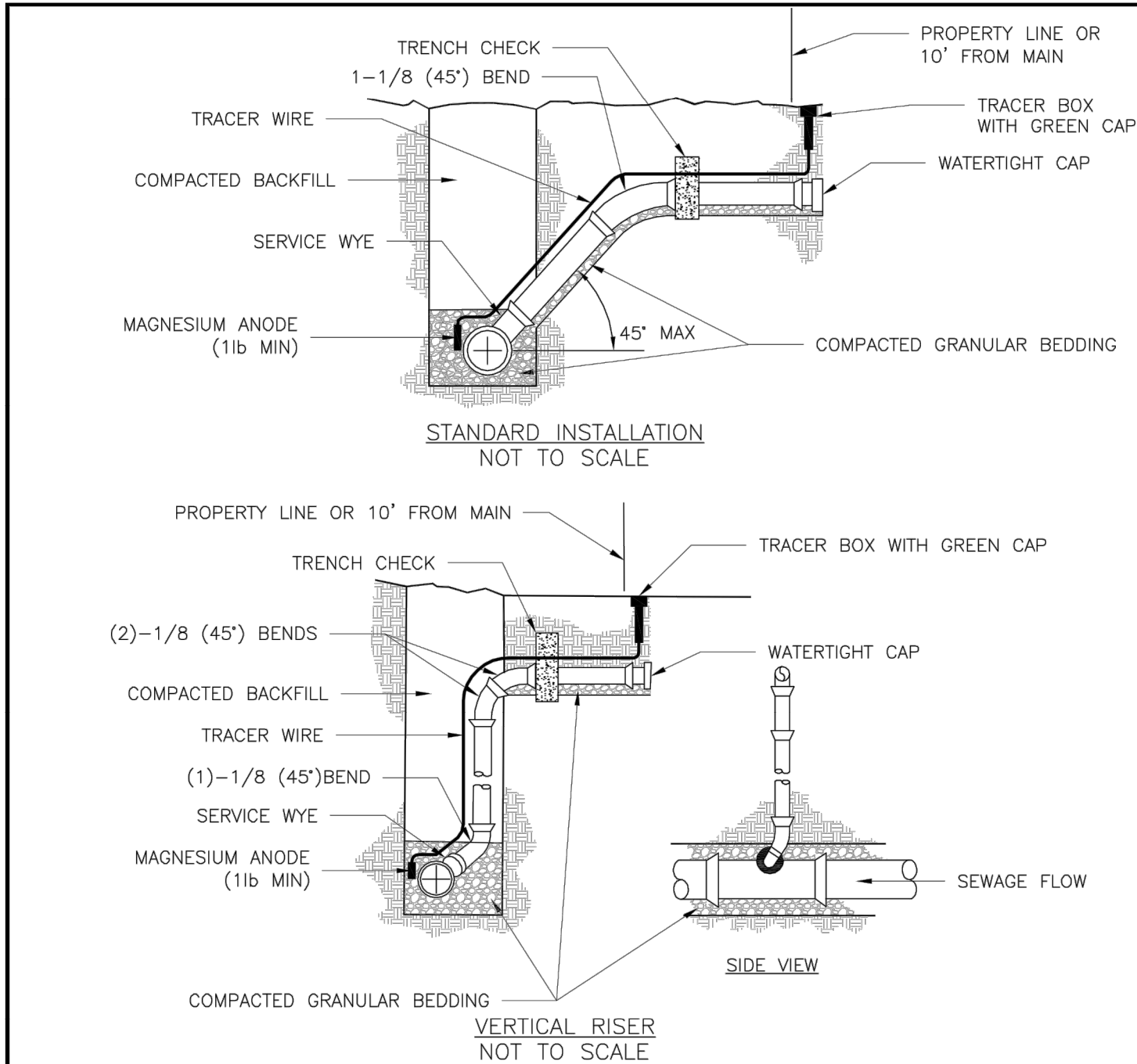


STREETS OF WEST PRYOR					
NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE					
LEE'S SUMMIT, MISSOURI					
SANITARY SEWER PLANS					
EROSION CONTROL PLAN					
PROJ. NO.					
A14_7067-1					
DESIGNER		DRAWN BY			
LDO		JT/BKR			
7067-1S.ECP					
CFCN					
SHEET	REV				
C-11	2				



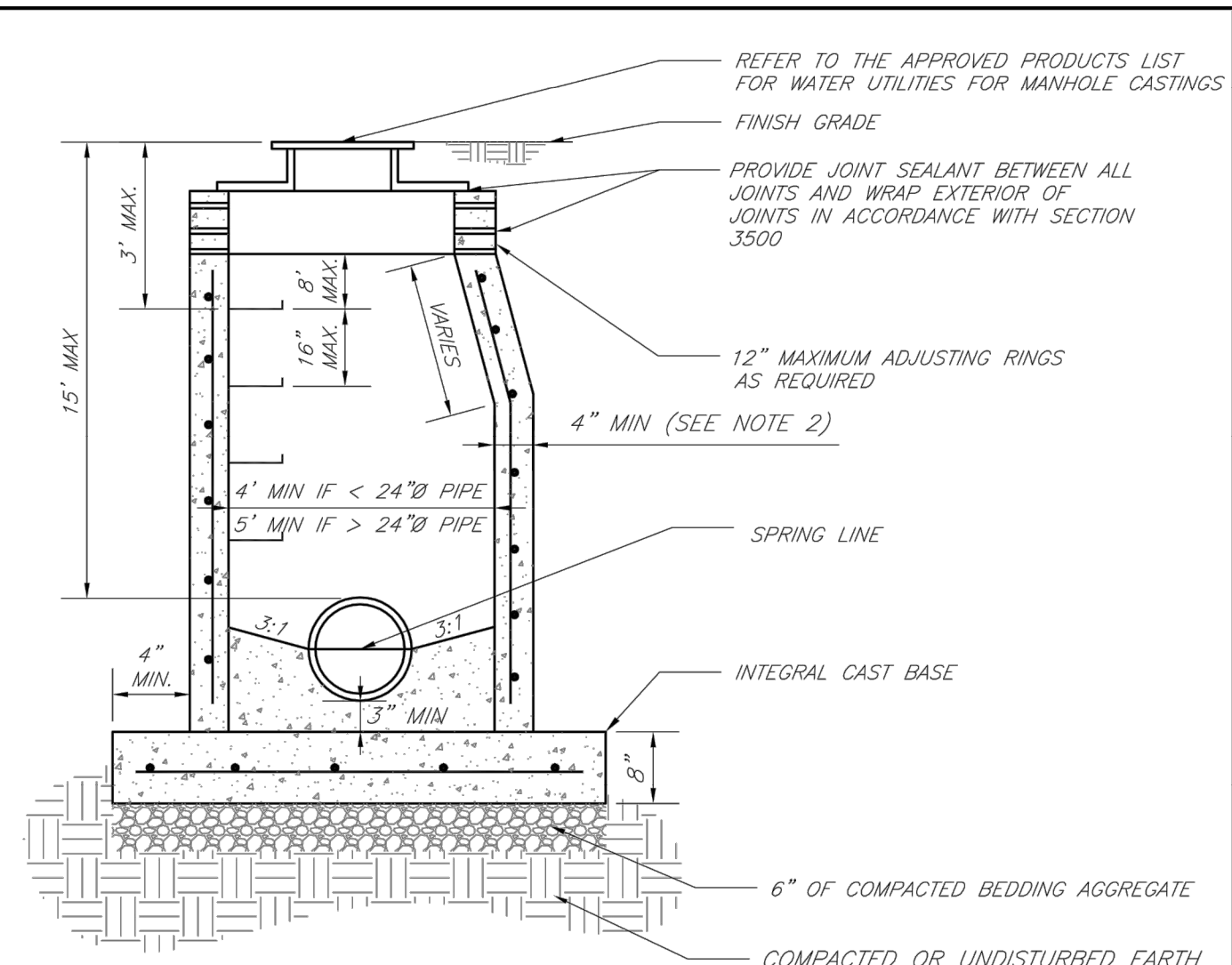
KAW VALLEY ENGINEERING
SERVICES BY MISSOURI S
EXPIRES 12/31/19

<div>STREETS OF WEST PRYOR NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE LEE'S SUMMIT, MISSOURI</div>		<div>SANITARY SEWER PLANS DETAIL SHEET</div>	
PROJ. NO.		A14-7067-1	
DESIGNER	LDO	DRAWN BY	JT/BKR
CFN	7067-1S_DET		
SHEET	C-12		REV
			1



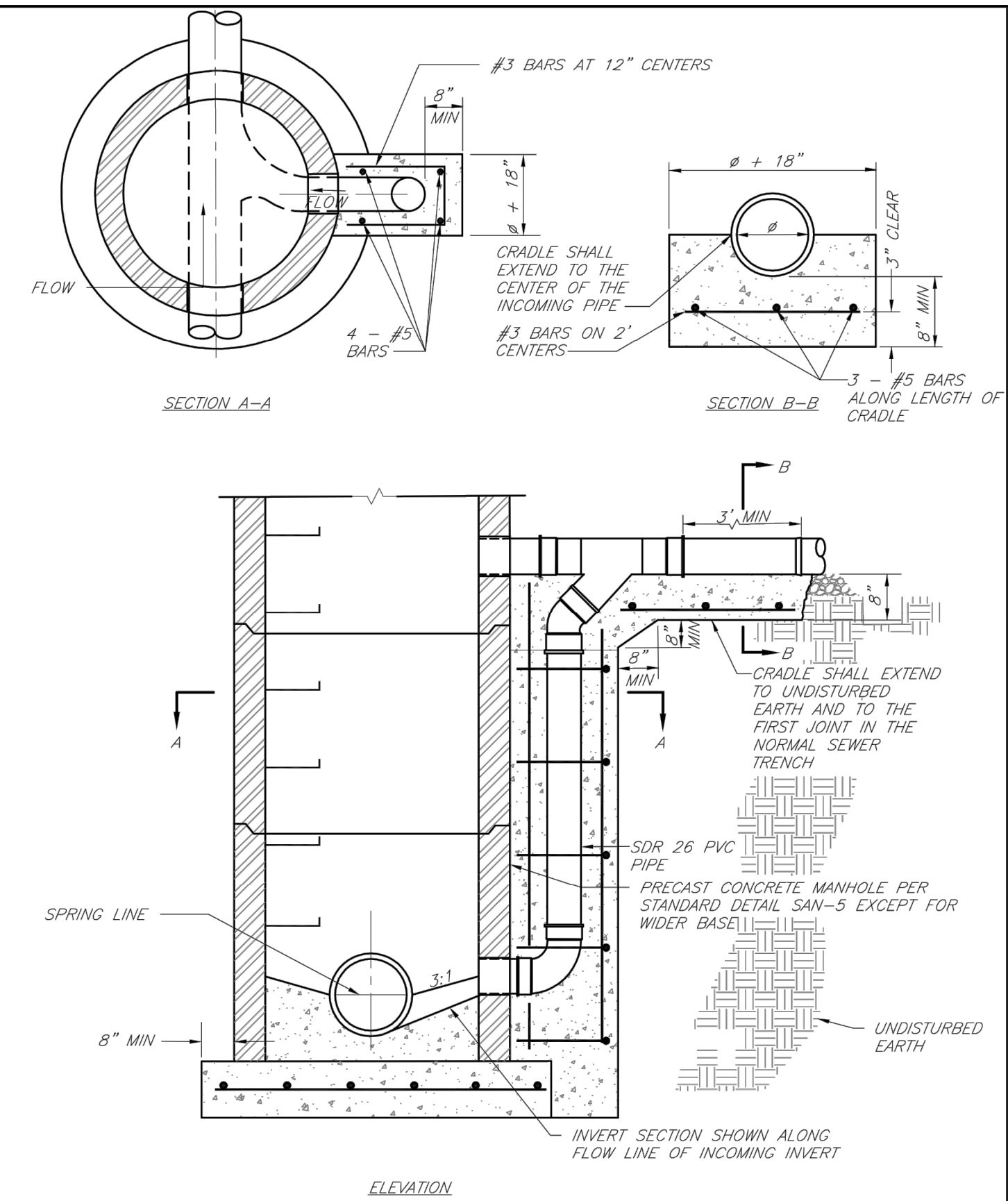
- NOTES:
1. ALL SEWER STUBS SHALL BE CONSTRUCTED TO PROPERTY LINE OR 10' MINIMUM FROM THE MAIN, WHERE SIDEWALKS EXIST. EXISTING CONTRACTOR SHALL EXTEND SERVICE LINE UNDER EXISTING SIDEWALK TO TWO FEET BEYOND.
 2. ALL NEW CONSTRUCTION OF SEWER STUBS SHALL BE TEMPORARILY MARKED WITH A MARKING STAKE, 36" 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. THE TRENCH CHECK SHALL BE INSTALLED IN THE TRENCH SECTION 2100 FOR SEWER MAIN BEDDING.
 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. THE TRACER WIRE SHALL RUN FROM THE WYE AND TERMINATE IN A FLUSH MOUNTED TRACER BOX WITH A GR CAST IRON LOCKABLE TOP. WIRE SHALL BE TAPED OR TIED TO THE PIPE AT 5' INTERVALS.
 8. TRACER WIRE BOX SHALL BE INSTALLED WITHIN 10' 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-BUSH CONNECTORS. WIRE NUTS SHALL NOT BE USED. A WATER-PROOF CONNECTION IS NECESSARY TO PREVENT CORROSION.

	<h1 style="margin: 0;">LEE'S SUMMIT</h1> <h2 style="margin: 0;">MISSOURI</h2> <p style="margin: 0;">PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063</p>	Date: 04/17 Drawn By: MJF Checked By: DL
	BUILDING SEWER STUB AND RISER	<div style="font-size: 2em; font-weight: bold; margin-bottom: 10px;">SAN-</div>



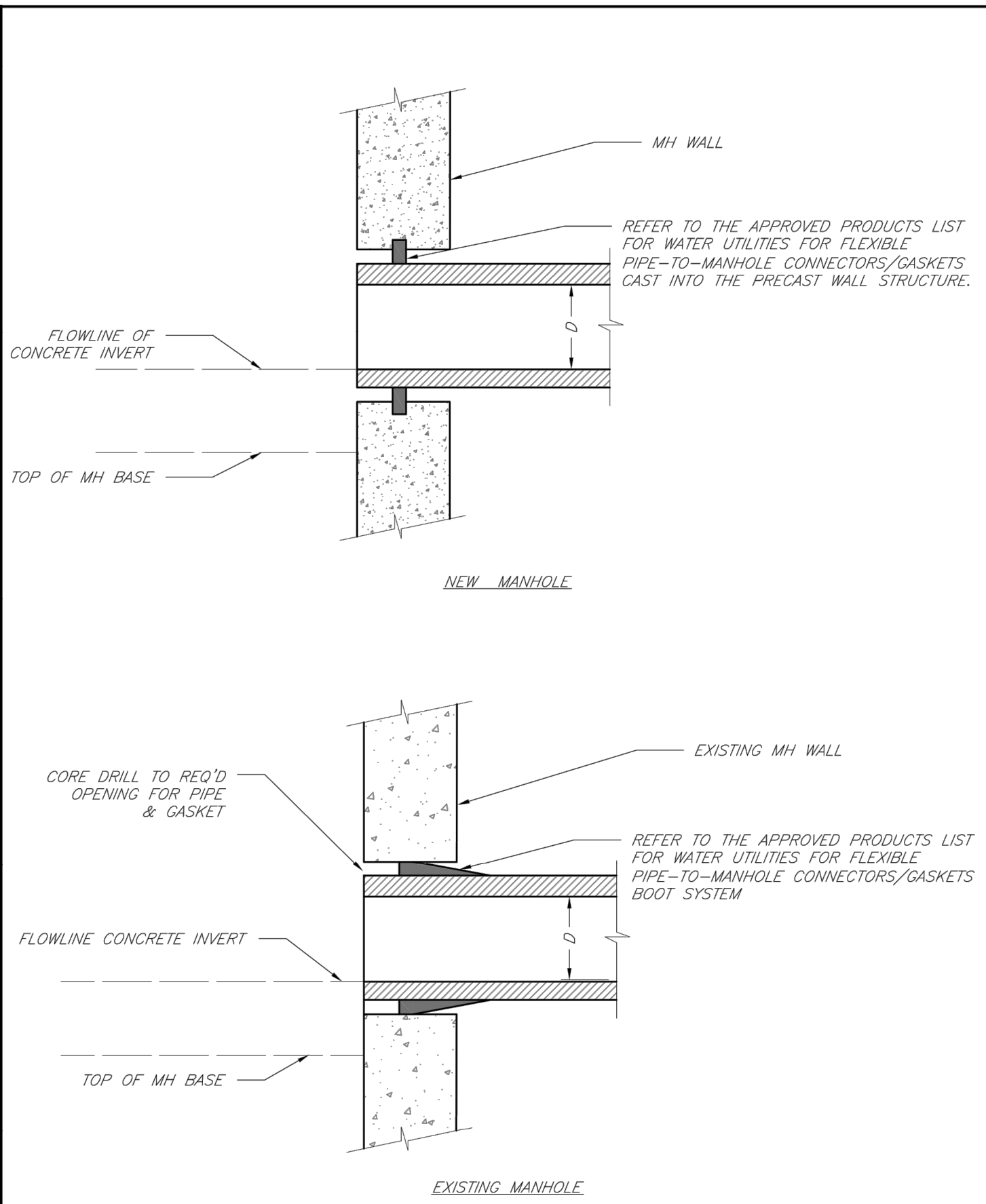
- NOTES:
1. PRECAST CONCRETE MANHOLES SHALL CONFORM TO ASTM C478 EXCEPT AS MODIFIED BY THE SPECIFICATIONS.
 2. A WALL THICKNESS NOT LESS THAN ONE-TWELFTH ($\frac{1}{12}$) OF THE INSIDE DIAMETER OR 4", WHICHEVER IS GREATER SHALL BE USED WHEN THE MANHOLE DEPTH IS LESS THAN 15'.
 3. WATERPROOFING SHALL 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. THE EXTERIOR SURFACING MATERIAL SHALL BE UNLESS OTHERWISE SPECIFIED 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 <small>PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063</small>		Date: 02/13 Drawn By: JN Checked By: DL FILE: SAN-2 Rev: 1/14 Rev:
	STANDARD PRECAST MANHOLE – SANITARY SEWER		

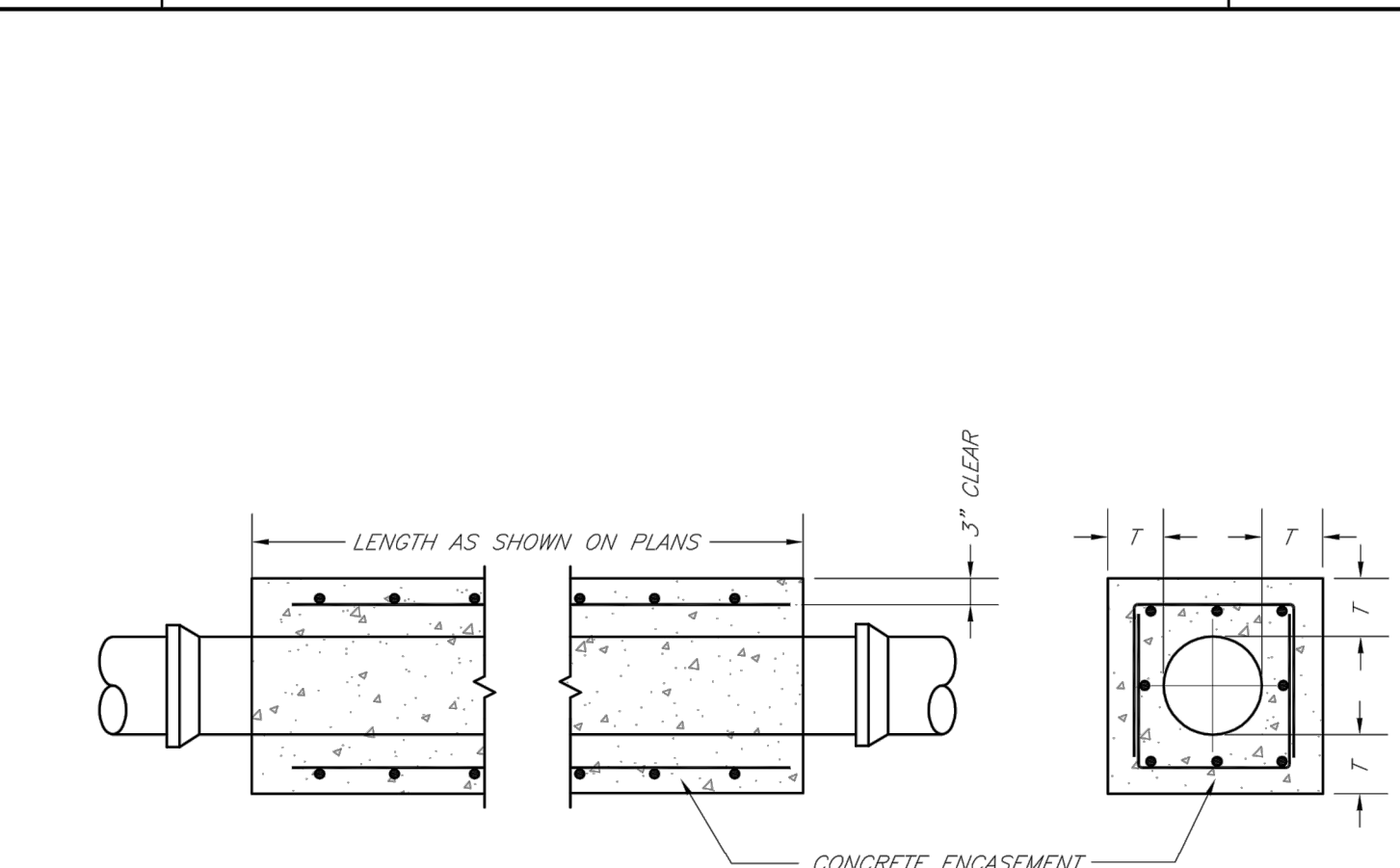


NOTE:
REFER TO DRAWING SAN-2 FOR MANHOLE DETAILS NOT SHOWN.


	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 1220 SE GREEN STREET LEE'S SUMMIT, MO 64063		Date: 02/13 Drawn By: JN Checked By: DL FILE: SAN-4 Rev: 1/14 Rev:
	DROP SANITARY SEWER MANHOLE		

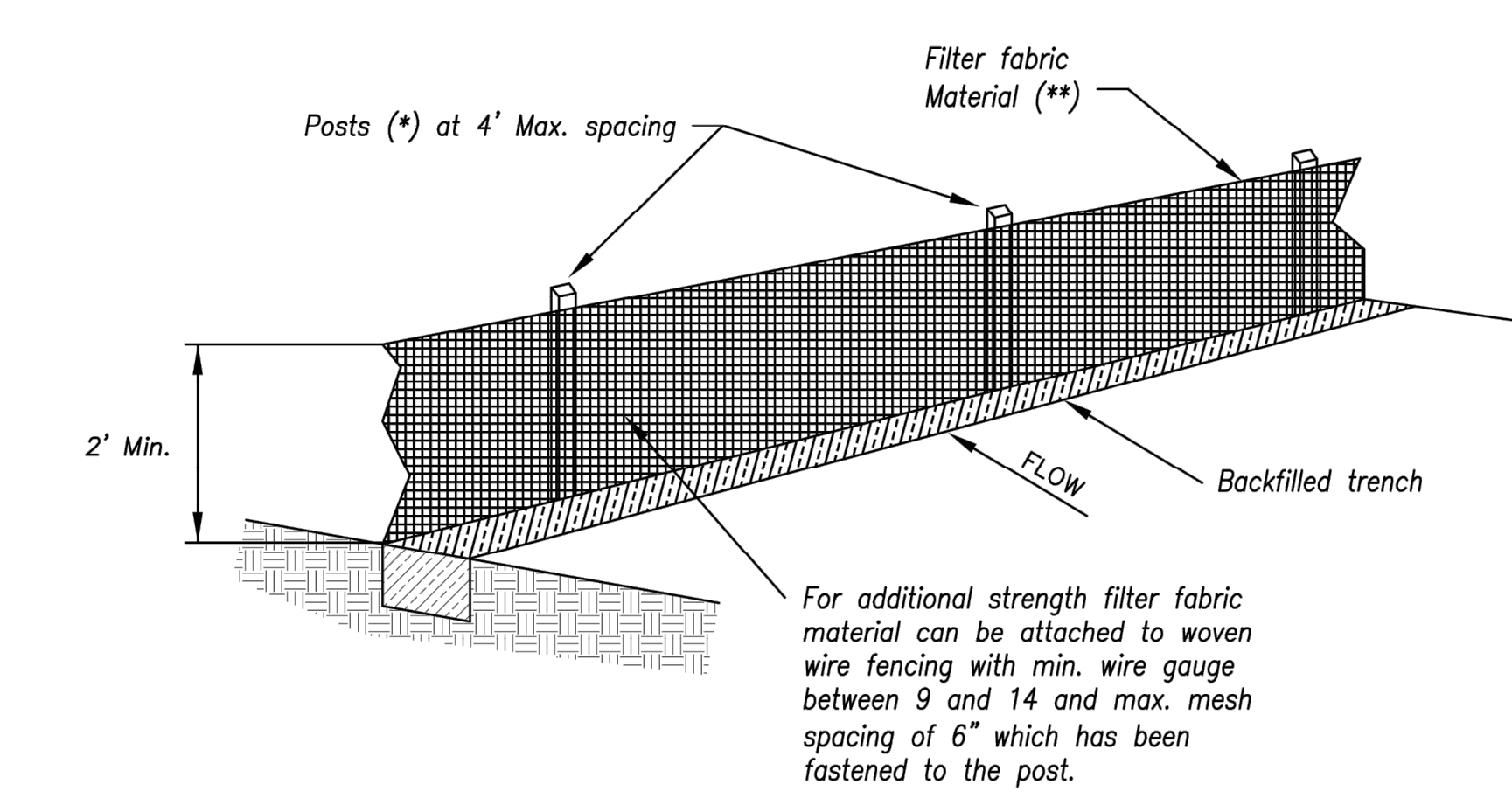


	LEE'S SUMMIT MISSOURI PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063		Date: 02/13
			Drawn By: JN
			Checked By: DL
			FILE: SAN-5
MANHOLE WALL CONNECTIONS			Rev: 1/14
			Rev:



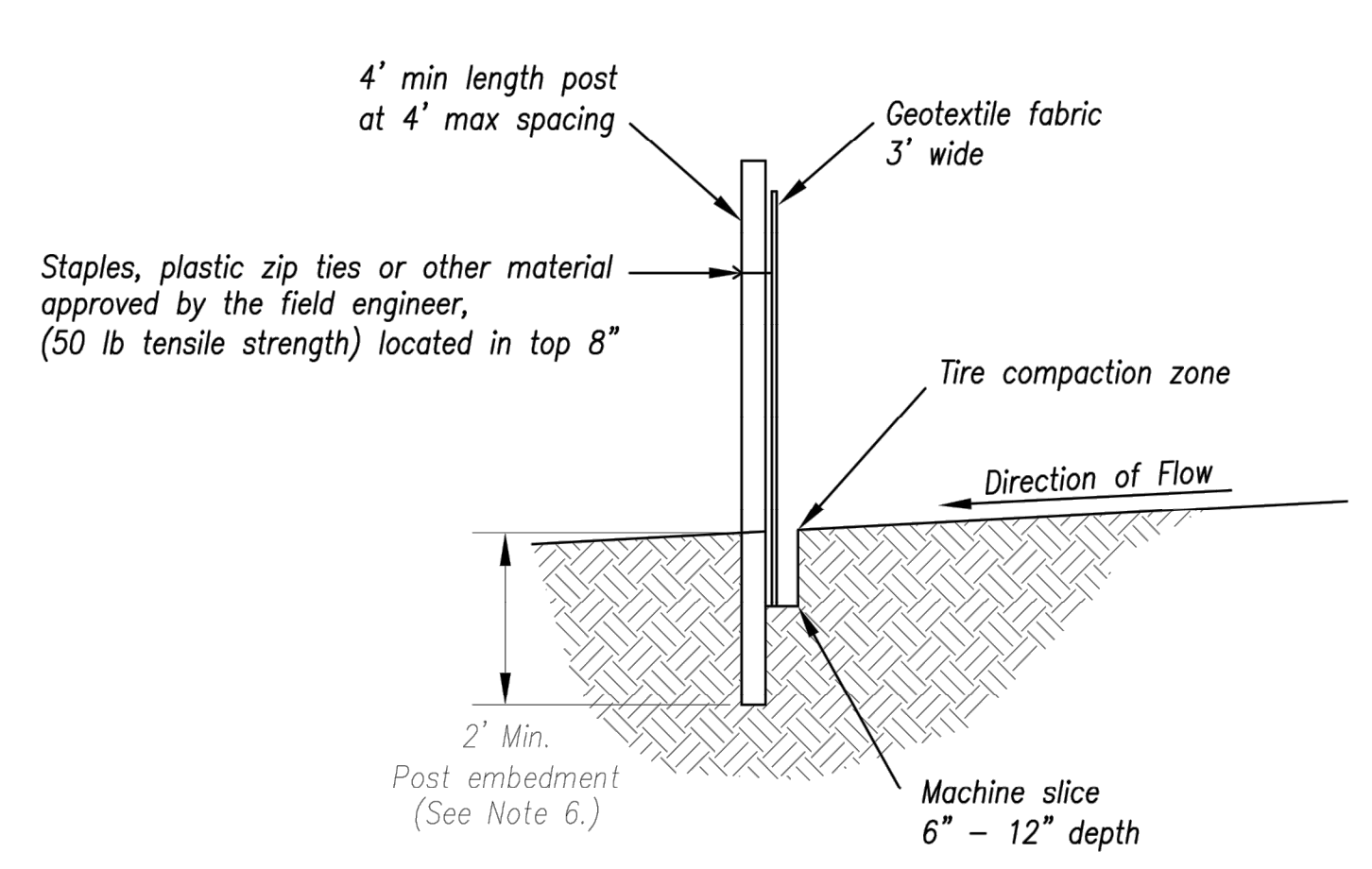
- NOTES:
1. FOR PIPES LESS THAN 15", T = 6" MIN.
 2. FOR PIPES 15" THRU 36", T = 8" MIN.
 3. INTERMEDIATE BELLS SHALL BE ENCASED.
 4. REINFORCING STEEL SHALL BE #4 @ 12" O.C. EACH WAY WITH A MINIMUM REBAR LAP OF 12".

	<p align="center">LEE'S SUMMIT MISSOURI</p> <p align="center">PUBLIC WORKS ENGINEERING DIVISION 220 SE GREEN STREET LEE'S SUMMIT, MO 64063</p>	<p>Date: 02/13</p> <p>Drawn By: JN</p> <p>Checked By: DL</p> <p>FILE: SAN-7</p>
	<p>SANITARY PIPE ENCASEMENT</p>	<p>Rev: 1/14</p> <p>Rev:</p>

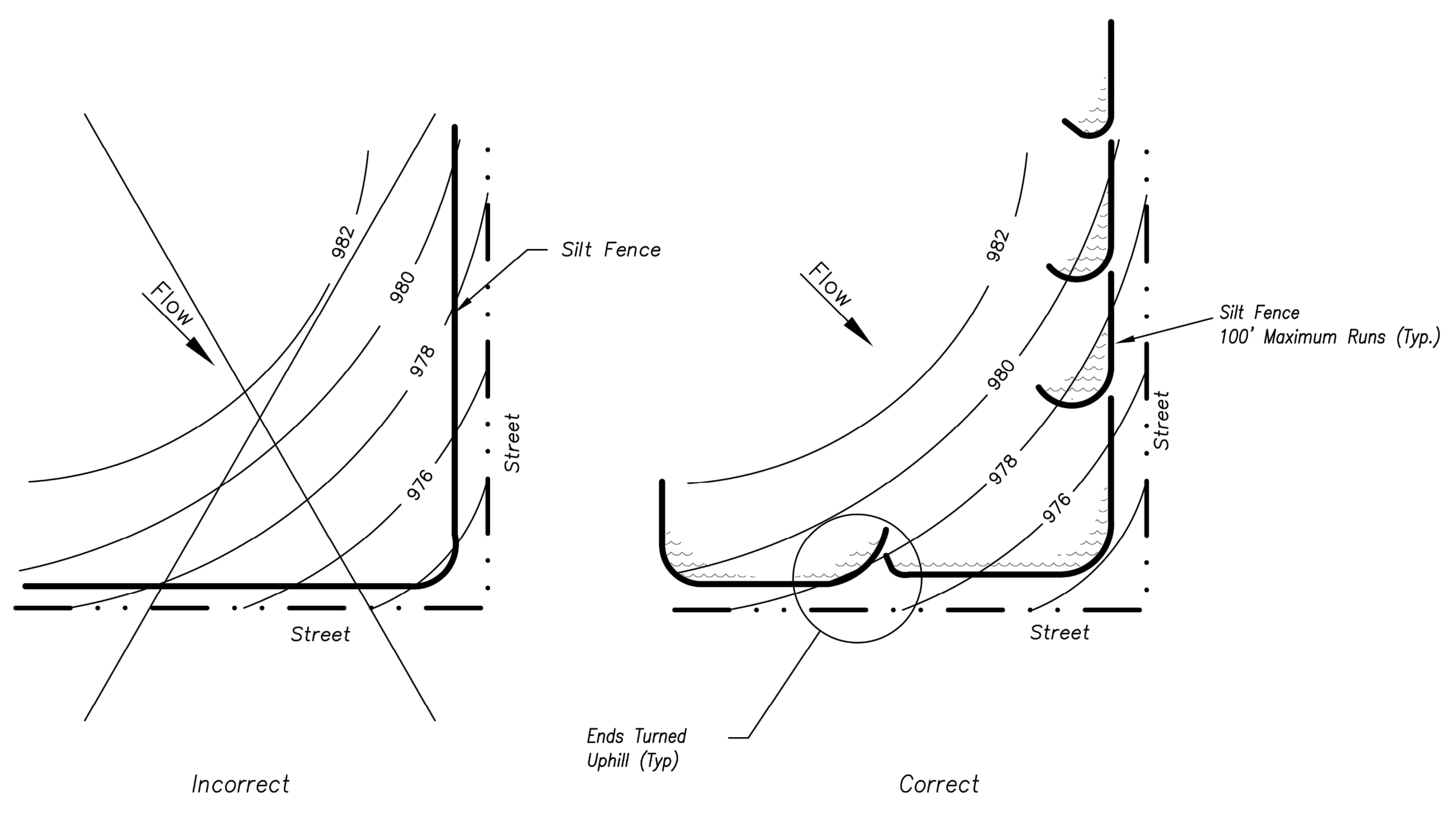


- (*) POSTS

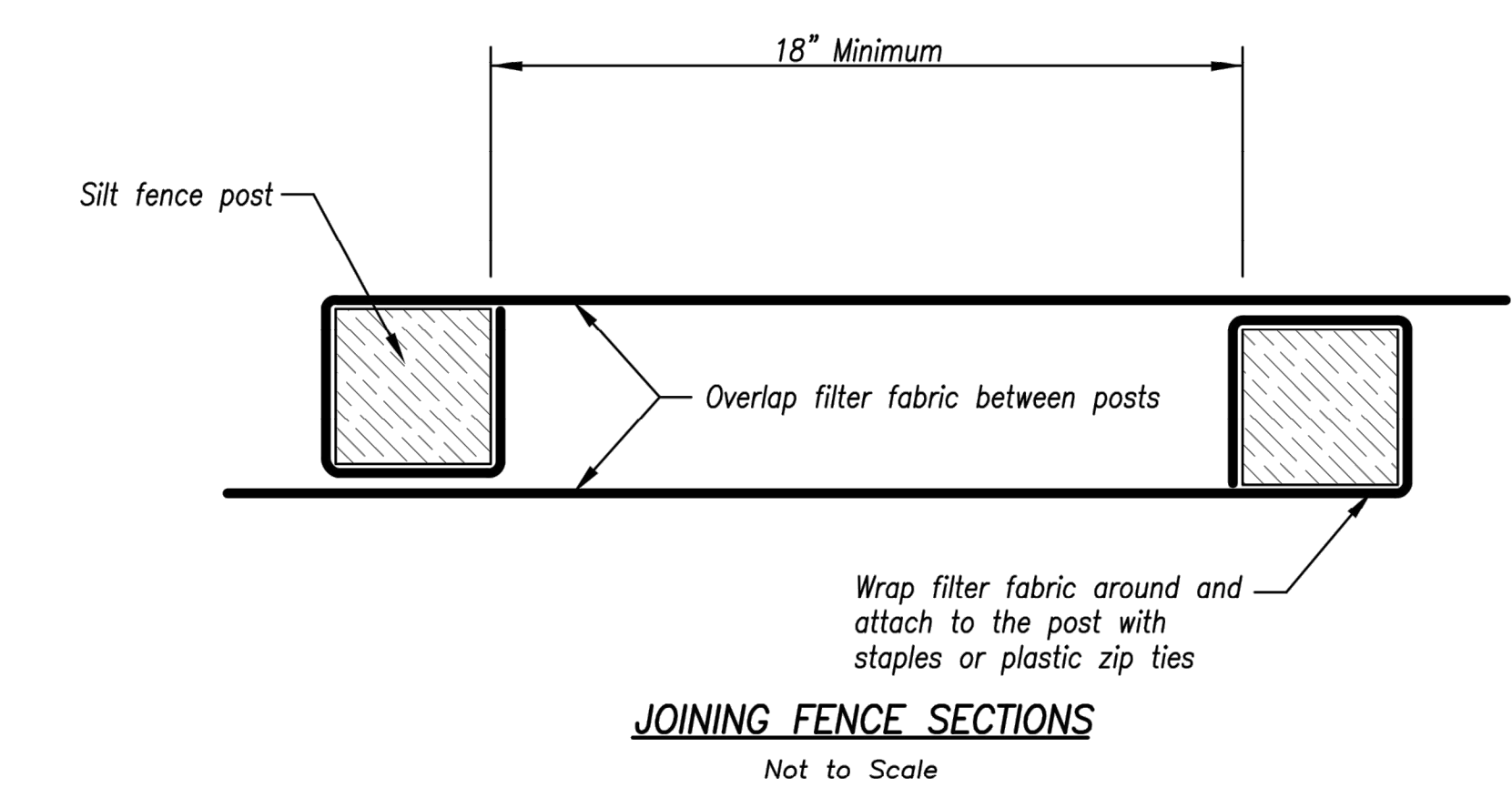
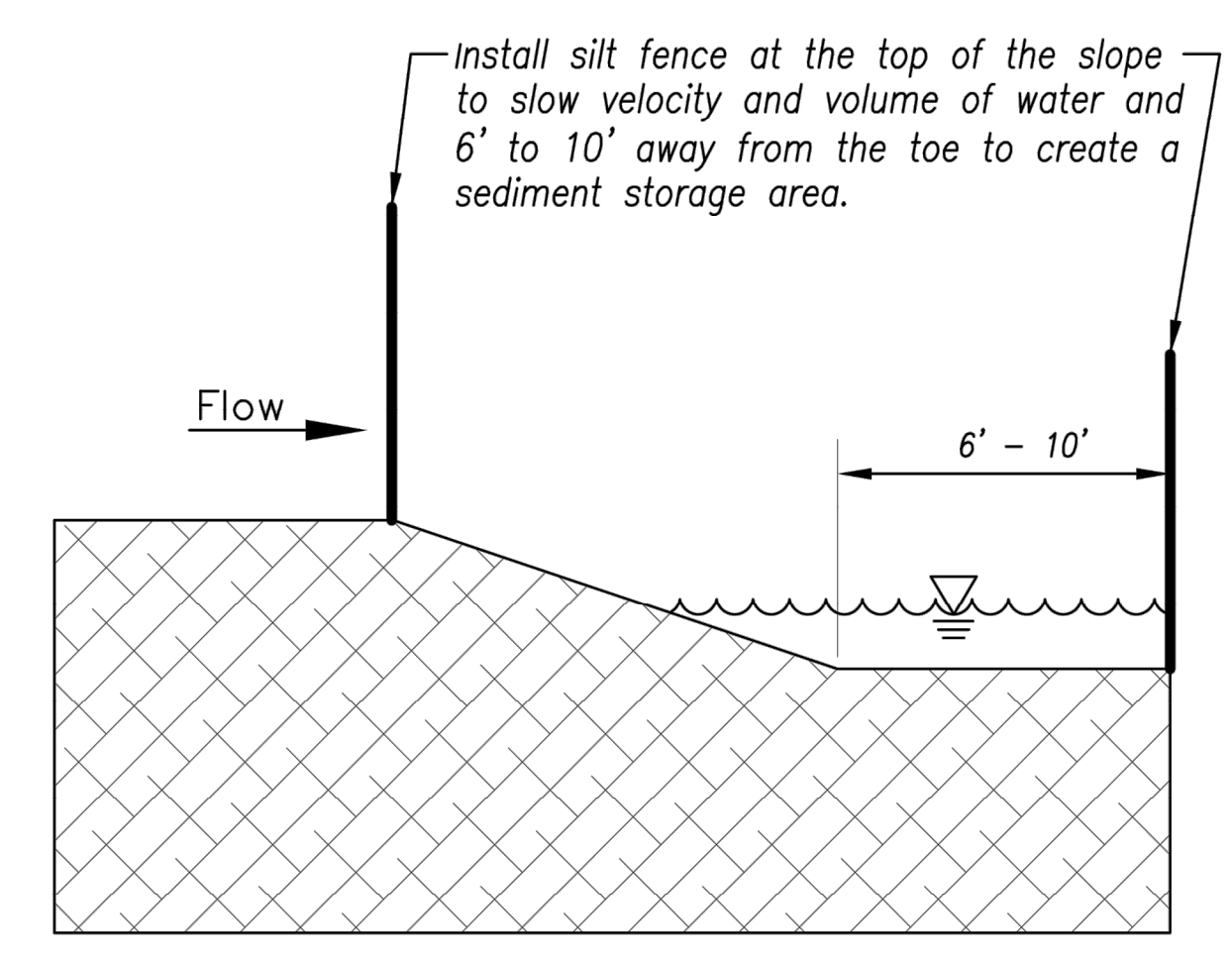
 - MIN. LENGTH 4'
 - HARDWOOD 1 3/16" x 1 3/16"
 - NO.2 SOUTHERN PINE 2 5/8" x 2 5/8"
 - STEEL 1.33 LB/FT
- (**) - Geotextile Fabric shall meet the requirements of AASHTO M288



SILT FENCE DETAILS
Not to Scale



SILT FENCE LAYOUT
Not to Scale



- Notes:
1. In order to contain water, the ends of the silt fence must be turned uphill (Figure A).
 2. Long perimeter runs of silt fence must be limited to 100'. Runs should be broken up into several smaller segments to minimize water concentrations (Figure A).
 3. Long slopes should be broken up with intermediate rows of silt fence to slow runoff velocities.
 4. Attach fabric to upstream side of post.
 5. Install posts a minimum of 2' into the ground.
 6. Trenching will only be allowed for small or difficult installation, where slicing machine cannot be reasonably used.
- Maintenance:
1. Remove and dispose of sediment deposits when the deposit approaches 1/3 the height of silt fence.
 2. Repair as necessary to maintain function and structure.

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Kansas City Metro Chapter
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KANSAS CITY METRO CHAPTER

SILT FENCE

STANDARD DRAWING
NUMBER ESC-03
ADOPTED:
10/24/2016

PROJ. NO. **A14_7067-1**

DESIGNER **LDO** DRAWN BY **JT/BKR**

CFN **7067-1S_DET**

SHEET **C-13**

REV

DATE

DESCRIPTION

1 1-23-19 REVISED PER CITY COMMENT

0 1-8-19 INITIAL ISSUE

DSN

DWN

CHK

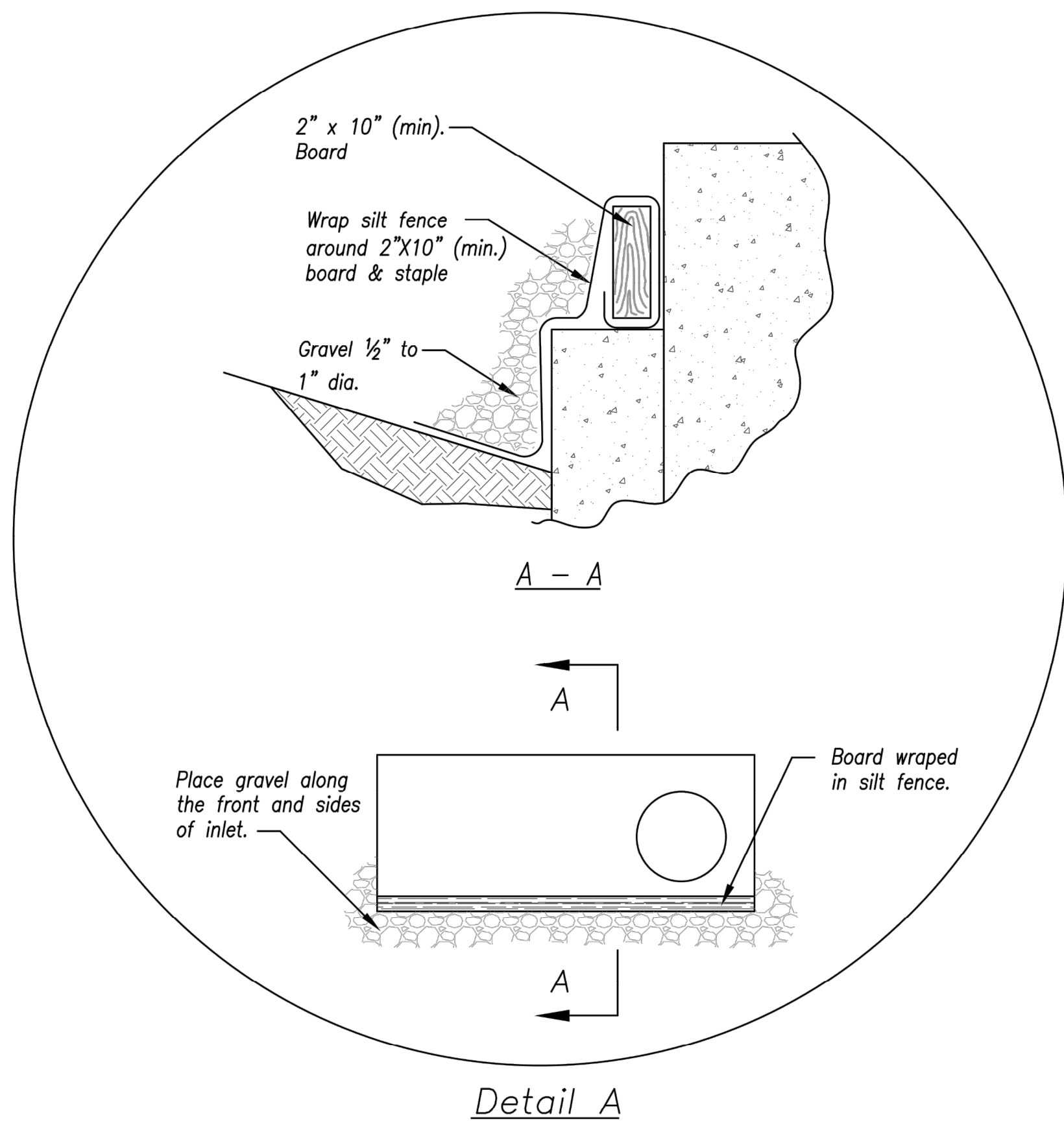
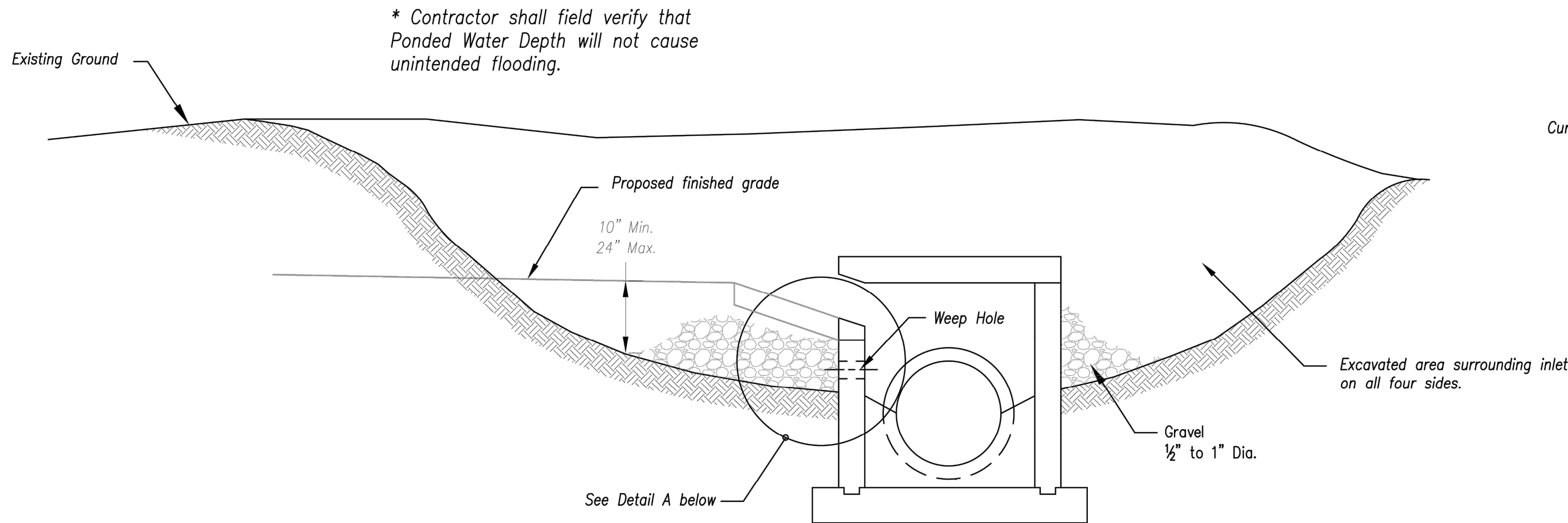
LEON D. OSBOURN
ENGINEER
MO # 021726

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KAW VALLEY ENGINEERING
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842.
EXPIRES 12/31/19

STREETS OF WEST PRYOR
NW/Q NW PRYOR ROAD & NW LOWENSTEIN DRIVE
LEE'S SUMMIT, MISSOURI

SANITARY SEWER PLANS
DETAIL SHEET



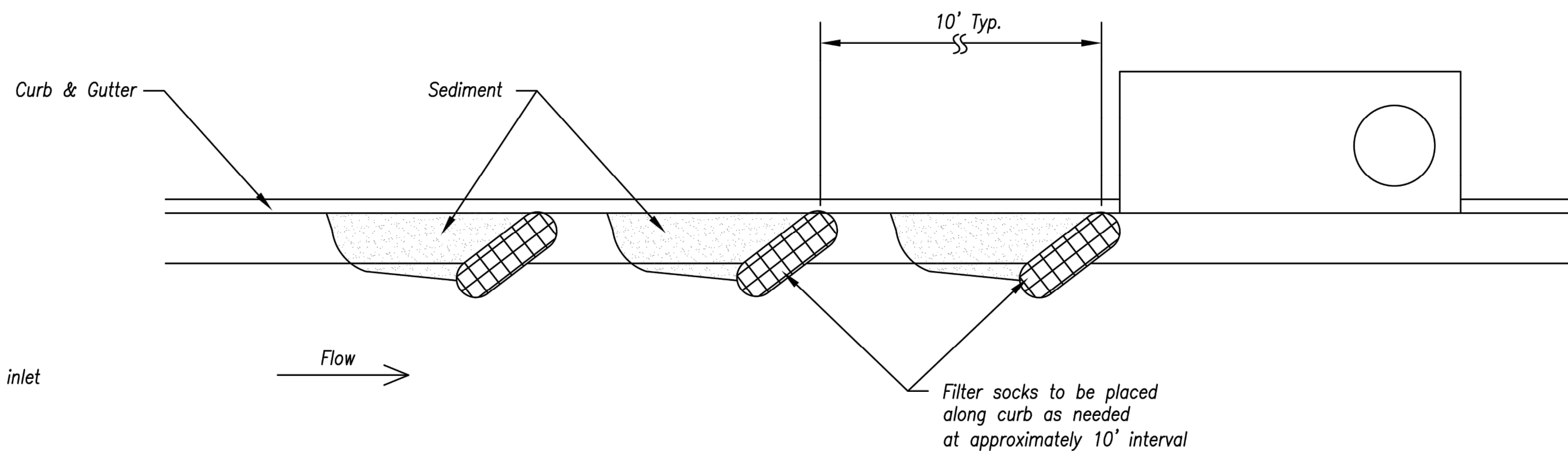
EARLY STAGE CURB INLET
(Open Box and Prior to Pouring Curb and Inlet Throat)

Notes:

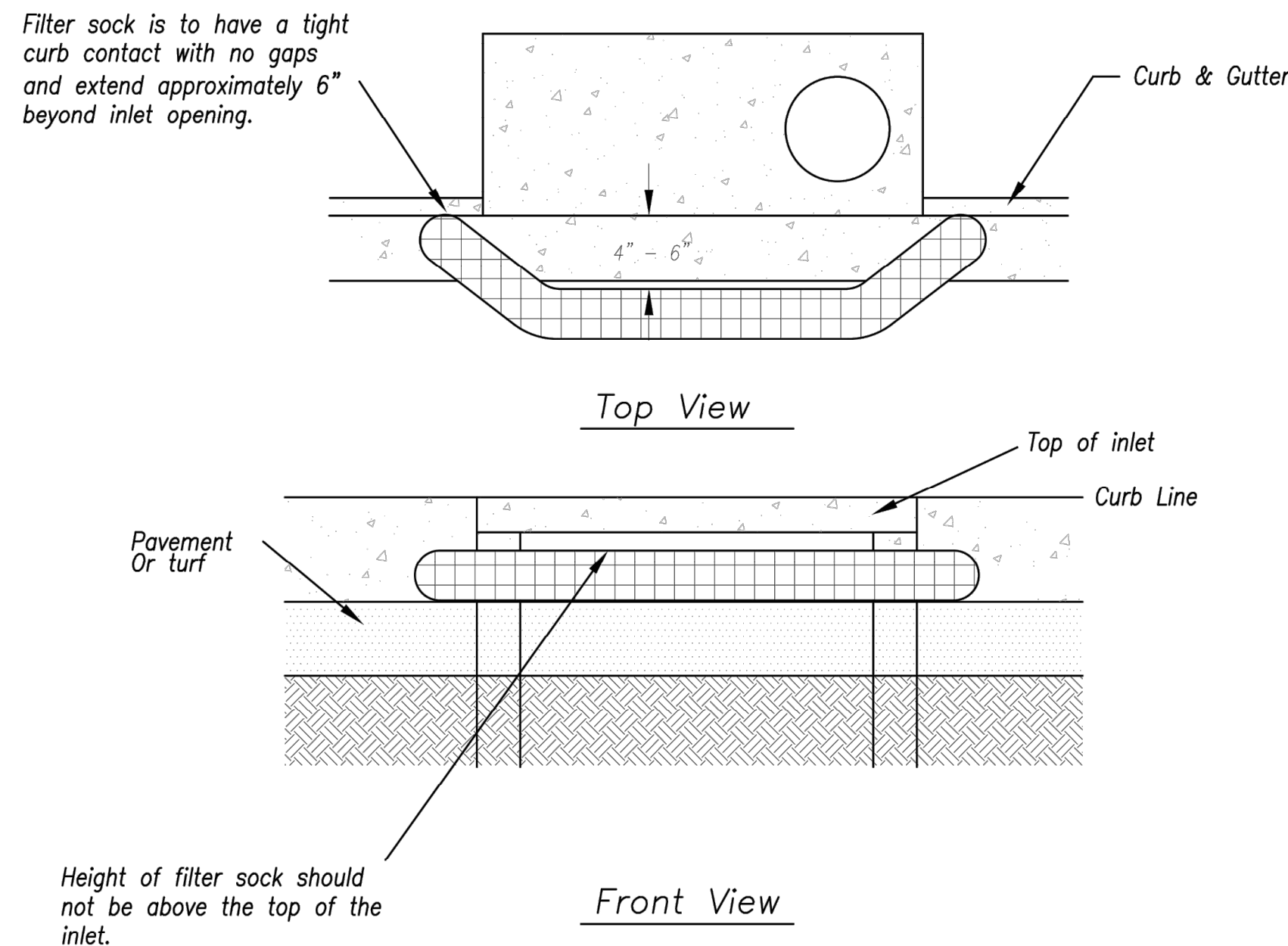
1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When inlet is completed and curb poured, filter socks or approved equal should be used (Late Stage Curb Inlet). Straw wattles are not approved for curb inlet use.
3. Contractor to field verify ponding water shall not create a traffic hazard.

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.



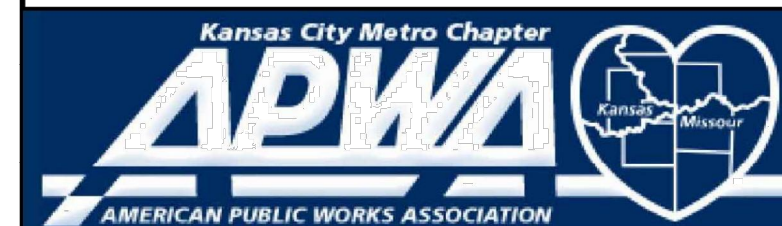
On Grade Curb Inlet Protection



Sump Inlet Sediment Filter

LATE STAGE CURB INLET
(After Pouring Curb and Inlet Throat)

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KANSAS CITY
METRO CHAPTER

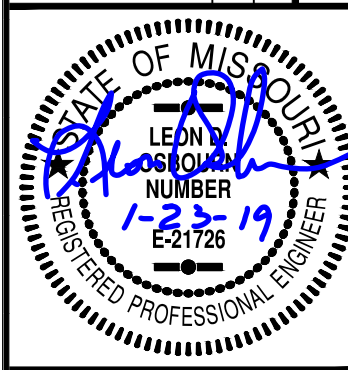
CURB INLET PROTECTION

STANDARD DRAWING
NUMBER ESC-06
ADOPTED:
10/24/2016

STREETS OF WEST PRYOR
NW/Q NW PRYOR ROAD & NW LOWENSTEIN DRIVE
LEE'S SUMMIT, MISSOURI
SANITARY SEWER PLANS
DETAIL SHEET

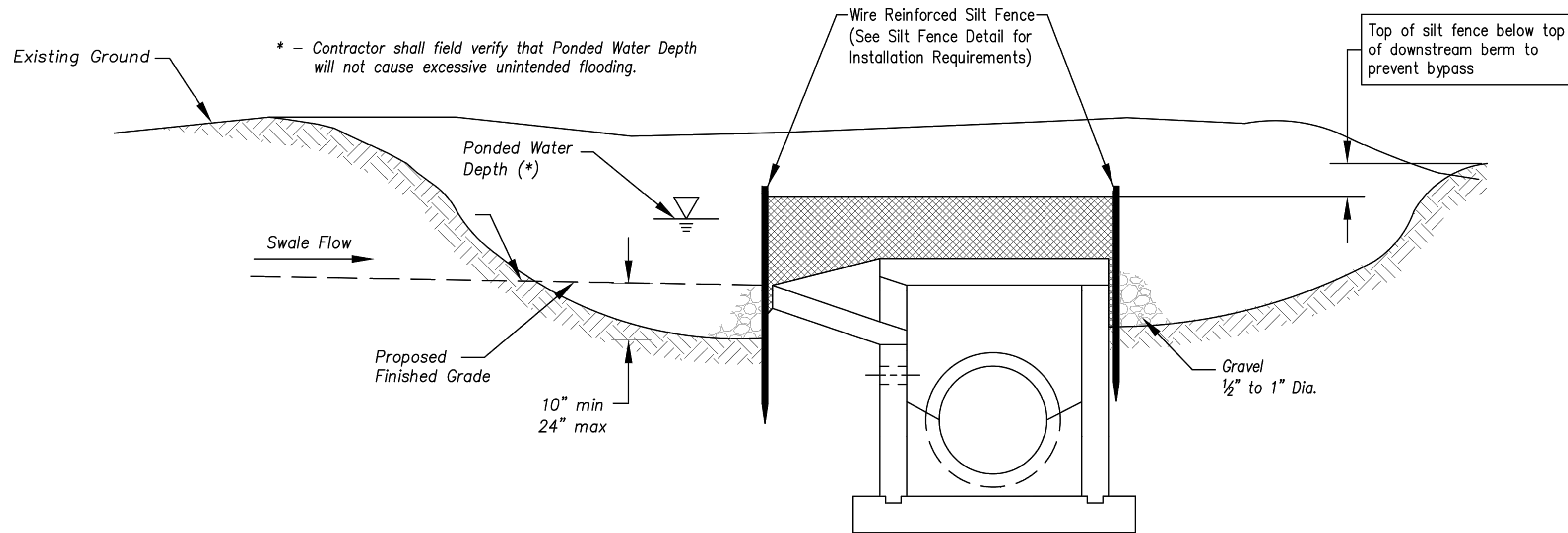
PROJ. NO. A14_7067-1
DESIGNER LDO DRAWN BY JT/BKR
CFN 7067-1S_DET
SHEET

C-14
1

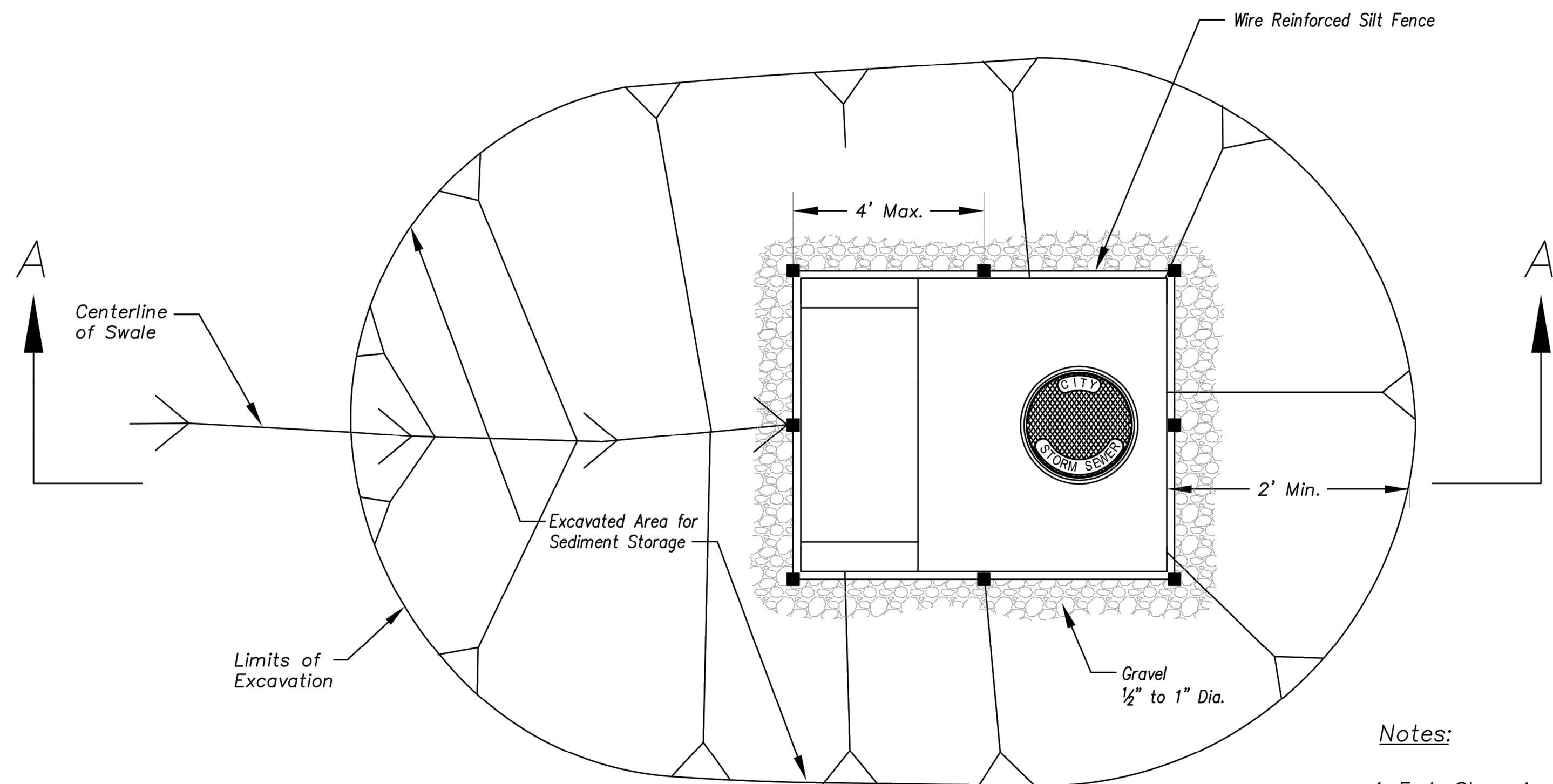


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Section A-A
Not to Scale

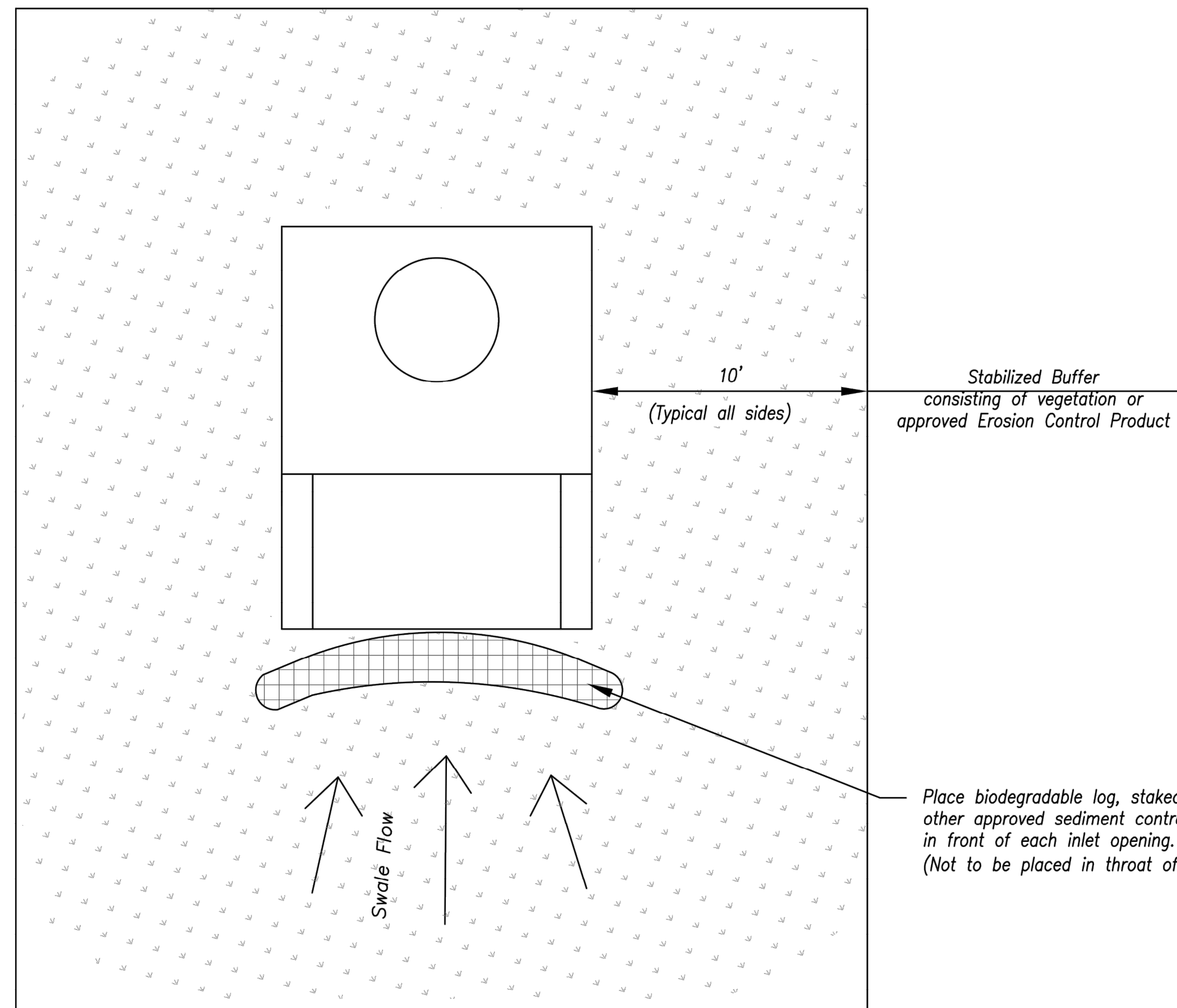


Plan
Not to Scale

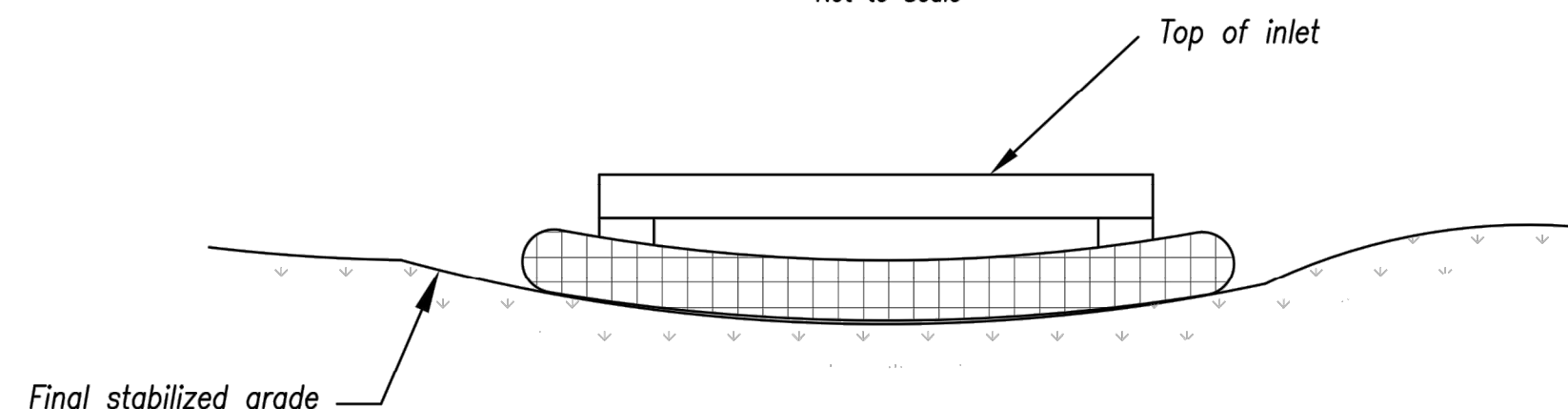
EARLY STAGE AREA INLET
(All open boxes and inlets not at final grade)

Notes:

1. Early Stage Area Inlet Sediment Barrier to be installed immediately after inlet or junction box is constructed.
2. Silt fence shall remain in place until excavated area is removed and Late Stage Area Inlet is being installed.
3. Backfill excavated area ONLY after final grading of the site. Stabilization of the site is to immediately follow.
4. Wire reinforced silt fence may be used in place of silt fence attached to wood frame.



Plan
Not to Scale



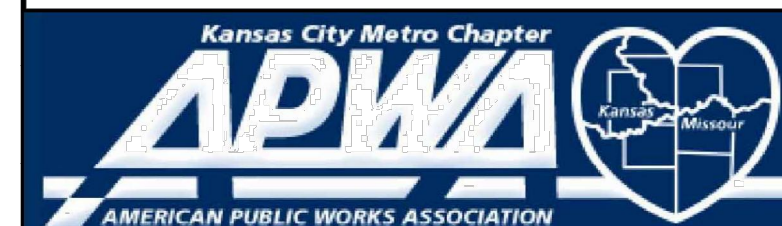
Front View

LATE STAGE AREA INLET
(Area inlets at final grade and existing inlets)

Maintenance:

1. Remove deposited sediment from excavated storage areas when available storage has been reduced by 20%.
2. Remove deposited sediment from filter socks or similar when any accumulation of sediment is visible.
3. Repair or replace as necessary to maintain function and integrity of installation.

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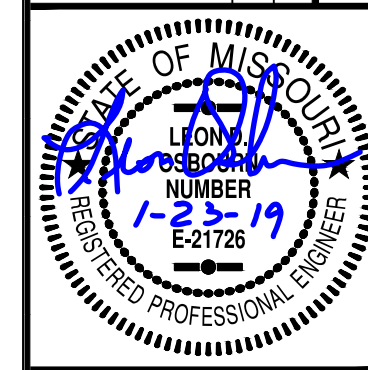
KANSAS CITY
METRO CHAPTER

AREA INLET AND
JUNCTION BOX PROTECTION

STANDARD DRAWING
NUMBER ESC-07
ADOPTED:
10/24/2016

STREETS OF WEST PRYOR
NW/Q NW PRYOR ROAD & NW LOWENSTEIN DRIVE
LEE'S SUMMIT, MISSOURI
SANITARY SEWER PLANS
DETAIL SHEET

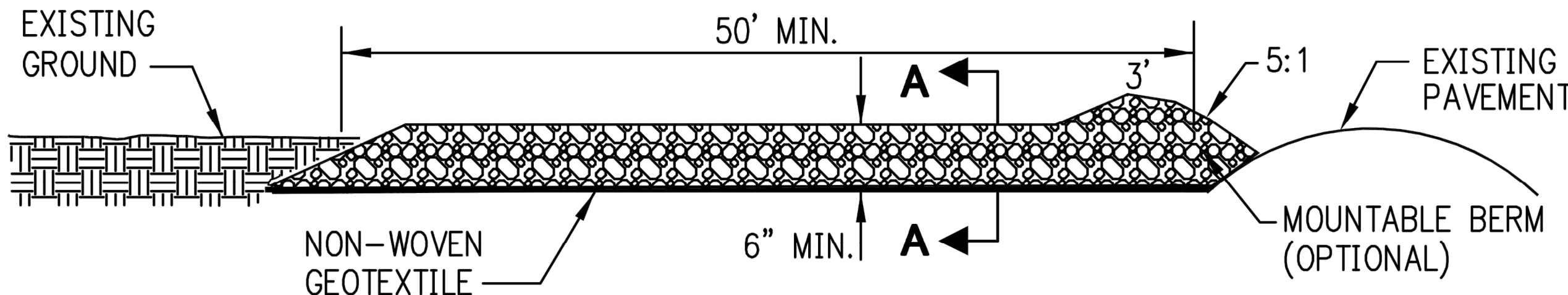
PROJ. NO.	A14_7067-1
DESIGNER	LDO
DRAWN BY	JT/BKR
CFN	7067-1S_DET
SHEET	C-15
REV	1



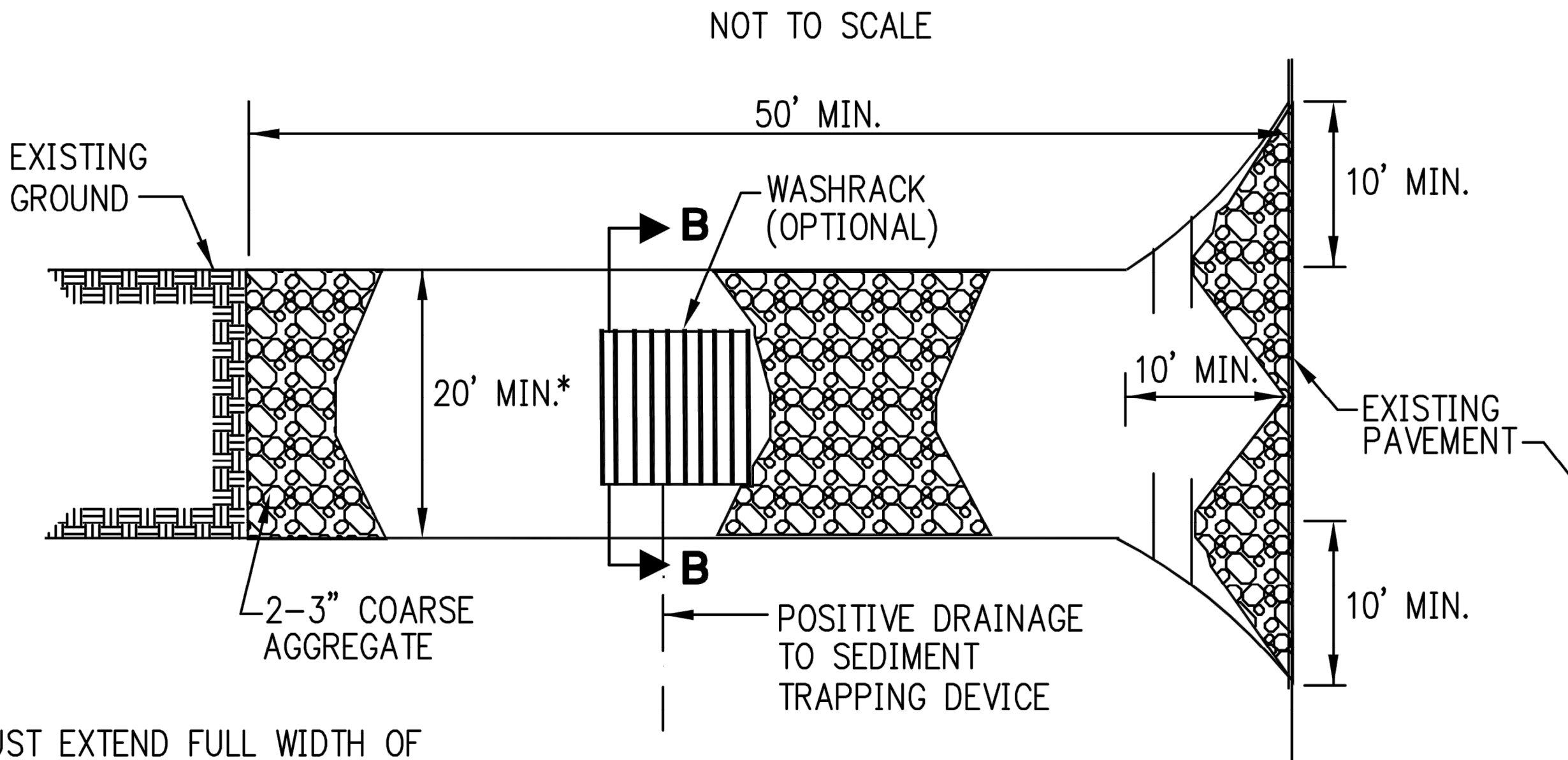
LEON D. OSBOURN
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MO # 021726

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SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842.
EXPIRES 12/31/19

TEMPORARY CONSTRUCTION ENTRANCE

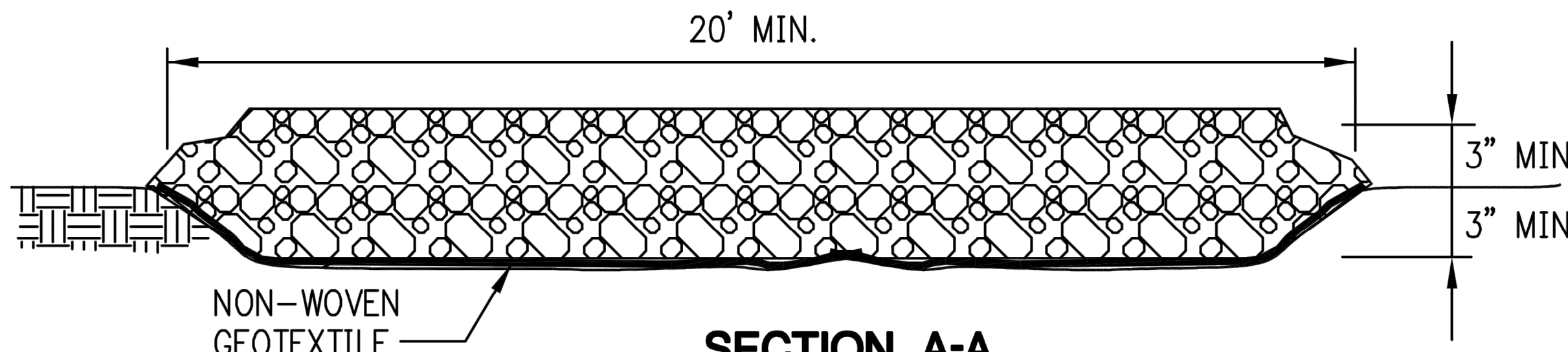


SIDE ELEVATION
NOT TO SCALE

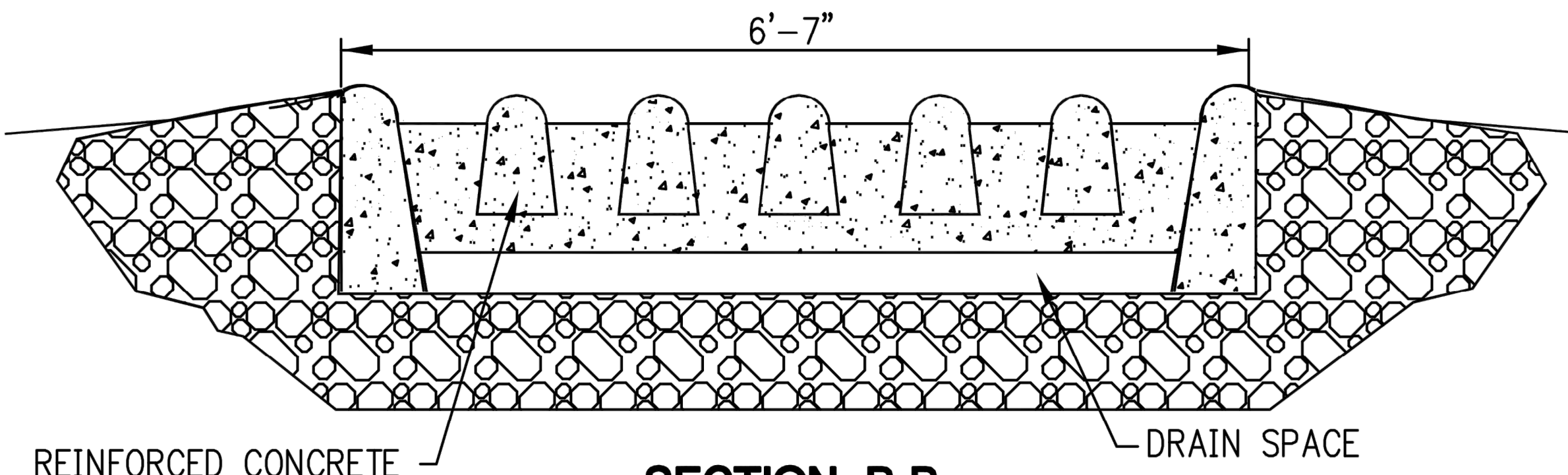


* MUST EXTEND FULL WIDTH OF
INGRESS AND EGRESS OPERATION

PLAN VIEW
NOT TO SCALE



SECTION A-A
NOT TO SCALE



SECTION B-E
NOT TO SCALE

SOURCE: MODIFIED FROM VA. DCR, 1992

TEMPORARY CONSTRUCTION ENTRANCE PAD NOTES:

A) INSTALLATION:

1. AVOID LOCATING ON STEEP SLOPES OR AT CURVES ON PUBLIC ROADS. IF POSSIBLE, LOCATE WHERE PERMANENT ROADS WILL EVENTUALLY BE CONSTRUCTED.
2. REMOVE ALL VEGETATION AND OTHER UNSUITABLE MATERIAL FROM THE FOUNDATION AREA, GRADE, AND CROWN FOR POSITIVE DRAINAGE.
3. IF SLOPE TOWARDS THE PUBLIC ROAD EXCEEDS 2%, CONSTRUCT A 6-TO 8-INCH HIGH RIDGE WITH 3H:1V SIDE SLOPES ACROSS THE FOUNDATION APPROXIMATELY 15 FEET FROM THE EDGE OF THE PUBLIC ROAD TO DIVERT RUNOFF AWAY FROM IT.
4. INSTALL PIPE UNDER THE ENTRANCE IF NEEDED TO MAINTAIN DRAINAGE DITCHES ALONG PUBLIC ROADS.
5. PLACE STONE TO DIMENSIONS AND GRADE AS SHOWN ON PLANS. LEAVE SURFACE SMOOTH AND SLOPED FOR DRAINAGE.
6. DIVERT ALL SURFACE RUNOFF AND DRAINAGE FROM THE ENTRANCE TO A SEDIMENT CONTROL DEVICE.
7. IF WET CONDITIONS ARE ANTICIPATED, PLACE GEOTEXTILE FABRIC ON THE GRADED FOUNDATION TO IMPROVE STABILITY.

B) TROUBLESHOOTING:

1. CONSULT WITH A QUALIFIED DESIGN PROFESSIONAL IF ANY OF THE FOLLOWING OCCUR:
 - a. INADEQUATE RUNOFF CONTROL TO THE EXTENT THAT SEDIMENT WASHES ONTO PUBLIC ROAD – INSTALL DIVERSIONS OR OTHER RUNOFF CONTROL MEASURES.
 - b. SMALL STONE, THIN PAD, OR ABSENCE OF GEOTEXTILE FABRIC RESULTS IN RUTS AND MUDDY CONDITIONS AS STONE IS PRESSED INTO SOIL – INCREASE STONE SIZE OR PAD THICKNESS OR ADD GEOTEXTILE FABRIC.
 - c. PAD TOO SHORT FOR HEAVY CONSTRUCTION TRAFFIC – EXTEND PAD BEYOND THE MINIMUM 50-FOOT LENGTH AS NECESSARY.

C) INSPECTION AND MAINTENANCE:

1. INSPECT STONE PAD AND SEDIMENT DISPOSAL AREA WEEKLY AND AFTER 1/2-INCH OR GREATER STORM EVENTS.
2. RESHAPE PAD AS NEEDED FOR PROPER DRAINAGE AND RUNOFF CONTROL.
3. TOPDRESS WITH CLEAN 2-AND 3-INCH STONE AS NEEDED.
4. IMMEDIATELY REMOVE MUD OR SEDIMENT TRACKED OR WASHED ONTO PUBLIC ROAD. REPAIR ANY BROKEN ROAD PAVEMENT IMMEDIATELY.
5. REMOVE ALL TEMPORARY ROAD MATERIALS FROM AREAS WHERE PERMANENT VEGETATION WILL BE ESTABLISHED.

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KANSAS CITY
METROPOLITAN CHAPTER

TEMPORARY CONSTRUCTION
ENTRANCE

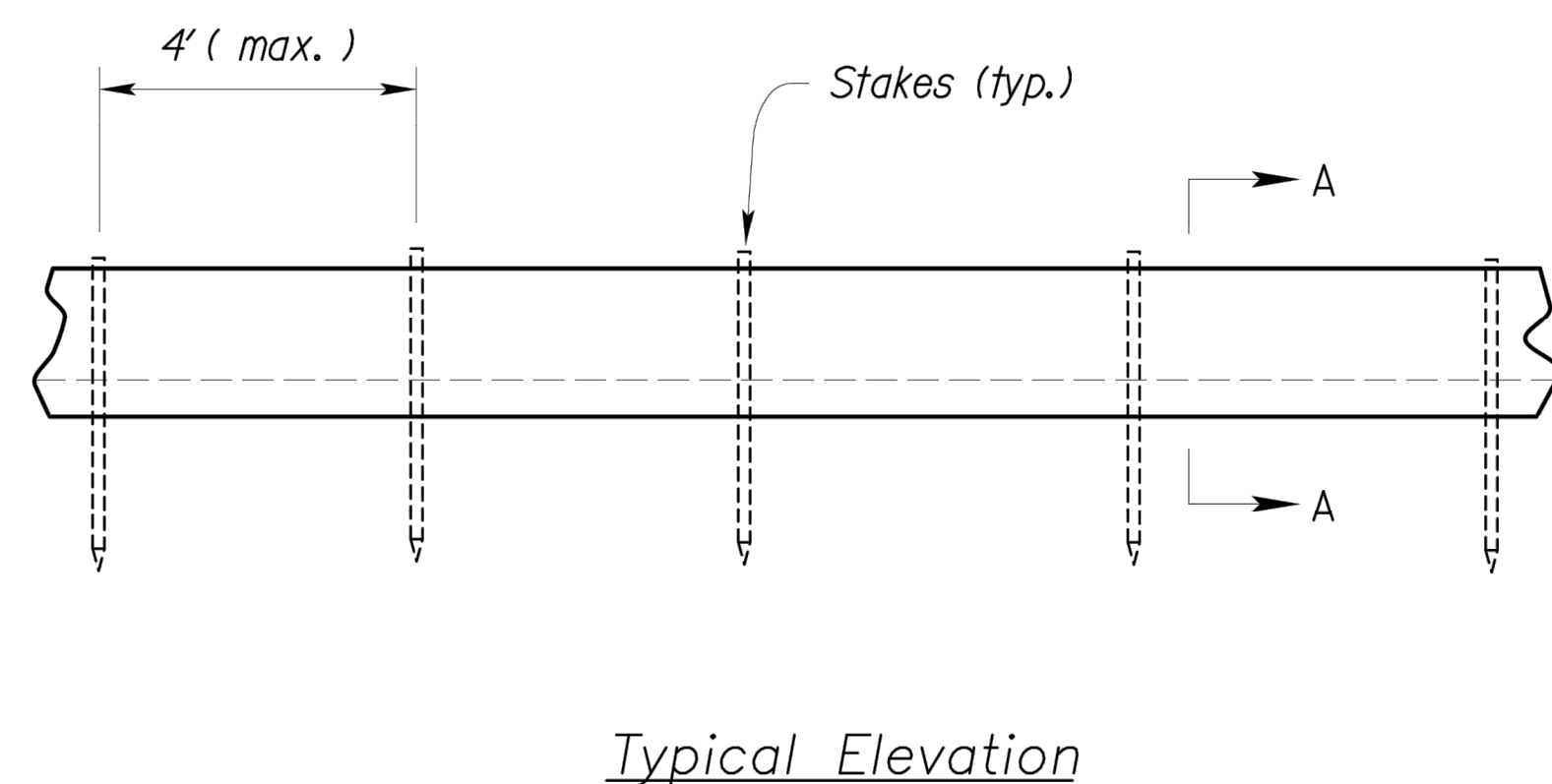
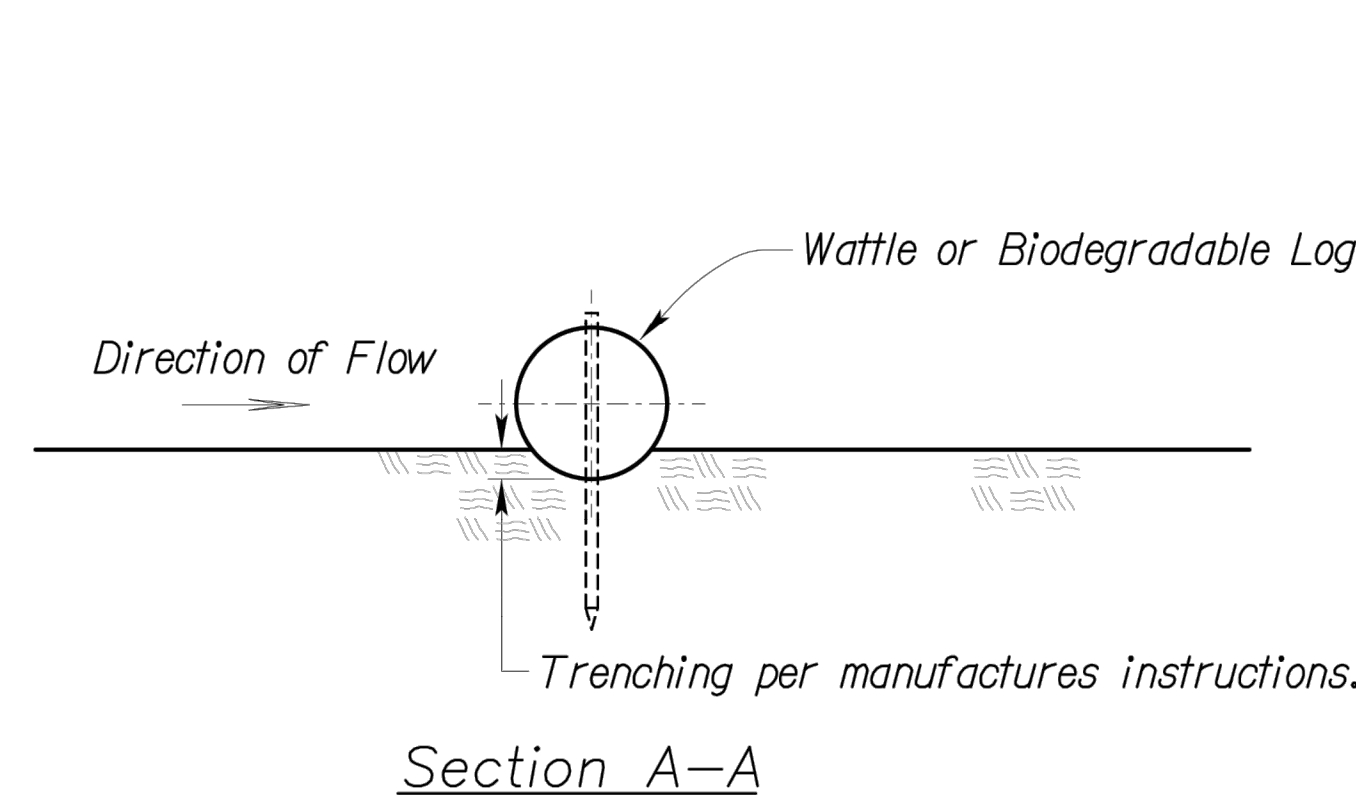
STANDARD DRAWING NUMBER	ESC-01
ADOPTED:	

STREETS OF WEST PRYOR
NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE
LEE'S SUMMIT, MISSOURI

SANITARY SEWER PLANS
DETAIL SHEET

PROJ. NO.	
A14-7067-1	
DESIGNER	DRAWN BY
LDO	JT/BKR

7067-1S_DET	
SHEET	REV
C-16	1



Notes for Wattles and Biodegradable Log Slope Protection:

1. The Slope barriers shall be placed along contour lines, with a short section turned upgrade at each end of the barrier. The maximum length of the slope barrier shall not exceed 250 feet, and the barrier ends need to be staggered.
2. Install wattles and biodegradable logs per manufacturer's instructions.
3. Spacing of stakes per manufacturer's instructions with 4' max. spacing. Length of stakes shall be a minimum of 2 times the diameter of the log with minimum of 24".

WATTLES AND BIODEGRADABLE LOG

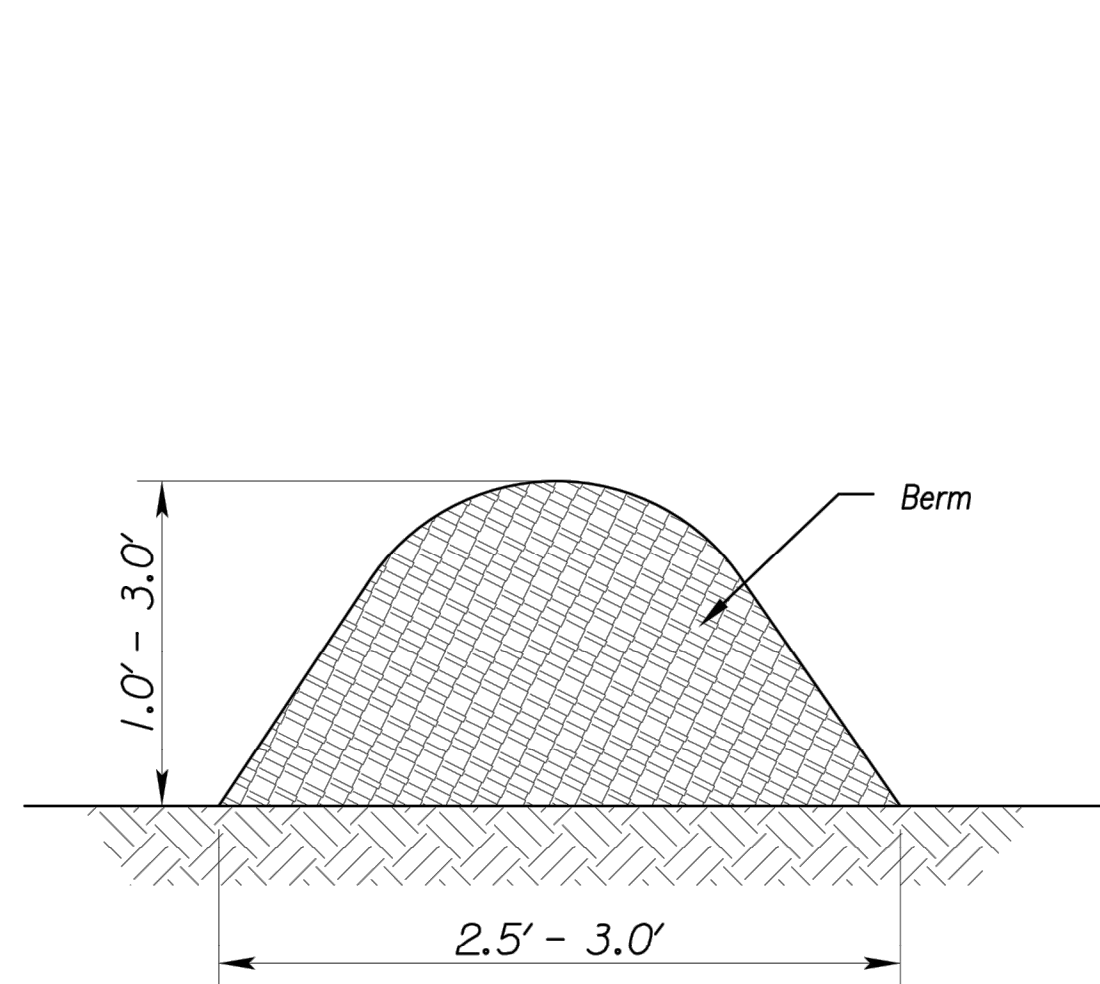


Figure 1
(Perimeter Control)

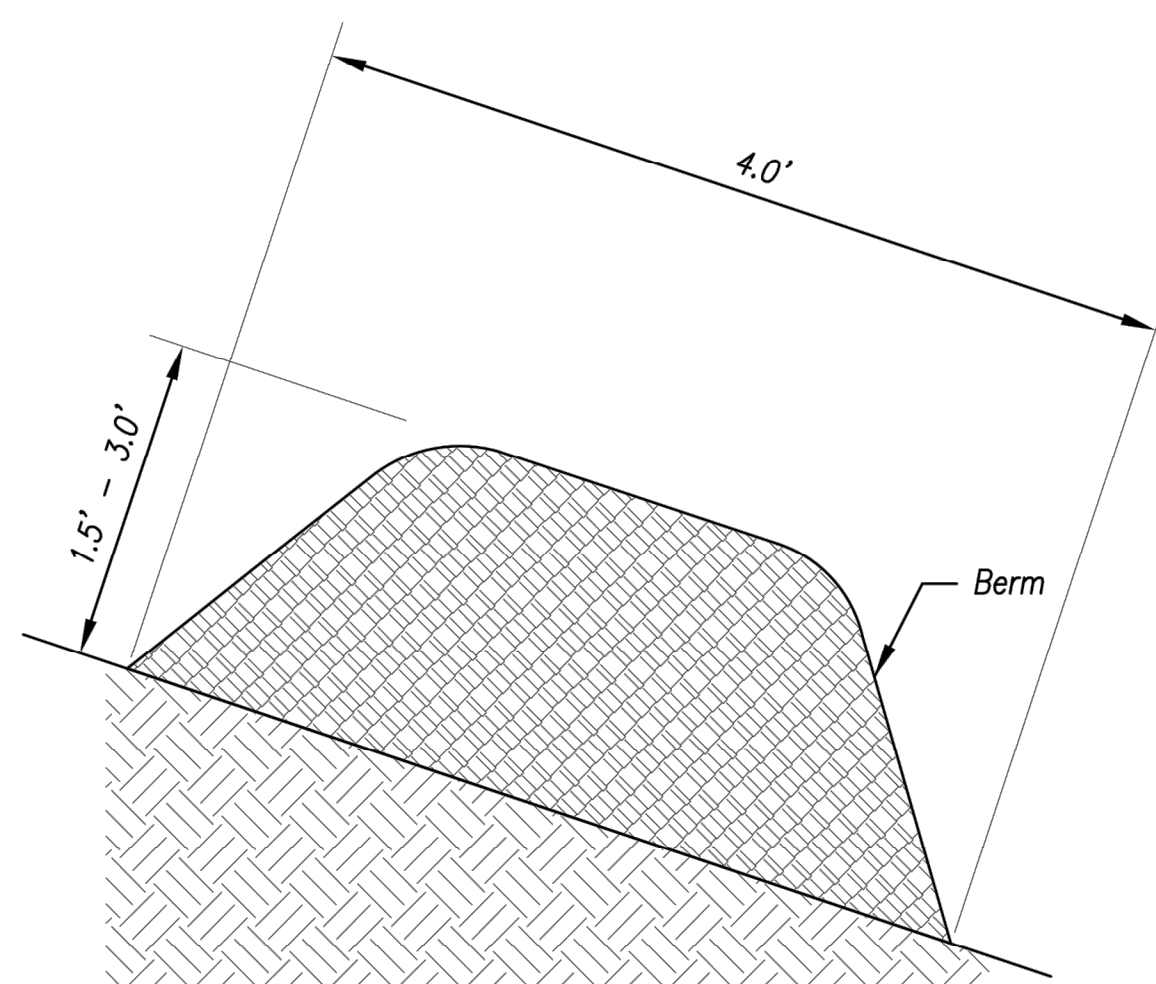


Figure 2
(Steep Slopes)

Notes for Mulch and Compost Filter Beam:

1. The sediment control berm shall be placed uncompacted in a windrow at locations shown on the plans or as directed by the engineer.
2. Parallel to the base of the slope, or around the perimeter of other affected areas, construct a 1 to 3 foot high by 2.5 to 3 foot wide berm (see Figure 1). For maximum water treatment ability or for steep slopes, construct a 1.5 to 3 foot high trapezoidal berm that is a minimum of 4 feet wide at the base (see Figure 2). In extreme conditions, or where specified by the engineer, a second berm shall be constructed at the top of the slope. Engineer will specify berm requirements.
3. If berm is to be left as permanent or part of the natural landscape, the compost berm may be seeded during application for permanent vegetation.
4. Do not use compost or wood mulch berms in any runoff channels or concentrated flow areas.
5. Wood mulch shall consist of tree and shrub debris resulting from clearing and grubbing and shall be ground by the mechanical means such as a chipper, hammermill, tub grinder or other approved method. Mulch sizing varies with a maximum width of 2" and a maximum length of 10".

Maintenance for Mulch and Compost Filter Beam:


1. Berm shall be reshaped and material added as necessary to maintain function and dimensions.
2. Breaches in the berm shall be repaired promptly.

MULCH OR COMPOST FILTER BERMS

Modified from 2015 Overland Park Standard Details for Erosion and Sediment Control.

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Kansas City Metro Chapter

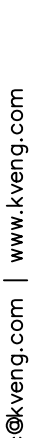



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KANSAS CITY METRO CHAPTER

WATTLES/Biodegradable Log AND MULCH/COMPOST FILTER BERM

STANDARD DRAWING NUMBER ESC-04 ADOPTED: 10/24/2016

STREETS OF WEST PRYOR NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE LEE'S SUMMIT, MISSOURI		SANITARY SEWER PLANS DETAIL SHEET		PROJ. NO. A14-7067-1	
DESIGNER LDO		DRAWN BY JT/BKR		CFN 7067-1S_DET	
SHEET C-17		REV 2			
2315 N. JACKSON / P.O. BOX 1304 JUNCTION CITY, KANSAS 66401 PH. (785) 762-5040 FAX (785) 762-7744 jc@kveeng.com www.kveeng.com		 KAW VALLEY ENGINEERING KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/19			
		LEON D. OSBOURN ENGINEER MO # 021726			
		REV DATE DESCRIPTION		DSN DWN CHK	
2		2-26-19		REVISED PER CITY COMMENT	
1		1-23-19		REVISED PER CITY COMMENT	
0		1-8-19		INITIAL ISSUE	
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