

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

APRIL 2019

ELECTRIC-- SERVICE  
KCP&L  
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(913) 347-4310  
Nathan.Michael@kcpl.com

GAS SERVICE  
SPIRE  
KATIE DARNELL  
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Katie.Darnell@spireenergy.com

WATER, SANITARY/STORM SEWER SERVICE  
CITY OF LEE'S SUMMIT  
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cc3527@att.com

COMMUNICATION SERVICE  
TIME WARNER CABLE  
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Ryan.Alkire@cable.comcast.com

COMMUNICATION SERVICE  
GOOGLE FIBER  
BECKY DAVIS  
(913) 725-8745  
KC- Google-UC@google.com  
rebeccadavis@google.com



CALL BEFORE YOU  
DIG - DRILL - BLAST  
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 ABOVE GROUND OBSERVABLE EVIDENCE, AND/OR THE SCALING AND PLOTTING OF EXISTING UTILITY MAPS 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 FROM INFORMATION AVAILABLE. 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 COMPANY AT LEAST 72 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.

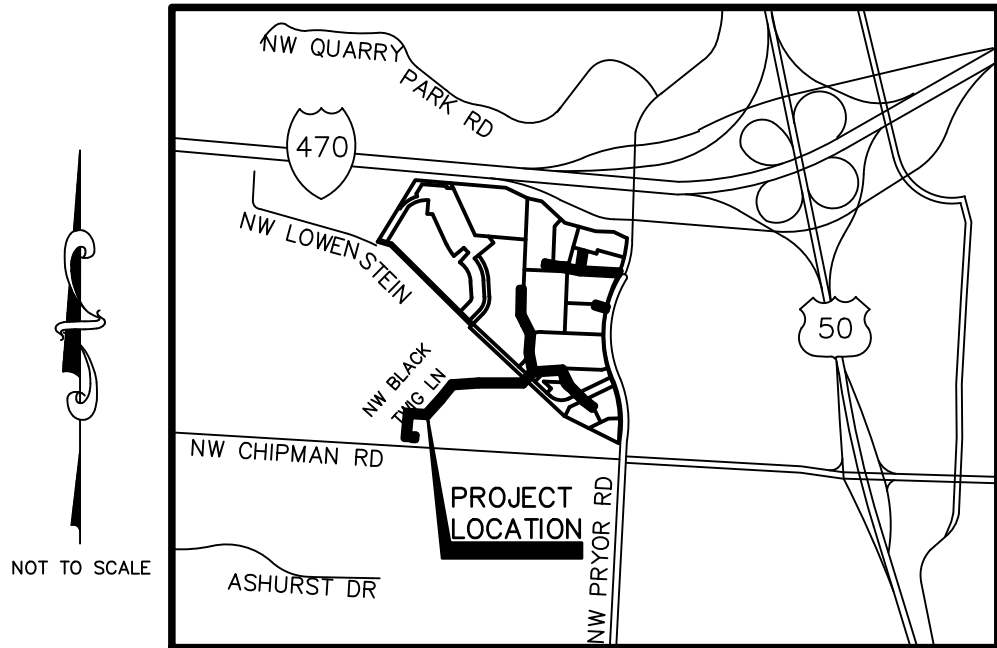
SAFETY NOTICE TO CONTRACTOR

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.

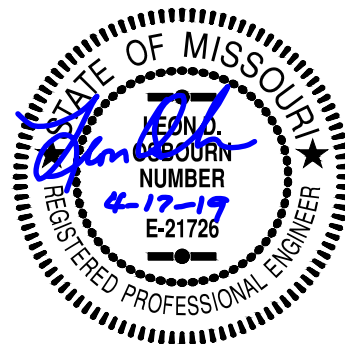
WARRANTY / DISCLAIMER

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.

Summary of Quantities			
Sanitary Sewer			
Item No.	Item	Estimated Quantity	Unit
1	Connect to Existing Manhole	3	Ea.
2	8" Sanitary Sewer Main	4118	L.F.
3	8" Sanitary Sewer Main (Private)	218	L.F.
4	Manhole (Less than 10')	8	Ea.
5	Manhole (10'-15')	8	Ea.
6	Manhole (10'-15' - Private)	1	Ea.
7	Manhole (greater than 15')	4	Ea.
8	Drop Manhole	2	Ea.
Erosion Control			
Item No.	Item	Estimated Quantity	Unit
1	Erosion Control Devices, Straw Wattles	1,439	L.F.
2	Erosion Control Devices, Sedimentation Fence	661	L.F.
3	Erosion Control Devices, Curb Inlet Protection	3	Ea.
4	Erosion Control Devices, Temporary Construction Entrance	3	Ea.
5	Seed	3.18	AC



LOCATION MAP  
CITY OF LEE'S SUMMIT, MISSOURI



LEON D. OSBOURN  
PROFESSIONAL ENGINEER

APPROVED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, \_\_\_\_\_

OWNER: MATT PENNINGTON

APPROVED THIS \_\_\_\_\_ DAY OF \_\_\_\_\_, \_\_\_\_\_

CITY APPROVAL

OWNER:  
STREETS OF WEST PRYOR, LLC  
7200 WEST 132ND STREET  
OVERLAND PARK, KS 66213  
CONTACT: MATT PENNINGTON  
email: matt@drakecc.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@kveg.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=964.97

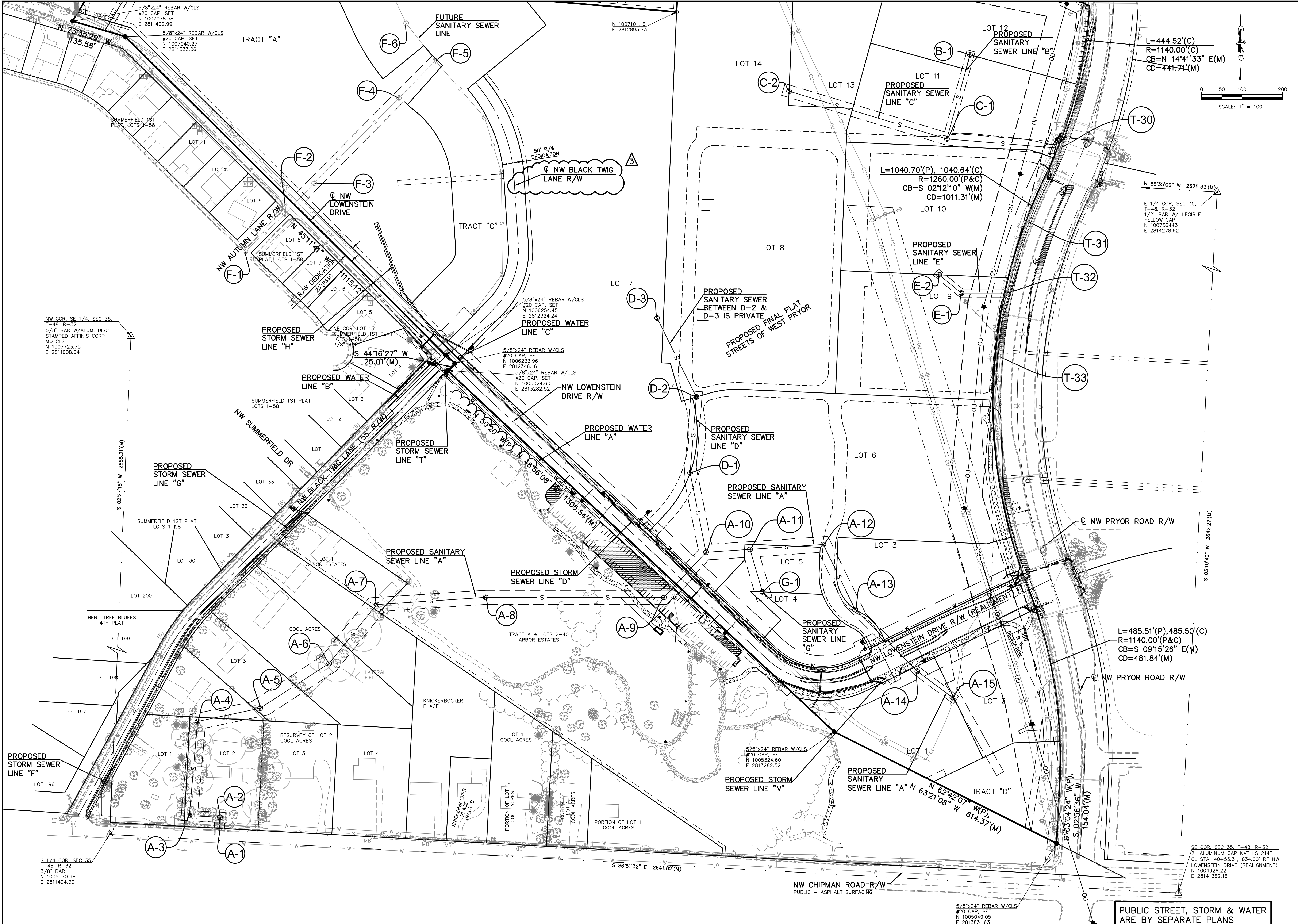
BM #2: CHISELED "SQUARE" ON NORTHWEST CORNER AREA INLET, 25'± EAST OF CURB LINE AND ON-LINE WITH SOUTH CURB OF LOWENSTEIN DRIVE AT 90' BEND IN ROAD. ELEV=970.98

INDEX TO SHEETS

- C-1 TITLE SHEET
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- C-3 GENERAL LAYOUT SHEET
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- C-5 SANITARY SEWER LINE A
- C-6 SANITARY SEWER LINE A
- C-7 SANITARY SEWER LINE B & E - PLAN & PROFILE
- C-8 SANITARY SEWER LINE C - PLAN & PROFILE
- C-9 SANITARY SEWER LINE D - PLAN & PROFILE
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- C-16 DETAIL SHEET
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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
3	4-15-19	REVISED PER CITY COMMENT

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

STATE OF MISSOURI  
Professional Engineer  
Leon D. Osbourn  
No. 021726

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

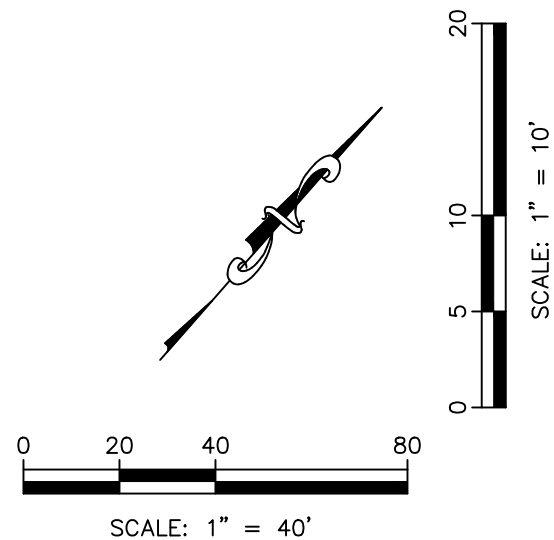
**KAW VALLEY ENGINEERING**  
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842.  
EXPIRES 12/31/19

**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 **3**





PHASE 2 NOTE:  
DURING PHASE 1, CONTRACTOR TO CONDUCT FIELD INVESTIGATION TO IDENTIFY AND LOCATE EXISTING SERVICE LINES AND LATERAL FIELD LOCATIONS FOR RESIDENCES LOCATED ALONGSIDE PHASE 2 ALIGNMENT. ONCE IDENTIFIED, CONTRACTOR AND ENGINEER SHALL COORDINATE TO PROVIDE TEMPORARY SERVICE CONNECTION PLAN TO CONNECT RESIDENCES TO PHASE 1 LINE AS NECESSARY DURING PHASE 2 CONSTRUCTION. AT THIS TIME, PERMANENT STUB & RISER SERVICE CONNECTION LOCATION TO PHASE 2 SYSTEM SHALL ALSO BE DETERMINED. CONTRACTOR WILL BE RESPONSIBLE FOR ALL CONSTRUCTION ASSOCIATED WITH TEMPORARY AND PERMANENT SERVICE CONNECTIONS. AT NO POINT SHALL SANITARY SERVICE BE INTERRUPTED FOR ANY EXISTING USERS.

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.

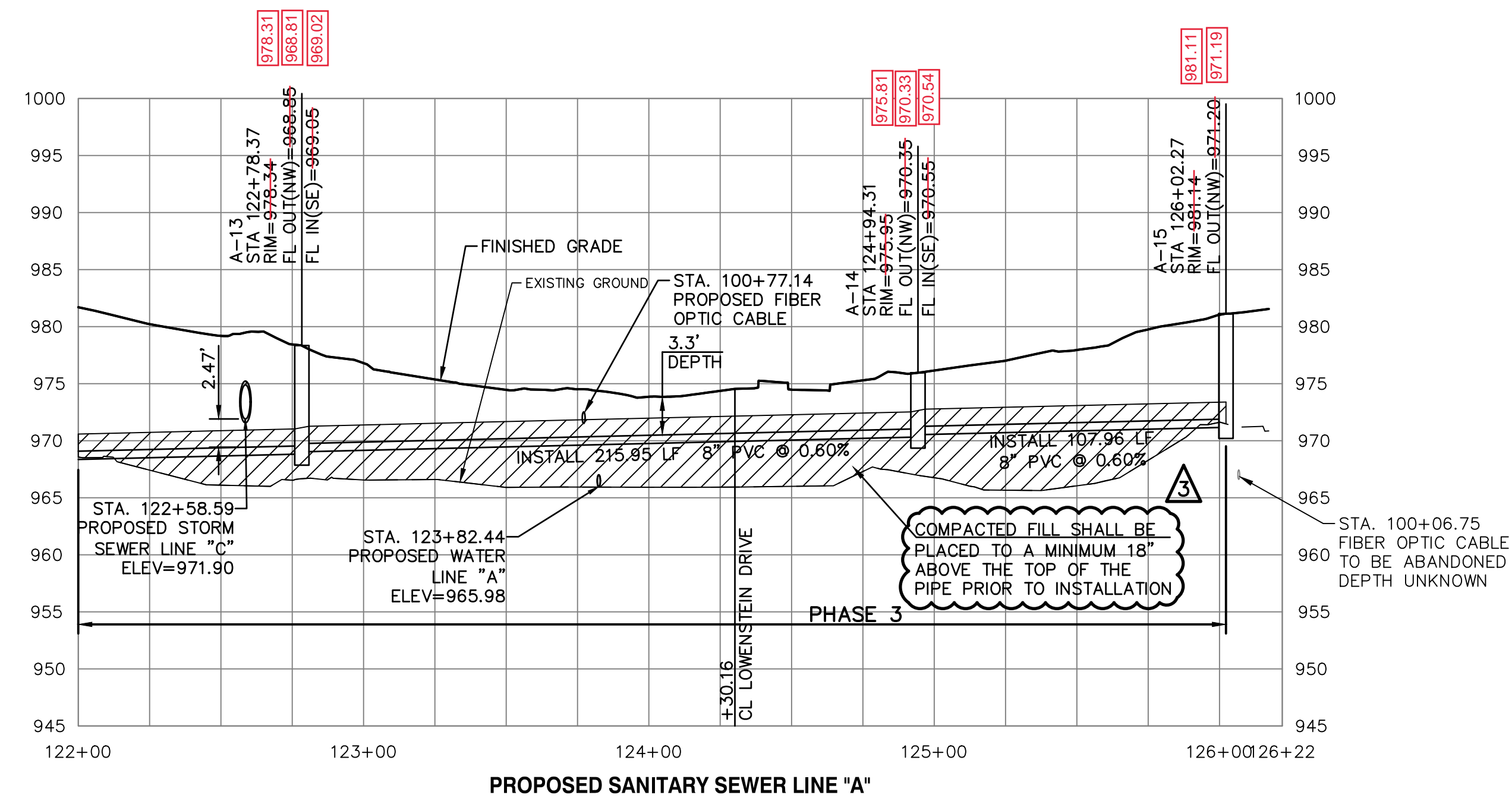
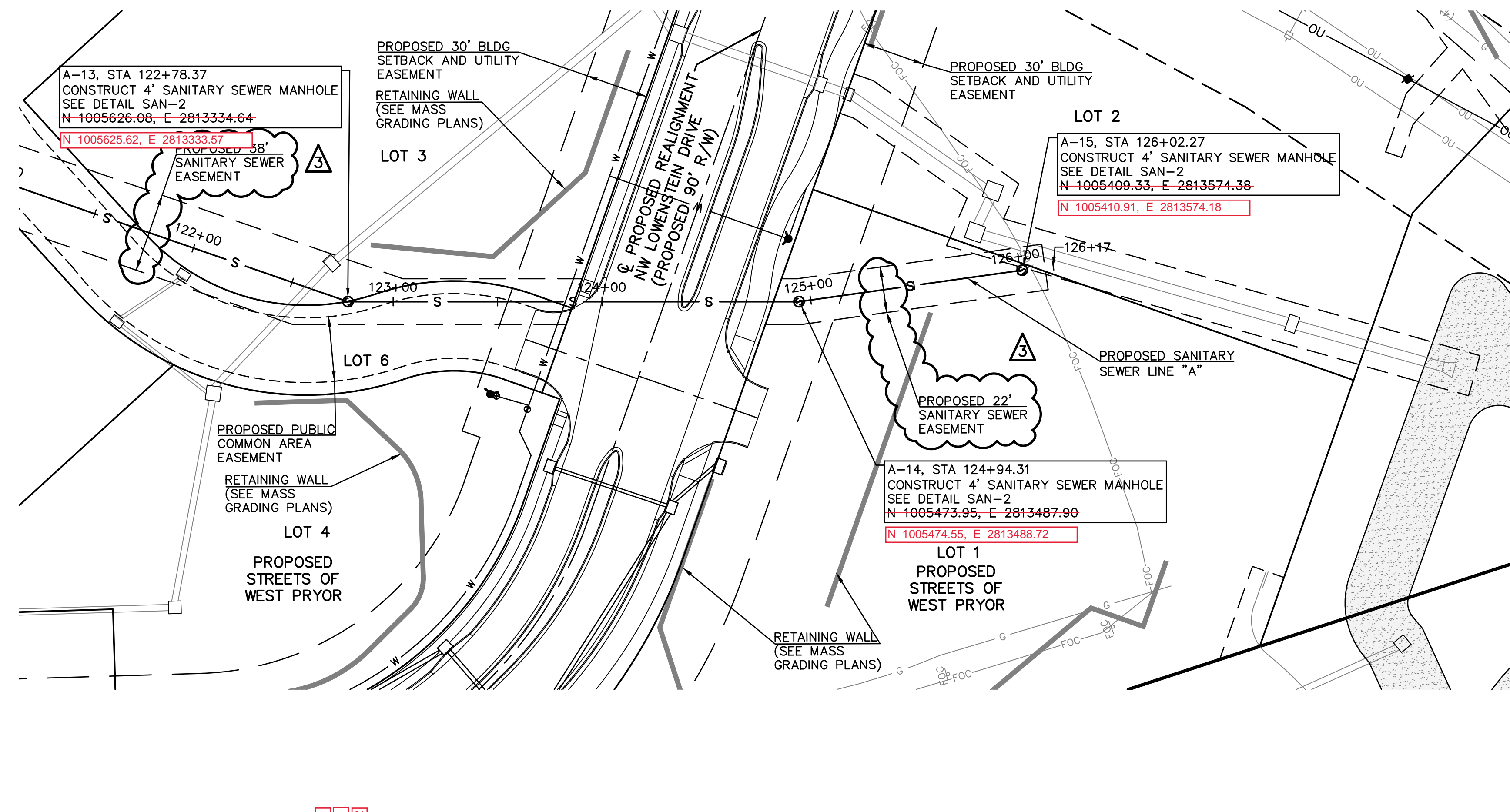








CONSTRUCTION RECORDS &  
POST CONSTRUCTION SURVEY  
INFORMATION PROVIDED BY  
EMERY SAPP & SONS, INC.  
06-10-20

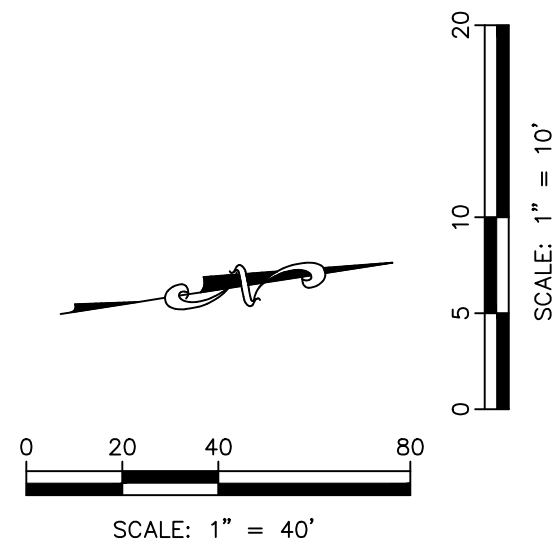


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PUBLIC STREET, STORM & WATER  
ARE BY SEPARATE PLANS

<p>PROJ. NO. <b>A14_7067-1</b></p> <p>DESIGNER <b>LD0</b> DRAWN BY <b>JT/BKR</b></p> <p>C-6</p>		<p><b>STREETS OF WEST PRYOR</b></p> <p><b>NWQ NW PRYOR ROAD &amp; NW LOWENSTEIN DRIVE</b></p> <p><b>LEE'S SUMMIT, MISSOURI</b></p>		<p><b>SANITARY SEWER PLANS</b></p> <p><b>SANITARY SEWER LINE A</b></p>		<p>DATE <b>4-15-19</b></p> <p>REV <b>3</b></p>		<p>STATE OF MISSOURI</p> <p>LEON D. OSBOURN</p> <p>ENGINEER</p> <p>MO # 021726</p>		<p>REVISED PER CITY COMMENT</p> <p>REVISED PER CITY COMMENT</p> <p>REVISED PER CITY COMMENT</p> <p>INITIAL ISSUE</p> <p>DESCRIPTION</p> <p>DSN</p> <p>DWN</p> <p>CHK</p>	
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**PROPOSED SANITARY SEWER LINE "B"**

**Stationing:** 195+00 to 197+63.31

**Elevations (ft):**

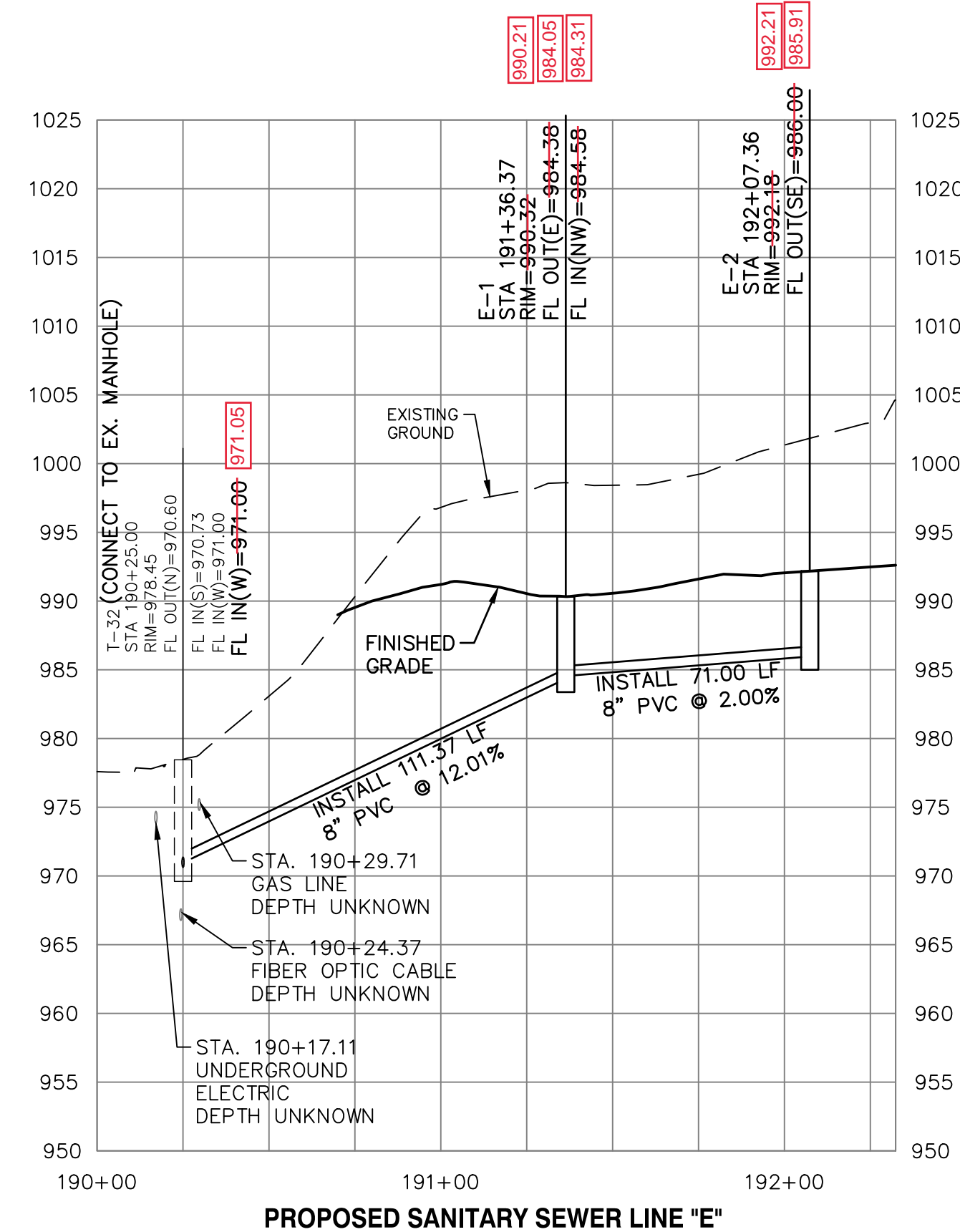
- 900.52 (Elevation at Station 195+00)
- 975.92 (Elevation at Station 195+00)
- 980.51 (Elevation at Station 195+00)
- 976.18 (Elevation at Station 195+00)
- 980.70 (Elevation at Station 197+63.31)
- 982.90 (Elevation at Station 197+63.31)

**Line Details:**

- INSTALL 215.32 LF 8" PVC @ 1.60%**
- EXISTING GROUND** (Dashed line)
- FINISHED GRADE** (Solid line)

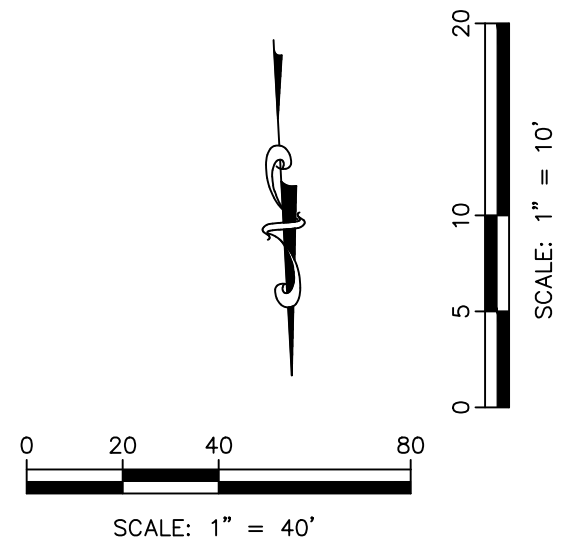
**Manhole Data:**

- C-1 (Station 153+02.95):**
  - SIA = 985.50
  - FL OUT (E) = 976.28
  - FL IN (N) = 988.60
  - FL IN (W) = 976.46
- B-1 (Station 197+48.31):**
  - SIA = 995.95
  - FL OUT (S) = 984.04



<div><div><div>STREETS OF WEST PRYOR</div><div>NWQ NW PRYOR ROAD &amp; NW LOWENSTEIN DRIVE</div><div>LEE'S SUMMIT, MISSOURI</div></div><div><div><div><div><div></div><div>KVE</div><div>KAW VALLEY ENGINEERING</div></div><div><div>2319 N. JACKSON, L.P.O. BOX 1304</div><div>LEE'S SUMMIT, MISSOURI 64086</div><div>PH. (785) 752-5040   FAX (785) 752-7744</div><div>jg@kveg.com   www.kveg.com</div></div></div><div><div><div>STATE OF MISSOURI</div><div>Professional Engineer</div><div>Leon D. Osbourn</div><div>No. 417-19</div><div>E21726</div></div></div><div><div>LEON D. OSBOURN</div><div>ENGINEER</div><div>MO # 021726</div></div><div><div>KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842.</div><div>EXPIRES 12/31/19</div></div></div></div></div>		PROJ. NO.		A14_7067-1	
		DESIGNER		LD0	
		CFN		LD0	
		SHEET		JT/BKR	
		REV		3	
C-7		3			
REV		3			
DATE		3			
DESCRIPTION		3			
DSN		3			
DWN		3			
CHK		3			
REV		3			
DATE		3			
DESCRIPTION		3			
DSN		3			
DWN		3			
CHK		3			





This profile view illustrates the proposed sanitary sewer line 'C' from station 150+00 to 157+00.57+24.90. The vertical axis represents elevation in feet, ranging from 950 to 1025. The horizontal axis shows stationing. The profile includes the existing ground line, the finished grade line, and the proposed sewer line. Key features include manholes at stations 150+00, 151+00, 153+00, and 157+00.57+24.90. The sewer line is installed in 8-inch PVC pipe with a slope of 1.01%. The profile also shows the connection to an existing 42-inch storm sewer at station 150+00 and the connection to an existing gas line at station 150+23.27. The profile includes the following data points:

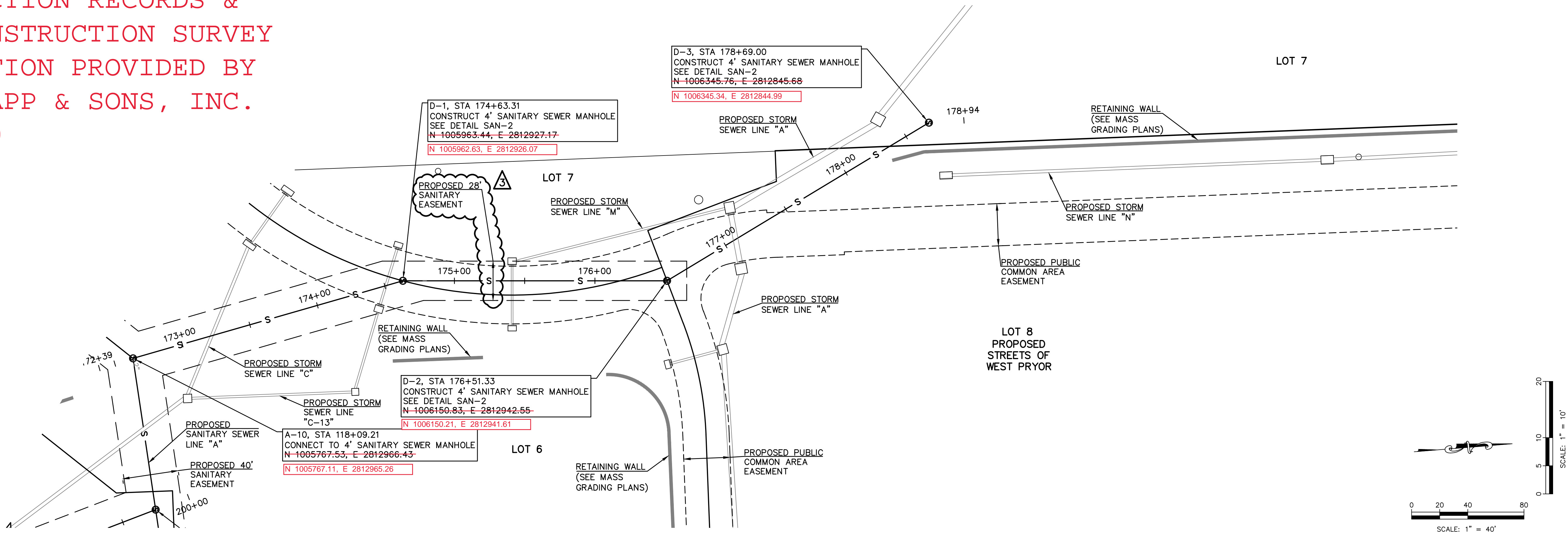
- STA. 150+04.21, 150+06.19 & 150+07.91 EX. UNDERGROUND ELECTRIC DEPTH UNKNOWN
- STA. 150+16.03 EXISTING 42" STORM SEWER ELEV=959.68
- STA. 150+14.57 EX. FIBER OPTIC CABLE TO BE ABANDONED DEPTH UNKNOWN
- STA. 150+23.27 EX. GAS LINE DEPTH UNKNOWN
- STA. 150+18.54 EX. TELEPHONE LINE DEPTH UNKNOWN
- STA. 151+04.93 PROPOSED STORM SEWER LINE "J-2" ELEV=973.98
- STA. 152+41.74 PROPOSED STORM SEWER LINE "J-3" ELEV=983.30
- STA. 153+02.95 RM=996.63 FL IN(W)=964.95 FL IN(N)=966.60 FL IN(W)=976.40 FL IN(N)=976.18
- STA. 156+60.91 B4 TO P1 ELEV=983.28
- STA. 157+09.90 RM=990.70 FL IN(W)=980.50 FL IN(N)=980.19
- INSTALL 277.95 LF 8" PVC @ 4.05%
- INSTALL 406.95 LF 8" PVC @ 1.01%
- EXISTING GROUND
- FINISHED GRADE

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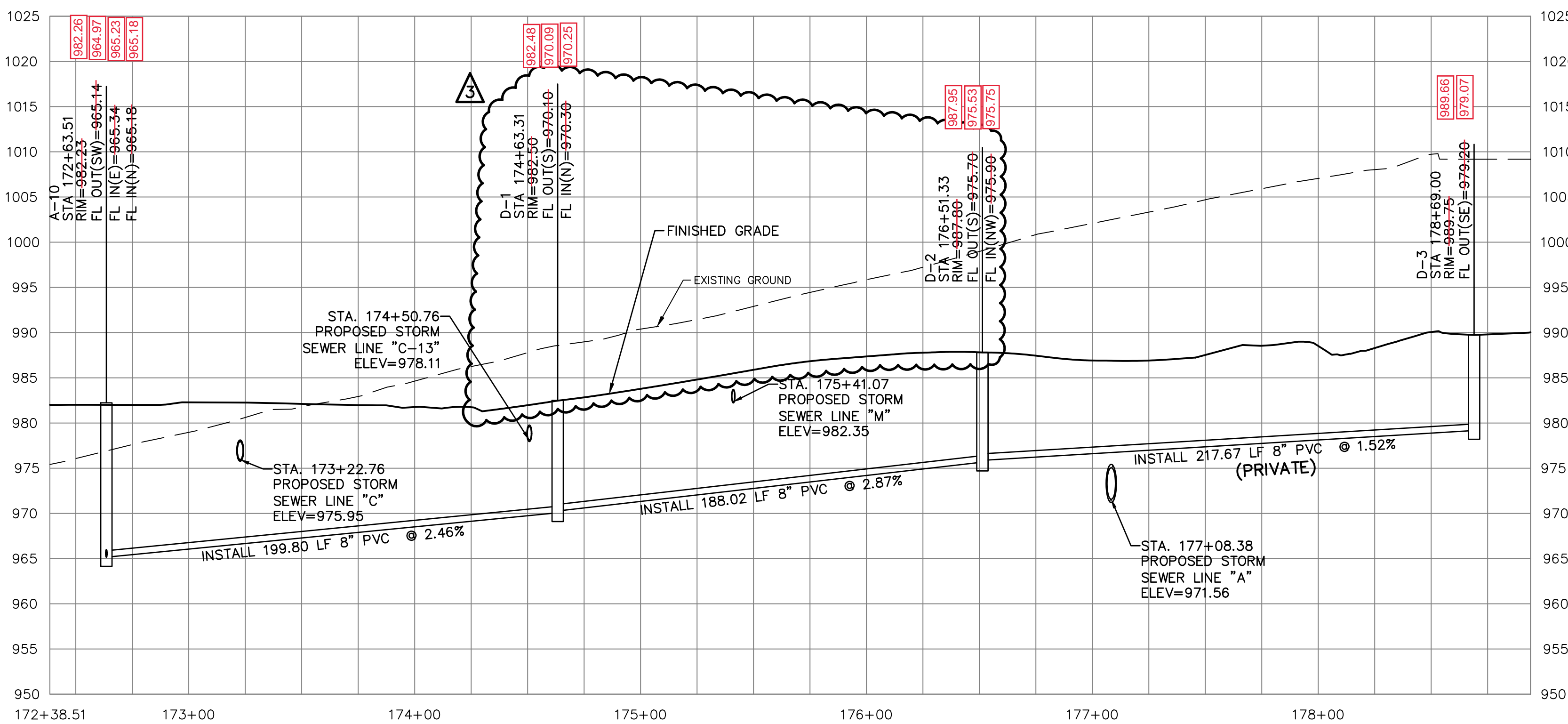
<b>STREETS OF WEST PRYOR</b>											
<b>NWQ NW PRYOR ROAD &amp; NW LOWENSTEIN DRIVE</b>											
<b>LEE'S SUMMIT, MISSOURI</b>											
<b>SANITARY SEWER PLANS</b>											
<b>SANITARY SEWER LINE C - PLAN &amp; PROFILE</b>											
PROJ. NO.						A14-7067-1					
DESIGNER						DRAWN BY					
LDO						JT/BKR					
CFN											
7067-1S_SPP											
SHEET						REV					
C-8						3					



CONSTRUCTION RECORDS &  
POST CONSTRUCTION SURVEY  
INFORMATION PROVIDED BY  
EMERY SAPP & SONS, INC.  
06-10-20



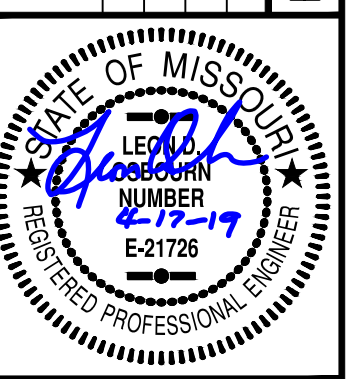
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**PROPOSED SANITARY SEWER LINE "D"**

PUBLIC STREET, STORM & WATER  
ARE BY SEPARATE PLANS

REV	DATE	DESCRIPTION	DSN	DWN	CHK
3	4-15-19	REVISED PER CITY COMMENT	LDO	JT	LDO
2	2-26-19	REVISED PER CITY COMMENT	LDO	JT	LDO
1	1-23-19	REVISED PER CITY COMMENT	LDO	JT	LDO
0	1-8-19	INITIAL ISSUE	LDO	JT/BKR	LDO



LEON D. OSBOURN  
ENGINEER  
MO # 021726

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JUNCTION CITY, KANSAS 66441  
PH. (785) 762-5040 | FAX (785) 762-7744  
jc@kveeng.com | www.kveeng.com



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

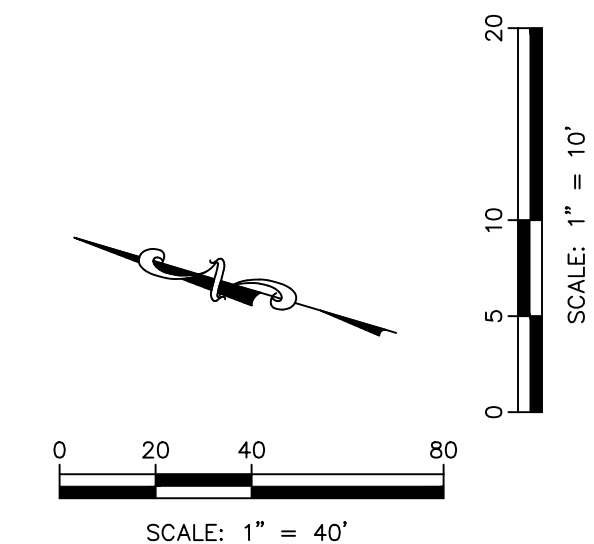
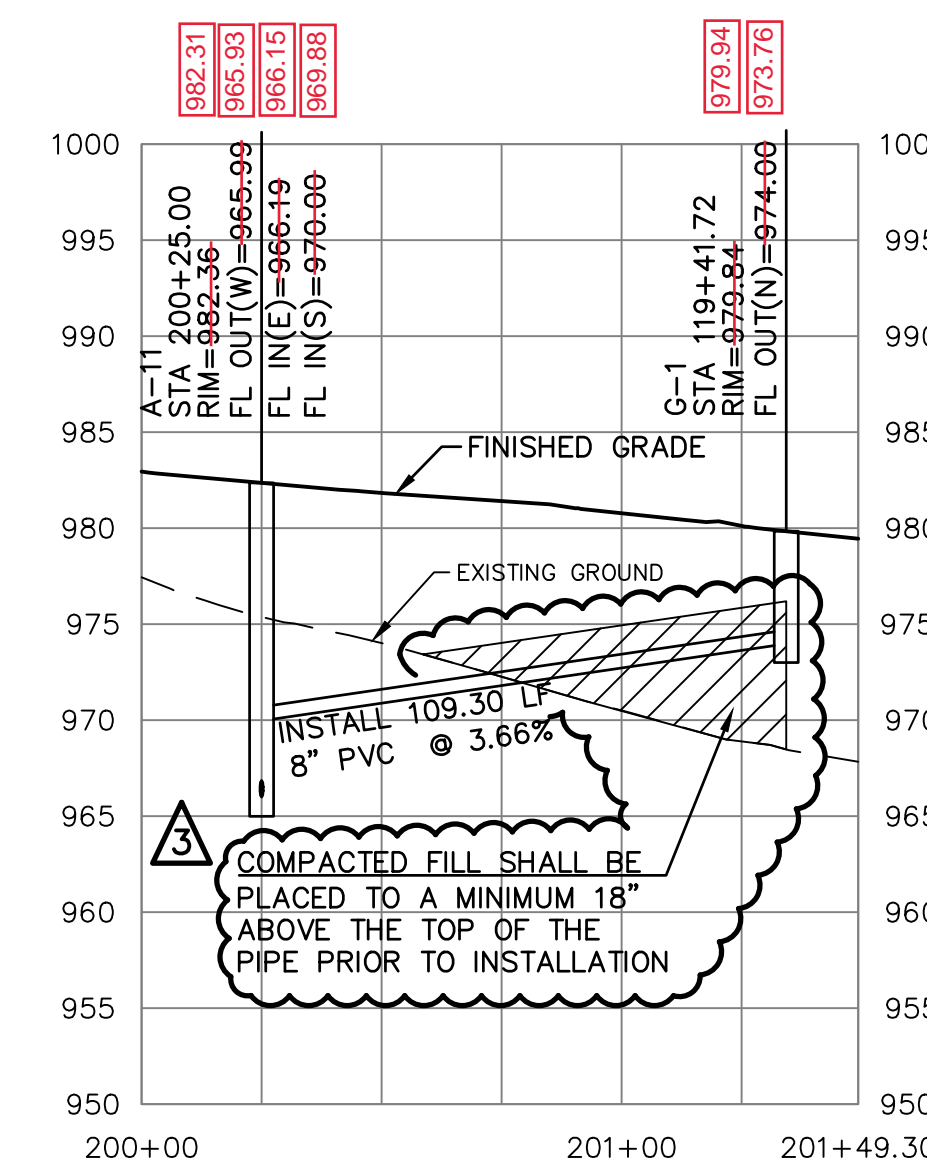
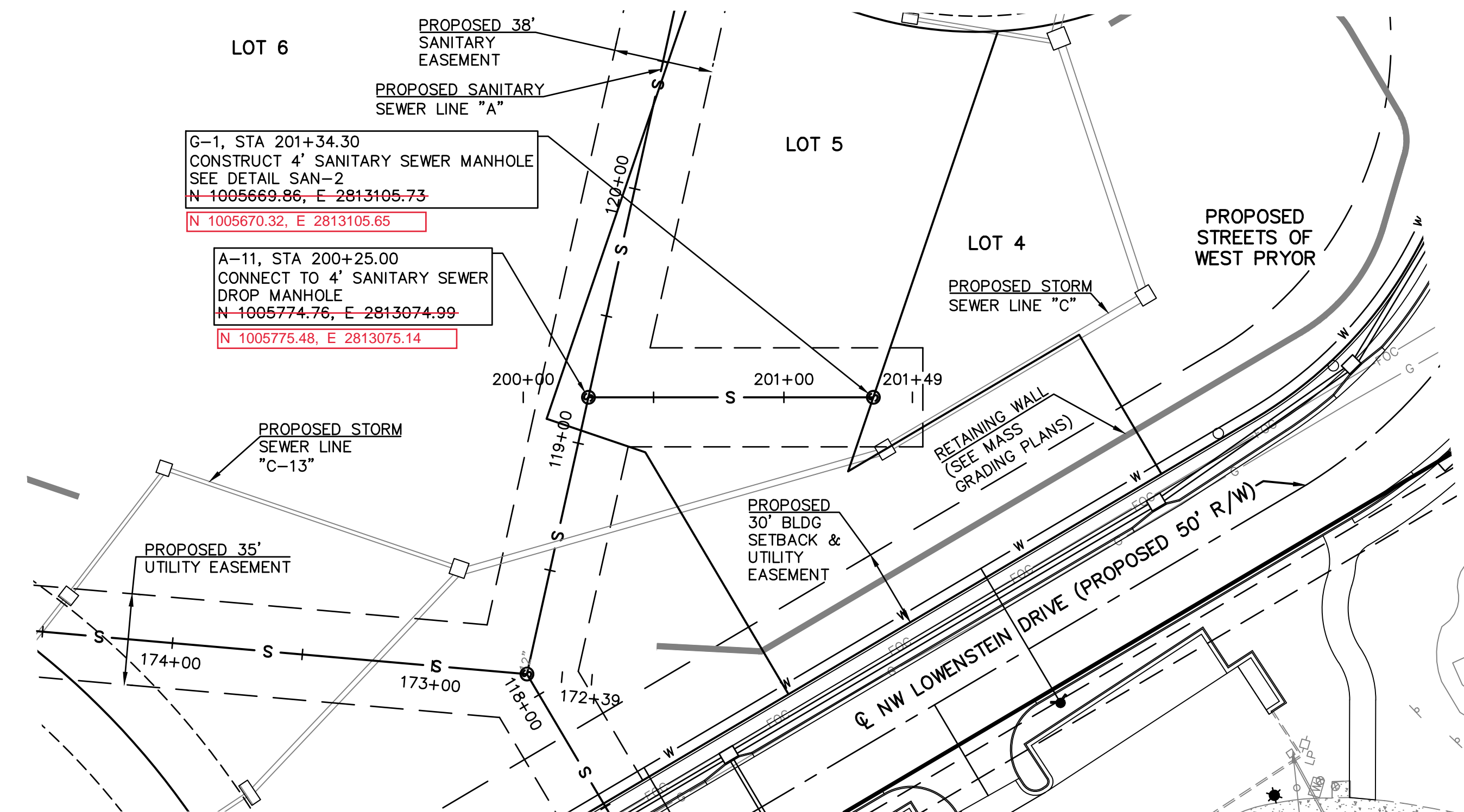
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**SANITARY SEWER PLANS**  
**SANITARY SEWER LINE D - PLAN & PROFILE**

PROJ. NO.	
A14_7067-1	
DESIGNER	DRAWN BY
LDO	JT/BKR
CFN	
7067-1S_SPP	
SHEET	REV
C-9	3



CONSTRUCTION RECORDS &  
POST CONSTRUCTION SURVEY  
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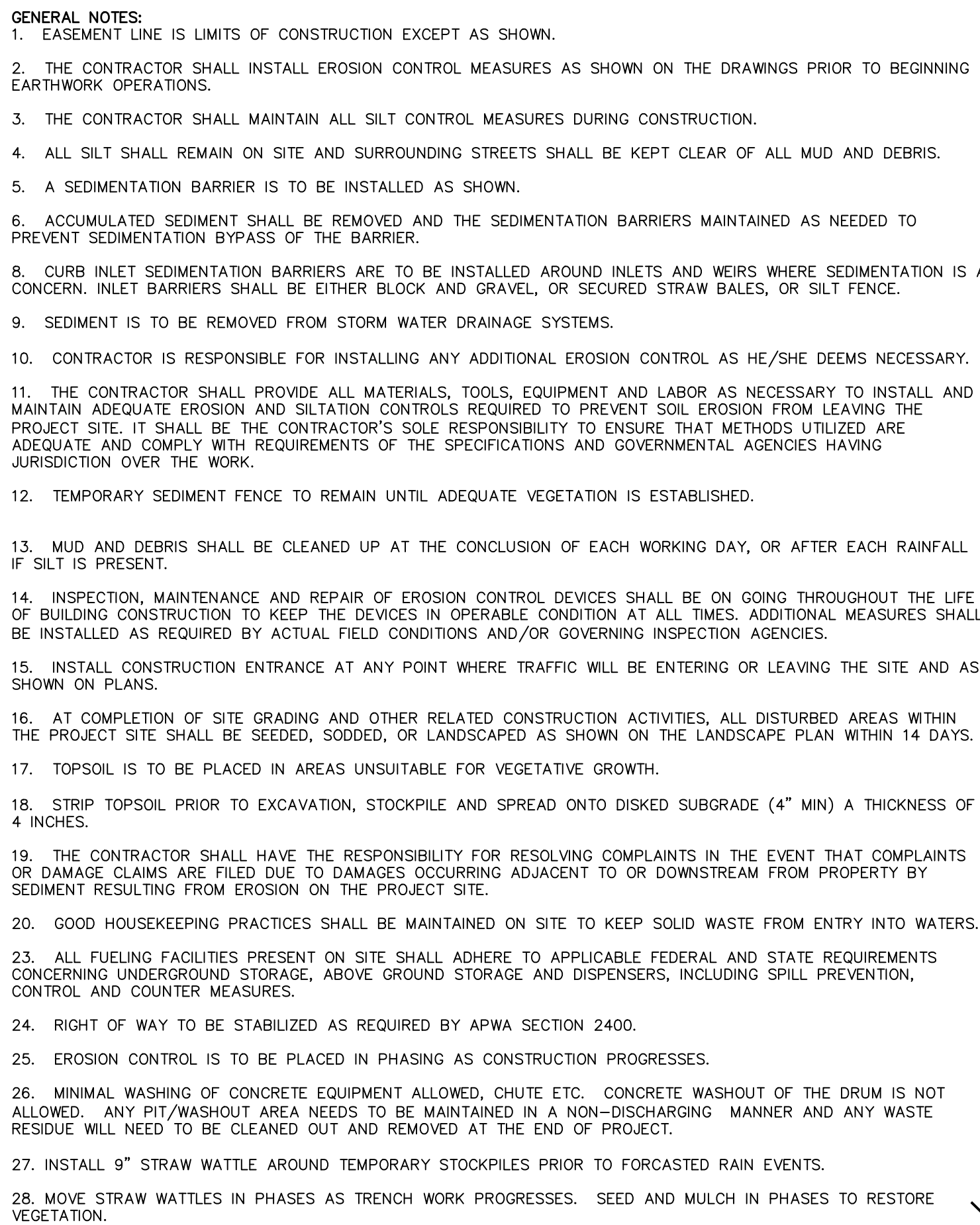
**STREETS OF WEST PRYOR**  
NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE  
LEE'S SUMMIT, MISSOURI

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**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		REV	
C-10		3	





**BEFORE**

1. INSTALL CONSTRUCTION ENTRANCES.
2. INSTALL STORM INLET PROTECTION DOWNSTREAM OF WORK ZONES.
3. PLACE STRAW WATTLES FOR INITIAL ZONES OF INSTALLATION.

**DURING**

1. INSTALL STRAW WATTLES IN PHASES AS SEWER EXCAVATION PROGRESSES.
2. ADJUST CONSTRUCTION ENTRANCE FOR OFF-SITE WORK TO MINIMIZE DISRUPTION OF PARK AND PRIVATE PROPERTY.

**AFTER**

1. COMPLETE PERMANENT AND TEMPORARY SEEDING OF AREAS DISTURBED BY SANITARY SEWER
1. INSTALLATION. MEASURES IN AREAS WITH PROJECT MASS GRADING LIMITS TO BE COORDINATED WITH MASS GRADING PLANS.
2. REMOVE ALL TEMPORARY MEASURES.

☐ DETAILS - SEE EROSION CONTROL DETAIL SHEETS  
FOR THE FOLLOWING DETAILS

ESC-01 CONSTRUCTION ENTRANCE DETAIL  
ESC-03 SILT FENCE  
ESC-04 STRAW WATTLES  
ESC-06 CURB INLET PROTECTION

**EROSION & PROPOSED IMPROVEMENTS LEGEND:**

- EXISTING GROUND CONTOUR (1' INTERVALS)
- PROPOSED FINISHED GROUND CONTOUR (1' INTERVALS)
- SILT FENCE OR STRAW WATTLES
- INLET PROTECTION

SEE SHEETS C-3 THRU C-5 FOR  
PHASING OF SANITARY SEWER  
CONSTRUCTION

ALL MATERIAL STORAGE AND STAGING  
WILL BE ON STREETS ON WEST PRYOR  
PROPERTY. PARK USAGE LIMITED TO  
INSTALLATION AND NECESSARY  
ACCESS.

CONTRACTOR TO COORDINATE EROSION  
CONTROL WITH MASS GRADING AND  
STREET CONSTRUCTION IN PHASES

ESC-06 (BEFORE)

NW PRYOR  
ROAD R/W  
PUBLIC - ASPHALT  
STREET

ESC-04 (DURING)

ESC-06 (BEFORE)



LEON D. OSBOURN  
ENGINEER  
MO # 021726

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

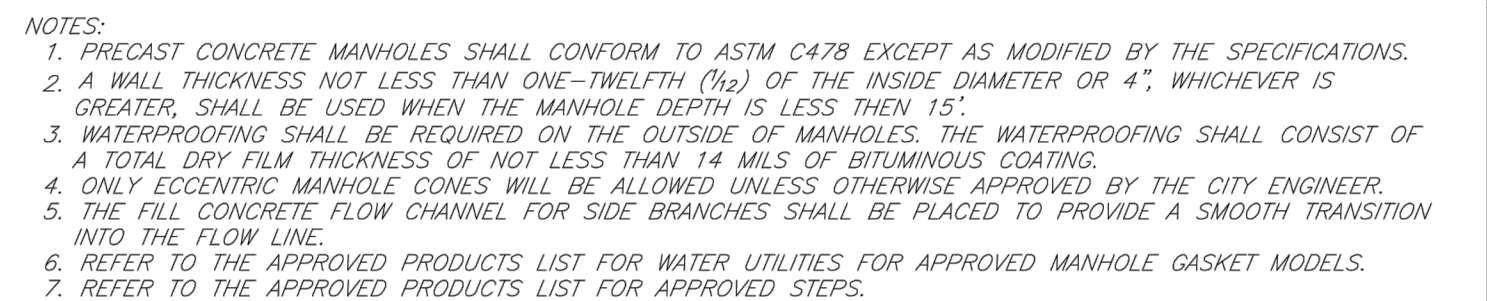
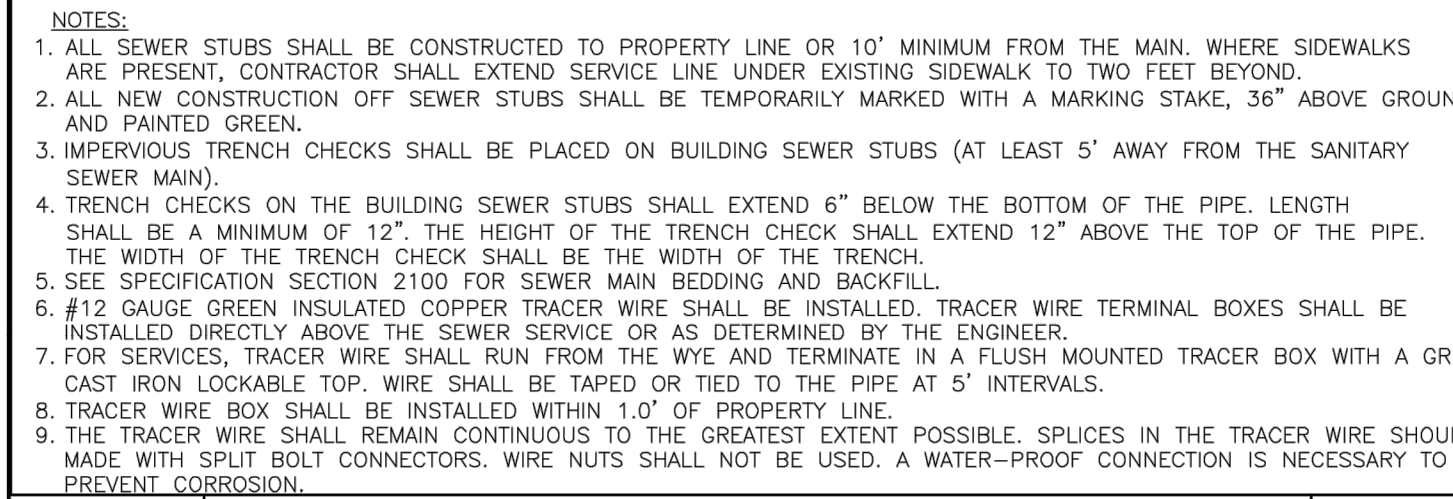
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**SANITARY SEWER PLANS**  
**EROSION CONTROL PLAN**

PROJ. NO.		A14_7067-1	
DESIGNER	LDO	DRAWN BY	JT/BKR
CFN			
7067-1S_ECP			
SHEET		REV	
C-11		3	



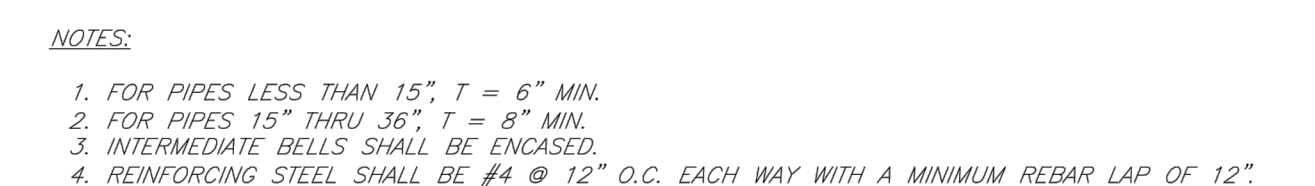
CFN	
7067-1S_DET	
SHEET	REV
C-12	1



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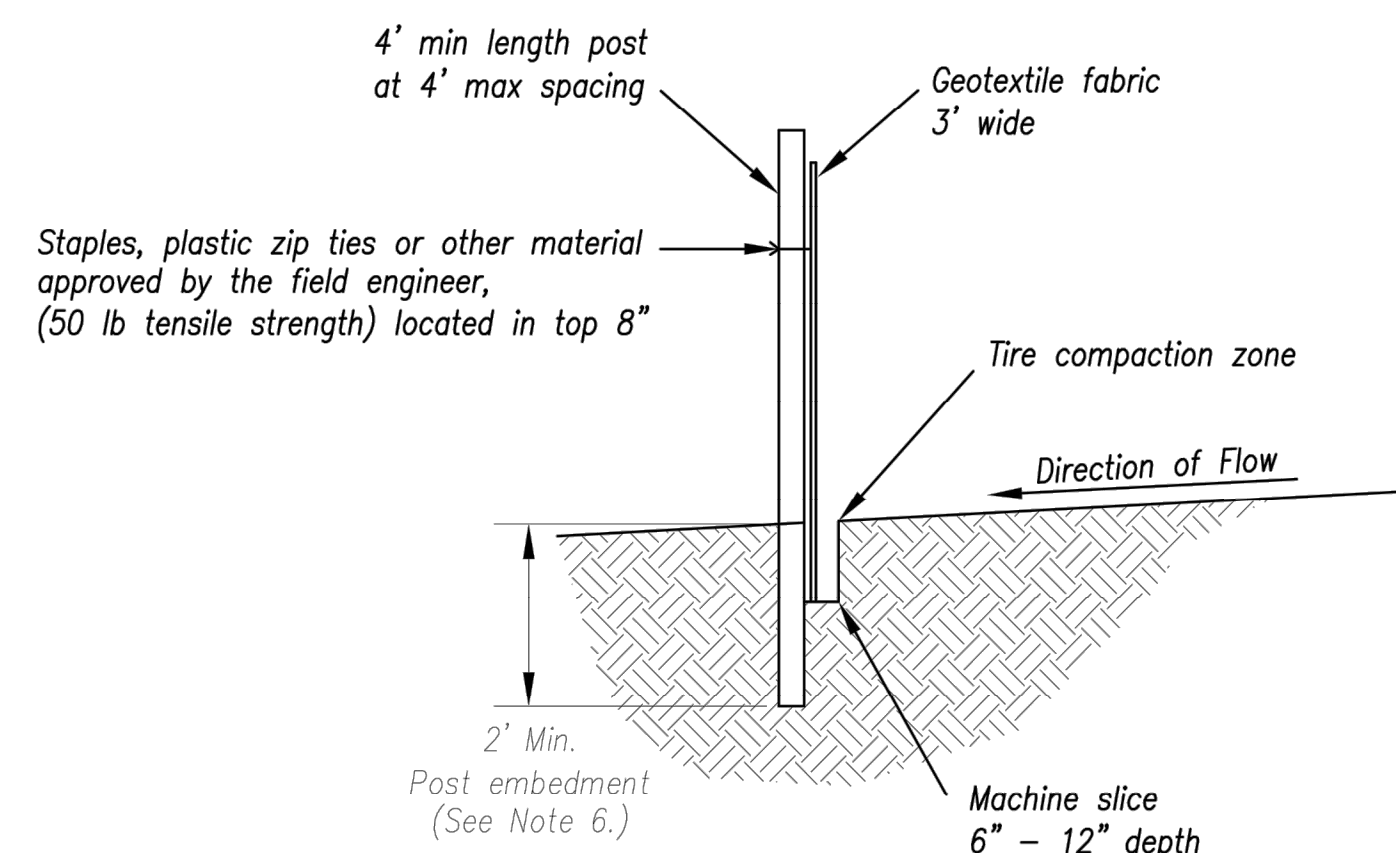


PERMISSION OF KAW VALLEY ENGINEERING, INC.



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- (\*) POSTS
- MIN, LENGTH 4'
- HARDWOOD 1  $\frac{3}{16}$ " x 1  $\frac{3}{16}$ "
- NO.2 SOUTHERN PINE 2  $\frac{5}{8}$ " x 2  $\frac{5}{8}$ "
- STEEL 1.33 LB/FT

(\*\*) - Geotextile Fabric shall meet the requirements of AASHTO M288

### SILT FENCE DETAILS

*Not to Scale*

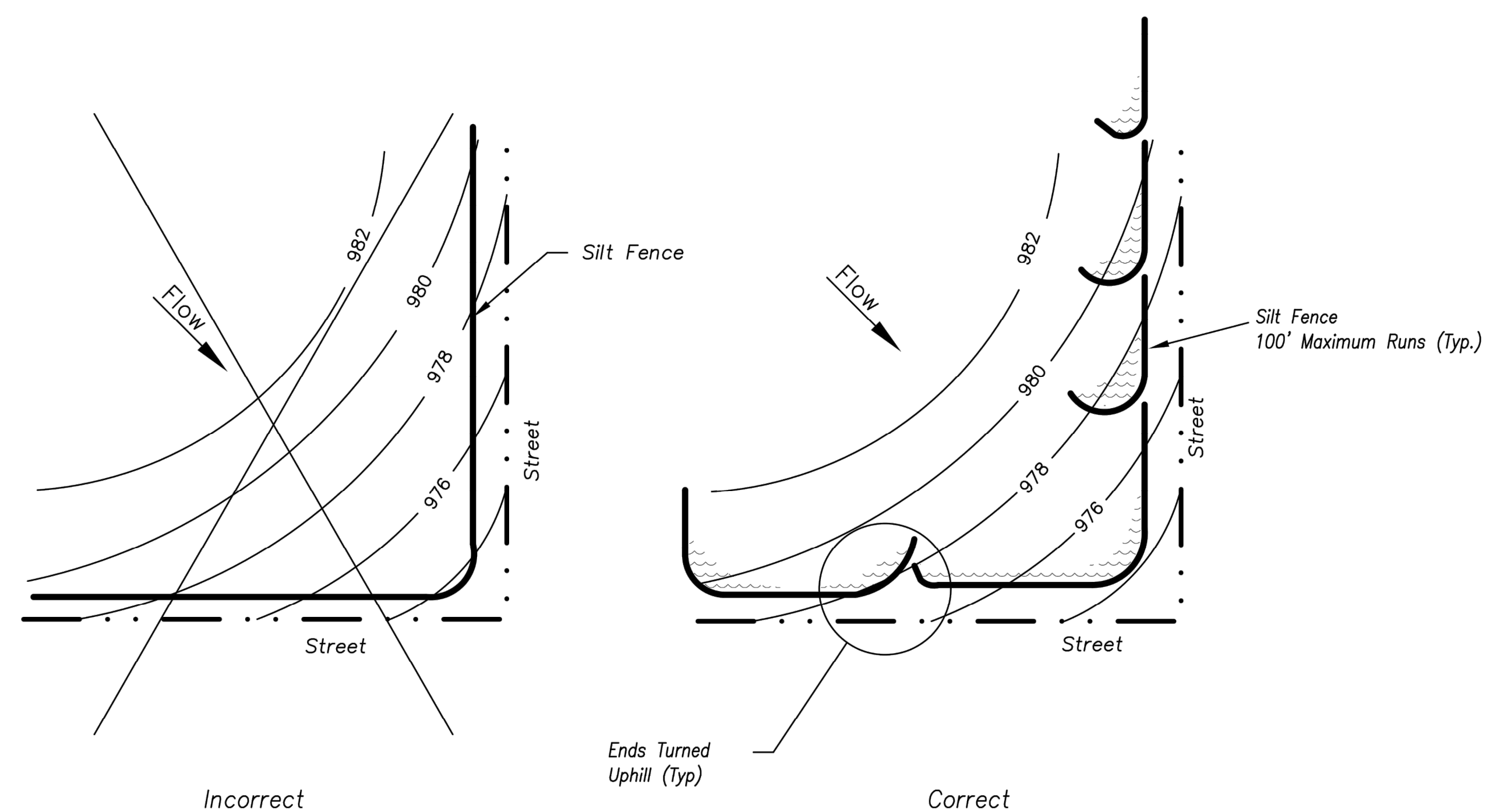
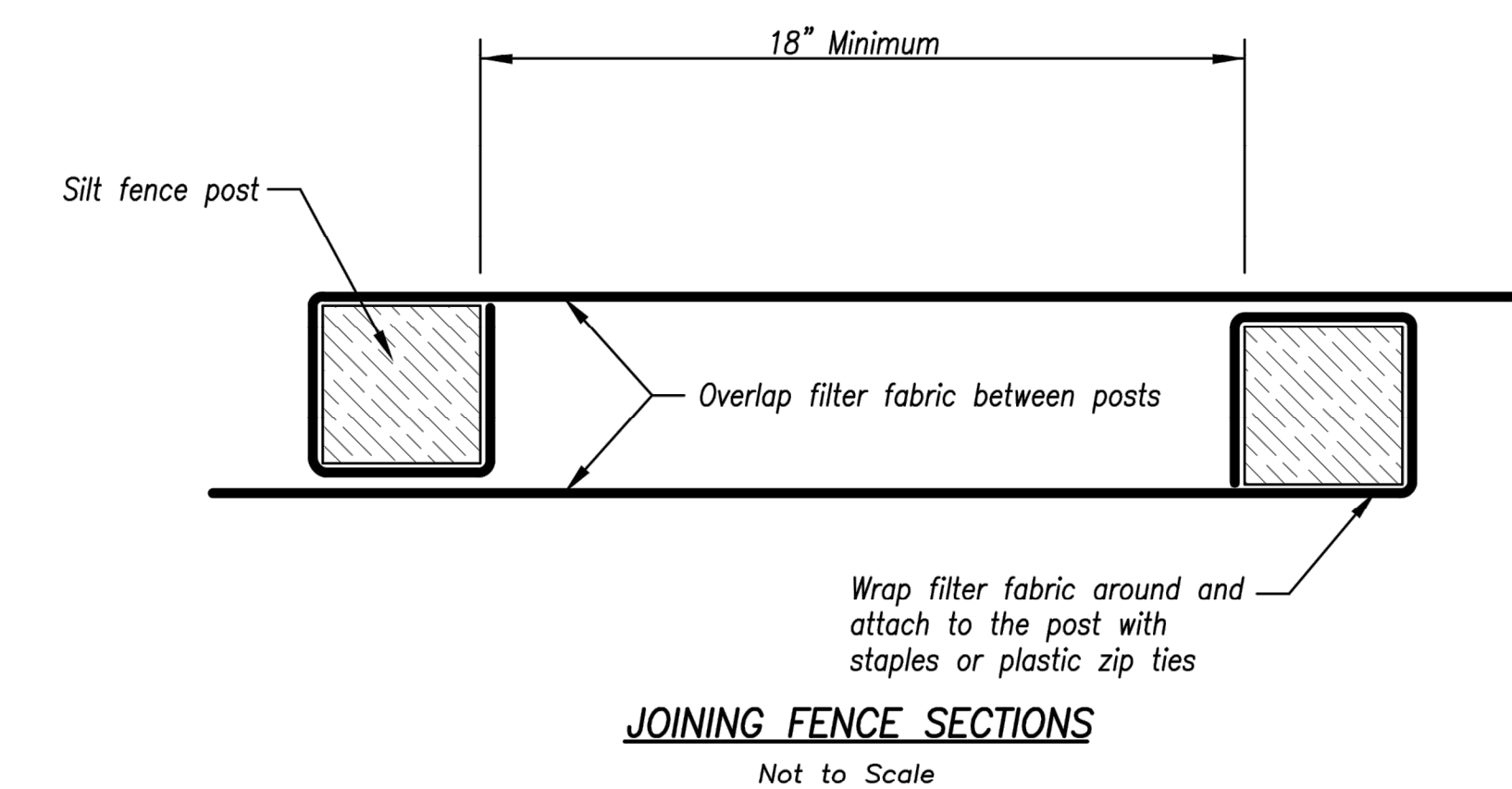
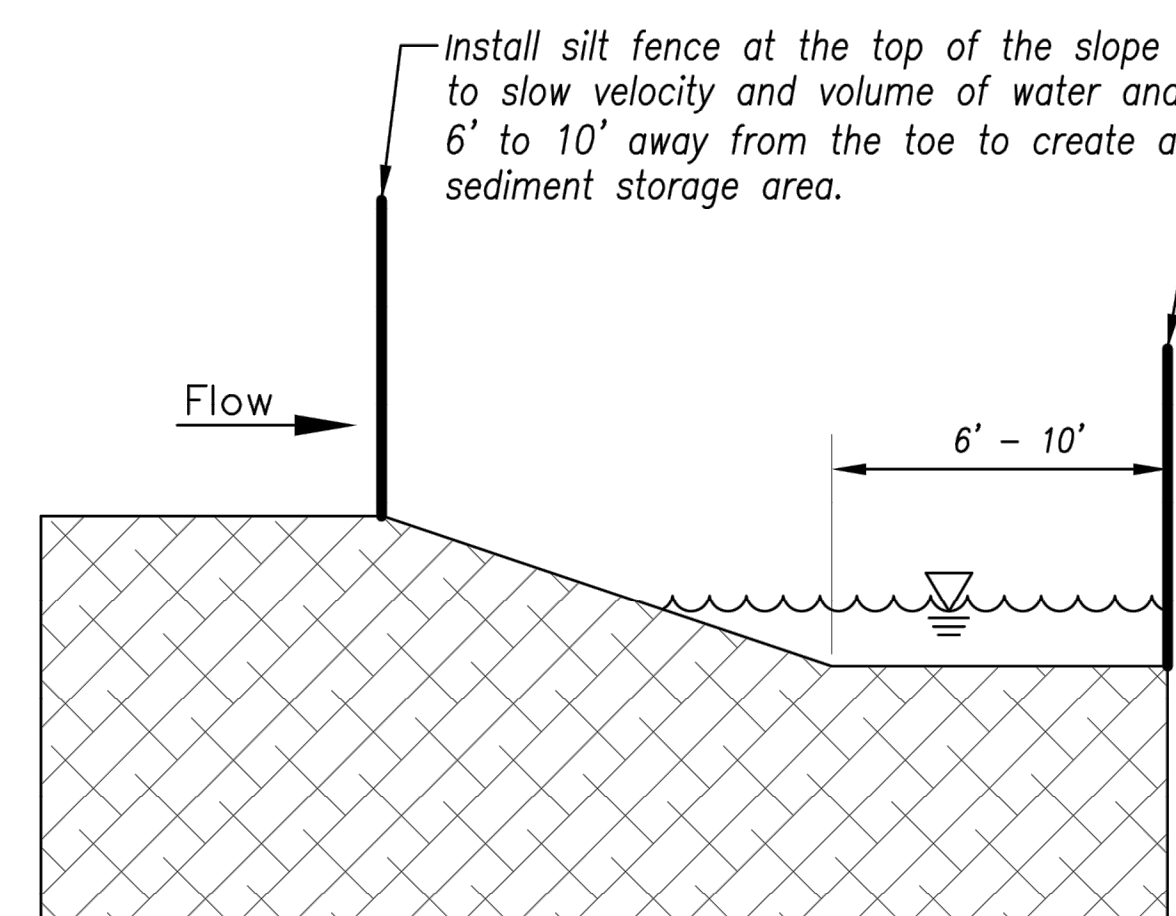


Figure A

SILT FENCE LAYOUT

Not to Scale



### JOINING FENCE SECTIONS

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  $\frac{1}{3}$  the height of silt fence.
2. Repair as necessary to maintain function and structure.



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**KVA**  
KAW VALLEY ENGINEERING  
SERVICES BY MISSOURI  
EXPIRES 12/31/19

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

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**SANITARY SEWER PLANS**  
**DETAIL SHEET**

PROJ. NO.		A14_7067-1	
DESIGNER	LDO	DRAWN BY	JT/BKR
CFN			
7067-1S_DET			
SHEET		REV	
C-13		1	

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

AMERICAN PUBLIC WORKS ASSOCIATION

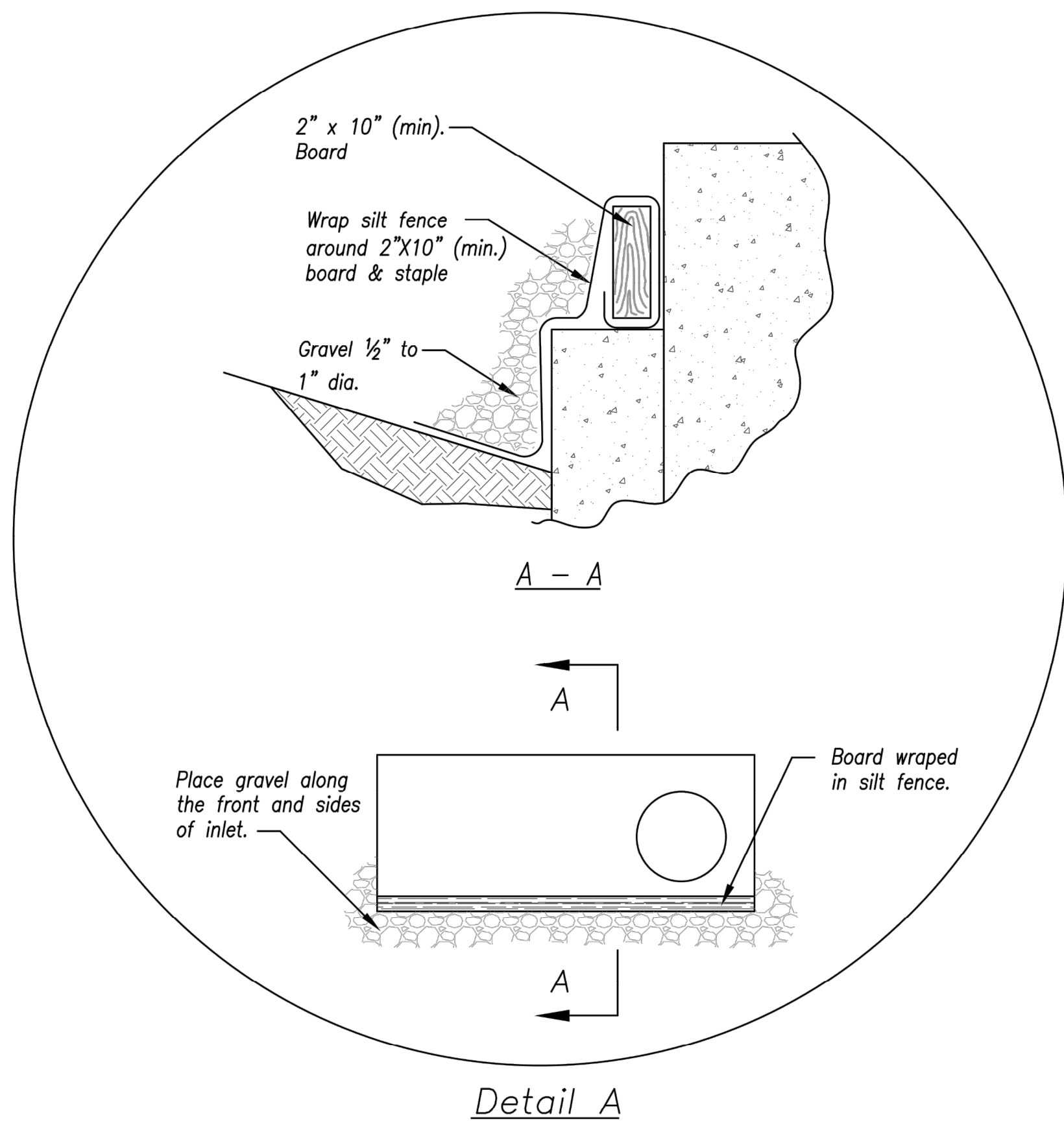
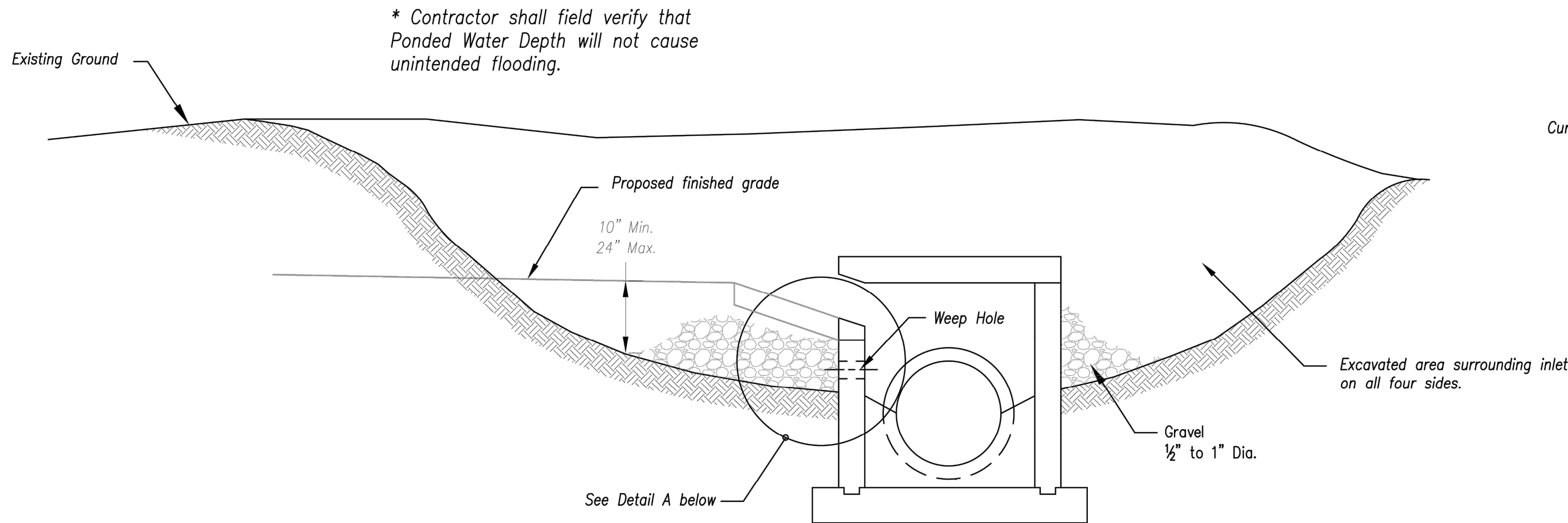


KANSAS CITY  
METRO CHAPTER

SILT FENCE

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





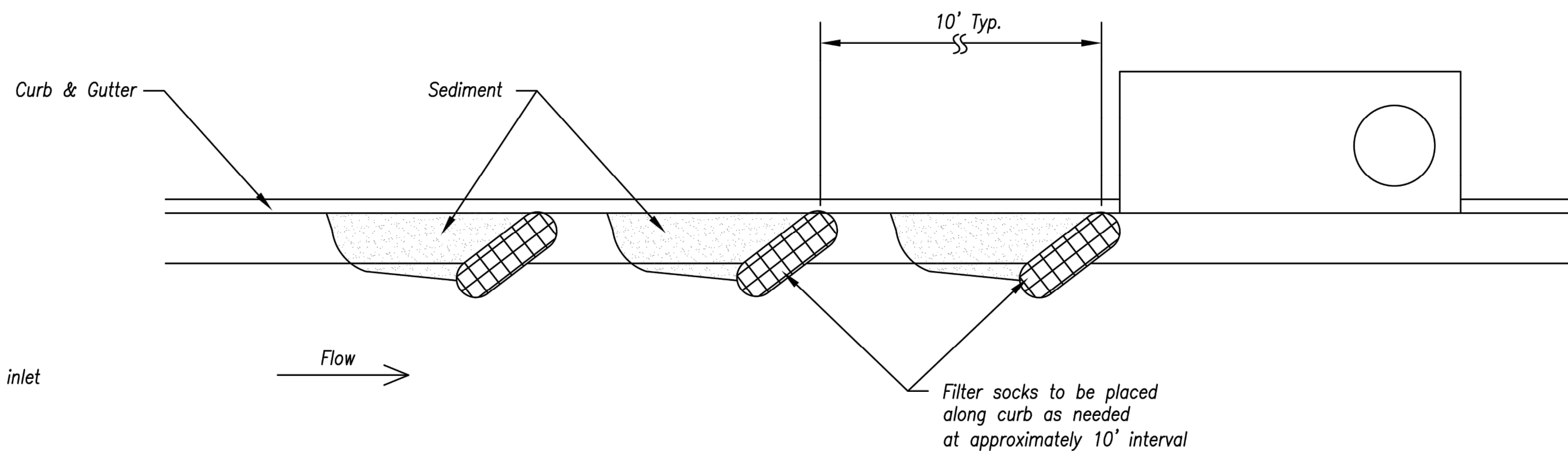
EARLY STAGE CURB INLET  
(Open Box and Prior to Pouring Curb and Inlet Throat)

Notes:

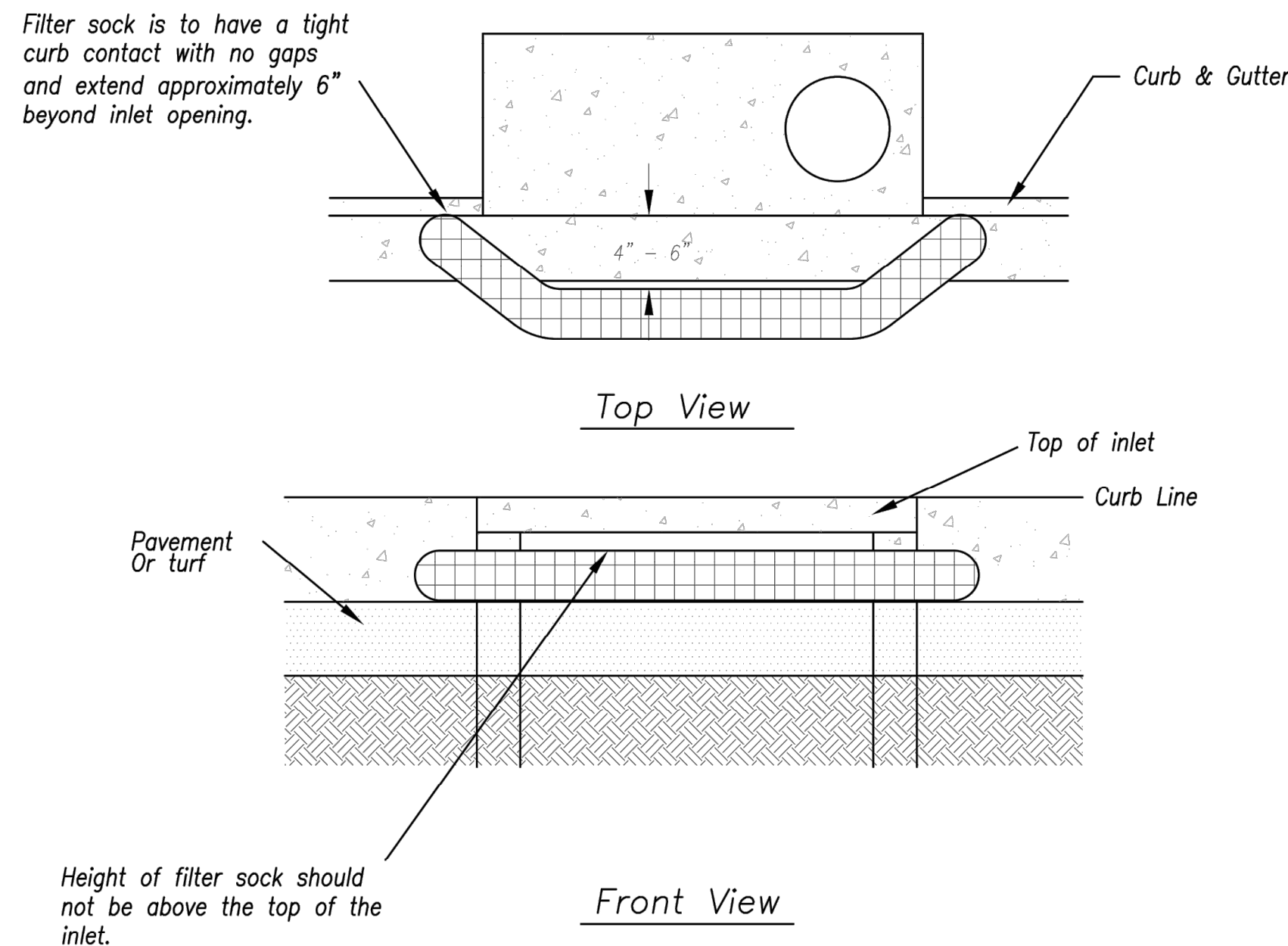
1. Immediately following inlet construction and prior to construction of curb and inlet throat, protect inlet opening by installing 2" X 10" (min.) board wrapped in silt fence. Structures shall have excavated storage area on all four sides to allow settling of sediment (Early Stage Curb Inlet).
2. When 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.



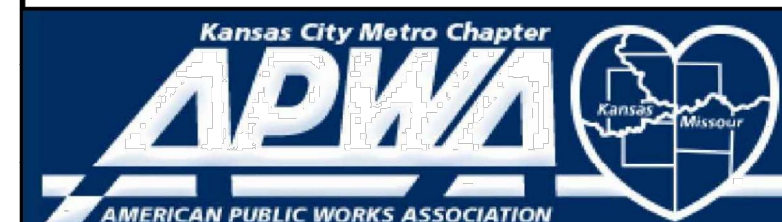
On Grade Curb Inlet Protection



Sump Inlet Sediment Filter

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

AMERICAN PUBLIC WORKS ASSOCIATION



KANSAS CITY  
METRO CHAPTER

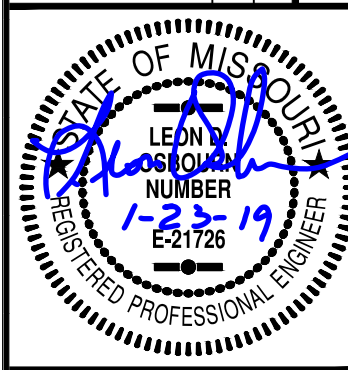
CURB INLET PROTECTION

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

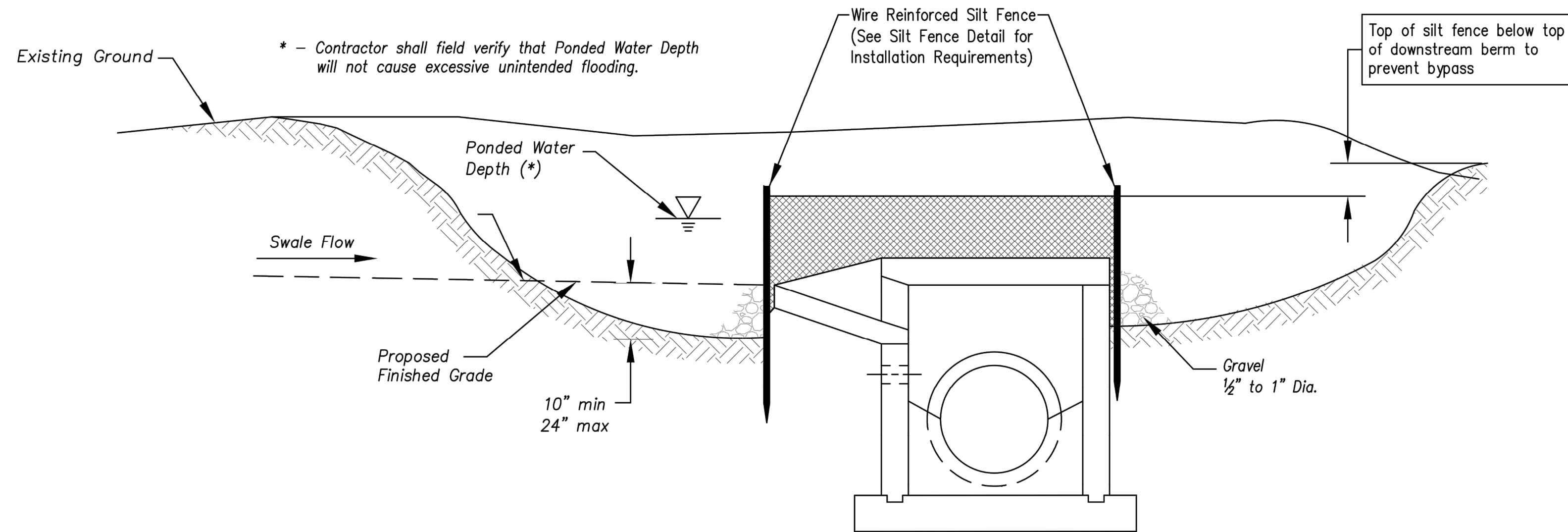
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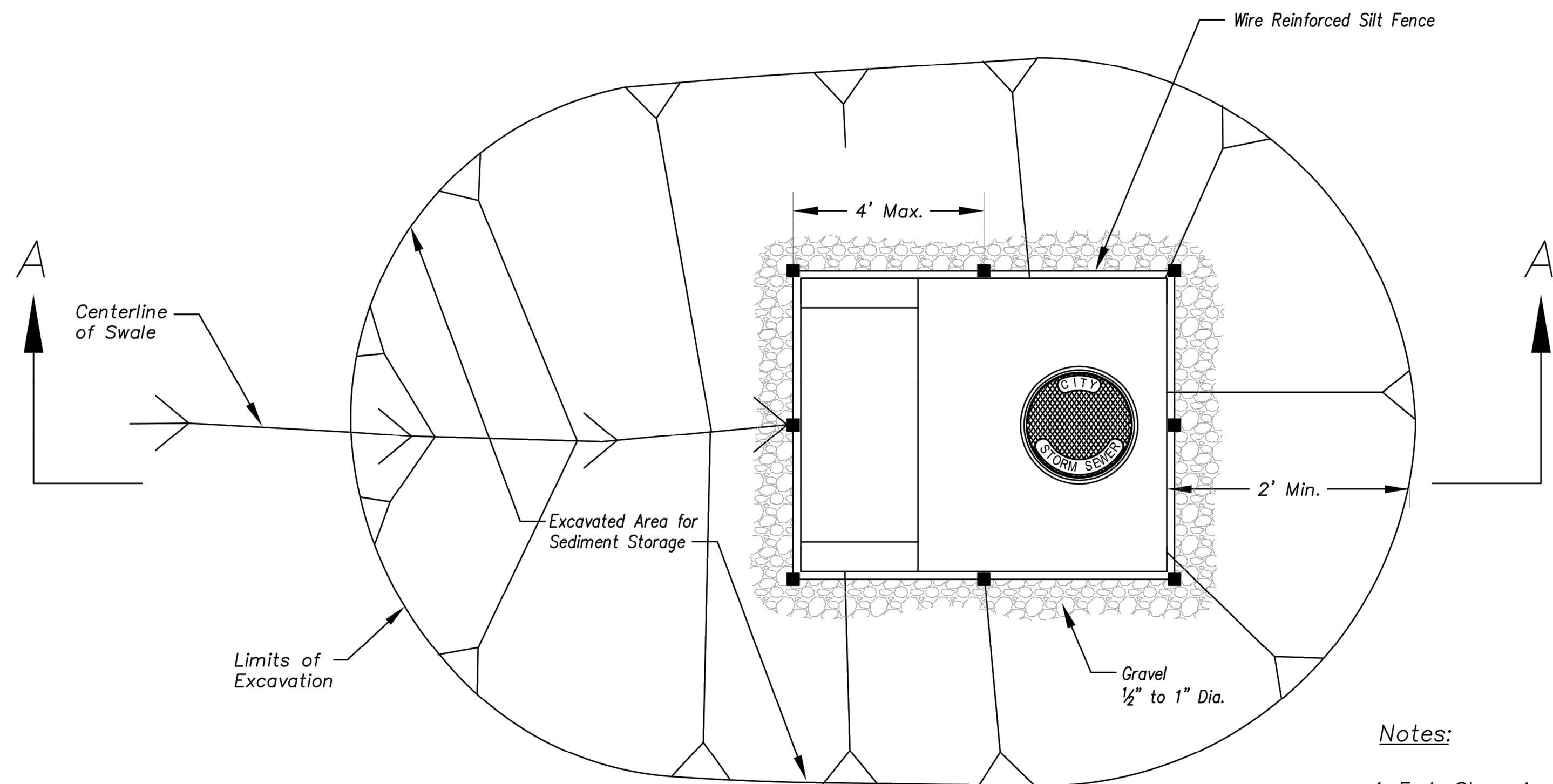
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**KAW VALLEY ENGINEERING**  
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EXPIRES 12/31/19





**Section A-A**  
Not to Scale

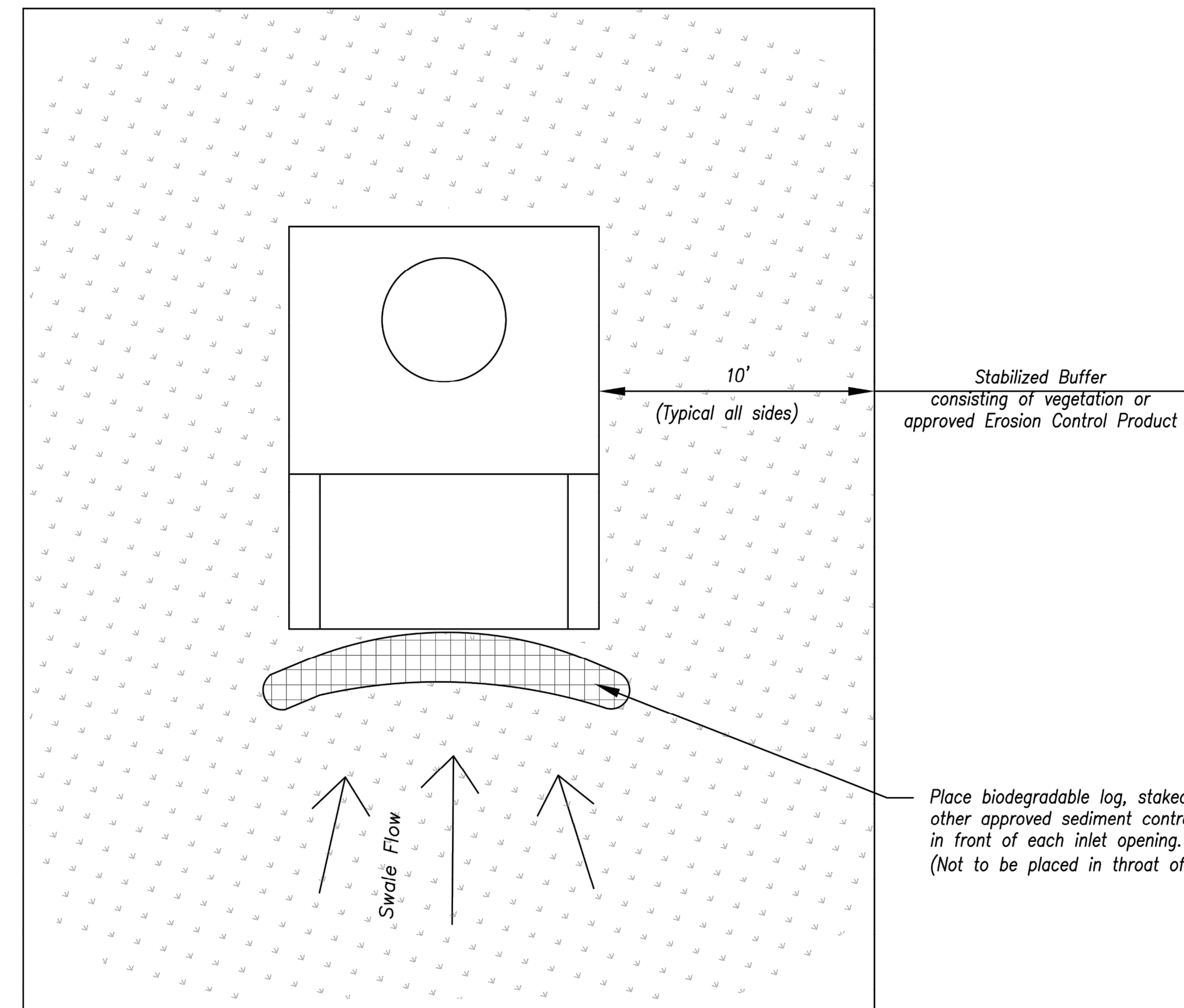


**Plan**  
Not to Scale

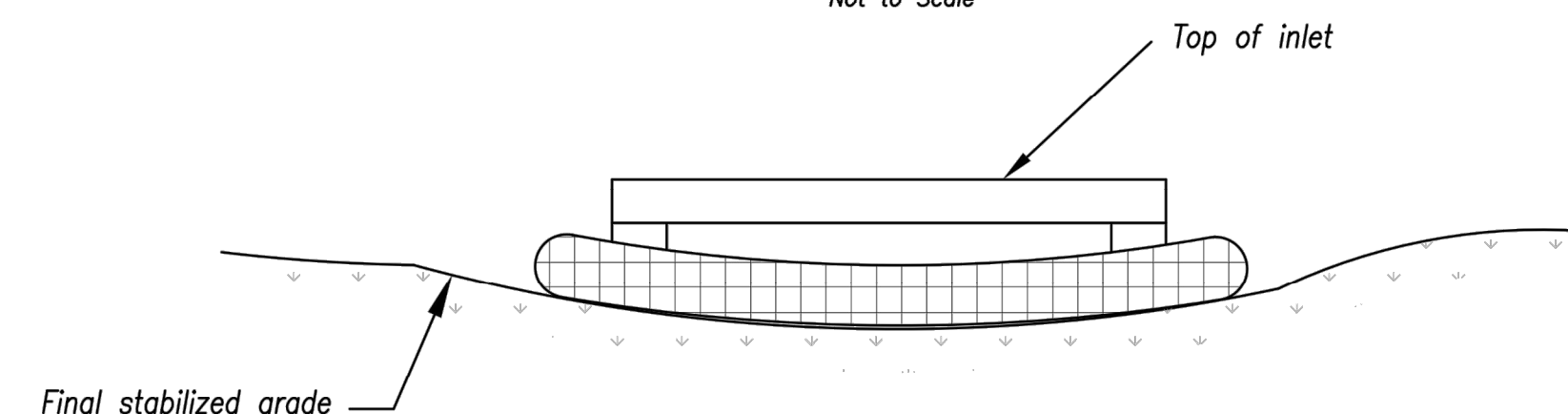
**EARLY STAGE AREA INLET**  
(All open boxes and inlets not at final grade)

**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.

**AMERICAN PUBLIC WORKS ASSOCIATION**



KANSAS CITY  
METRO CHAPTER

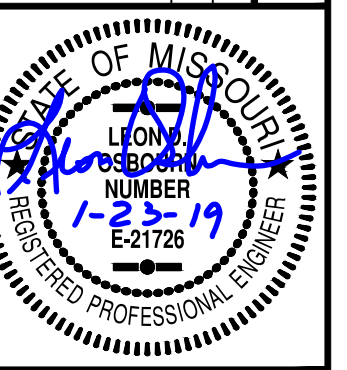
AREA INLET AND  
JUNCTION BOX PROTECTION

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



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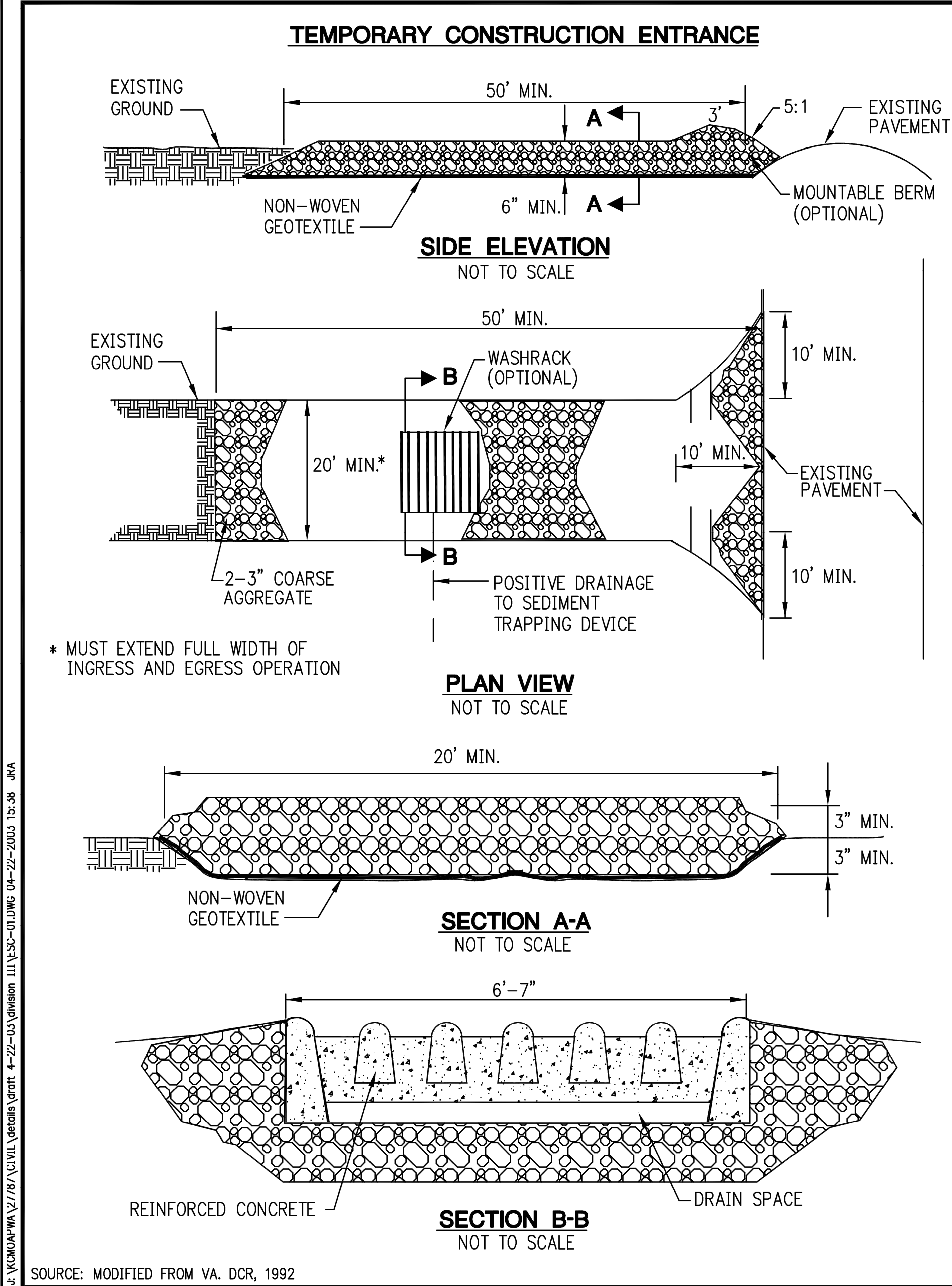


**KAW VALLEY ENGINEERING**  
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/19

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



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**TEMPORARY CONSTRCUTION 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.

**AMERICAN PUBLIC WORKS ASSOCIATION**



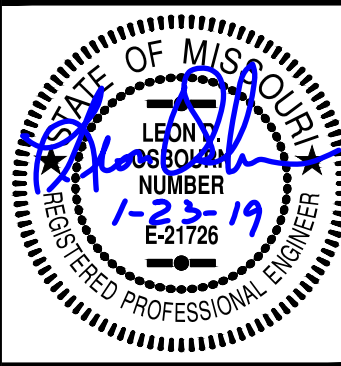
KANSAS CITY  
METROPOLITAN CHAPTER

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

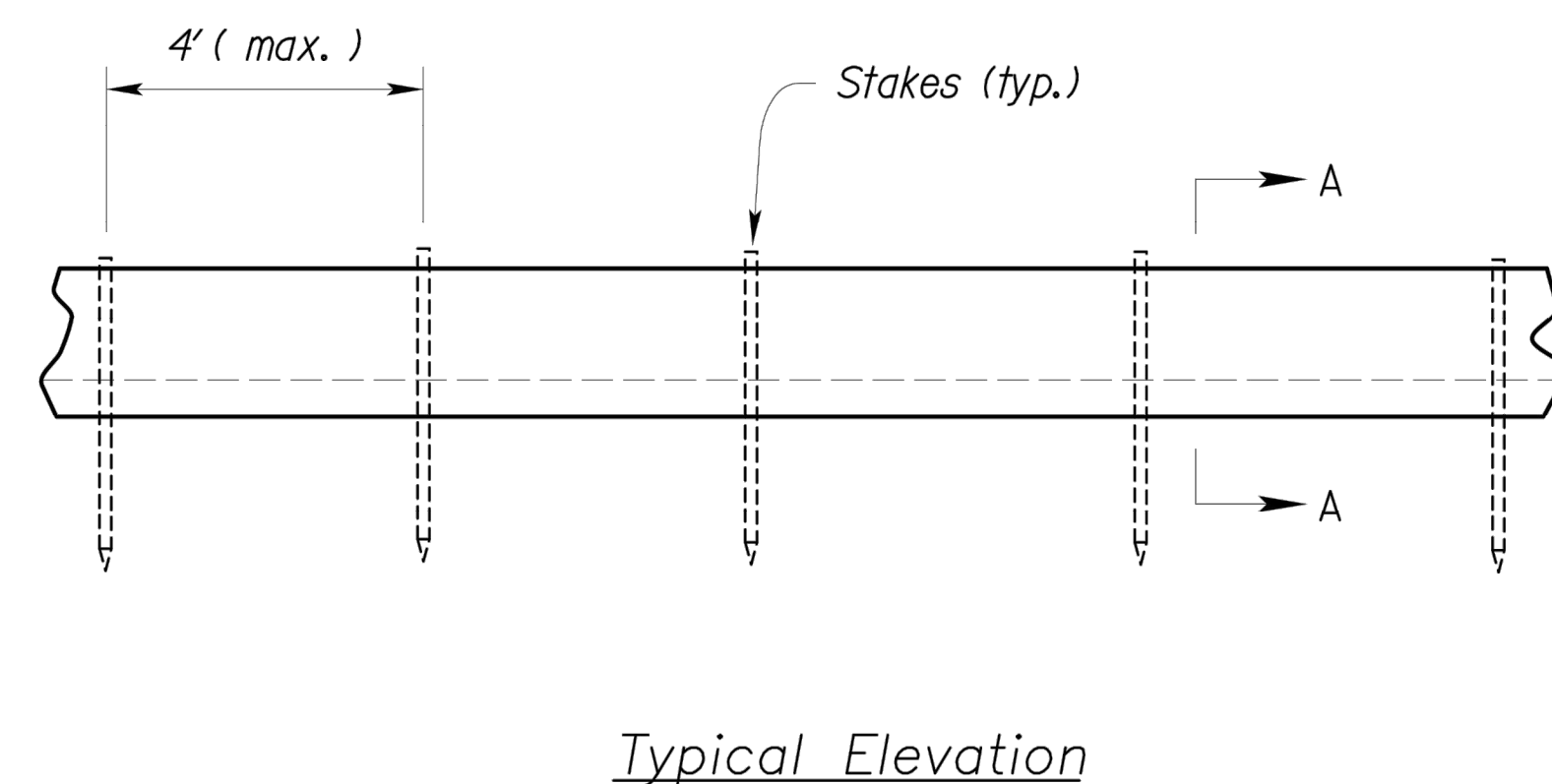
PROJ. NO. A14-7067-1  
DESIGNER LDO  
DRAWN BY JT/BKR  
CFN 7067-1S\_DET  
SHEET 1  
C-16



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





1. The Slope barriers shall be placed along contour lines, with a short section turned up grade 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".

Diagram of a berm cross-section. The berm is a trapezoidal shape with a cross-hatched pattern. The top width is 4.0'. The height is 1.5' - 3.0'. The slope is labeled "Berm".

Figure 2  
(Steep Slopes)

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".

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

KANSAS CITY  
METRO CHAPTER

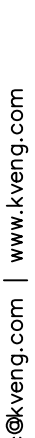

WATTLES/BIODEGRADABLE LOG  
AND  
MULCH/COMPOST FILTER BERM

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

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

ADDED SHEET

 $\Delta_2$ 

<b>STREETS OF WEST PRYOR</b> <b>NWQ NW PRYOR ROAD &amp; NW LOWENSTEIN DRIVE</b> <b>LEE'S SUMMIT, MISSOURI</b>		 <b>KAW VALLEY ENGINEERING</b> <small>KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/19</small>		2319 N. JACKSON   P.O. BOX 1304 JUNCTION CITY, KANSAS 66441 PH. (785) 938-7744 jke@kveeng.com   www.kveeng.com					
PROJ. NO. <b>A14_7067-1</b> DESIGNER <b>LDO</b>		DRAWN BY <b>JT/BKR</b>							
CFN <b>7067-1S_DET</b>									
SHEET <b>C-17</b>		REV <b>2</b>							