

# CONSTRUCTION PLANS FOR PRIVATE ROAD, WATER, GAS AND ELECTRIC IMPROVEMENTS STREETS OF WEST PRYOR LEE'S SUMMIT, MISSOURI

▲ JULY 2019

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

COMMUNICATION SERVICE  
AT&T  
CARRIE CILKE  
(816) 703-4386  
cc3527@att.com

GAS SERVICE  
SPIRE  
KATIE DARNELL  
(816) 969-2247  
Katie.Darnell@spireenergy.com

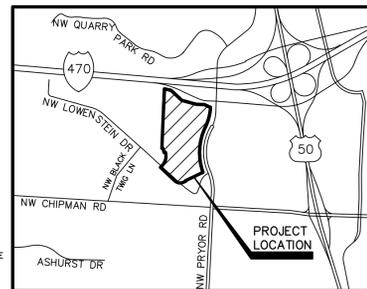
COMMUNICATION SERVICE  
TIME WARNER CABLE  
STEVE BAXTER  
(913) 643-1928  
Steve.Baxter@charter.com

WATER, SANITARY/STORM SEWER SERVICE  
CITY OF LEE'S SUMMIT  
KENT MONTER  
(816) 969-1900  
Kent.Monter@cityofls.net

COMMUNICATION SERVICE  
COMCAST  
RYAN ALKIRE  
(816) 795-2218  
Ryan.Alkire@cable.comcast.com

 CALL BEFORE YOU  
DIG - DRILL - BLAST  
1-800-344-7483  
(TOLL FREE)

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



LOCATION MAP  
CITY OF LEE'S SUMMIT, MISSOURI

## INDEX TO SHEETS

C-1	TITLE SHEET
C-2	GENERAL NOTES
C-3	GENERAL LAYOUT SHEET
C-4	TYPICAL SECTIONS FOR PRIVATE ROAD - A
C-5	TYPICAL SECTIONS FOR PRIVATE ROAD - B & C
C-6	PRIVATE ROAD - A PLAN & PROFILE
C-7	PRIVATE ROAD - A PLAN & PROFILE
C-8	PRIVATE ROAD - A PLAN & PROFILE
C-9	PRIVATE ROAD - A PLAN & PROFILE
C-10	PRIVATE ROAD - B PLAN & PROFILE
C-11	PRIVATE ROAD - B PLAN & PROFILE
C-12	PRIVATE ROAD - B PLAN & PROFILE
C-13	PRIVATE ROAD - C PLAN & PROFILE
C-14	PRIVATE ROAD - C PLAN & PROFILE
C-15	EROSION CONTROL PLAN
C-16	PAVEMENT MARKING & SIGNING PLAN
C-17	UTILITY PLAN
C-18	UTILITY PLAN
C-19	PAVEMENT MARKING DETAIL SHEET
C-20	SIGN AND TRAFFIC CONTROL DETAIL SHEET
C-21	STREET DETAIL SHEET
C-22	STORM SEWER DETAIL SHEET
C-23	EROSION CONTROL DETAIL SHEET
C-24	EROSION CONTROL DETAIL SHEET
C-25	EROSION CONTROL DETAIL SHEET
C-26	EROSION CONTROL DETAIL SHEET
C-27	WATER DETAILS
C-28	WATER DETAILS

▲ LIGHTING	
SE-1	SITE ELECTRICAL PLAN
SE-2	SITE ELECTRICAL PLAN
SE-3	DIAGRAMS & DETAIL SHEET
SL-1	PHOTOMETRIC PLAN
SL-2	LIGHTING FIXTURE SCHEDULE & FIXTURE CUT SHEETS
LANDSCAPING	
L 1.00	SIGNAGE LANDSCAPE PLAN

**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.

	POSTED SPEED	DESIGN SPEED
PRIVATE ROAD "A", "B" & "C"	25	25

**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.

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@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@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=984.9'  
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=979.9'

REV	DATE	DESCRIPTION	DSN	DWN	CHK
1	07-02-19	REVISED PER CITY COMMENTS	LDO	JT	LDO
0	5-16-19	INITIAL ISSUE	LDO	BKR	LDO



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  
jpe@kveg.com | www.kveg.com

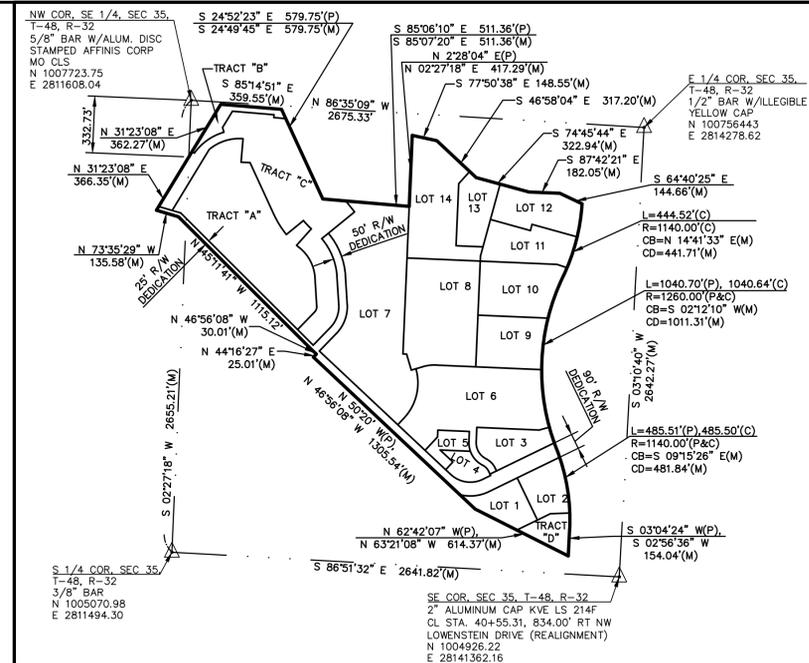
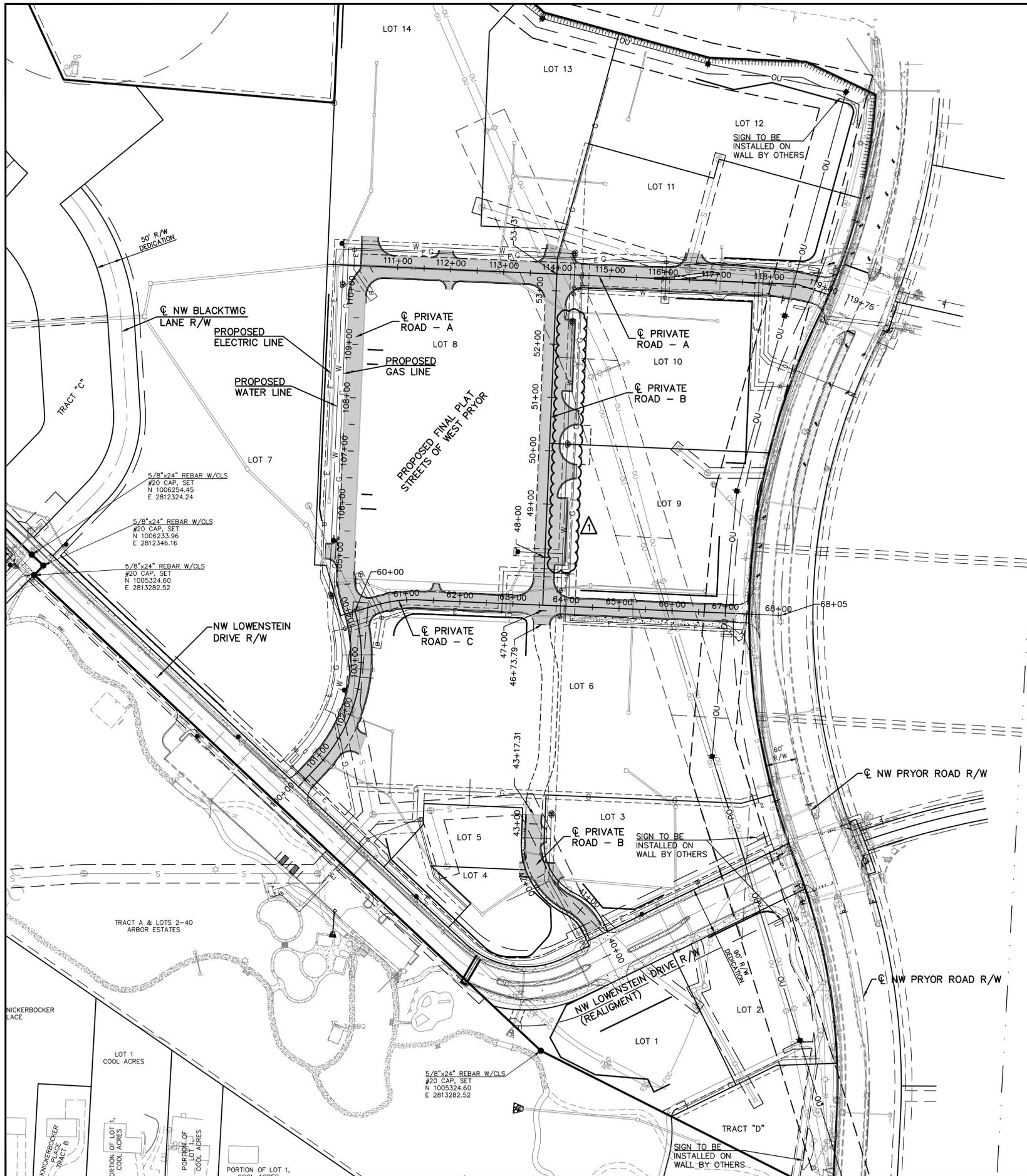
**KAW VALLEY ENGINEERING**  
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN THE STATE OF MISSOURI UNDER CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/19

**STREETS OF WEST PRYOR**  
NWQ NW PRYOR RD & NW LOWENSTEIN DR  
LEE'S SUMMIT, MISSOURI

**PRIVATE ROAD PLANS**  
TITLE SHEET

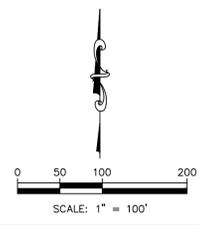
PROJ. NO.	A14-7067-1
DESIGNER	LDO
DRAWN BY	JT
CFN	7067-1R-TS
SHEET	REV
C-1	1





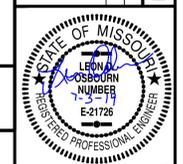
**BOUNDARY INFORMATION & SURVEY CONTROL**  
SCALE: 1"=500'  
(SEE FINAL PLAT OF STREETS OF WEST PRYOR LOTS 1 THRU 14, TRACTS "A", "B", "C", & "D" FOR ADDITIONAL INFORMATION)

- PROPOSED LEGEND**
- S — SANITARY SEWER MAIN
  - G — UNDERGROUND GAS LINE
  - W — WATER MAIN
  - ⊙ WATER VALVE
  - ⚡ FIRE HYDRANT
  - OU — UNDERGROUND ELECTRIC LINE
  - E — OVERHEAD POWER (BY OTHERS)
  - TRANSFORMER
  - SECTIONALIZER
  - RISER
  - NEW POWER POLE



**PUBLIC STREET, STORM & SANITARY SEWER ARE BY SEPARATE PLANS**

REV	DATE	DESCRIPTION
1	07-02-19	REVISED PER CITY COMMENTS
0	5-16-19	INITIAL ISSUE



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  
j@kveeng.com | www.kveeng.com

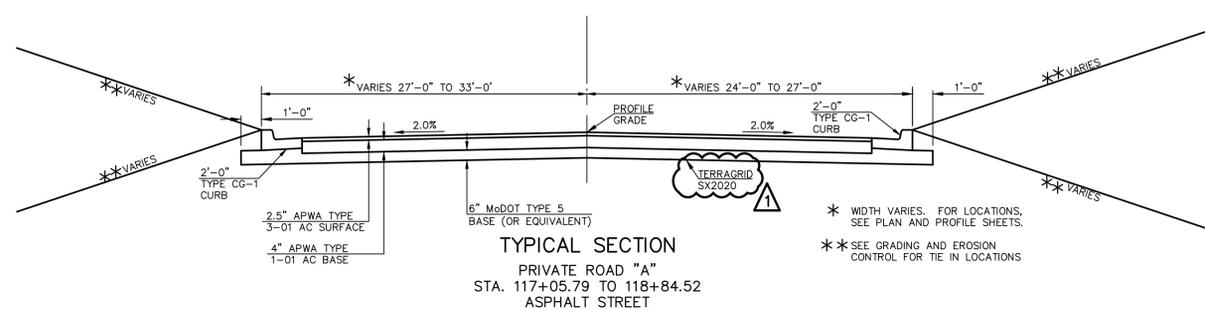
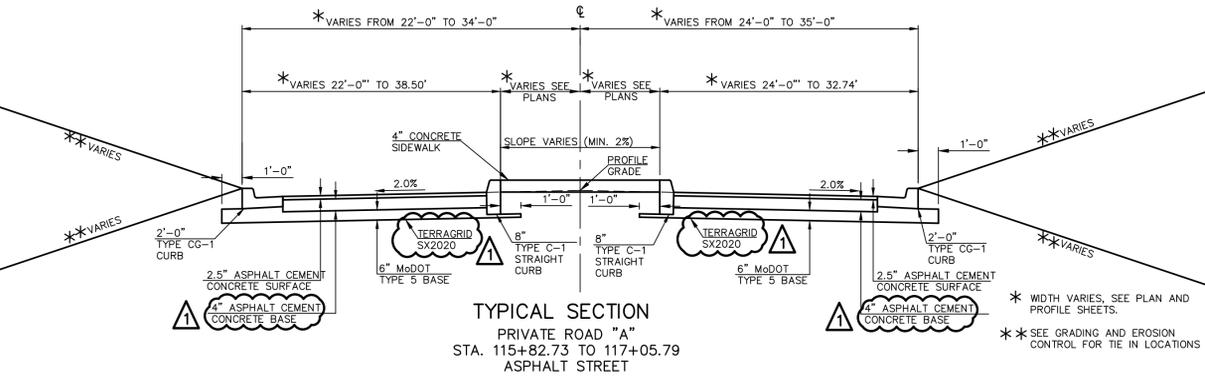
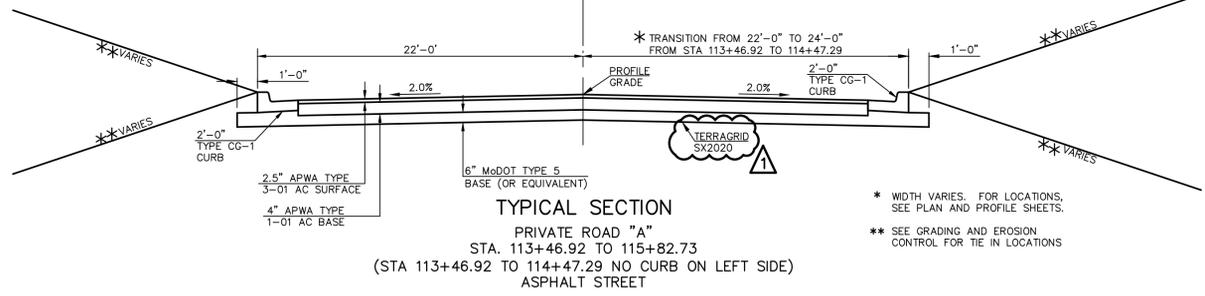
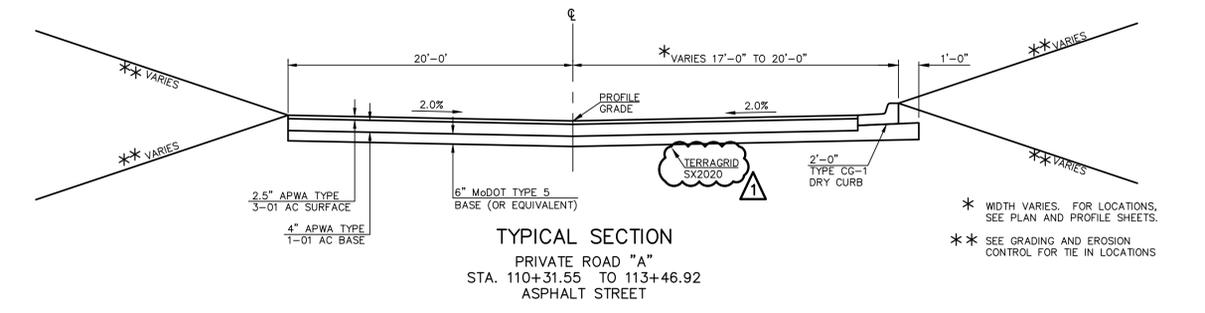
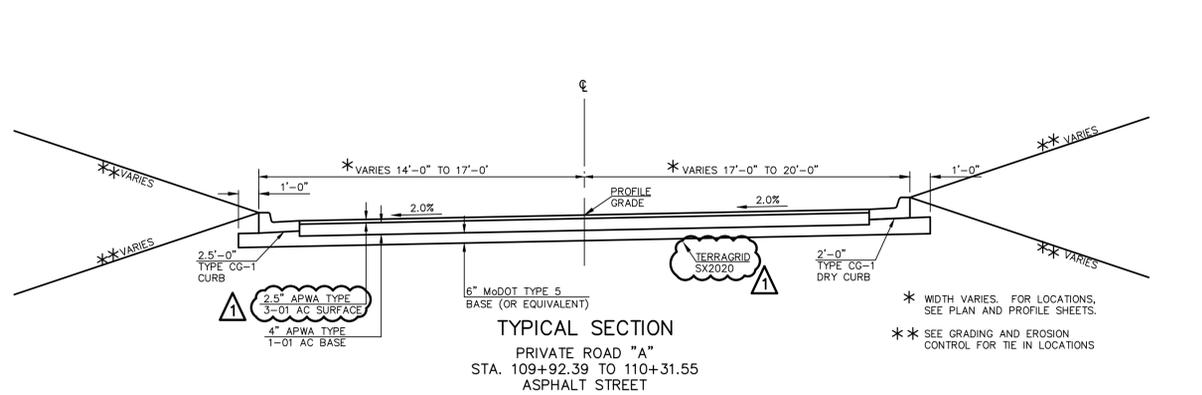
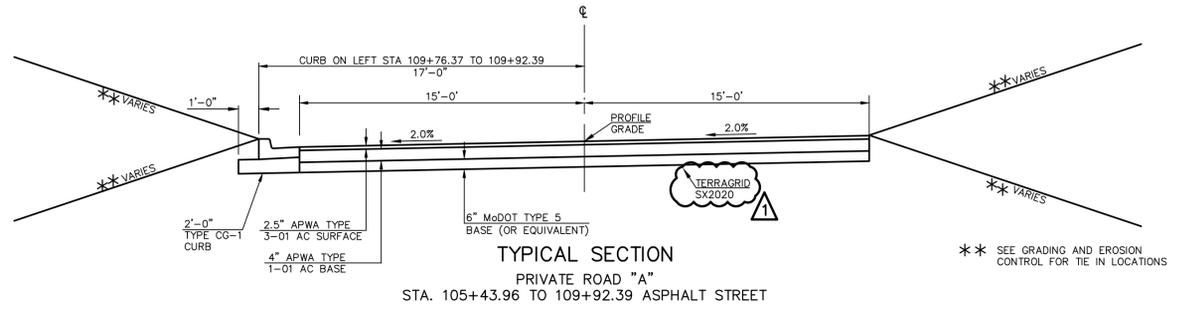
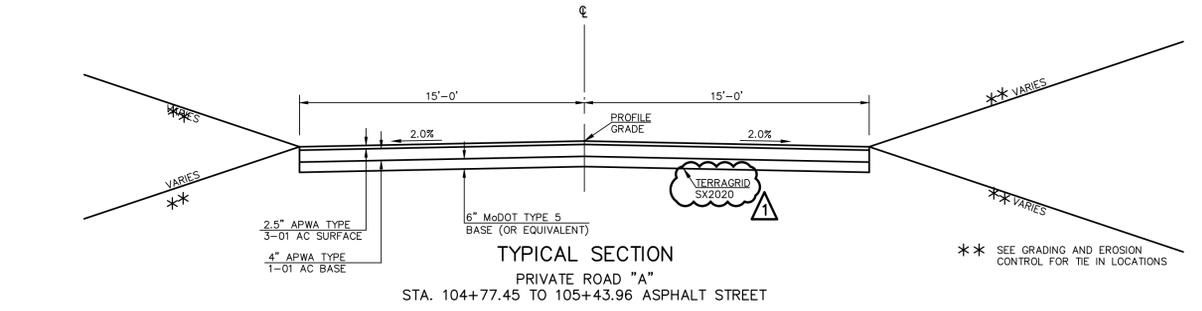
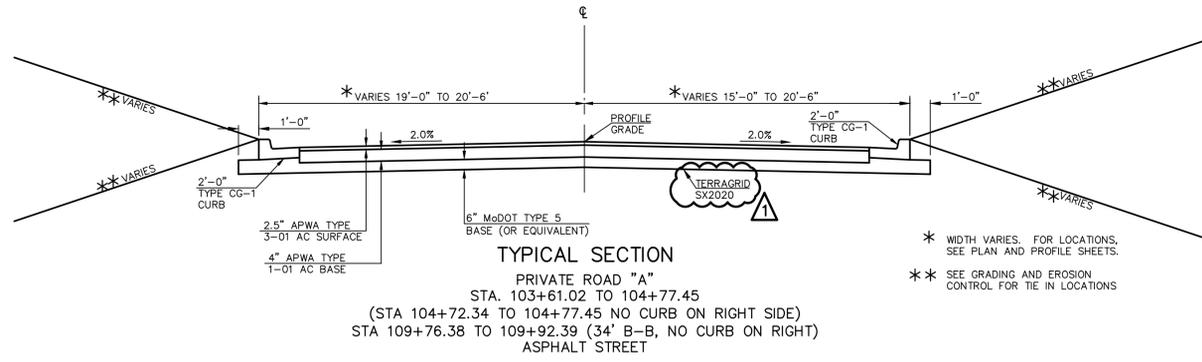
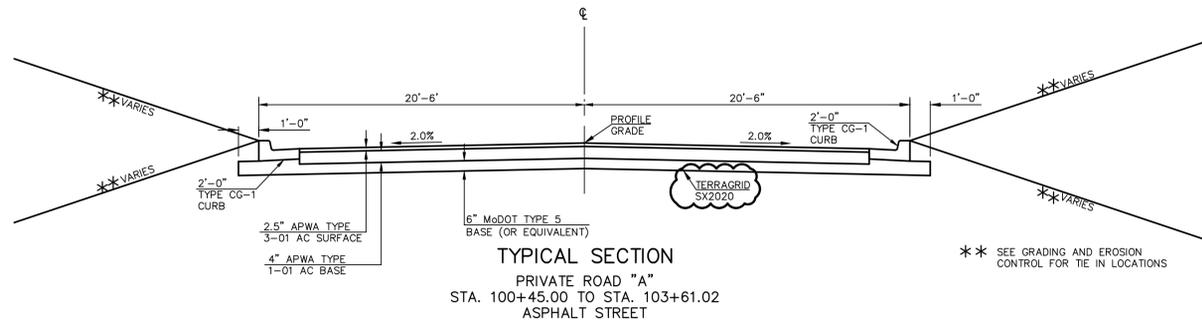
**KAW VALLEY ENGINEERING**  
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN THE STATE OF MISSOURI. CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/19

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

PRIVATE ROAD PLANS  
GENERAL LAYOUT SHEET

PROJ. NO. A14 7067-1  
DESIGNER LDO DRAWN BY JF  
CFN 7067-11R\_GLS  
SHEET 1 REV 1  
C-3 1

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.



1	07-02-19	REVISED PER CITY COMMENTS	LDO	JT	LDO	CHK
0	5-16-19	INITIAL ISSUE	LDO	BKR	LDO	CHK
					DSN	DWN



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  
www.kveng.com | info@kveng.com

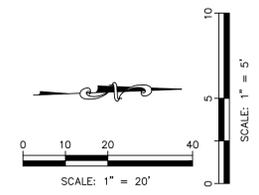
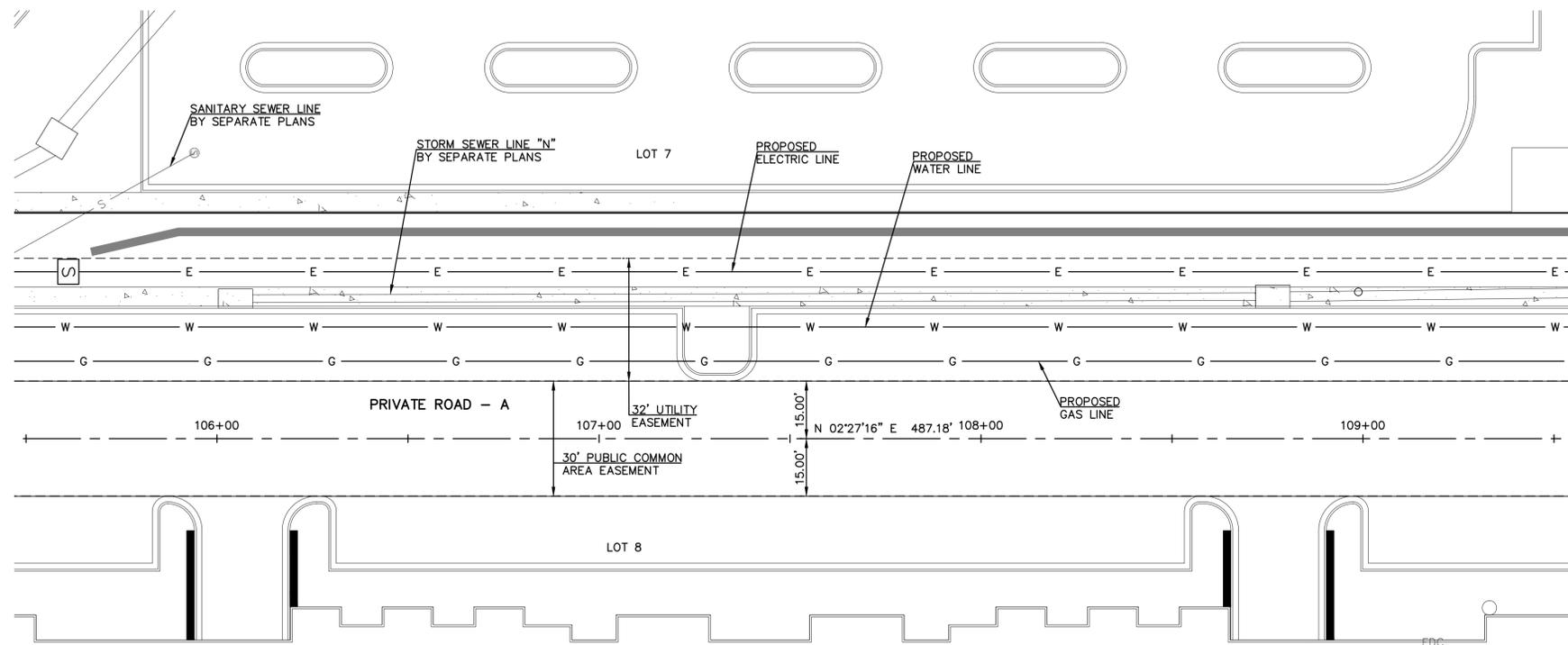
**KAW VALLEY ENGINEERING**  
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN THE STATE OF MISSOURI. CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/19

STREETS OF WEST PRYOR NW Q NW PRYOR RD & NW LOWENSTEIN DR LEE'S SUMMIT, MISSOURI		PRIVATE ROAD PLANS TYPICAL SECTIONS FOR PRIVATE ROAD - A	
PROJ. NO.	A14-7067-1	DESIGNER	LDO
CFN	7067-11R_TYP	DRAWN BY	5
SHEET	C-4	REV	1

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.





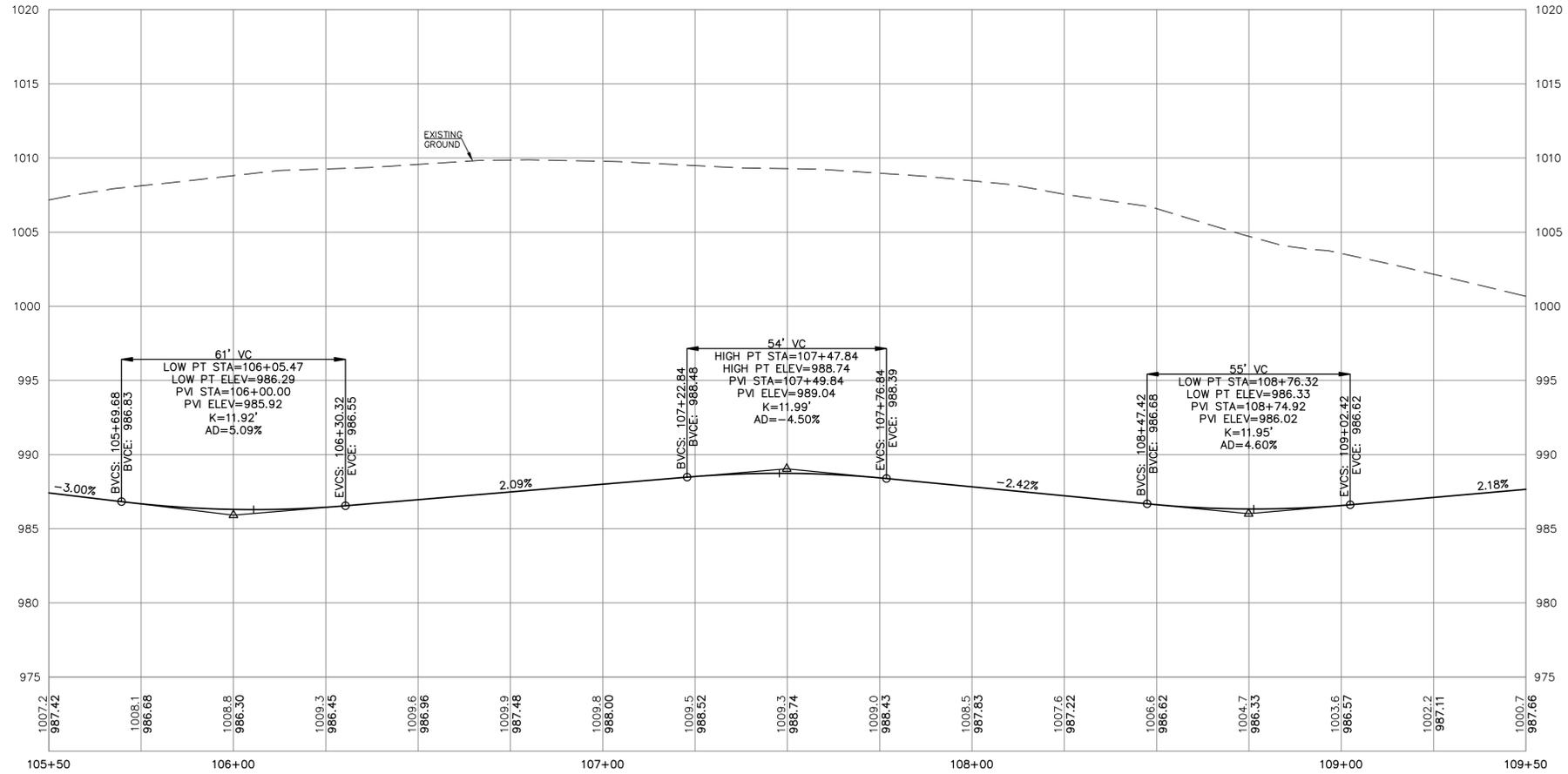


**LEGEND**

— DRY CURB

TC TOP OF CURB ELEVATION

EOP EDGE OF PAVEMENT ELEVATION



0	5-18-19	INITIAL ISSUE	LDO	BKR	LDO
0		REV	DATE	DESCRIPTION	CHK

LEON D. OSBOURN  
ENGINEER  
MO # 021726

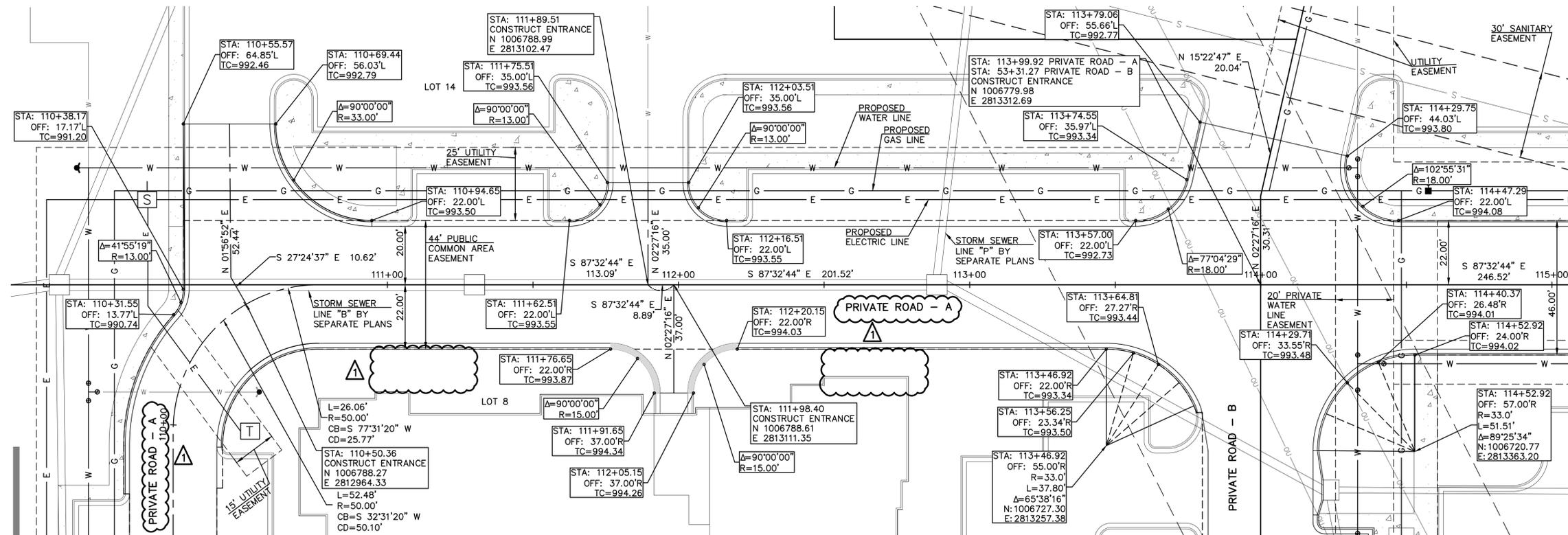
2319 N. JACKSON | P.O. BOX 1304  
JUNCTION CITY, KANSAS 66441  
PH. (785) 762-5040 | FAX (785) 762-7744  
j@kveeng.com | www.kveeng.com

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

**STREETS OF WEST PRYOR**  
NWQ NW PRYOR RD & NW LOWENSTEIN DR  
LEE'S SUMMIT, MISSOURI

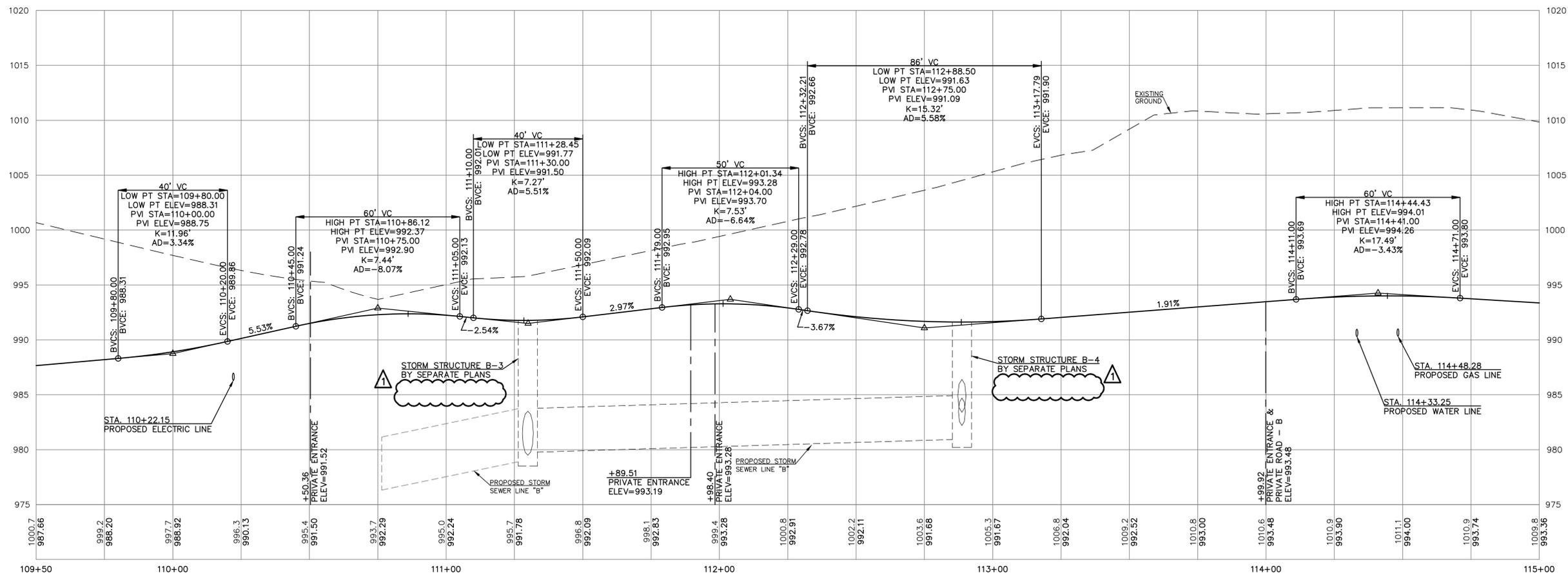
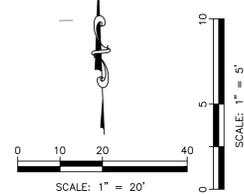
PRIVATE ROAD PLANS  
PRIVATE ROAD - A - PLAN & PROFILE

PROJ. NO. **A14 7067-1**  
DESIGNER **LDO** DRAWN BY **5**  
CFN  
SHEET **7067-11R-STPP** REV  
**C-7** **0**



**LEGEND**

— DRY CURB  
 TC TOP OF CURB ELEVATION  
 EOP EDGE OF PAVEMENT ELEVATION



1	07-02-19	REVISED PER CITY COMMENTS	LD0	JD	LD0
0	5-16-19	INITIAL ISSUE	LD0	BKR	LD0
					DSN
					DWN
					CHK

STATE OF MISSOURI  
 LEON D. OSBOURN  
 LICENSED PROFESSIONAL ENGINEER  
 NUMBER 111-111-1111  
 EXPIRES 12/31/19

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  
 info@kveeng.com | www.kveeng.com

**KAW VALLEY ENGINEERING**  
 KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN THE STATE OF MISSOURI UNDER LICENSE # 000842. EXPIRES 12/31/19

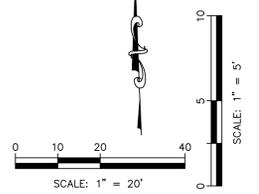
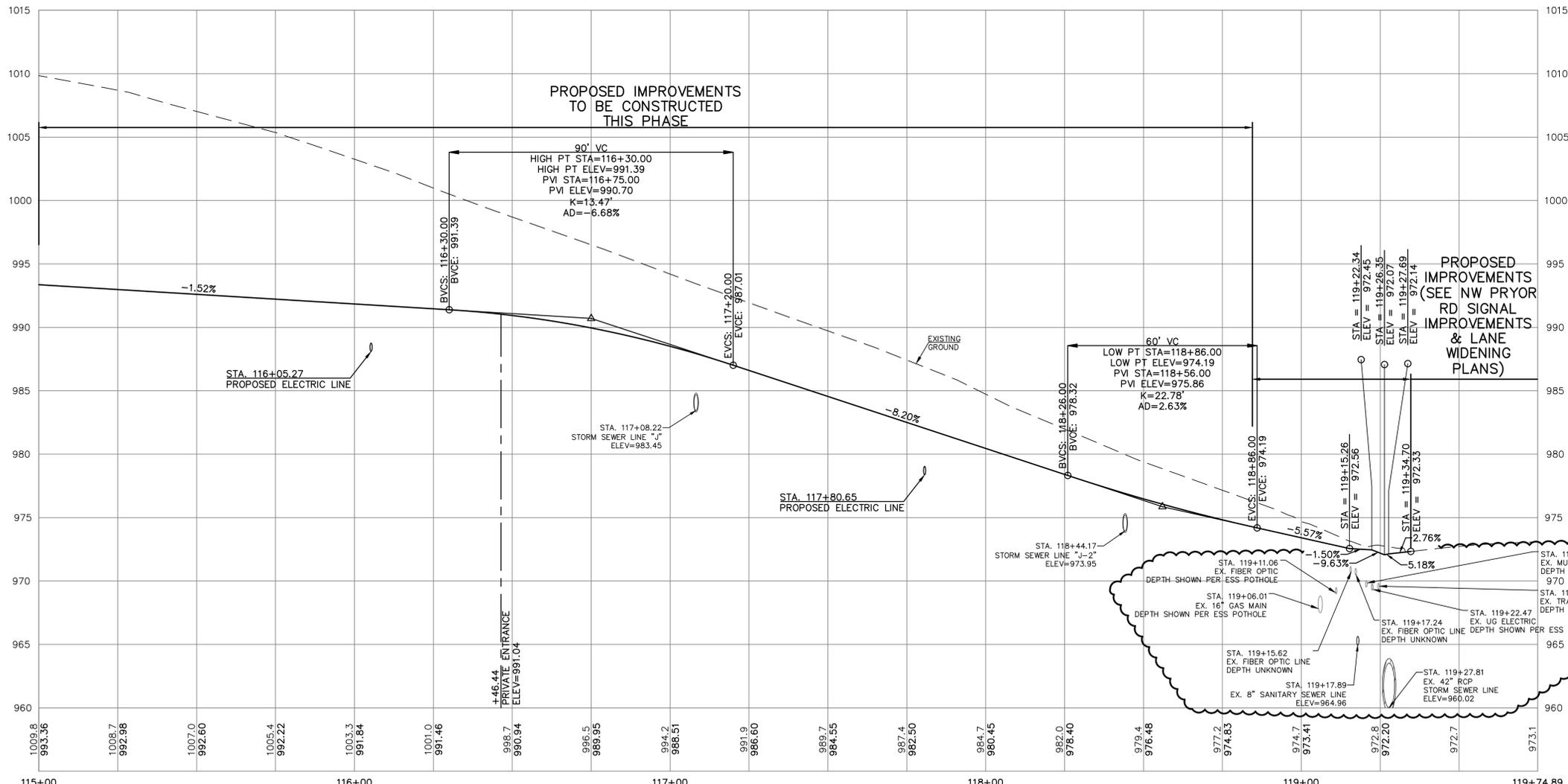
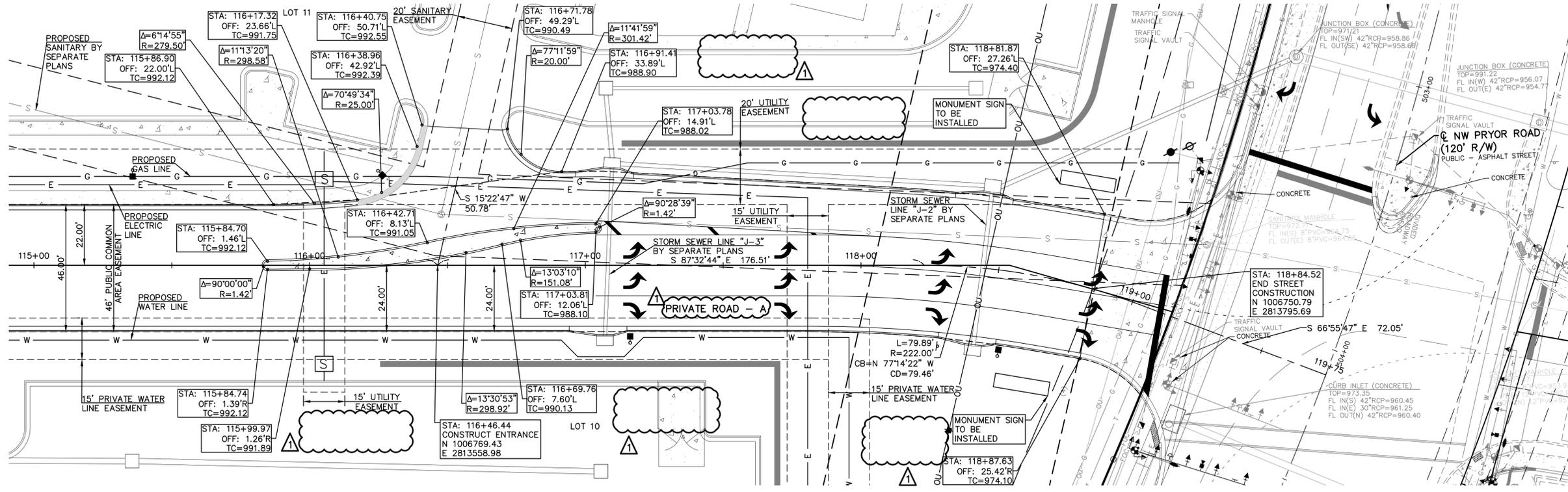
**STREETS OF WEST PRYOR**  
 NW QW PRYOR RD & NW LOWENSTEIN DR  
 LEE'S SUMMIT, MISSOURI

PRIVATE ROAD PLANS  
 PRIVATE ROAD - A - PLAN & PROFILE

PROJ. NO. A14\_7067-1  
 DESIGNER LD0 DRAWN BY 5  
 CFN 7067-11R\_STPP  
 SHEET REV

C-8 1

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.



**LEGEND**  
 DRY CURB  
 TC TOP OF CURB ELEVATION  
 EOP EDGE OF PAVEMENT ELEVATION

PROJ. NO.	A14 7067-1
DESIGNER	LDO
DRAWN BY	5
CFN	7067-11R STVP
SHEET	C-9
REV	DATE DESCRIPTION
1	07-02-19 REVISED PER CITY COMMENTS
0	5-16-19 INITIAL ISSUE
LDO	JT
LDO	BRR
DSN	DWN
CHK	CHK

STATE OF MISSOURI  
 LEON D. OSBOURN  
 LICENSED PROFESSIONAL ENGINEER  
 NUMBER 73178

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  
 jdo@kveeng.com | www.kveeng.com

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

**STREETS OF WEST PRYOR**  
 NWQ NW PRYOR RD & NW LOWENSTEIN DR  
 LEE'S SUMMIT, MISSOURI

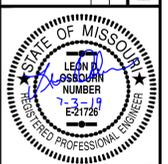
**PRIVATE ROAD PLANS**  
 PRIVATE ROAD - A - PLAN & PROFILE

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.



LD0	LD0	LD0	LD0
LD0	LD0	LD0	LD0
LD0	LD0	LD0	LD0
LD0	LD0	LD0	LD0

REV	DATE	DESCRIPTION
1	07-02-19	REVISED PER CITY COMMENTS
0	5-16-19	INITIAL ISSUE



LEON D. OSBOURN  
ENGINEER  
MO # 021726

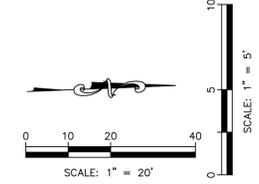
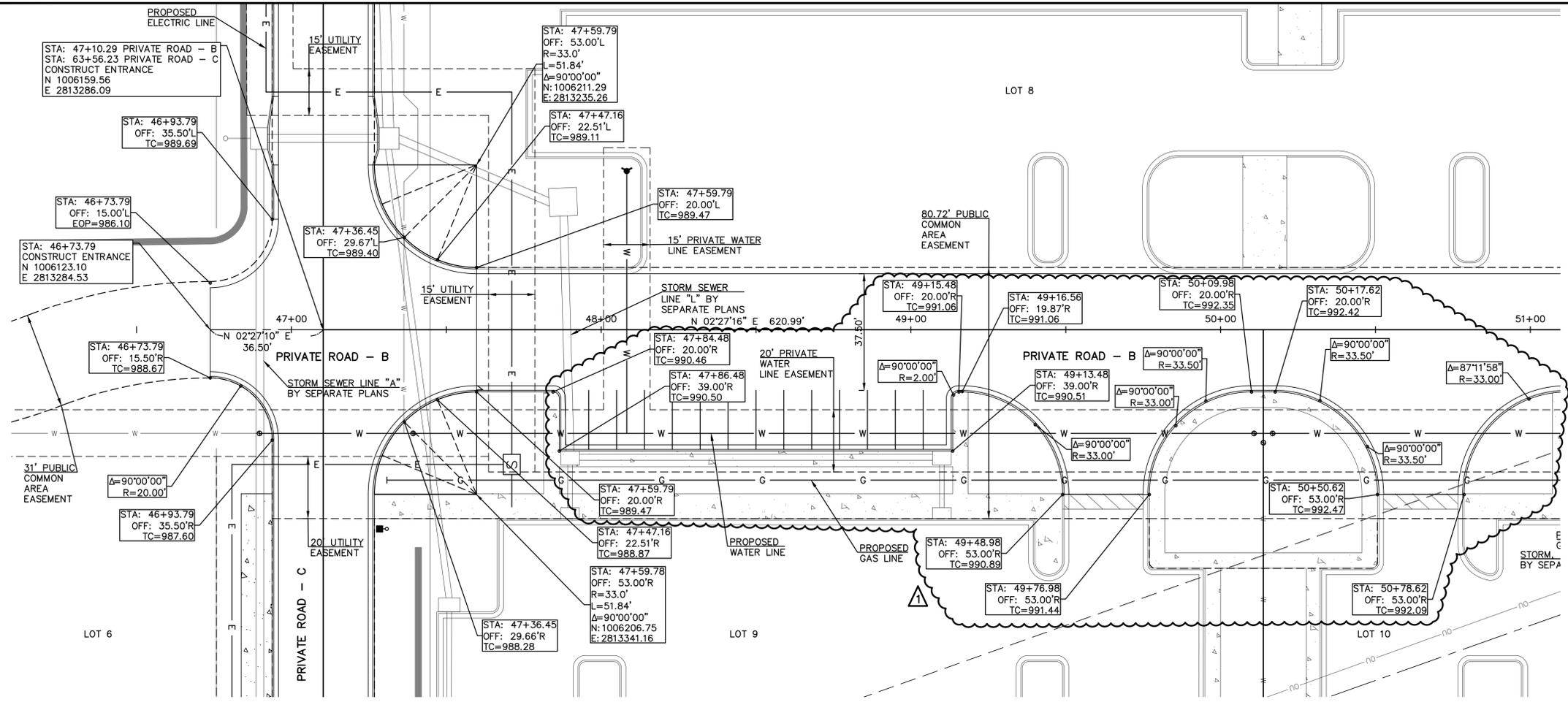
2319 N. JACKSON | P.O. BOX 1304  
JUNCTION CITY, KANSAS 66441  
PH. (785) 762-5040 | FAX (785) 762-7744  
j@kveeng.com | www.kveeng.com

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

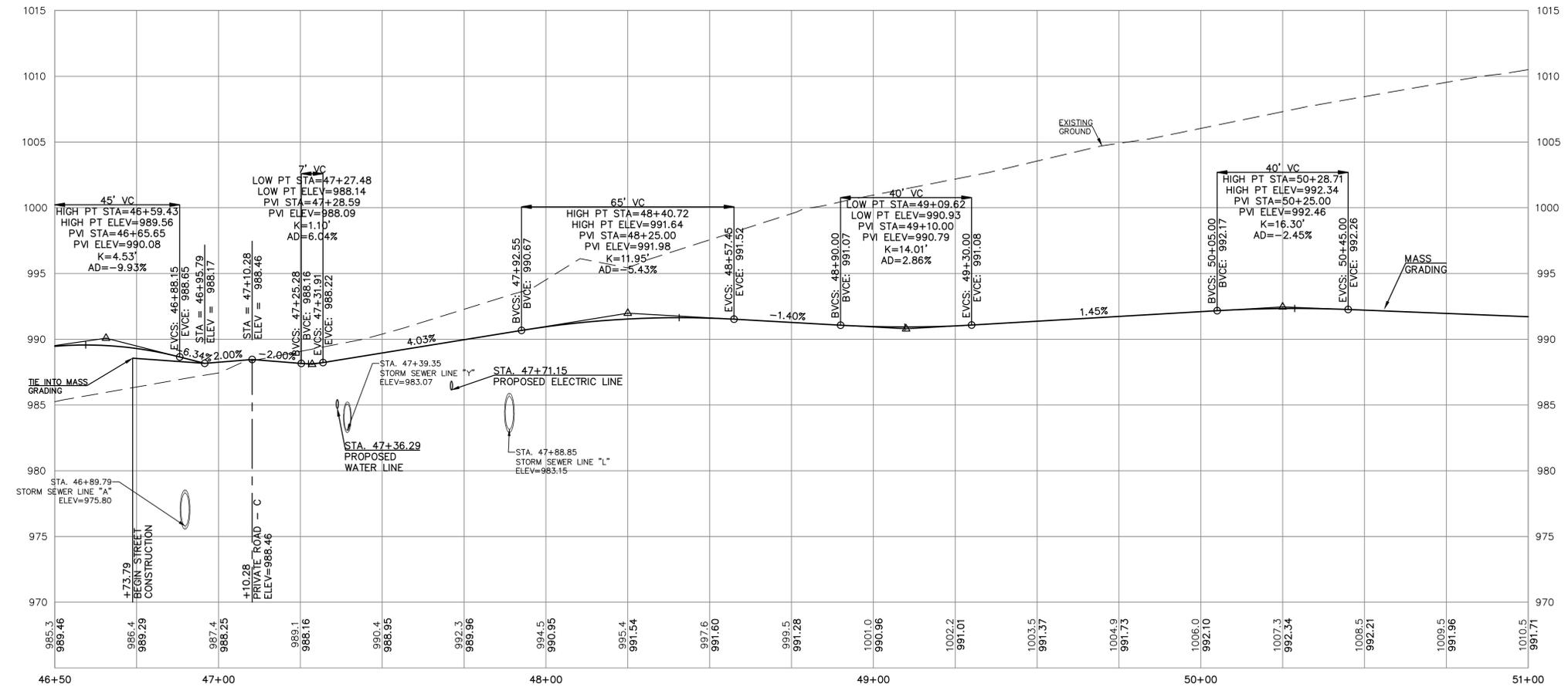
**STREETS OF WEST PRYOR**  
NWQ NW PRYOR RD & NW LOWENSTEIN DR  
LEE'S SUMMIT, MISSOURI

**PRIVATE ROAD PLANS**  
**PRIVATE ROAD - B - PLAN & PROFILE**

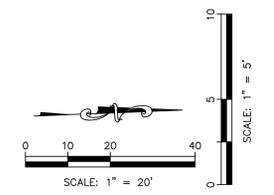
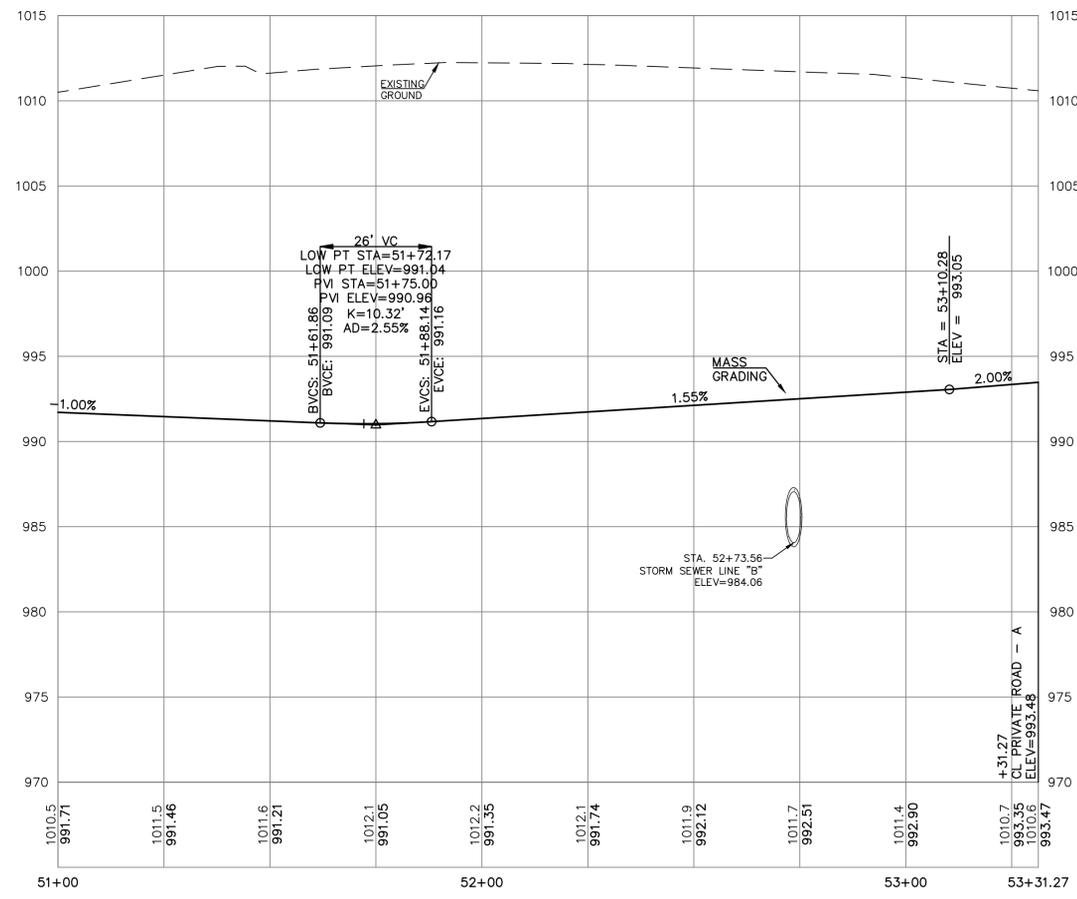
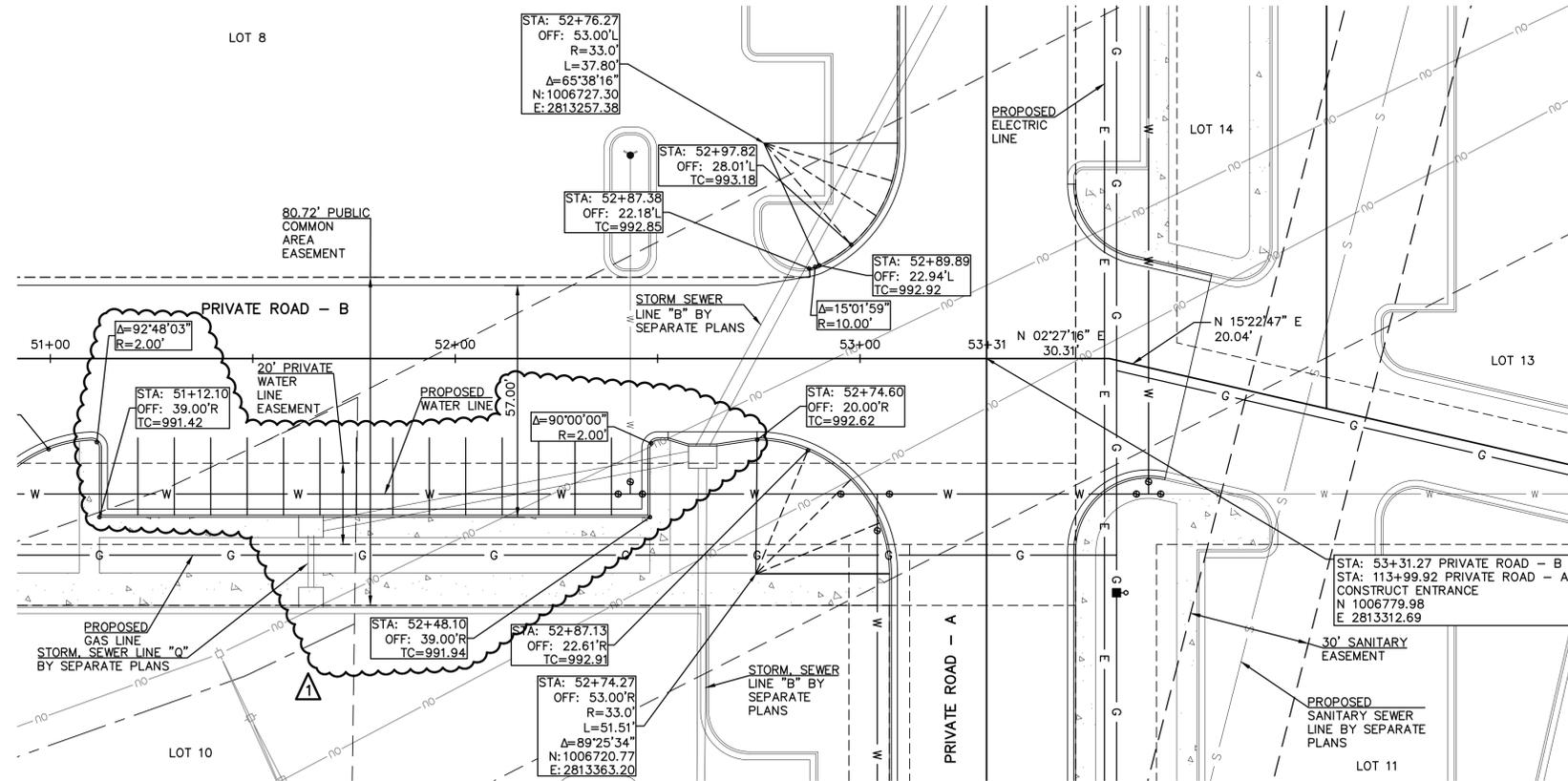
PROJ. NO.	A14 7067-1
DESIGNER	LD0
DRAWN BY	LD0
CFN	7067-1R STPP
SHEET	C-11
REV	1



- LEGEND**
- DRY CURB
  - TC TOP OF CURB ELEVATION
  - EOP EDGE OF PAVEMENT ELEVATION



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.



PROJ. NO.	A14-7067-1
DESIGNER	LDO
CFN	CFN
SHEET	7067-1R-STPP
C-12	1

REV	DATE	DESCRIPTION
1	07-02-19	REVISED PER CITY COMMENTS
0	5-16-19	INITIAL ISSUE

STATE OF MISSOURI  
 LEON D. OSBOURN  
 LICENSED PROFESSIONAL ENGINEER  
 NUMBER 153719

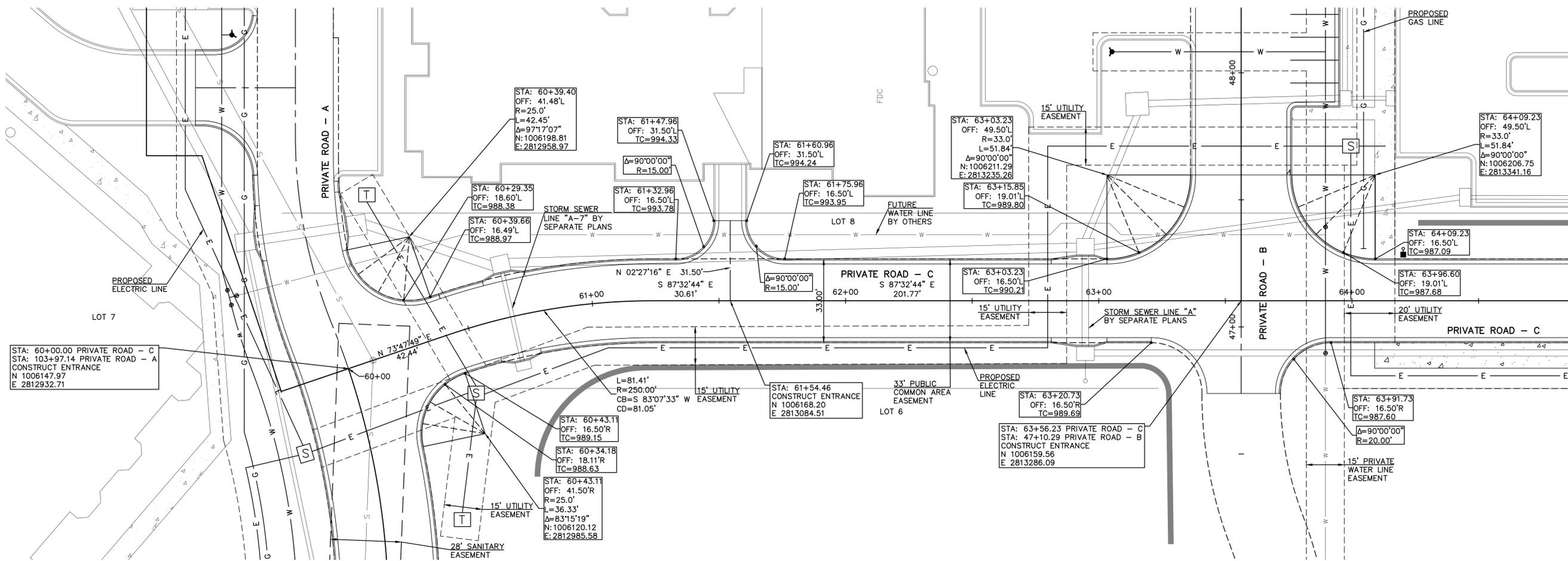
LEON D. OSBOURN  
 ENGINEER  
 MO # 021726

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

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

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

**PRIVATE ROAD PLANS**  
 PRIVATE ROAD - B - PLAN & PROFILE



STA: 60+00.00 PRIVATE ROAD - C  
 STA: 103+97.14 PRIVATE ROAD - A  
 CONSTRUCT ENTRANCE  
 N 1006147.97  
 E 2812932.71

STA: 60+39.40  
 OFF: 41.48'L  
 R=25.0'  
 L=42.45'  
 Δ=97°17'07"  
 N:1006198.81  
 E:2812958.97

STA: 60+29.35  
 OFF: 18.60'L  
 TC=988.38

STA: 61+47.96  
 OFF: 31.50'L  
 TC=994.33

STA: 61+60.96  
 OFF: 31.50'L  
 TC=994.24

STA: 63+03.23  
 OFF: 49.50'L  
 R=33.0'  
 L=51.84'  
 Δ=90°00'00"  
 N:1006211.29  
 E:2813235.26

STA: 64+09.23  
 OFF: 49.50'L  
 R=33.0'  
 L=51.84'  
 Δ=90°00'00"  
 N:1006206.75  
 E:2813341.16

STA: 60+39.66  
 OFF: 16.49'L  
 TC=988.97

STA: 61+32.96  
 OFF: 16.50'L  
 TC=993.78

STA: 61+75.96  
 OFF: 16.50'L  
 TC=993.95

STA: 63+15.85  
 OFF: 19.01'L  
 TC=989.80

STA: 64+09.23  
 OFF: 16.50'L  
 TC=987.09

STA: 63+03.23  
 OFF: 16.50'L  
 TC=990.21

STA: 63+96.60  
 OFF: 19.01'L  
 TC=987.68

STA: 60+43.11  
 OFF: 16.50'R  
 TC=989.15

STA: 60+34.18  
 OFF: 18.11'R  
 TC=988.63

STA: 60+43.11  
 OFF: 41.50'R  
 R=25.0'  
 L=36.33'  
 Δ=83°15'19"  
 N:1006120.12  
 E:2812985.58

STA: 61+54.46  
 CONSTRUCT ENTRANCE  
 N 1006168.20  
 E 2813084.51

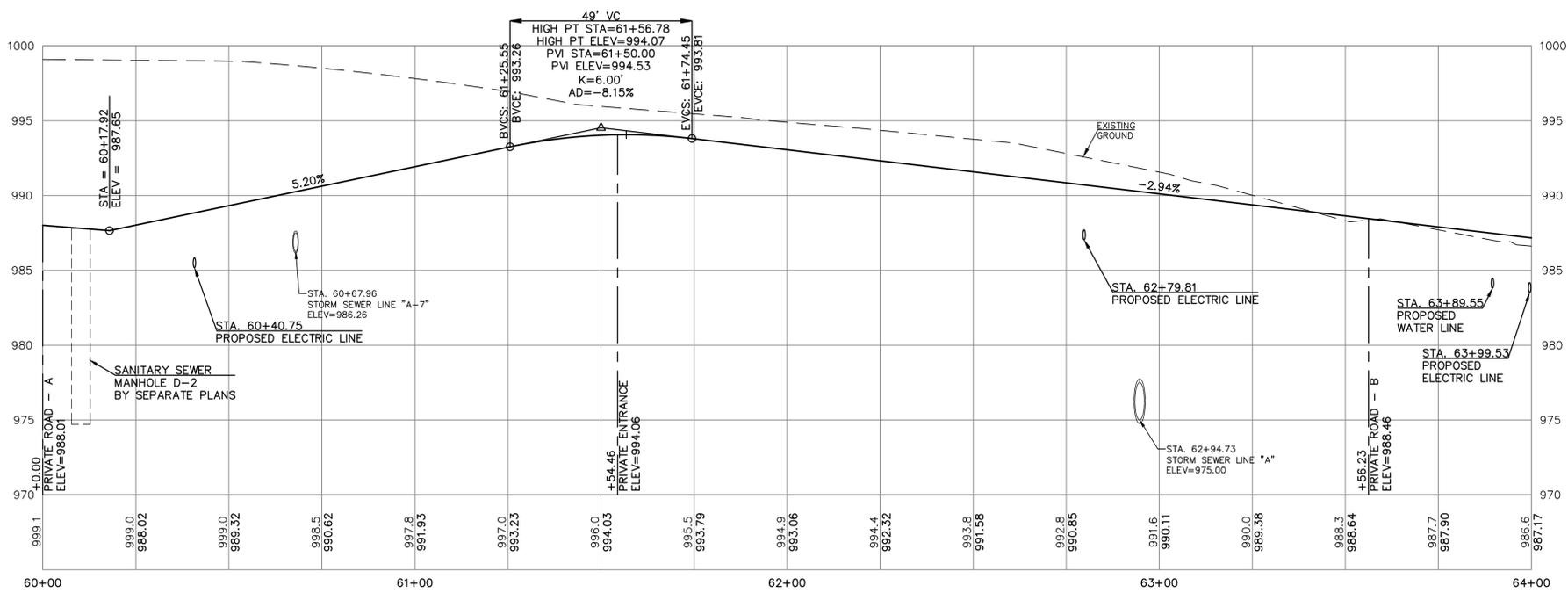
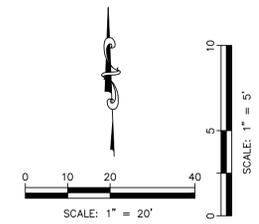
STA: 63+20.73  
 OFF: 16.50'R  
 TC=989.69

STA: 63+56.23 PRIVATE ROAD - C  
 STA: 47+10.29 PRIVATE ROAD - B  
 CONSTRUCT ENTRANCE  
 N 1006159.56  
 E 2813286.09

STA: 63+91.73  
 OFF: 16.50'R  
 TC=987.60

Δ=90°00'00"  
 R=20.00'

**LEGEND**  
 DRY CURB  
 TC TOP OF CURB ELEVATION  
 EOP EDGE OF PAVEMENT ELEVATION



PROJ. NO.	A14_7067-1
DESIGNER	LDO
DRAWN BY	5
CFN	7067-11R-STPP
SHEET	REV
C-13	0

REV	DATE	DESCRIPTION
0	5-16-19	INITIAL ISSUE
		DSN
		DWN
		CHK

STATE OF MISSOURI  
 LEON D. OSBOURN  
 LICENSED PROFESSIONAL ENGINEER  
 NUMBER 1717  
 EXPIRES 12/31/19

LEON D. OSBOURN  
 ENGINEER  
 MO # 021726

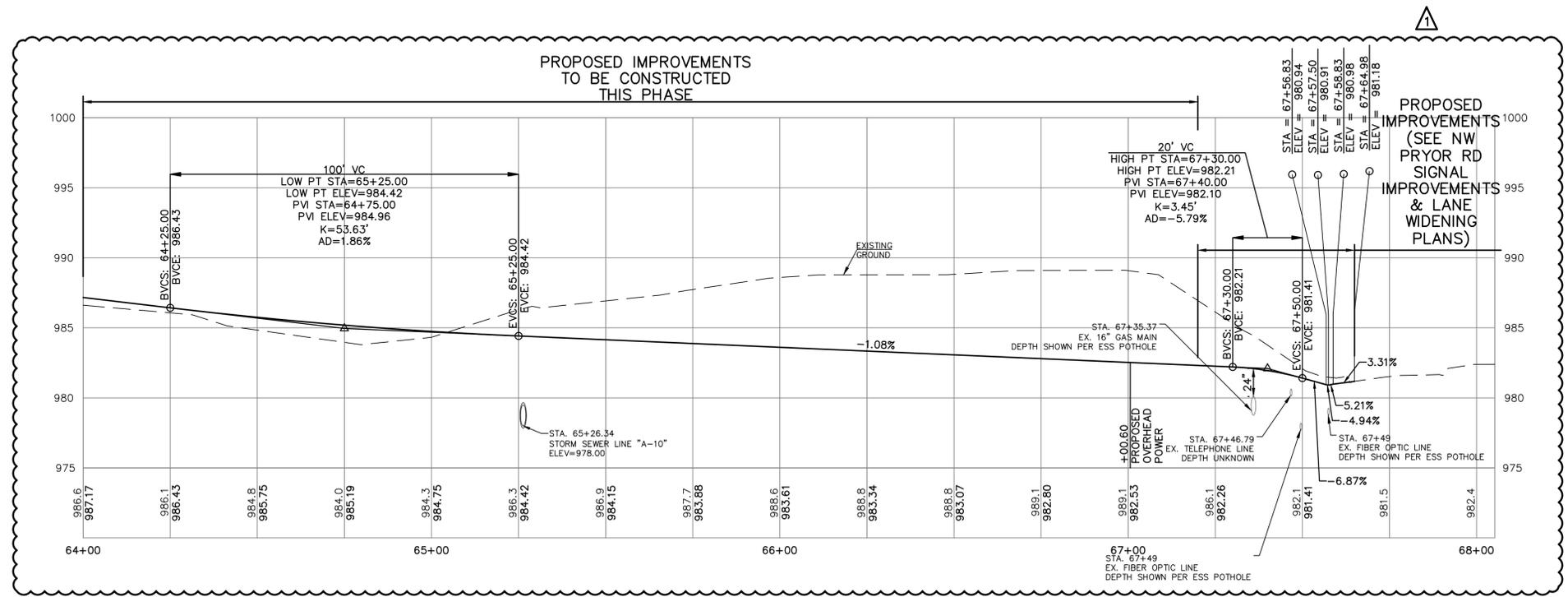
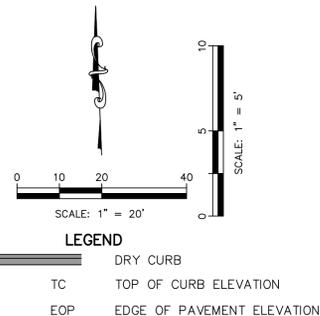
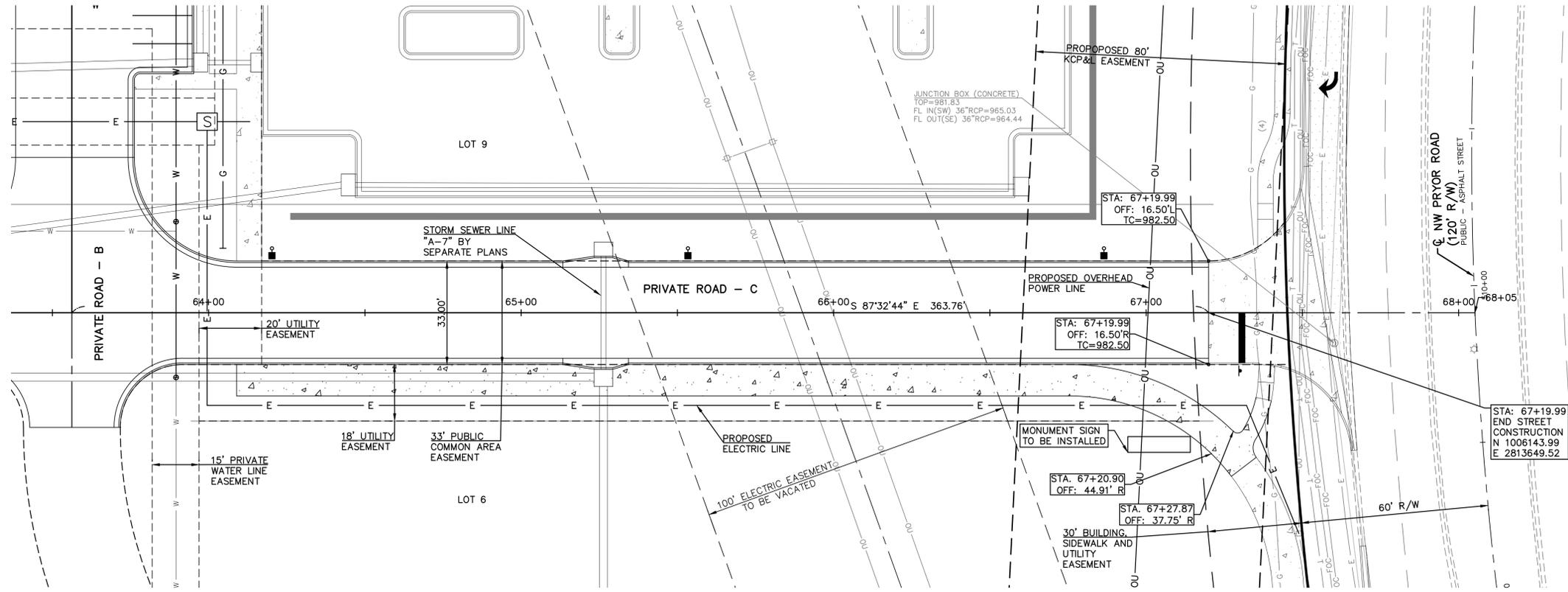
2319 N. JACKSON | P.O. BOX 1304  
 JUNCTION CITY, KANSAS 66441  
 PH. (785) 762-5040 | FAX (785) 762-7744  
 jdo@kveeng.com | www.kveeng.com

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

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

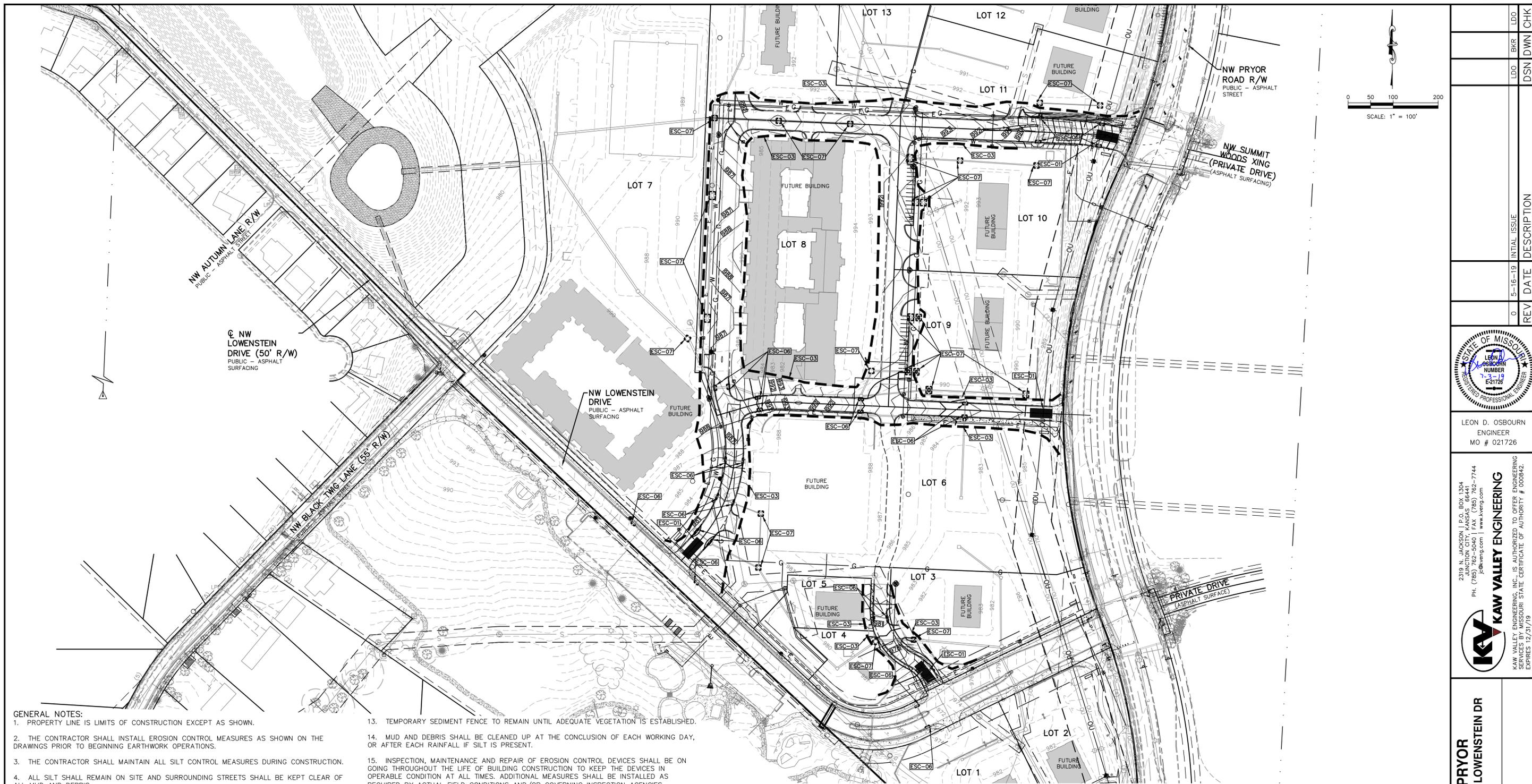
PRIVATE ROAD PLANS  
 PRIVATE ROAD - C - PLAN & PROFILE

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.



PROJ. NO.	A14-7067-1	DESIGNER	LDO	DRAWN BY	5
CFN	7067-11R-STPP	SHEET	1	REV	
C-14					
STREETS OF WEST PRYOR NWQ NW PRYOR RD & NW LOWENSTEIN DR LEE'S SUMMIT, MISSOURI					
PRIVATE ROAD PLANS PRIVATE ROAD - C - PLAN & PROFILE					
KAW VALLEY ENGINEERING KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN MISSOURI STATE CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/19					
2319 N. JACKSON   P.O. BOX 1304 JUNCTION CITY, KANSAS 66441 PH. (785) 762-5040   FAX (785) 762-7744 joe@kveeng.com   www.kveeng.com					
LEON D. OSBOURN ENGINEER MO # 021726					
REV	DATE	DESCRIPTION	DSN	DWN	CHK
1	07-02-19	REVISED PER CITY COMMENTS	LDO	JT	LDO
0	5-16-19	INITIAL ISSUE	LDO	BKR	LDO

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.



**GENERAL NOTES:**

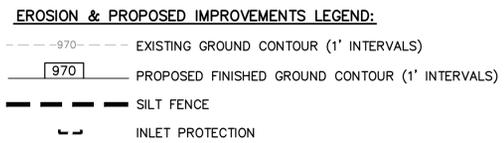
1. PROPERTY LINE IS LIMITS OF CONSTRUCTION EXCEPT AS SHOWN.
2. THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE DRAWINGS PRIOR TO BEGINNING EARTHWORK OPERATIONS.
3. THE CONTRACTOR SHALL MAINTAIN ALL SILT CONTROL MEASURES DURING CONSTRUCTION.
4. ALL SILT SHALL REMAIN ON SITE AND SURROUNDING STREETS SHALL BE KEPT CLEAR OF ALL MUD AND DEBRIS.
5. A SEDIMENTATION BARRIER IS TO BE INSTALLED AS SHOWN.
6. ACCUMULATED SEDIMENT SHALL BE REMOVED AND THE SEDIMENTATION BARRIERS MAINTAINED AS NEEDED TO PREVENT SEDIMENTATION BYPASS OF THE BARRIER.
7. SLOPES ARE TO BE LEFT IN A ROUGH CONDITION DURING GRADING.
8. CURB INLET SEDIMENTATION BARRIERS ARE TO BE INSTALLED AROUND INLETS AND WEIRS WHERE SEDIMENTATION IS A CONCERN. INLET BARRIERS SHALL BE EITHER BLOCK AND GRAVEL, OR SECURED STRAW BALES, OR SILT FENCE.
9. SEDIMENT IS TO BE REMOVED FROM STORM WATER DRAINAGE SYSTEMS.
10. RIPRAP IS TO BE INSTALLED AT AREAS OF CONCENTRATED FLOW (I.E. CULVERT OUTLETS).
11. CONTRACTOR IS RESPONSIBLE FOR INSTALLING ANY ADDITIONAL EROSION CONTROL AS HE/SHE DEEMS NECESSARY.
12. THE CONTRACTOR SHALL PROVIDE ALL MATERIALS, TOOLS, EQUIPMENT AND LABOR AS NECESSARY TO INSTALL AND MAINTAIN ADEQUATE EROSION AND SILTATION CONTROLS REQUIRED TO PREVENT SOIL EROSION FROM LEAVING THE PROJECT SITE. IT SHALL BE THE CONTRACTOR'S SOLE RESPONSIBILITY TO ENSURE THAT METHODS UTILIZED ARE ADEQUATE AND COMPLY WITH REQUIREMENTS OF THE SPECIFICATIONS AND GOVERNMENTAL AGENCIES HAVING JURISDICTION OVER THE WORK.

13. TEMPORARY SEDIMENT FENCE TO REMAIN UNTIL ADEQUATE VEGETATION IS ESTABLISHED.
14. MUD AND DEBRIS SHALL BE CLEANED UP AT THE CONCLUSION OF EACH WORKING DAY, OR AFTER EACH RAINFALL IF SILT IS PRESENT.
15. INSPECTION, MAINTENANCE AND REPAIR OF EROSION CONTROL DEVICES SHALL BE ON GOING THROUGHOUT THE LIFE OF BUILDING CONSTRUCTION TO KEEP THE DEVICES IN OPERABLE CONDITION AT ALL TIMES. ADDITIONAL MEASURES SHALL BE INSTALLED AS REQUIRED BY ACTUAL FIELD CONDITIONS AND/OR GOVERNING INSPECTION AGENCIES.
16. INSTALL CONSTRUCTION ENTRANCE AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING THE SITE AND AS SHOWN ON PLANS.
17. AT COMPLETION OF SITE GRADING AND OTHER RELATED CONSTRUCTION ACTIVITIES, ALL DISTURBED AREAS WITHIN THE PROJECT SITE SHALL BE SEEDED, SODDED, OR LANDSCAPED AS SHOWN ON THE LANDSCAPE PLAN WITHIN 14 DAYS.
18. TOPSOIL IS TO BE PLACED IN AREAS UNSUITABLE FOR VEGETATIVE GROWTH.
19. STRIP TOPSOIL PRIOR TO EXCAVATION, STOCKPILE AND SPREAD ONTO DISKED SUBGRADE (4" MIN) A THICKNESS OF 4 INCHES.
20. ROCK LINING (RIPRAP) SHALL BE DURABLE STONE CONTAINING A COMBINED TOTAL OF NOT MORE THAN 10 PERCENT OF EARTH, SAND, SHALE AND NON-DURABLE ROCK. AT LEAST 60 PERCENT OF THE MASS SHALL BE OF PIECES HAVING A MINIMUM WEIGHT OF 150 POUNDS OR MORE PER CUBIC FOOT.
21. THE CONTRACTOR SHALL HAVE THE RESPONSIBILITY FOR RESOLVING COMPLAINTS IN THE EVENT THAT COMPLAINTS OR DAMAGE CLAIMS ARE FILED DUE TO DAMAGES OCCURRING ADJACENT TO OR DOWNSTREAM FROM PROPERTY BY SEDIMENT RESULTING FROM EROSION ON THE PROJECT SITE.
22. GOOD HOUSEKEEPING PRACTICES SHALL BE MAINTAINED ON SITE TO KEEP SOLID WASTE FROM ENTRY INTO WATERS.

**CONTRACTOR TO COORDINATE EROSION CONTROL WITH MASS GRADING CONSTRUCTION PLANS**

23. ALL FUELING FACILITIES PRESENT ON SITE SHALL ADHERE TO APPLICABLE FEDERAL AND STATE REQUIREMENTS CONCERNING UNDERGROUND STORAGE, ABOVE GROUND STORAGE AND DISPENSERS, INCLUDING SPILL PREVENTION, CONTROL AND COUNTER MEASURES.
24. RIGHT OF WAY TO BE STABILIZED AS REQUIRED BY APWA SECTION 2400.
25. EROSION CONTROL IS TO BE PLACED IN PHASING AS CONSTRUCTION PROGRESSES.
26. MINIMAL WASHING OF CONCRETE EQUIPMENT ALLOWED, CHUTE ETC. CONCRETE WASHOUT OF THE DRUM IS NOT ALLOWED. ANY PIT/WASHOUT AREA NEEDS TO BE MAINTAINED IN A NON-DISCHARGING MANNER AND ANY WASTE RESIDUE WILL NEED TO BE CLEANED OUT AND REMOVED AT THE END OF PROJECT.
27. EROSION CONTROL SEDIMENT FENCE TO BE INSTALLED 1'-0" BEHIND CURB & GUTTER UPON COMPLETION OF BACKFILL OF CURB IN ALL AREAS WHERE SLOPES FROM LOT DRAIN TOWARDS CURB. UPON COMPLETION OF FINAL GRADING THE TOES OF ALL EMBANKMENTS IN EXCESS OF TWO FEET IN HEIGHT WILL HAVE EROSION CONTROL SEDIMENT FENCE INSTALLED.

- DETAILS - SEE EROSION CONTROL DETAIL SHEETS FOR THE FOLLOWING DETAILS
- ESC-01 CONSTRUCTION ENTRANCE DETAIL
  - ESC-03 SILT FENCE
  - ESC-06 CURB INLET PROTECTION
  - ESC-07 AREA INLET AND JUNCTION BOX PROTECTION



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.

PROJ. NO.	A14 7067-1	
DESIGNER	LDO	
DRAWN BY	JT	
CFN	7067-1IR_EOP	
SHEET	C-15	
REV	0	
REV	DATE	DESCRIPTION
0	5-16-19	INITIAL ISSUE
LDO	DSN	DWN
LDO	BKR	CHK



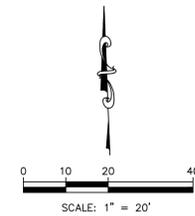
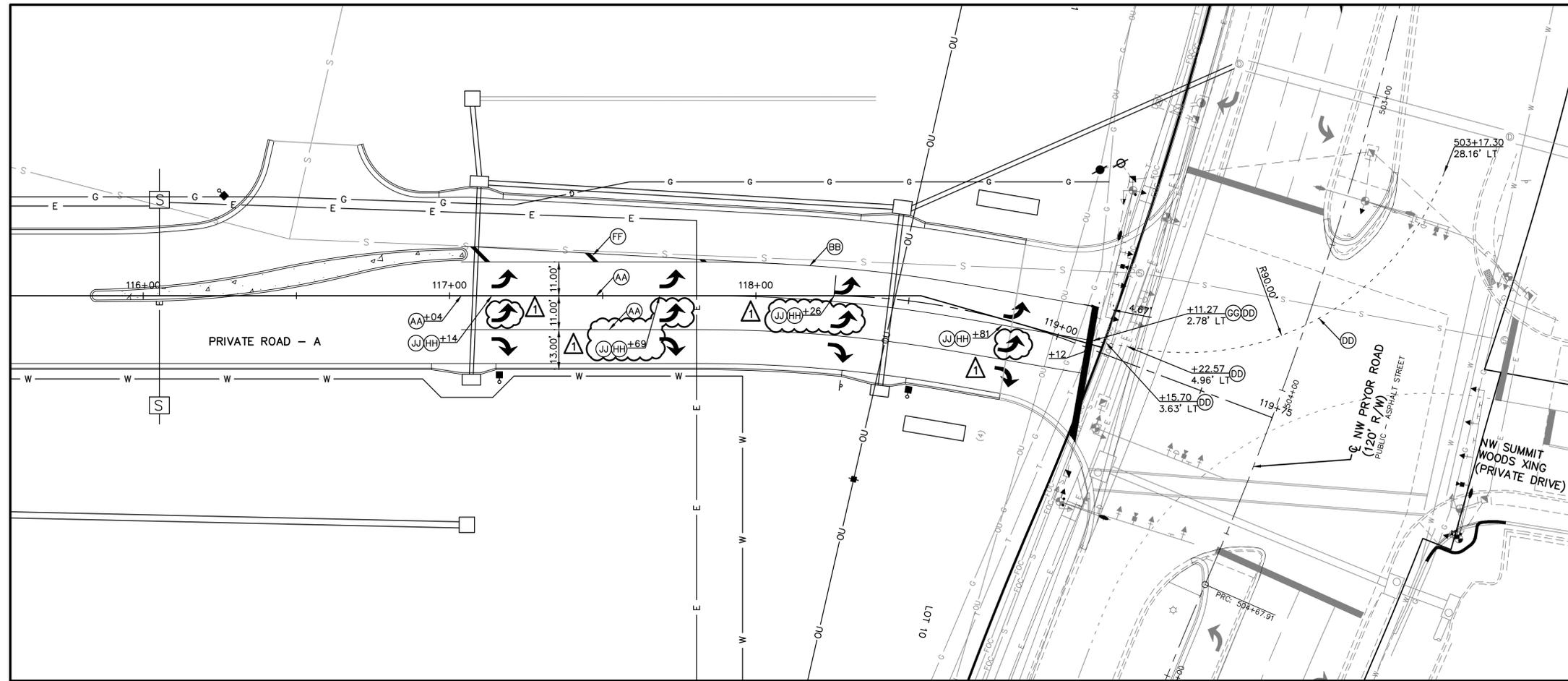
LEON D. OSBOURN  
ENGINEER  
MO # 021726

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

**KAW VALLEY ENGINEERING**  
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN THE STATE OF MISSOURI. LICENSE # 0008642. EXPIRES 12/31/19

**STREETS OF WEST PRYOR**  
NW Q NW PRYOR RD & NW LOWENSTEIN DR  
LEE'S SUMMIT, MISSOURI

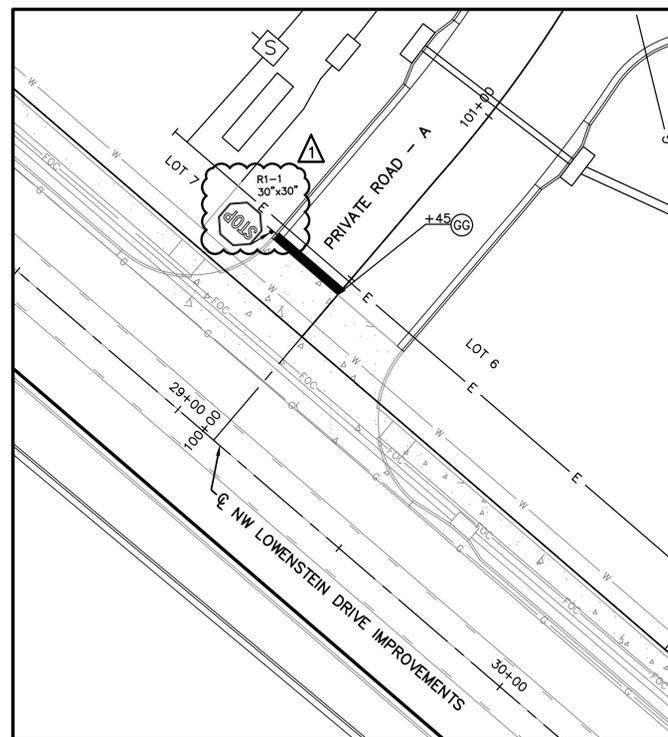
**PRIVATE ROAD PLANS**  
**EROSION CONTROL PLAN**



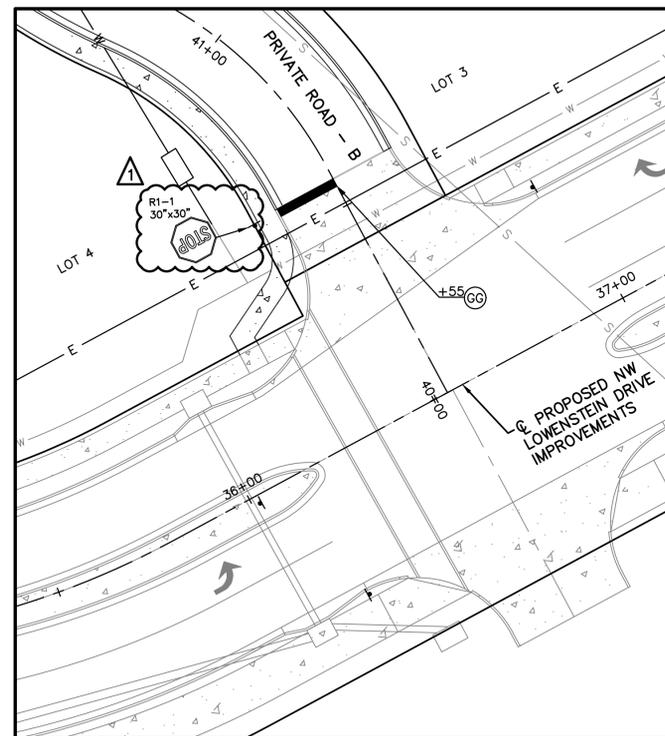
PRIVATE ROAD - A PAVEMENT MARKING

**NOTE:**  
 1. PAVEMENT MARKING SHALL BE PROVIDED AND INSTALLED IN ACCORDANCE WITH THE CURRENT CITY OF LEE'S SUMMIT PAVEMENT MARKING STANDARDS.

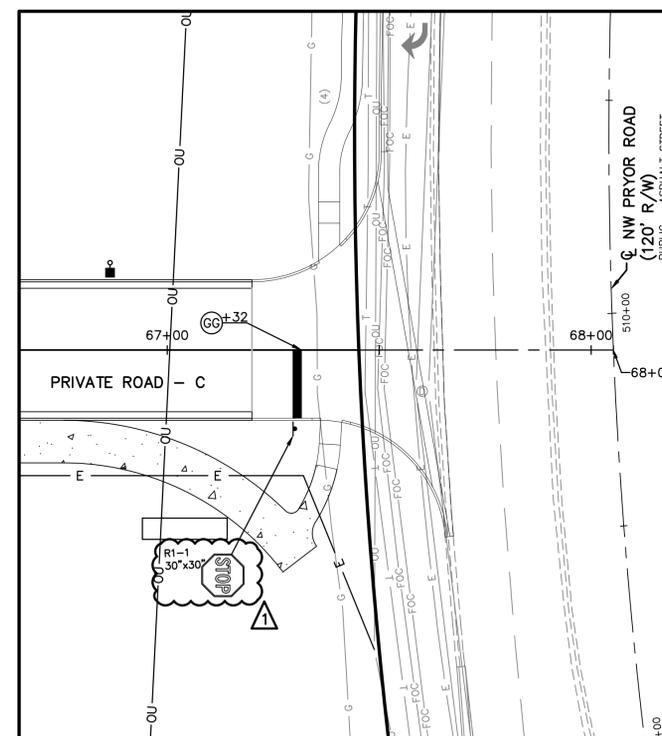
MARK	ITEM
AA	4" SOLID WHITE LINE (HIGH BUILD PAINT)
BB	4" DOUBLE YELLOW LINE (HIGH BUILD PAINT)
CC	NOT USED
DD	6" DASHED WHITE EXTENSION LINE (THERMOPLASTIC)
EE	NOT USED
FF	12" SOLID YELLOW LINE (THERMOPLASTIC)
GG	24" STOP BAR (THERMOPLASTIC)
HH	TURN ARROW WHITE (LEFT) (THERMOPLASTIC)
JJ	TURN ARROW WHITE (RIGHT) (THERMOPLASTIC)
KK	NOT USED



PRIVATE ROAD - A & NW LOWENSTEIN DRIVE PAVEMENT MARKING



PRIVATE ROAD - B & NW LOWENSTEIN DRIVE PAVEMENT MARKING



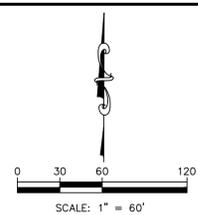
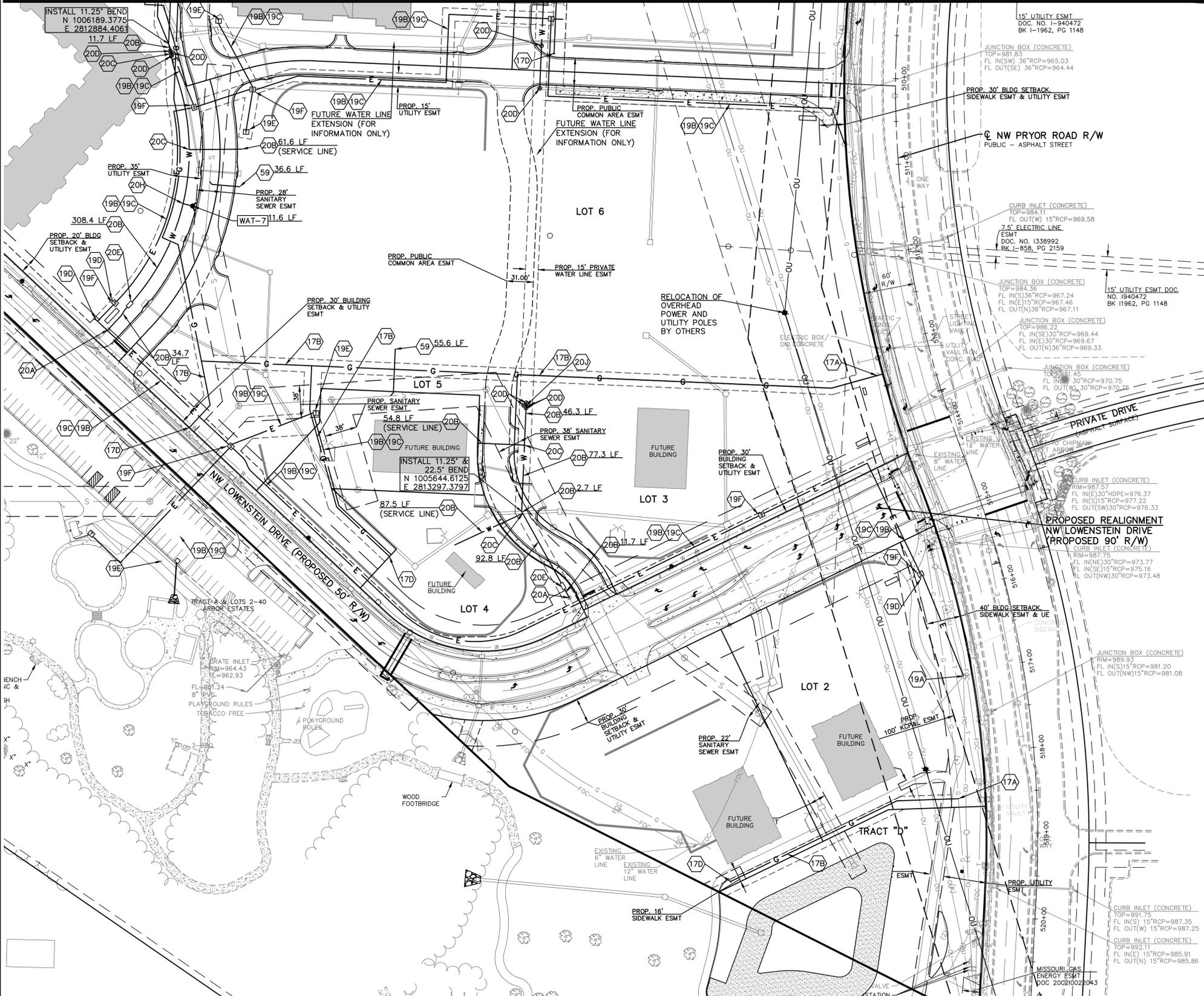
PRIVATE ROAD - C & NW LOWENSTEIN DRIVE PAVEMENT MARKING

PROJ. NO.	A14_7067-1	
DESIGNER	LDO	
CFN	7067-11R_PMP	
SHEET	C-16	
REV	1	
REV	DATE	DESCRIPTION
0	5-16-19	INITIAL ISSUE
1	07-02-19	REVISED PER CITY COMMENTS
LDO	DD	CHK
LDO	BKR	LDO
DSN	DWN	CHK

LEON D. OSBOURN  
 ENGINEER  
 MO # 021726

**KAW VALLEY ENGINEERING**  
 KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN THE STATE OF MISSOURI. EXPIRES 12/31/19.  
 PH. (785) 762-5040 | FAX (785) 762-7744  
 j@kveeng.com | www.kveeng.com

2319 N. JACKSON, P.O. BOX 1304  
 JUNCTION CITY, KANSAS 66441



**NOTE:**  
 1. CONTRACTOR SHALL REFER TO ARCHITECTURAL PLANS FOR EXACT LOCATIONS AND DIMENSIONS OF ENTRANCE, SLOPED PAVING, EXIT PORCHES, RAMPS, TRUCK DOCKS, PRECISE BUILDING DIMENSIONS AND EXACT BUILDING UTILITY ENTRANCE LOCATIONS.  
 2. THESE PLANS HAVE NOT BEEN VERIFIED WITH FINAL ARCHITECTURAL CONTRACT DRAWINGS. CONTRACTOR SHALL VERIFY AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES. CONTRACTOR IS FULLY RESPONSIBLE FOR REVIEW AND COORDINATION OF ALL DRAWINGS AND CONTRACTOR DOCUMENTS.

- UTILITY NOTES:**
- CONSTRUCTION SHALL NOT START ON ANY PUBLIC WATER OR SANITARY SEWER SYSTEM UNTIL WRITTEN APPROVAL OR PERMITS HAVE BEEN RECEIVED FROM THE OWNER.
  - ALL UTILITY AND STORM SEWER TRENCHES CONSTRUCTED UNDER AREAS THAT RECEIVE PAVING SHALL BE BACKFILLED TO 18 INCHES ABOVE THE TOP OF THE PIPE WITH SELECT GRANULAR MATERIAL PLACED ON EIGHT-INCH LIFTS, AND COMPACTED TO 95% MODIFIED PROCTOR DENSITY.
  - CONTRACTOR SHALL NOT OPEN, TURN OFF, INTERFERE WITH, OR ATTACH ANY PIPE OR HOSE TO OR TAP ANY WATER MAIN BELONGING TO THE CITY UNLESS DULY AUTHORIZED TO DO SO BY THE CITY. ANY ADVERSE CONSEQUENCE OF ANY SCHEDULED OR UNSCHEDULED DISRUPTIONS OF SERVICE TO THE PUBLIC ARE TO BE THE LIABILITY OF THE CONTRACTOR. **KAW VALLEY ENGINEERING AND OWNER ARE TO BE HELD HARMLESS.**
  - DISINFECTION AND PRESSURE TESTING OF WATER LINES SHALL BE PERFORMED AND PAID FOR BY THE CONTRACTOR UNDER SUPERVISION OF A REPRESENTATIVE OF THE CITY WATER DEPARTMENT. CONTRACTOR SHALL NOTIFY THE CITY OF LEE'S SUMMIT WATER DEPARTMENT 24 HOURS MINIMUM, PRIOR TO ANY TESTING.
  - ALL WATER AND SANITARY SEWER SYSTEMS THAT ARE TO BE PUBLIC LINES SHALL BE CONSTRUCTED IN ACCORDANCE WITH SPECIFICATIONS PREVIOUSLY APPROVED BY THE CITY OF LEE'S SUMMIT AND SHALL BE INSPECTED BY THE CITY. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ASSURE THAT THIS INSPECTION OCCURS.
  - LOCATIONS SHOWN FOR PROPOSED WATER LINES ARE APPROXIMATE. VARIATIONS MAY BE MADE, WITH APPROVAL OF THE ENGINEER, TO AVOID CONFLICTS.
  - CONTRACTOR TO INSTALL TRACING WIRE ALONG ALL NON-METALLIC WATER MAINS AND SERVICE LINES PER SPECIFICATIONS.
  - CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICT AND POINTS OF CONNECTION PRIOR TO ANY CONSTRUCTION OF NEW UTILITIES.
  - WATER LINES SHALL HAVE A MINIMUM COVER OF 42 INCHES. ALL VALVES ON MAINS AND FIRE HYDRANT LEADS SHALL BE WITH VALVE BOX ASSEMBLIES. THE SIZE OF VALVE BOX ASSEMBLY TO BE INSTALLED IS DETERMINED BY THE TYPE AND SIZE OF VALVE. VALVE BOX CAPS SHALL HAVE THE WORD "WATER".
  - A MINIMUM HORIZONTAL DISTANCE OF 10 FEET SHALL BE MAINTAINED BETWEEN PARALLEL WATER AND SANITARY SEWER LINES. WHEN IT IS NECESSARY FOR ANY WATER LINE TO CROSS A SANITARY SEWER LINE, THE SEWER LINE SHALL BE CONSTRUCTED OF DUCTILE IRON PIPE AT LEAST 10 FEET EITHER SIDE OF THE WATER LINE UNLESS THE WATER LINE IS AT LEAST 2 FEET CLEAR DISTANCE ABOVE THE SANITARY SEWER LINE.

- DETAILS - SEE DETAIL SHEETS FOR THE FOLLOWING DETAILS**
- WAT-5 WATER CASING PIPE DETAIL (CITY OF LEE'S SUMMIT)
  - WAT-7 HYDRANT INSTALLATION - STRAIGHT SET W/LINEAR FOOT OF 6" PVC C-900 WATER LINE (CITY OF LEE'S SUMMIT)
  - WAT-9 VALVE STEM EXTENSION AND VALVE BOX (CITY OF LEE'S SUMMIT)
  - WAT-12 VAULT FOR DOUBLE CHECK DETECTOR CHECK (CITY OF LEE'S SUMMIT)
  - GEN-5 TRENCHING/PATCHING ROADWAY (CITY OF LEE'S SUMMIT)

- NOTES:**
- 17A POINT OF CONNECTION - GAS SERVICE
  - 17B GAS SERVICE (BY GAS COMPANY)
  - 17D INSTALL CAP FOR GAS SERVICE
  - 19A POINT OF CONNECTION - ELECTRIC SERVICE
  - 19B UNDERGROUND POWER PER LOCAL POWER COMPANY
  - 19C 4" CONDUIT INSTALLED BY CONTRACTOR - ELECTRIC SERVICE
  - 19D CONDUIT STUB FOR FUTURE EXTENSION - ELECTRIC
  - 19E INSTALL TRANSFORMER - PER KCP&L STANDARD SPECIFICATIONS
  - 19F INSTALL SECTIONALIZER - PER KCP&L STANDARD SPECIFICATIONS
  - 19G CONSTRUCT RISER - PER KCP&L STANDARD SPECIFICATIONS
  - 20A POINT OF CONNECTION - WATER
  - 20B 8" PVC C-900 WATER LINE WITH LINEAR FEET
  - 20C 8"x8"x8" TEE
  - 20D INSTALL 8" WATER VALVE. SEE DETAIL WAT-9.
  - 20E INSTALL 8" BACKFLOW PREVENTION DETECTOR ASSEMBLY IN 8'x6" VAULT (INSIDE DIAMETER) OR AS REQUIRED PER CLEARANCE. SEE DETAIL WAT-12.
  - 20F CONNECT TO EXISTING MAIN WITH 12"x12"x8" TEE
  - 20G BORE 114.6 LF OF 20" STEEL CASING AND INSTALL 138.9 LF OF 8" PVC C-900 PIPE WITH RESTRAINED JOINTS. SEE DETAIL WAT-5
  - 20H 8"x8"x6" TEE
  - 20J 8"x8"x8"x8" TEE
  - 59 6" SANITARY SEWER SERVICE LINE (1% MIN)

**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.**

**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.

**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.

PROJ. NO.	A14 7067-1
DESIGNER	LDO
DRAWN BY	5
CEN	7067-1R_UP
SHEET	REV
C-17	1

REV	DATE	DESCRIPTION
1	07-02-19	REVISED PER CITY COMMENTS
0	5-16-19	INITIAL ISSUE

STATE OF MISSOURI  
 LEON D. OSBOURN  
 LICENSED PROFESSIONAL ENGINEER  
 NUMBER 13197  
 EXPIRES 12/31/24

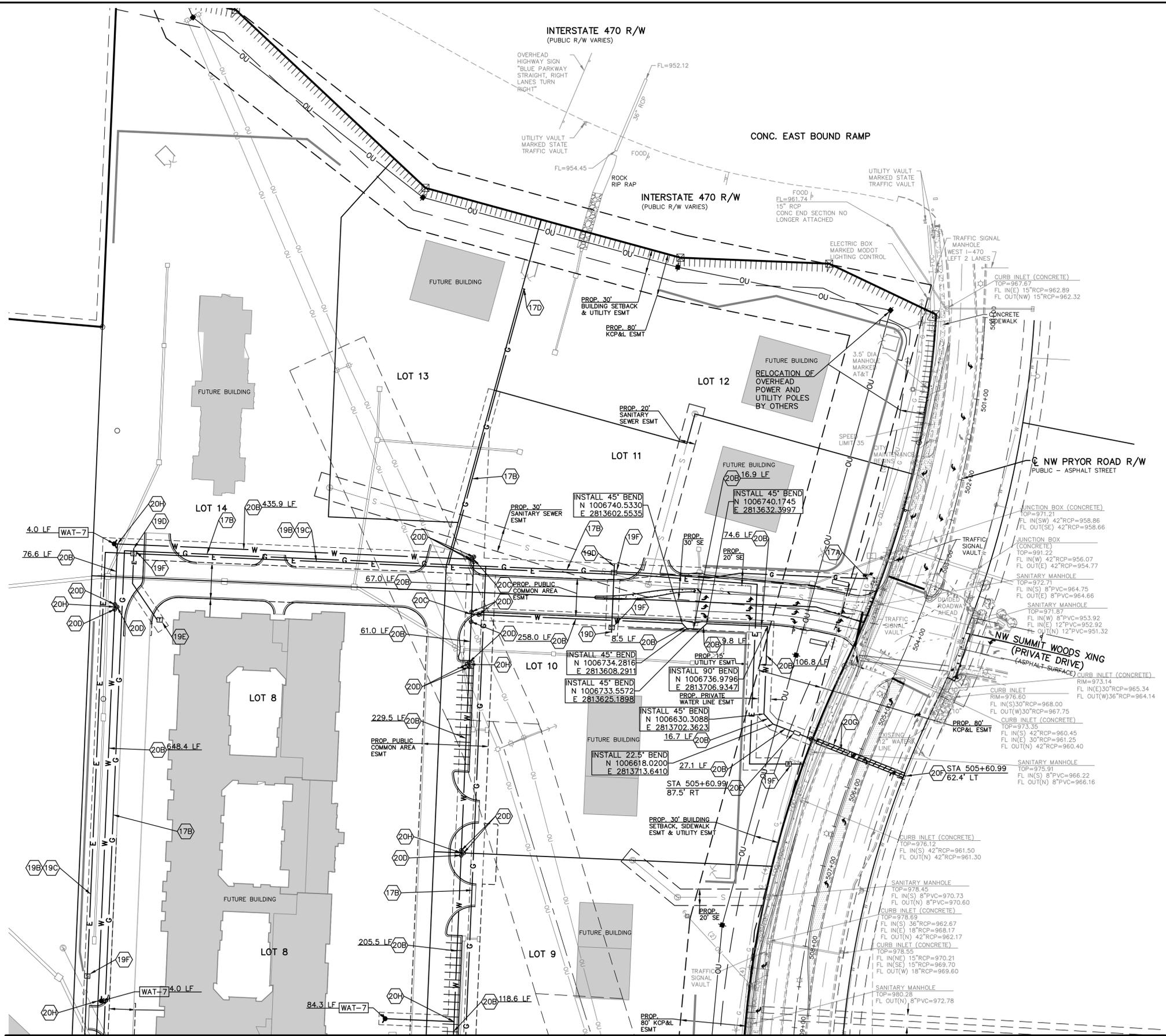
LEON D. OSBOURN  
 ENGINEER  
 MO # 021726

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

**KAW VALLEY ENGINEERING**  
 KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN THE STATE OF MISSOURI UNDER CERTIFICATE OF AUTHORITY # 000642. EXPIRES 12/31/19

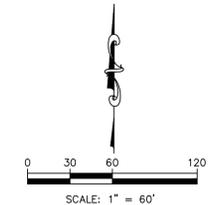
**STREETS OF WEST PRYOR**  
 NW QW PRYOR RD & NW LOWENSTEIN DR  
 LEE'S SUMMIT, MISSOURI

**PRIVATE ROAD PLANS**  
**UTILITY PLAN**



- DETAILS - SEE DETAIL SHEETS FOR THE FOLLOWING DETAILS
- WAT-5 WATER CASING PIPE DETAIL (CITY OF LEE'S SUMMIT)
  - WAT-7 HYDRANT INSTALLATION - STRAIGHT SET W/LINEAR FOOT OF 6" PVC C-900 WATER LINE (CITY OF LEE'S SUMMIT)
  - WAT-9 VALVE STEM EXTENSION AND VALVE BOX (CITY OF LEE'S SUMMIT)
  - WAT-12 VAULT FOR DOUBLE CHECK DETECTOR CHECK (CITY OF LEE'S SUMMIT)
  - GEN-5 TRENCHING/PATCHING ROADWAY (CITY OF LEE'S SUMMIT)

- NOTES:
- 17A POINT OF CONNECTION - GAS SERVICE
  - 17B GAS SERVICE (BY GAS COMPANY)
  - 17D INSTALL CAP FOR GAS SERVICE
  - 19A POINT OF CONNECTION - ELECTRIC SERVICE
  - 19B UNDERGROUND POWER PER LOCAL POWER COMPANY
  - 19C 4" CONDUIT INSTALLED BY CONTRACTOR - ELECTRIC SERVICE
  - 19D CONDUIT STUB FOR FUTURE EXTENSION - ELECTRIC
  - 19E INSTALL TRANSFORMER - PER KCP&L STANDARD SPECIFICATIONS
  - 19F INSTALL SECTIONALIZER - PER KCP&L STANDARD SPECIFICATIONS
  - 19G CONSTRUCT RISER - PER KCP&L STANDARD SPECIFICATIONS
  - 20A POINT OF CONNECTION - WATER
  - 20B 8" PVC C-900 WATER LINE WITH LINEAR FEET
  - 20C 8"x8"x8" TEE
  - 20D INSTALL 8" WATER VALVE. SEE DETAIL WAT-9.
  - 20E INSTALL 8" BACKFLOW PREVENTION DETECTOR ASSEMBLY IN 8'x6' VAULT (INSIDE DIAMETER) OR AS REQUIRED PER CLEARANCE. SEE DETAIL WAT-12.
  - 20F CONNECT TO EXISTING MAIN WITH 12"x12"x8" TEE
  - 20G BORE 114.6 LF OF 20" STEEL CASING AND INSTALL 138.9 LF OF 8" PVC C-900 PIPE WITH RESTRAINED JOINTS. SEE DETAIL WAT-5
  - 20H 8"x8"x6" TEE
  - 20J 8"x8"x8"x8" TEE
  - 59 6" SANITARY SEWER SERVICE LINE (1 1/2" MIN)



MATCH LINE - SHEET C-17

PROJ. NO.	A14 7067-1
DESIGNER	LDO
DRAWN BY	5
CFN	7067-1R_UP
SHEET	REV
C-18	1

REV	DATE	DESCRIPTION
1	07-02-19	REVISED PER CITY COMMENTS
0	5-16-19	INITIAL ISSUE

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

LEON D. OSBOURN  
ENGINEER  
MO # 021726

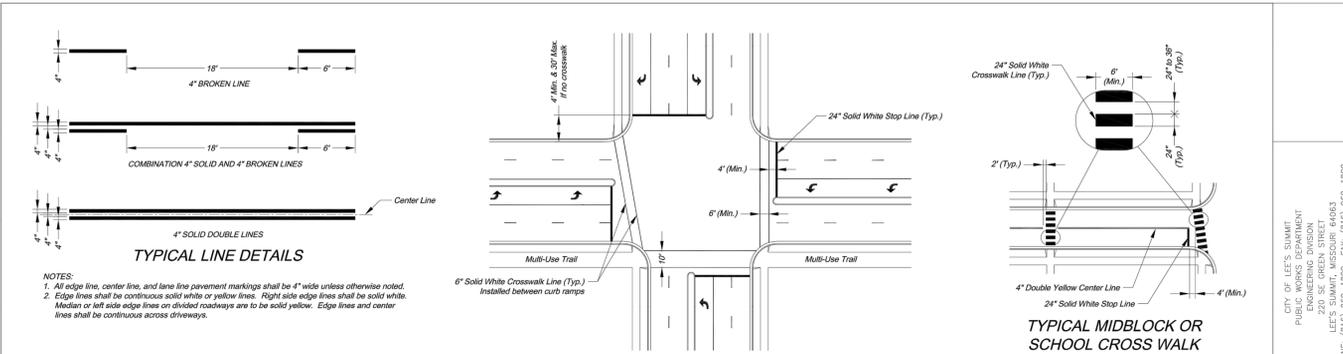
  

**KAW VALLEY ENGINEERING**  
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN THE STATE OF MISSOURI. EXPIRES 12/31/19.

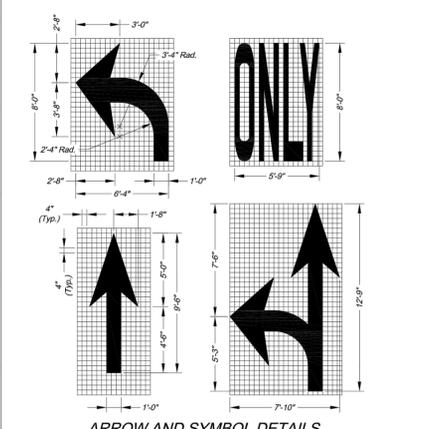
  

**STREETS OF WEST PRYOR**  
NWQ NW PRYOR RD & NW LOWENSTEIN DR  
LEE'S SUMMIT, MISSOURI

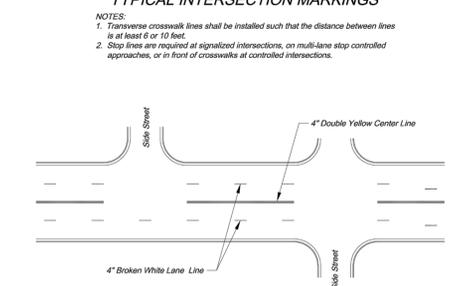
**PRIVATE ROAD PLANS**  
**UTILITY PLAN**



NOTES:  
 1. All edge, center, and lane line pavement markings shall be 4" wide unless otherwise noted.  
 2. Edge lines shall be continuous solid white or yellow lines. Right side edge lines shall be solid white. Median or left side edge lines on divided roadways are to be solid yellow. Edge lines and center lines shall be continuous across driveways.



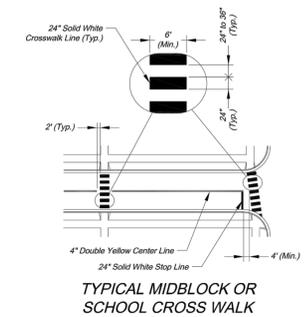
NOTES:  
 1. All arrow and symbol markings shall be white, and shall be centered in their respective traffic lanes.  
 2. Right-turn and combination right-turn/straight arrows are reverse of arrows shown.



TYPICAL INTERSECTION MARKINGS

NOTES:  
 1. Transverse crosswalk lines shall be installed such that the distance between lines is at least 6 or 10 feet.  
 2. Stop lines are required at signalized intersections, on multi-lane stop controlled approaches, or in front of crosswalks at controlled intersections.

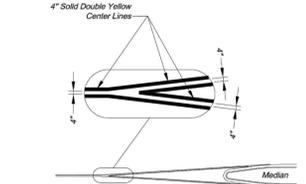
TYPICAL MARKINGS FOR FOUR-LANE UNDIVIDED ROADWAY



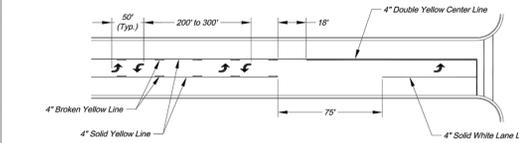
TYPICAL MIDBLOCK OR SCHOOL CROSS WALK

TYPICAL MARKINGS FOR FOUR-LANE UNDIVIDED ROADWAY

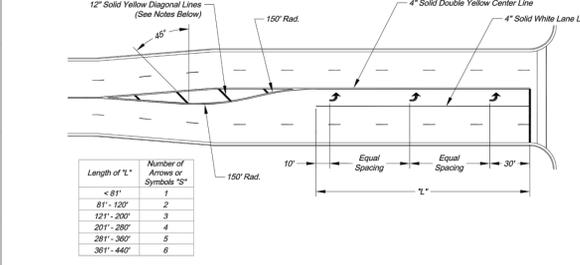
PAVEMENT MARKING GENERAL NOTES:  
 1. All pavement markings shall be in accordance with the latest edition of the Manual on Uniform Traffic Control Devices (MUTCD).  
 2. All words and symbols shall conform to the latest edition of Standard Alphabets for Highway Signs and Pavement Markings printed by the U.S. Department of Transportation, Federal Highway Administration.  
 3. Pavement markings, either temporary or permanent are required at all times if the roadway is open to traffic.  
 4. All pavement markings that conflict with the desired markings shall be completely removed. Removals shall not leave the road surface scarred with an image that misleads traffic. Any excess damage or scarring of pavement shall be repaired at the Contractor's expense.  
 5. The proposed permanent markings shall be laid out by the Contractor in advance of the marking installation. Markings shall not be applied until the layout has been approved by the City Traffic Engineer.  
 6. Center lines shall be marked on all undivided arterial streets, and any other undivided street with more than two lanes and/or a speed limit of 30 mph or more.  
 7. Edge lines shall be marked on all non-curbed streets.



TYPICAL MEDIAN NOSE CENTER LINE DETAIL

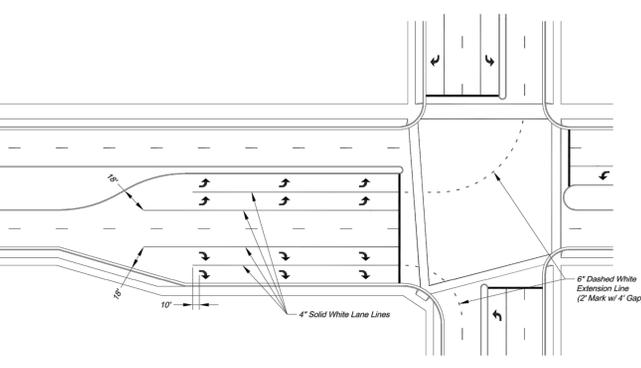


TYPICAL MARKINGS FOR TWO-WAY LEFT-TURN LANE



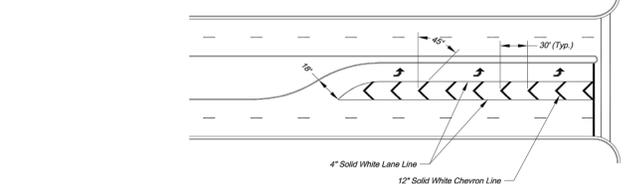
NOTES:  
 1. Diagonal lines are required between centerlines if the width of the area between the center lines is greater than 12' and/or the length of the area between center lines is greater than 200'.  
 2. Diagonal lines should be spaced at 5' increments, equal to the posted speed limit.  
 3. Equal Spacing is calculated as  $(L - 40) / (S - 1)$ .  
 4. When a through lane of traffic terminates as a mandatory turn lane, Arrow and "ONLY" symbols should be marked in the turn lane, in alternating order. The first and last symbols should be Arrows.

TYPICAL TURN LANE MARKINGS



TYPICAL DUAL TURN LANE MARKINGS

NOTE:  
 1. Dashed extension lines shall not extend through crosswalks.



TYPICAL STRIPED OUT TURN LANE MARKINGS

CITY OF LEE'S SUMMIT  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION  
 220 SE GREEN STREET  
 LEE'S SUMMIT, MISSOURI 64441  
 PHONE (816) 898-1800 FAX (816) 898-1809



ROADWAY MARKING DETAILS  
 Sheet Name: STANDARD DRAWING PM-1

Drawn By: AS  
 Checked By: JW  
 Date: 09/09/2009  
 Project:

1 OF 2

CITY OF LEE'S SUMMIT  
 PUBLIC WORKS DEPARTMENT  
 ENGINEERING DIVISION  
 220 SE GREEN STREET  
 LEE'S SUMMIT, MISSOURI 64441  
 PHONE (816) 898-1800 FAX (816) 898-1809



INTERSECTION MARKING DETAILS  
 Sheet Name: STANDARD DRAWING PM-2

Drawn By: AS  
 Checked By: JW  
 Date: 09/09/2009  
 Project:

2 OF 2

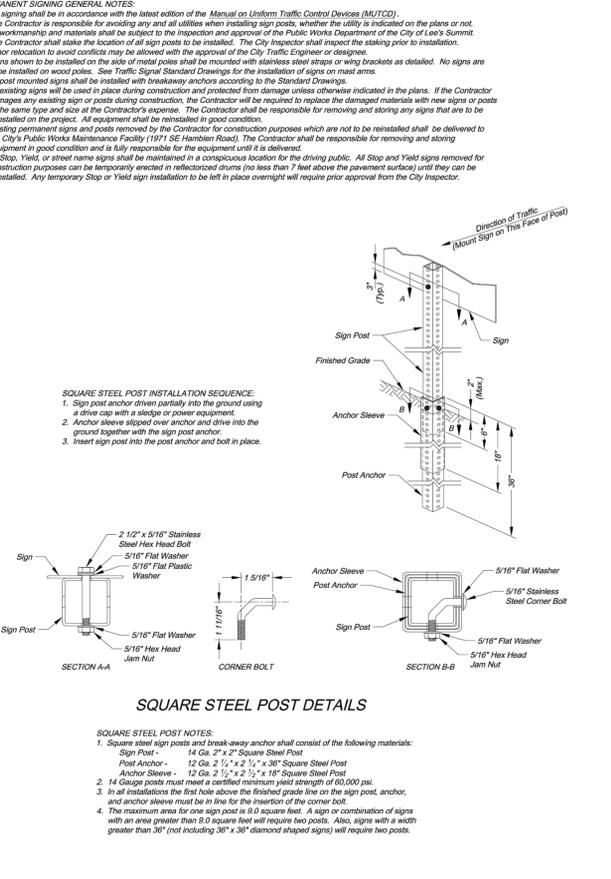
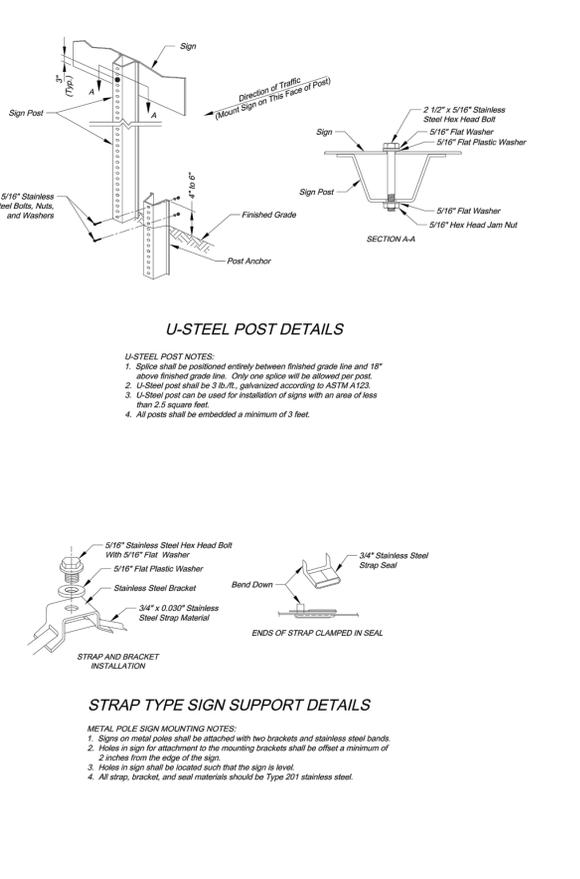
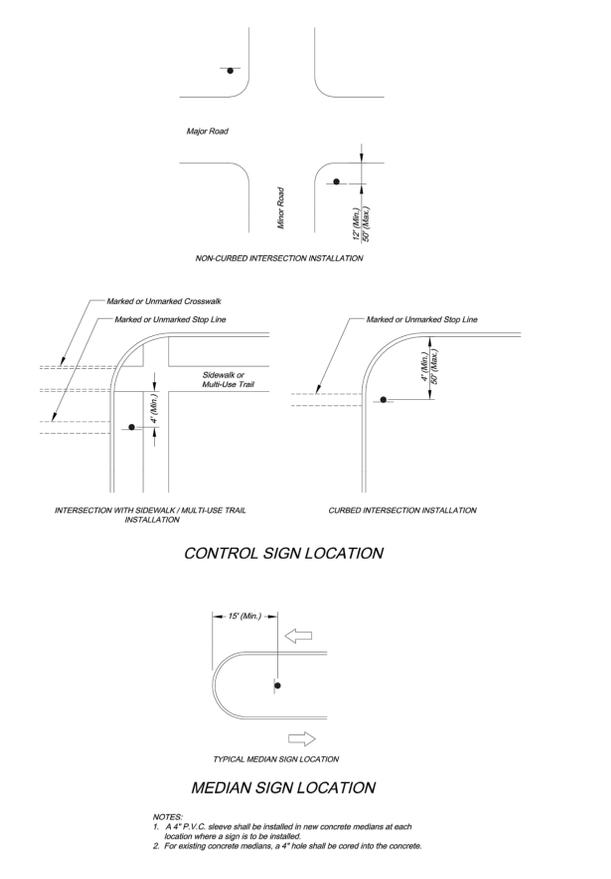
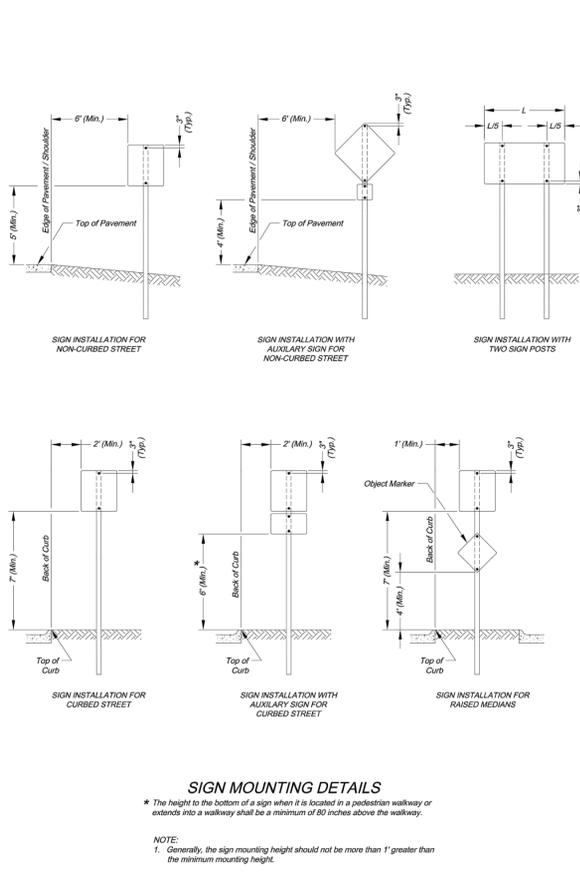
PROJ. NO.	A14-7067-1
DESIGNER	LDO
DRAWN BY	JF
CHECKED BY	CFN
DATE	07/09/2009
SHEET	7067-1IR_DET
REV	0
DATE	5-16-19
INITIAL ISSUE	0
DESCRIPTION	REV
DSN	DWN
BKR	LDO
CHK	CHK

LEON D. OSBOURN  
 ENGINEER  
 MO # 021726

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

**STREETS OF WEST PRYOR**  
**NWQ NW PRYOR RD & NW LOWENSTEIN DR**  
**LEE'S SUMMIT, MISSOURI**

PRIVATE ROAD PLANS  
 PAVEMENT MARKING DETAIL SHEET



**STANDARD ABBREVIATION LISTS**

Named Streets		Numbered Streets	
Avenue	AVE	First	ST
Boulevard	BLVD	Second	ND
Circle	CIR	Third	RD
Creek	CR	Fourth to Tenth	TH
Court	CT		
Crossing	XING		
Drive	DR		
Highway	HWY		
Lane	LN		
Parkway	PKWY		
Place	PL		
Road	RD		
Street	ST		
Terrace	TRL		
Trail	WAY		
Way	WAY		

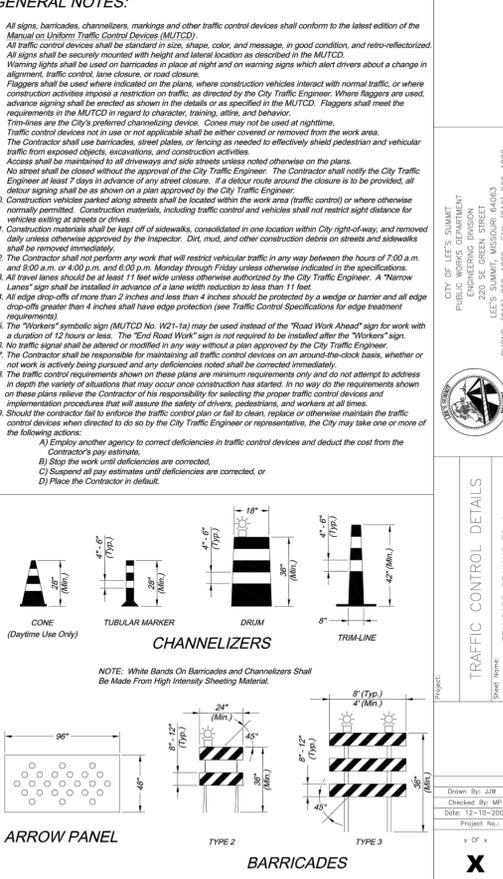
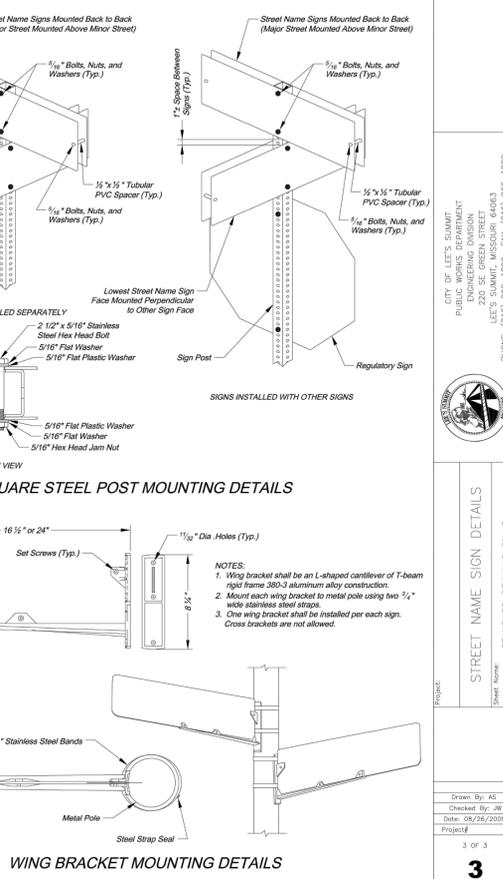
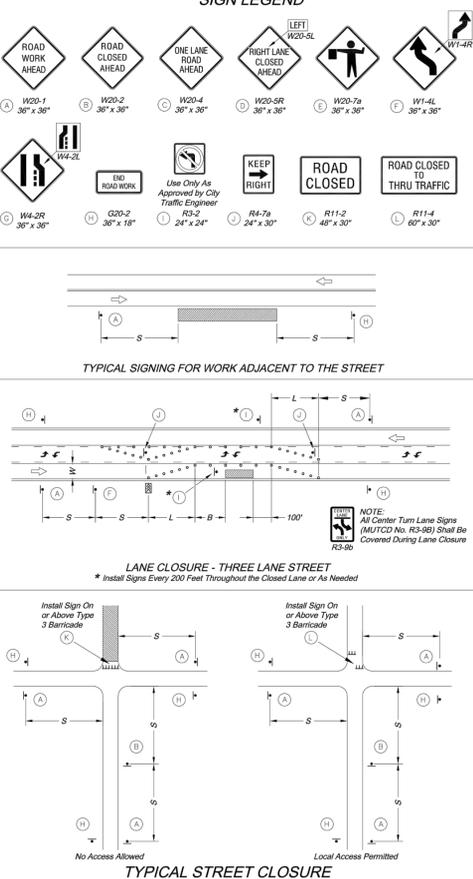
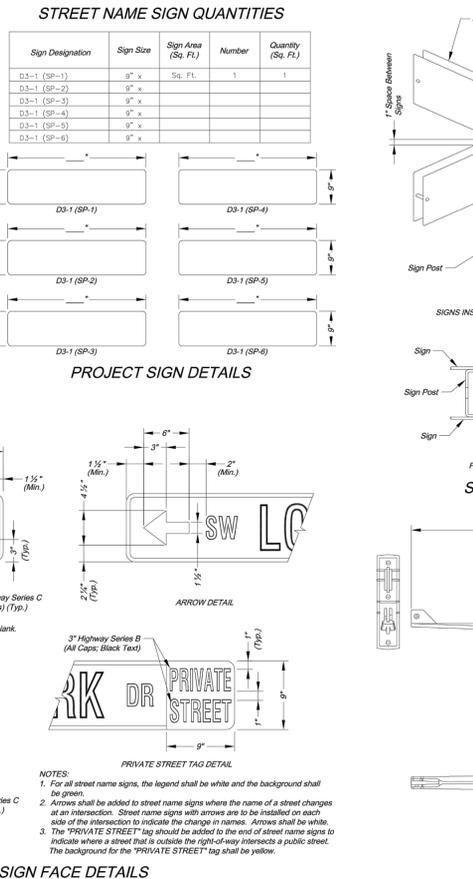
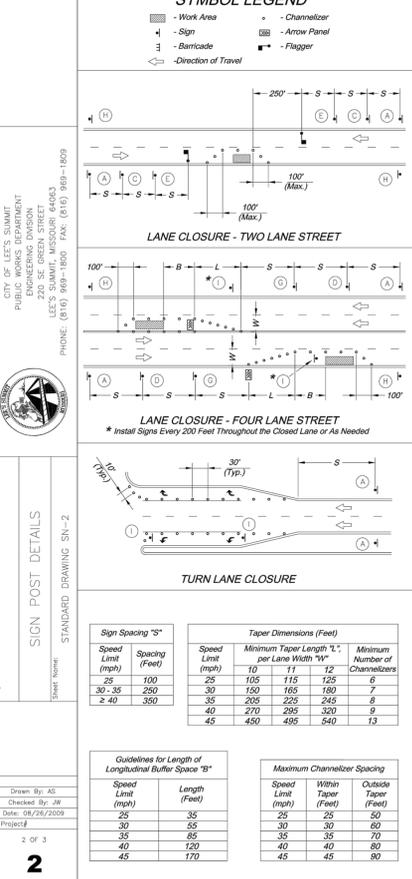
**STREET NAME SIGN BLANK DETAILS**  
For Mounting on Square Steel Posts

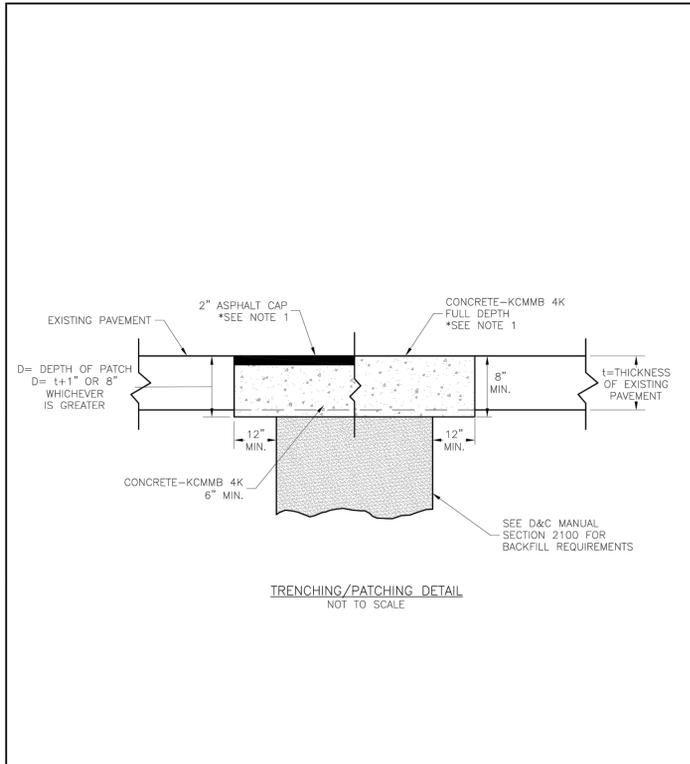
**STREET NAME SIGN FACE DETAILS**

**NAMED STREET NAME SIGN DETAIL**  
\* Use Highway Series B (All Caps) in lieu of series C if necessary to fit text on a 36" sign blank.

**PRIVATE STREET TAG DETAIL**

**NUMBERED STREET NAME SIGN DETAIL**



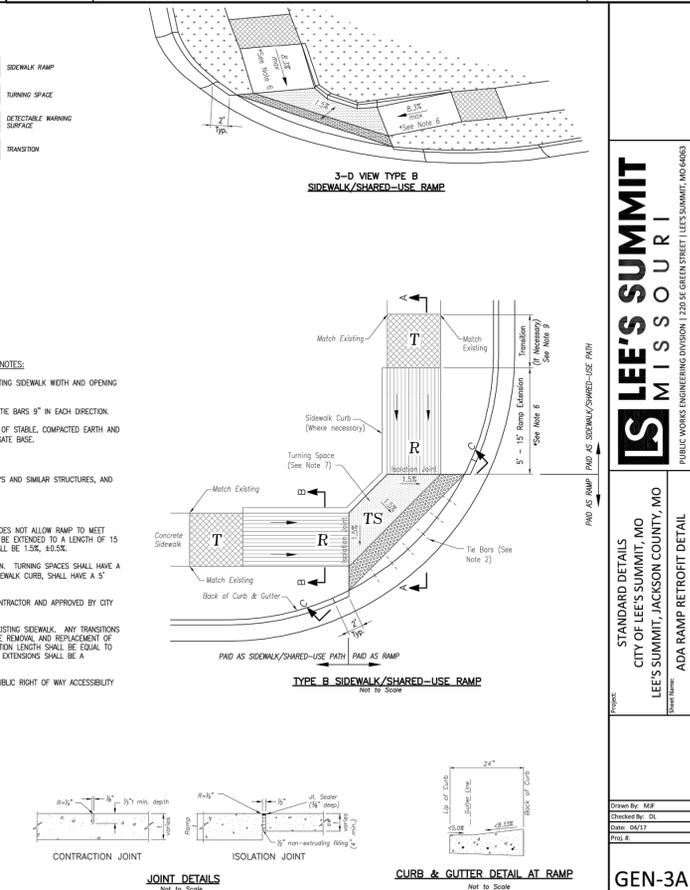


NOTE:  
1. ASPHALT CAP OR FULL DEPTH CONCRETE SHALL BE DETERMINED BY CITY INSPECTOR.

**LEE'S SUMMIT MISSOURI**  
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64083

DATE: 04/27  
DRAWN BY: MIF  
CHECKED BY: DL

**GEN-5**

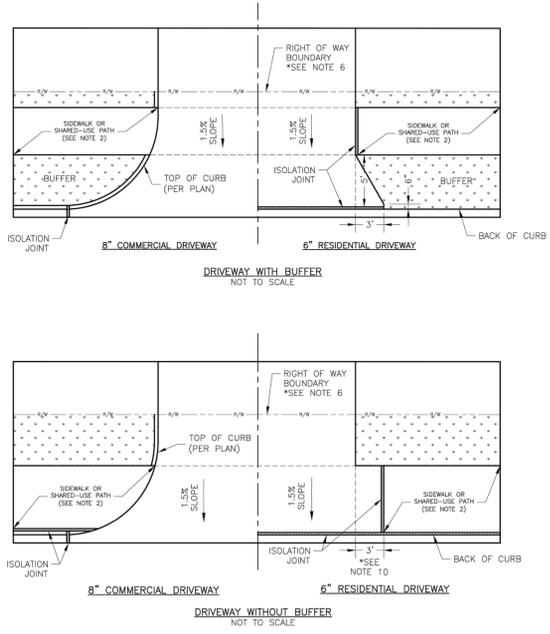


**LEE'S SUMMIT MISSOURI**  
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64083

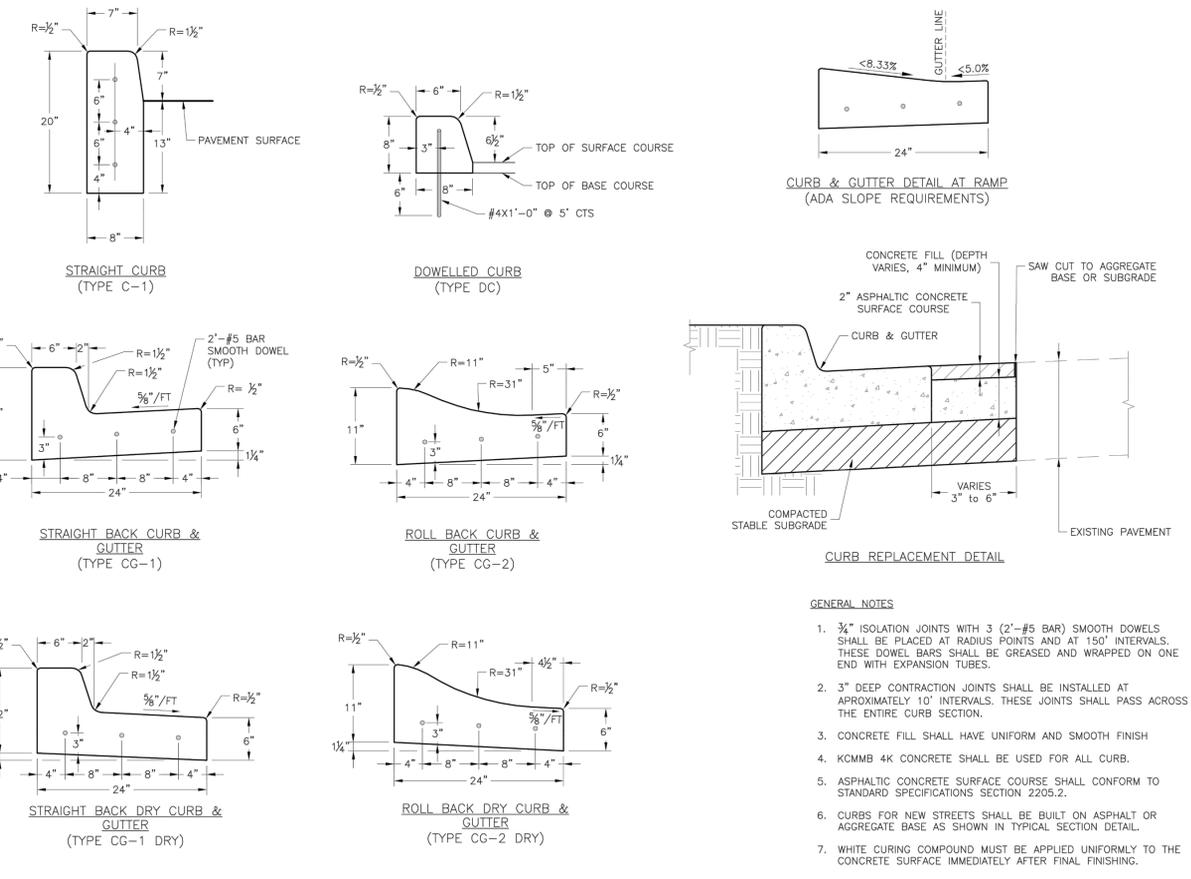
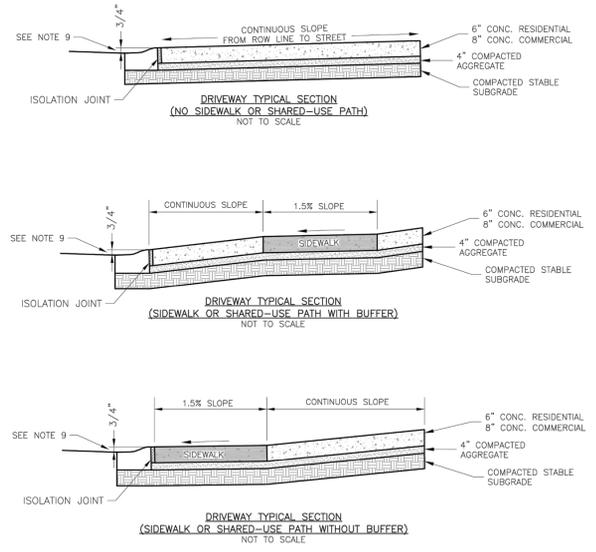
STANDARD DETAILS  
CITY OF LEE'S SUMMIT, MO  
LEE'S SUMMIT, JACKSON COUNTY, MO  
ADA RAMP RETROFIT DETAIL

DATE: 04/27  
DRAWN BY: MIF  
CHECKED BY: DL

**GEN-3A**



- GENERAL NOTES
- SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAYED WITH 4" COMPACTED DENSE GRADED AGGREGATE BASE.
  - ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT DETAIL GEN-3B, SIDEWALK/SHARED USE PATH RAMP AT DRIVEWAY DETAIL).
  - JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
  - KCMBB 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
  - COMMERCIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, SHALL BE KCMBB 4K CONCRETE MIX.
  - RESIDENTIAL DRIVEWAYS, IN THE PUBLIC RIGHT OF WAY, KCMBB 4K CONCRETE MIX IS RECOMMENDED. OTHER CONCRETE MIXES NEEDS TO BE APPROVED BY CITY INSPECTOR.
  - A JOINT MUST BE INSTALLED AT THE RIGHT OF WAY BOUNDARY FOR PROPERTY DELINEATION.
  - WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
  - 3/4" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE CG-1 CURB ONLY). MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
  - SIDEWALK ADJOINING CURB SHALL BE 6" THICK, EXTENDING 3' FROM THE DRIVEWAY.
  - THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.



- GENERAL NOTES
- 3/4" ISOLATION JOINTS WITH 3 (2"-#5 BAR) SMOOTH DOWELS SHALL BE PLACED AT RADIUS POINTS AND AT 150" INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
  - 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
  - CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH.
  - KCMBB 4K CONCRETE SHALL BE USED FOR ALL CURB.
  - ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
  - CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
  - WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

**LEE'S SUMMIT MISSOURI**  
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64083

STANDARD DETAILS  
CITY OF LEE'S SUMMIT, MO  
LEE'S SUMMIT, JACKSON COUNTY, MO  
DRIVEWAY DETAIL

**STATE OF MISSOURI**  
REGISTERED PROFESSIONAL ENGINEER  
LEON D. OSBOURN  
NUMBER 17174  
E31767

LEON D. OSBOURN  
ENGINEER  
MO # 021726

**GEN-1**

**LEE'S SUMMIT MISSOURI**  
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64083

**KAW VALLEY ENGINEERING**  
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING EXPRES 12/31/19  
2310 N. JACKSON | P.O. BOX 1304  
JUNCTION CITY, KANSAS 66441  
PH. (785) 762-5040 | FAX (785) 762-7744  
joe@kveeng.com | www.kveeng.com

STANDARD DETAILS  
CITY OF LEE'S SUMMIT, MO  
LEE'S SUMMIT, JACKSON COUNTY, MO  
CURB & GUTTER DETAIL

**STREETS OF WEST PRYOR**  
NW QW PRYOR RD & NW LOWENSTEIN DR  
LEE'S SUMMIT, MISSOURI

PRIVATE ROAD PLANS  
STREET DETAIL SHEET

PROJ. NO. **A14-7067-1**  
DESIGNER **LDO** DRAWN BY **JL**

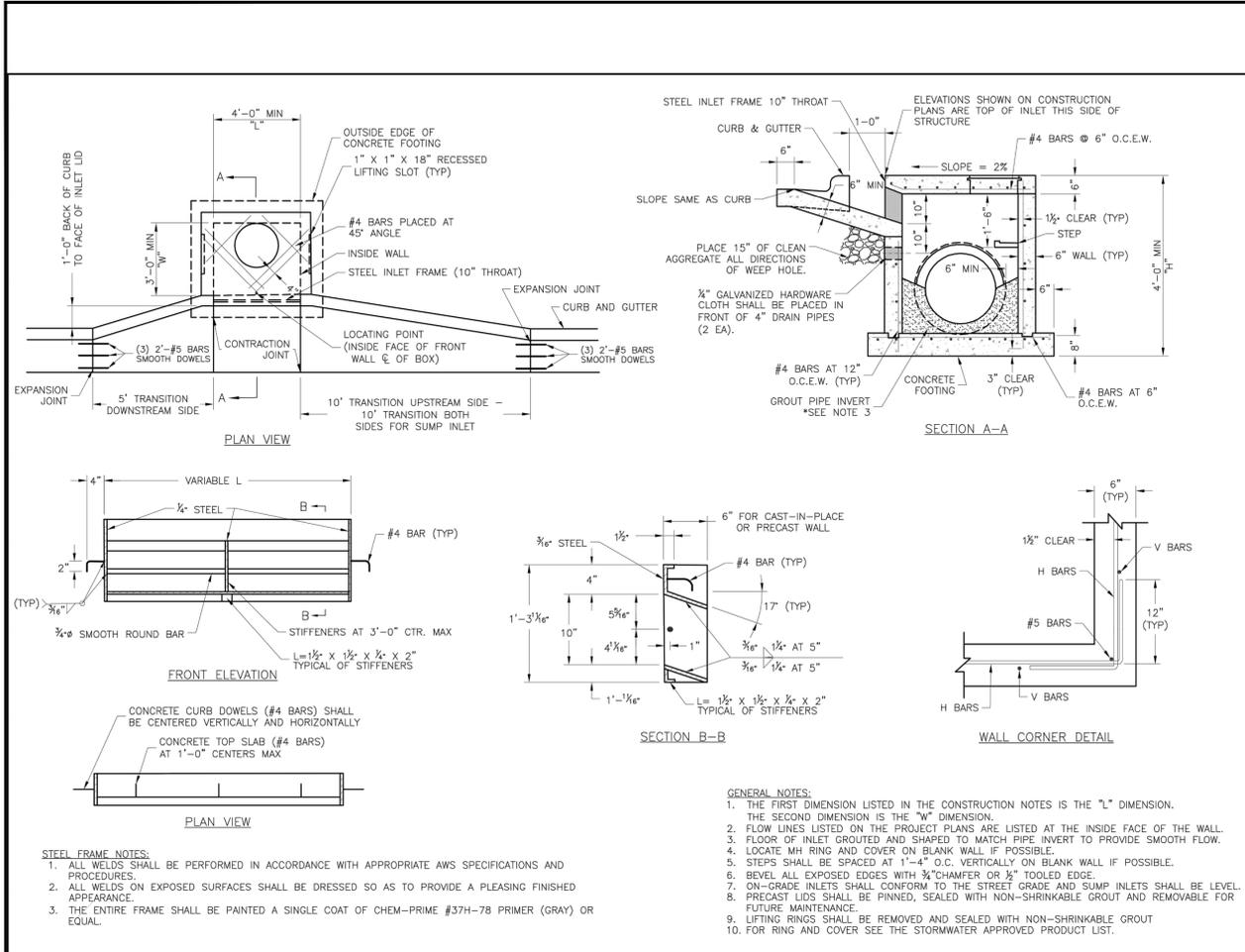
CFN  
DATE: 04/27  
REV. 8  
SHEET **7067-11R\_DET**

REV. DATE DESCRIPTION  
0 5-16-19 INITIAL ISSUE  
0 5-16-19 INITIAL ISSUE

**GEN-4**

**C-21**

**0**

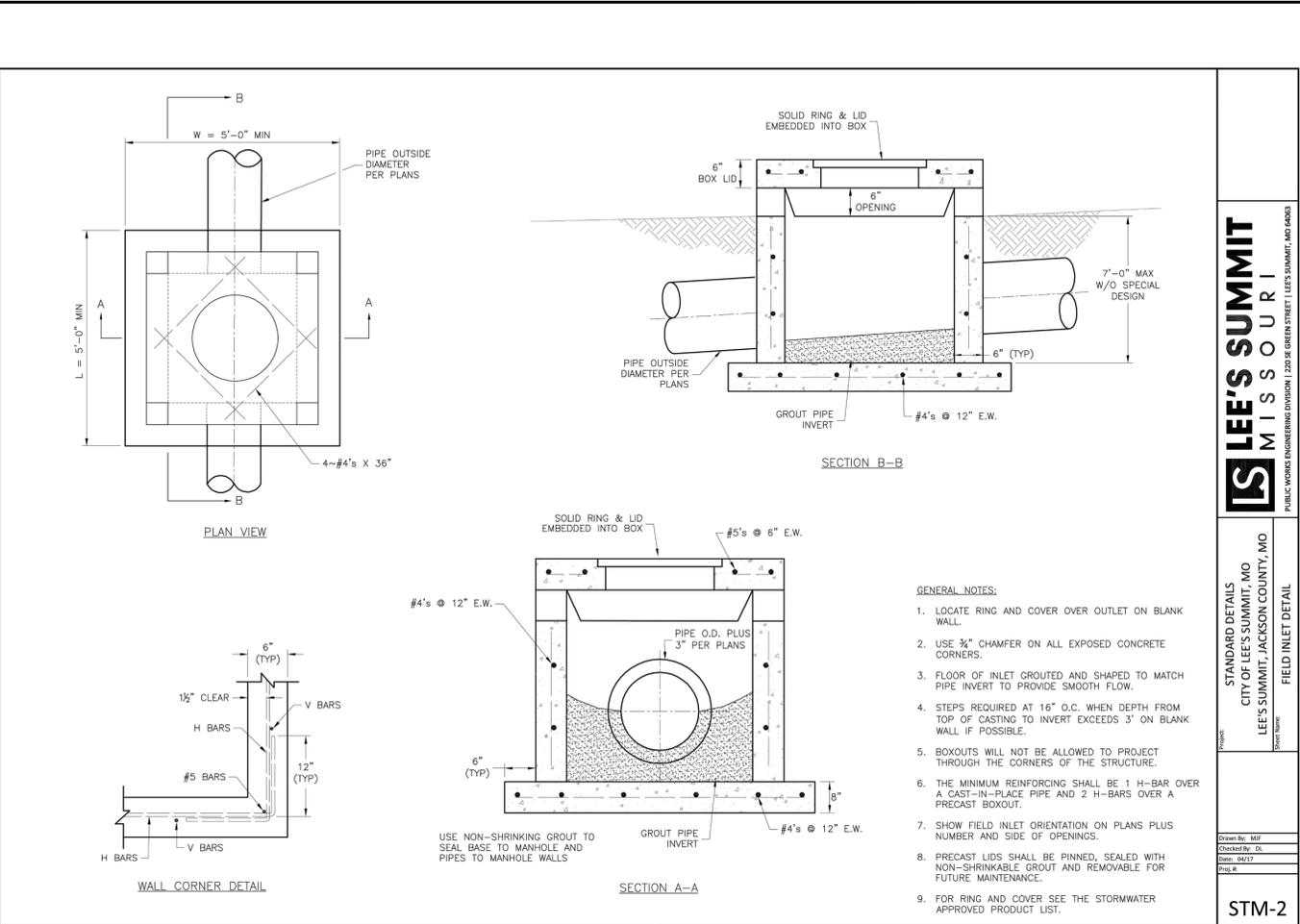


**LEE'S SUMMIT MISSOURI**  
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

**STANDARD DETAILS**  
CITY OF LEE'S SUMMIT, MO  
LEE'S SUMMIT, JACKSON COUNTY, MO

**STM-1**  
CURB INLET DETAIL

Drawn By: MIF  
Checked By: DL  
Date: 04/17  
Proj. #:



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

**STANDARD DETAILS**  
CITY OF LEE'S SUMMIT, MO  
LEE'S SUMMIT, JACKSON COUNTY, MO

**STM-2**  
FIELD INLET DETAIL

Drawn By: MIF  
Checked By: DL  
Date: 04/17  
Proj. #:

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

**KAW VALLEY ENGINEERING**  
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING EXPIRES 12/31/19

**LEON D. OSBOURN**  
ENGINEER  
MO # 021726

PROJ. NO. A14-7067-1  
DESIGNER LDO DRAWN BY JF

**STREETS OF WEST PRYOR**  
NWQ NW PRYOR RD & NW LOWENSTEIN DR  
LEE'S SUMMIT, MISSOURI

**PRIVATE ROAD PLANS**  
**STORM SEWER DETAIL SHEET**

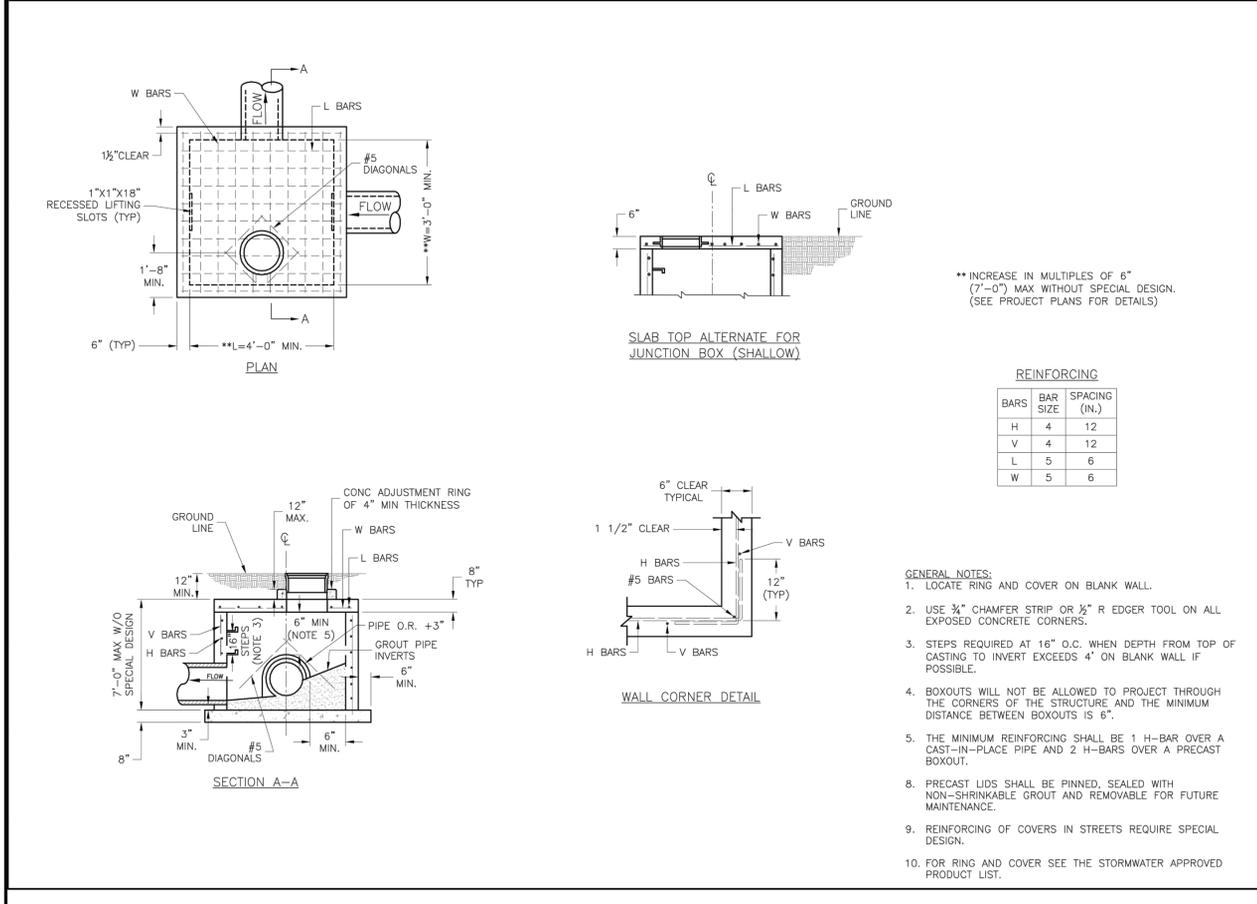
CFN 7067-11R\_DET SHEET REV C-22 0

PROJ. NO. A14-7067-1  
DESIGNER LDO DRAWN BY JF

CFN 7067-11R\_DET SHEET REV C-22 0

REV DATE DESCRIPTION  
0 5-16-19 INITIAL ISSUE

LDO BKR LDO DSN LDO CHK

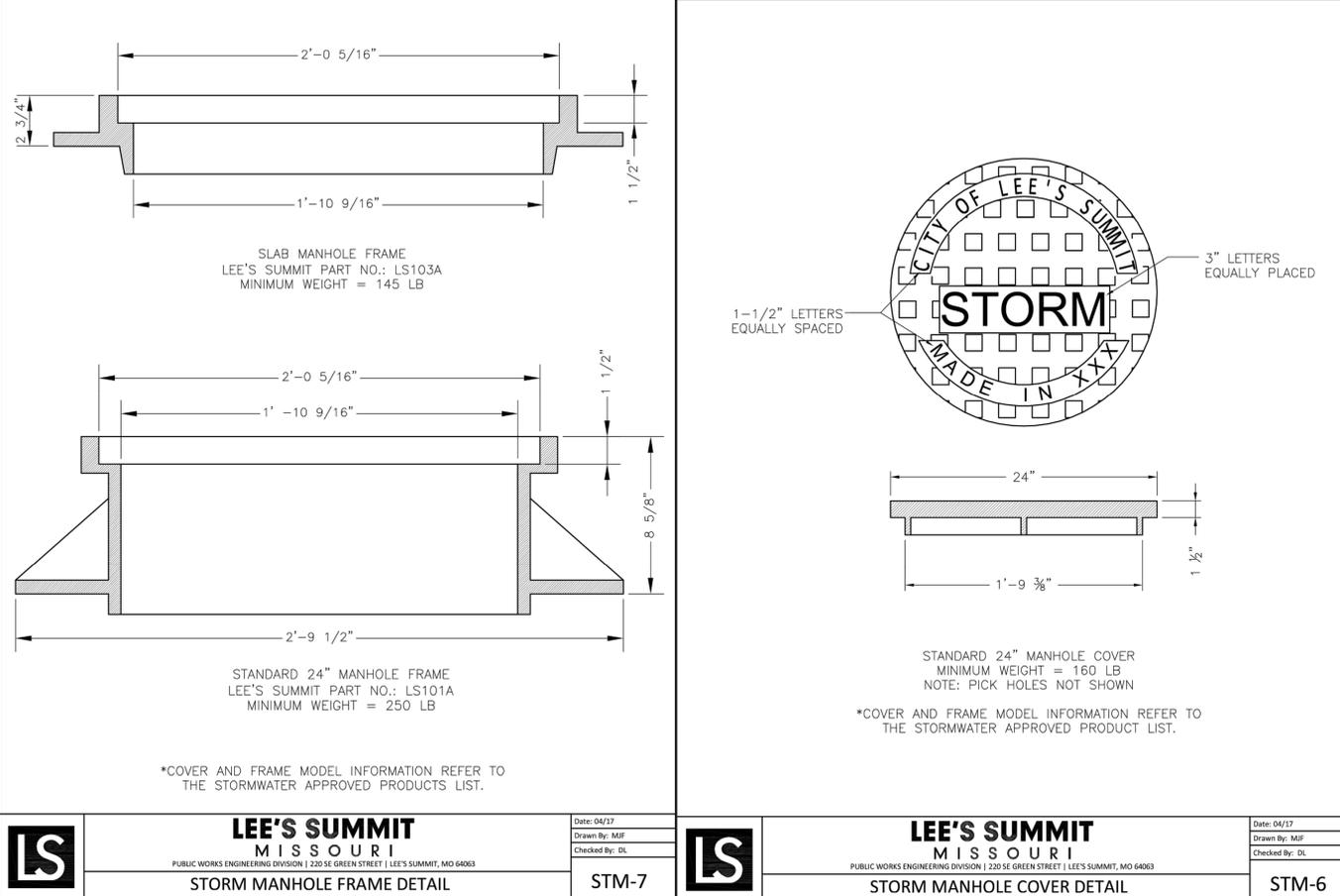


**LEE'S SUMMIT MISSOURI**  
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

**STANDARD DETAILS**  
CITY OF LEE'S SUMMIT, MO  
LEE'S SUMMIT, JACKSON COUNTY, MO

**STM-3**  
JUNCTION BOX DETAIL

Drawn By: MIF  
Checked By: DL  
Date: 04/17  
Proj. #:



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

**STANDARD DETAILS**  
CITY OF LEE'S SUMMIT, MO  
LEE'S SUMMIT, JACKSON COUNTY, MO

**STM-7**  
SLAB MANHOLE FRAME DETAIL

Drawn By: MIF  
Checked By: DL  
Date: 04/17  
Proj. #:

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

**KAW VALLEY ENGINEERING**  
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING EXPIRES 12/31/19

**LEON D. OSBOURN**  
ENGINEER  
MO # 021726

PROJ. NO. A14-7067-1  
DESIGNER LDO DRAWN BY JF

**STREETS OF WEST PRYOR**  
NWQ NW PRYOR RD & NW LOWENSTEIN DR  
LEE'S SUMMIT, MISSOURI

**PRIVATE ROAD PLANS**  
**STORM SEWER DETAIL SHEET**

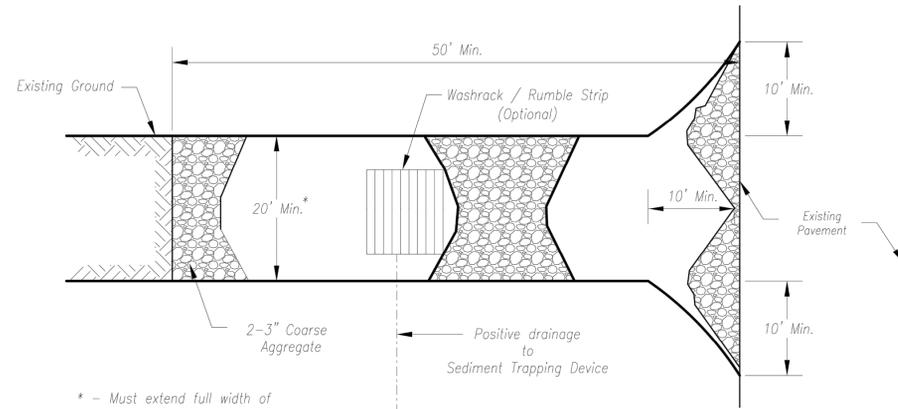
CFN 7067-11R\_DET SHEET REV C-22 0

PROJ. NO. A14-7067-1  
DESIGNER LDO DRAWN BY JF

CFN 7067-11R\_DET SHEET REV C-22 0

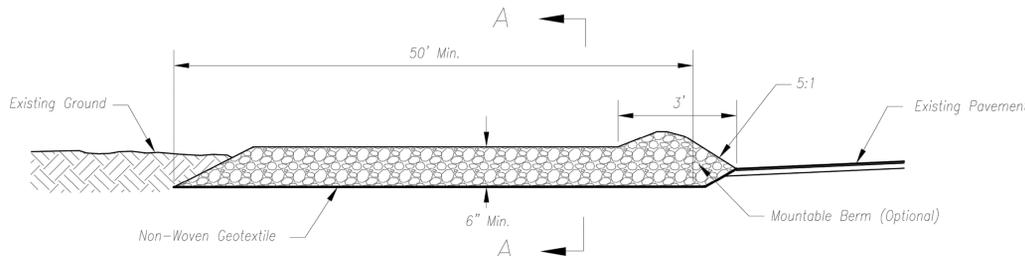
REV DATE DESCRIPTION  
0 5-16-19 INITIAL ISSUE

LDO BKR LDO DSN LDO CHK

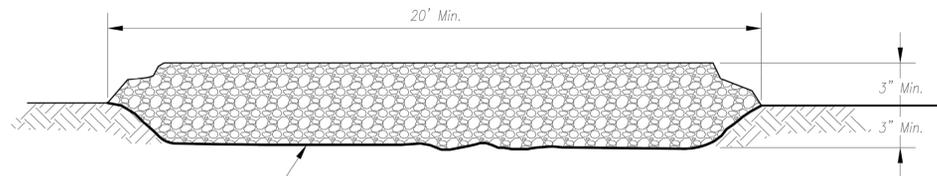


\* - Must extend full width of ingress and egress operation

**Plan View**  
Not to Scale



**Side Elevation**  
Not to Scale



**Section A-A**  
Not to Scale

**Notes for Construction Entrance:**

1. Avoid locating on steep slopes, at curves on public roads, or downhill of disturbed area.
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 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 sloped for drainage.
6. Divert all surface runoff and drainage from the entrance to a sediment control device.
7. If conditions warrant, place geotextile fabric on the graded foundation to improve stability.

**Maintenance for Construction Entrance:**

1. Reshape entrance as needed to maintain function and integrity of installation. Top dress with clean aggregate as needed.

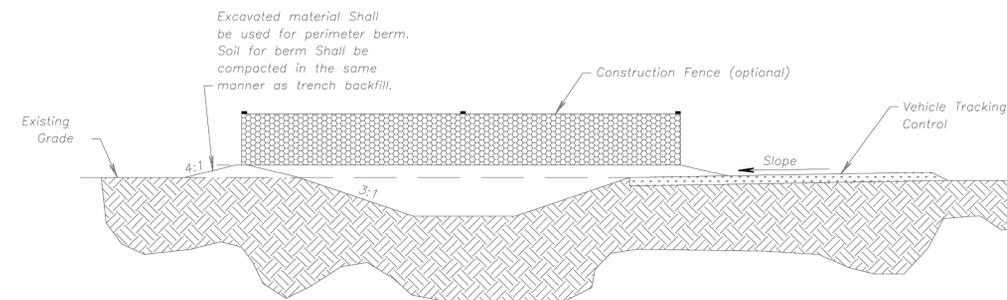
**CONSTRUCTION ENTRANCE**

**Notes for Concrete Washout:**

1. Concrete washout areas shall be installed prior to any concrete placement on site.
2. Concrete washout area shall include a flat subsurface pit sized relative to the amount of concrete to be placed on site. The slopes leading out of the subsurface pit shall be 3:1. The vehicle tracking pad shall be sloped towards the concrete washout area.
3. Vehicle tracking control is required at the access point to all concrete washout areas.
4. Signs shall be placed at the construction site entrance, washout area and elsewhere as necessary to clearly indicate the location(s) of the concrete washout area(s) to operators of concrete truck and pump rigs.
5. A one-piece impervious liner may be required along the bottom and sides of the subsurface pit in sandy or gravelly soils.

**Maintenance for Concrete Washout:**

1. Concrete washout materials shall be removed once the materials have filled the washout to approximately 75% full.
2. Concrete washout areas shall be enlarged as necessary to maintain capacity for wasted concrete.
3. Concrete washout water, wasted pieces of concrete and all other debris in the subsurface pit shall be transported from the job site in a water-tight container and disposed of properly.
4. Concrete washout areas shall remain in place until all concrete for the project is placed.
5. When concrete washout areas are removed, excavations shall be filled with suitable compacted backfill and topsoil, any disturbed areas associated with the installation, maintenance, and/or removal of the concrete washout areas shall be stabilized.



Excavated material shall be used for perimeter berm. Soil for berm shall be compacted in the same manner as trench backfill.

**CONCRETE WASHOUT**

**AMERICAN PUBLIC WORKS ASSOCIATION**



KANSAS CITY METRO CHAPTER

CONSTRUCTION ENTRANCE AND CONCRETE WASHOUT

STANDARD DRAWING NUMBER ESC-01  
ADOPTED: 10/24/2016

Construction Entrance modified from 2015 Overland Park Standard Details for Erosion and Sediment Control; Concrete Washout modified from 2009 City of Great Bend Standard Drawings.

LD0	CHK
BKR	DWN
LD0	DSN

REV	DATE	DESCRIPTION
0	5-18-19	INITIAL ISSUE

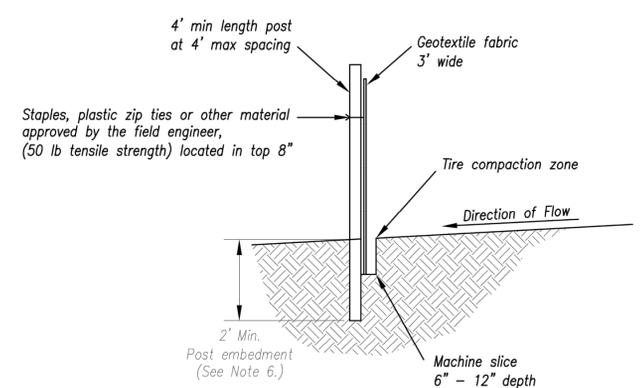
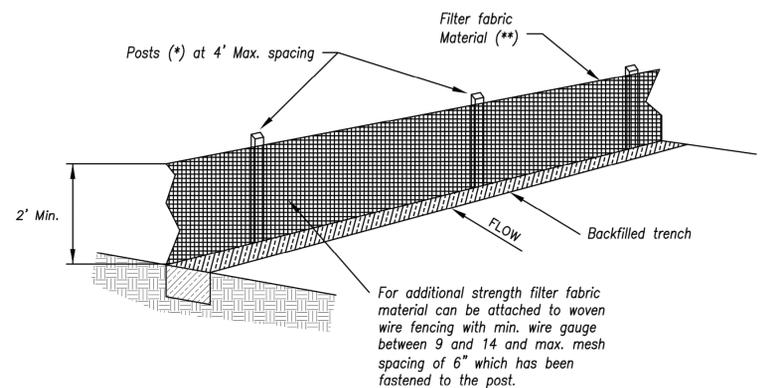


LEON D. OSBOURN  
ENGINEER  
MO # 021726

2319 N. JACKSON | P.O. BOX 1304  
JUNCTION CITY, KANSAS 66441  
PH. (785) 762-5040 | FAX (785) 762-7744  
j@kveeng.com | www.kveeng.com  
**KAW VALLEY ENGINEERING**  
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN THE STATE OF MISSOURI. LICENSE # 000842. EXPIRES 12/31/19

**STREETS OF WEST PRYOR**  
NW Q NW PRYOR RD & NW LOWENSTEIN DR  
LEE'S SUMMIT, MISSOURI  
PRIVATE ROAD PLANS  
EROSION CONTROL DETAIL SHEET

PROJ. NO.	A14-7067-1
DESIGNER	LD0
DRAWN BY	JT
CFN	7067-11R_DET
SHEET	0



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

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

**SILT FENCE DETAILS**  
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.

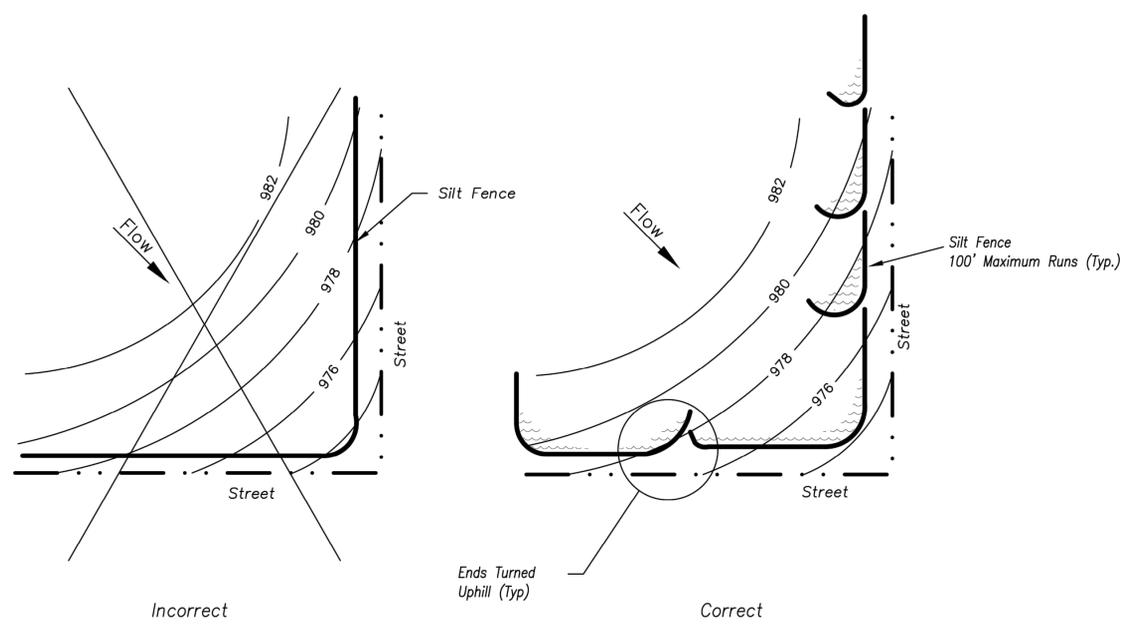
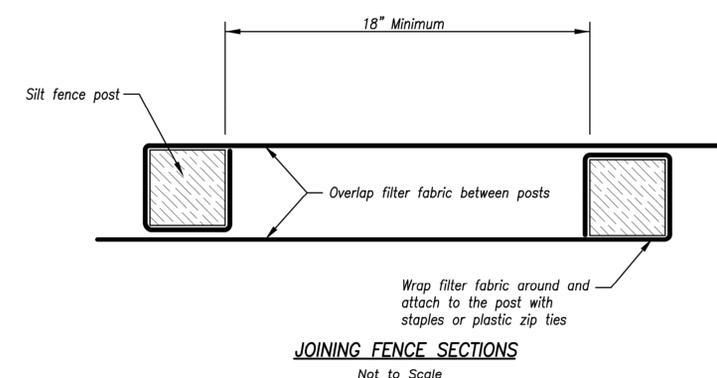
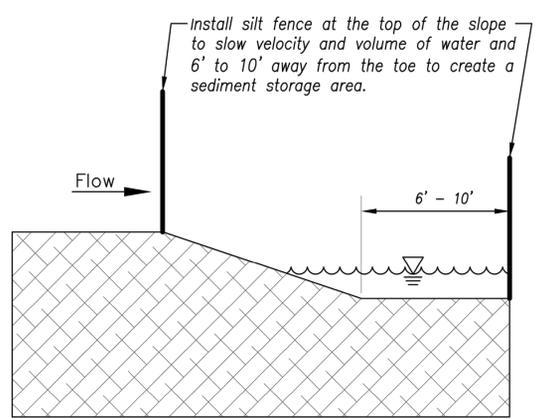


Figure A

**SILT FENCE LAYOUT**  
Not to Scale



AMERICAN PUBLIC WORKS ASSOCIATION  
Kansas City Metro Chapter  
**APWA**  
AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY METRO CHAPTER

SILT FENCE

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

0	5-16-19	INITIAL ISSUE		LDO	CHK
0		REV	DATE	DESCRIPTION	

STATE OF MISSOURI  
LEON D. OSBOURN  
ENGINEER  
NO. 021726

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

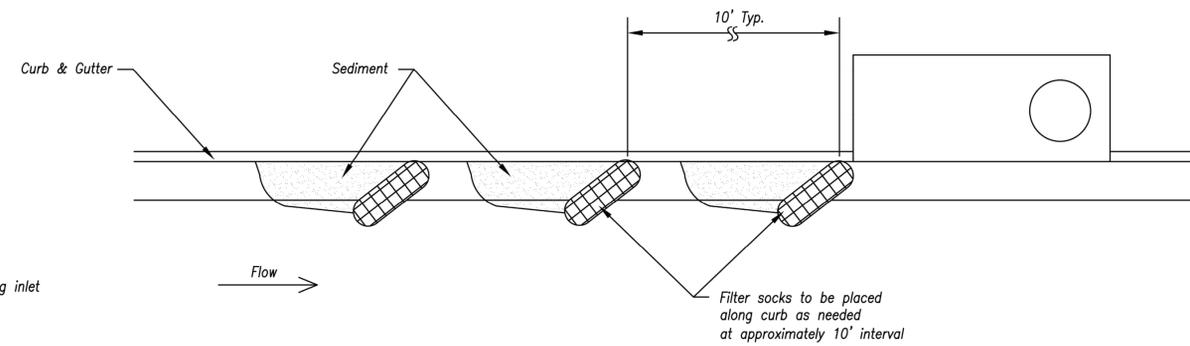
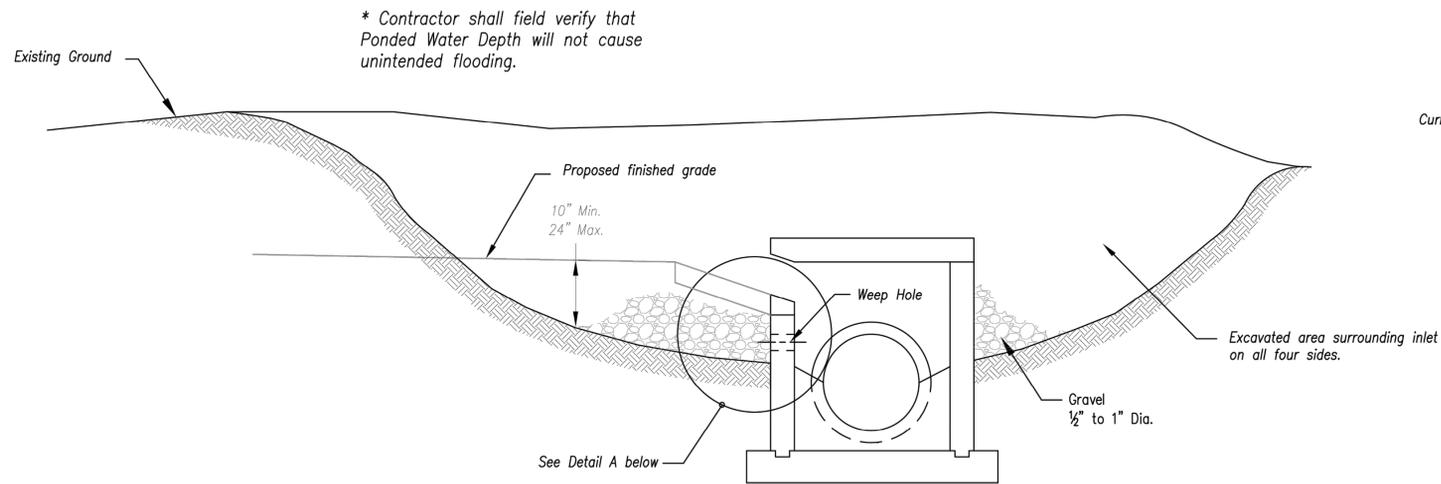
**KAW VALLEY ENGINEERING**  
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN THE STATE OF MISSOURI UNDER CERTIFICATE OF AUTHORITY # 000842. EXPIRES 12/31/19

STREETS OF WEST PRYOR  
NW QW PRYOR RD & NW LOWENSTEIN DR  
LEE'S SUMMIT, MISSOURI

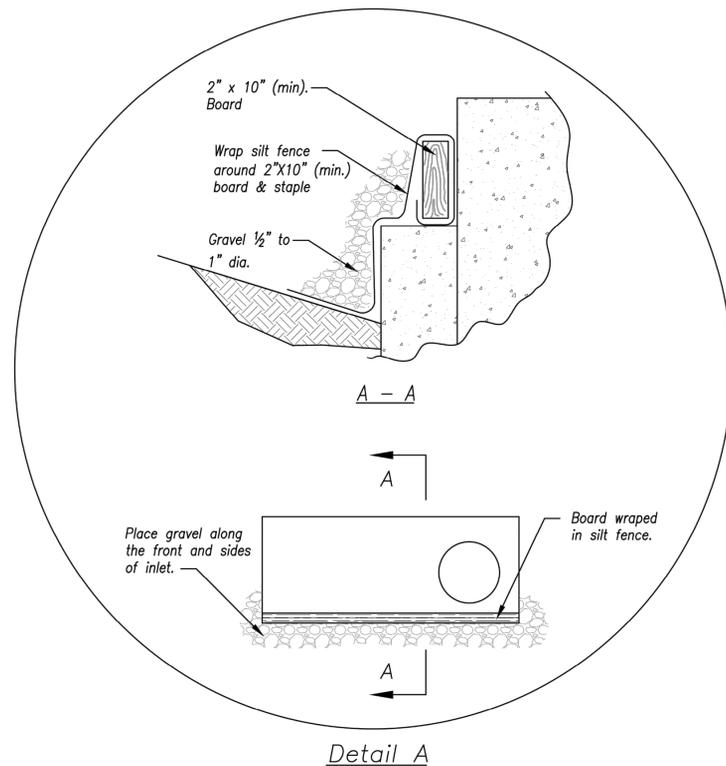
PRIVATE ROAD PLANS  
EROSION CONTROL DETAIL SHEET

PROJ. NO. A14-7067-1  
DESIGNER LDO  
DRAWN BY JT  
CFN  
7067-11R\_DET  
SHEET  
REV

C-24  
0



On Grade Curb Inlet Protection



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

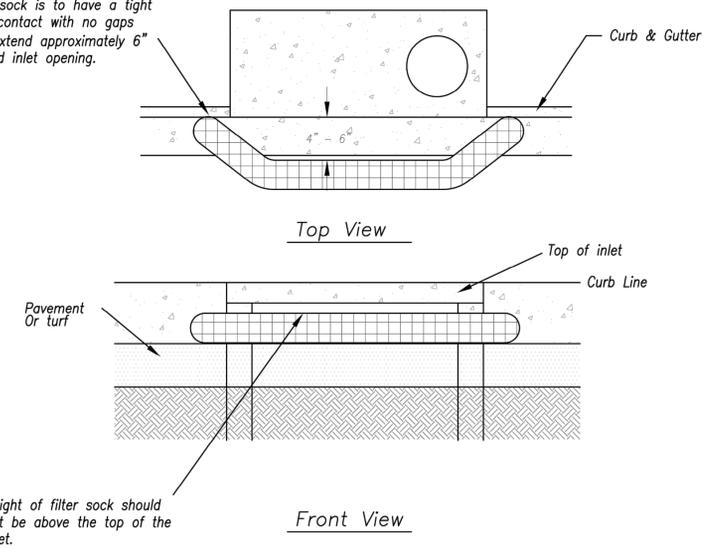
Notes:

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.

Filter sock is to have a tight curb contact with no gaps and extend approximately 6" beyond inlet opening.



Sump Inlet Sediment Filter

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

AMERICAN PUBLIC WORKS ASSOCIATION

Kansas City Metro Chapter

APWA

AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY METRO CHAPTER

STANDARD DRAWING NUMBER ESC-06

ADOPTED: 10/24/2016

CURB INLET PROTECTION

PROJ. NO.	A14_7067-1
DESIGNER	LDO
DRAWN BY	JT
CFN	7067-11R_DET
SHEET	0
REV	0
REV	0
DATE	5-16-19
INITIAL ISSUE	0
DESCRIPTION	0
DSN	LDO
DWN	BKR
CHK	LDO



LEON D. OSBOURN  
ENGINEER  
MO # 021726

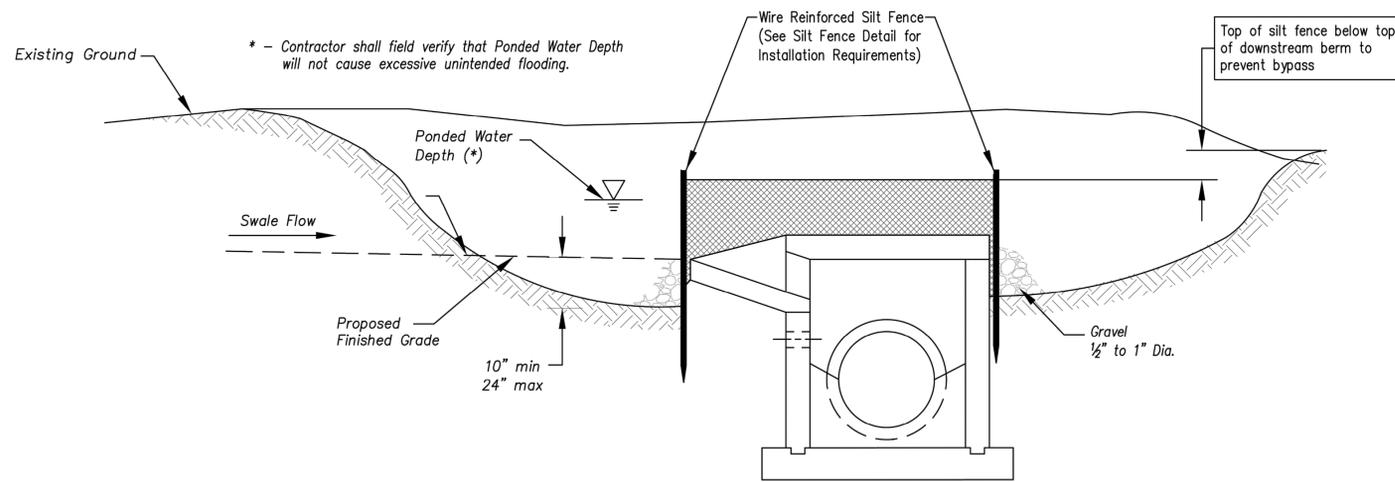
2319 N. JACKSON | P.O. BOX 1304  
JUNCTION CITY, KANSAS 66441  
PH. (785) 762-5040 | FAX (785) 762-7744  
jdo@kveeng.com | www.kveeng.com

**KAW VALLEY ENGINEERING**

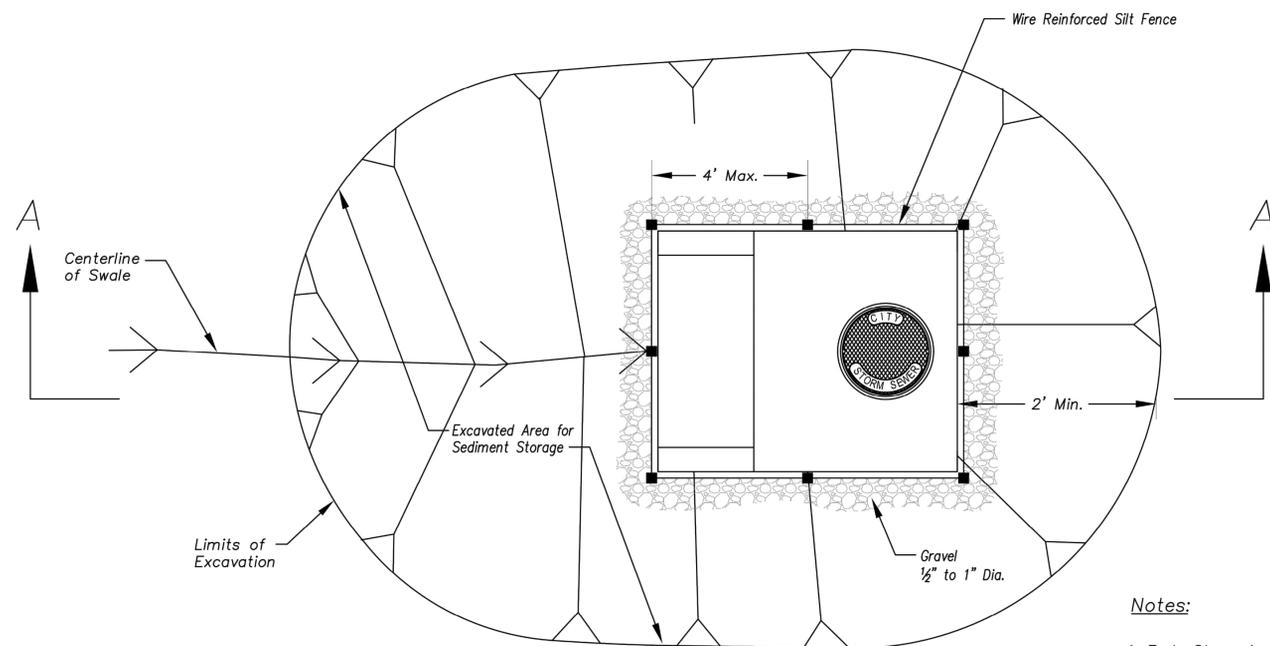
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN THE STATE OF MISSOURI. LICENSE # 000842. EXPIRES 12/31/19.

STREETS OF WEST PRYOR  
NWQ NW PRYOR RD & NW LOWENSTEIN DR  
LEE'S SUMMIT, MISSOURI

PRIVATE ROAD PLANS  
EROSION CONTROL DETAIL SHEET



Section A-A  
Not to Scale

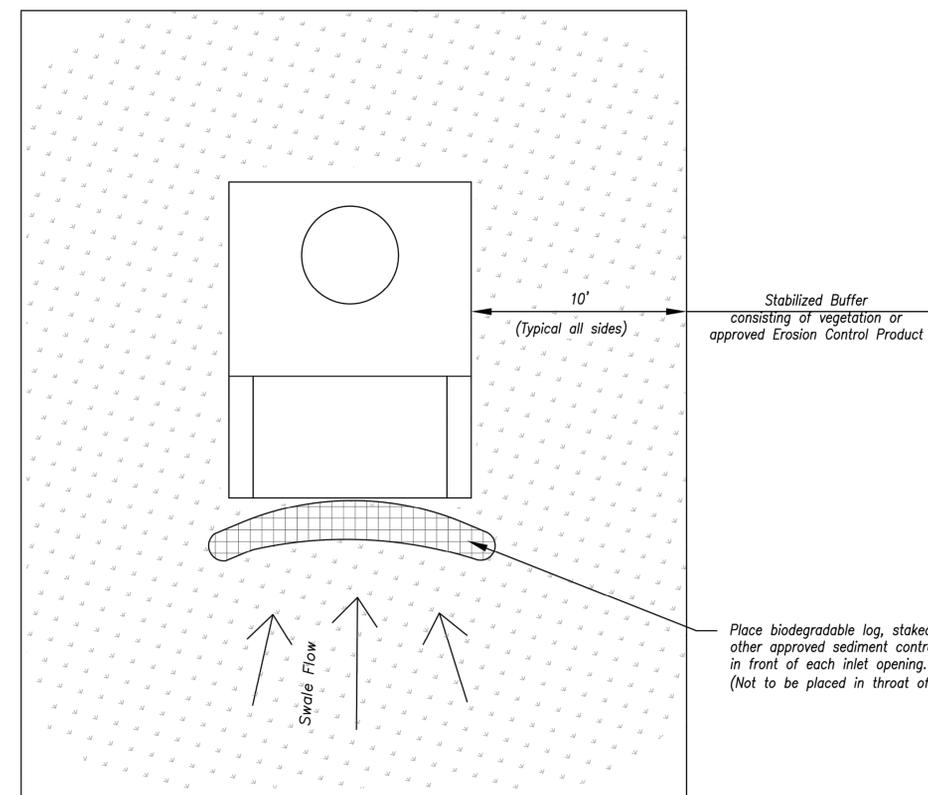


Plan  
Not to Scale

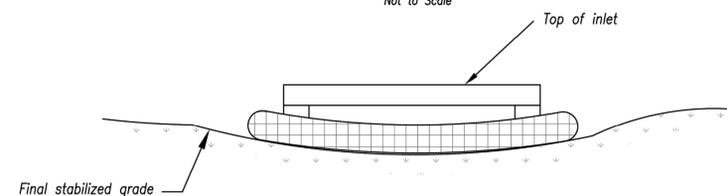
**EARLY STAGE AREA INLET**  
(All open boxes and inlets not at final grade)

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

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

	LDO	CHK
	BKR	DWN
	LDO	DSN

REV	DATE	DESCRIPTION
0	5-16-19	INITIAL ISSUE



LEON D. OSBOURN  
ENGINEER  
MO # 021726

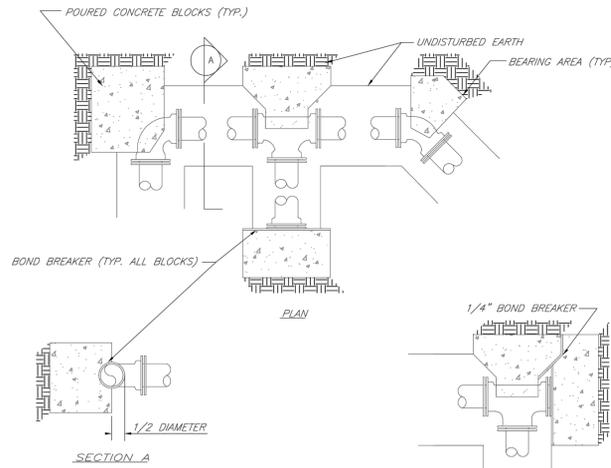
2319 N. JACKSON | P.O. BOX 1304  
JUNCTION CITY, KANSAS 66441  
PH. (785) 762-5040 | FAX. (785) 762-7744  
j@kveeng.com | www.kveeng.com  
**KAW VALLEY ENGINEERING**  
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING  
SERVICES IN THE STATE OF MISSOURI UNDER CERTIFICATE OF AUTHORITY # 000842.  
EXPIRES 12/31/19

**STREETS OF WEST PRYOR**  
NWQ NW PRYOR RD & NW LOWENSTEIN DR  
LEE'S SUMMIT, MISSOURI  
PRIVATE ROAD PLANS  
EROSION CONTROL DETAIL SHEET

PROJ. NO.	A14_7067-1
DESIGNER	LDO
DRAWN BY	JT
CFN	7067-11R_DET
SHEET	REV
C-26	0

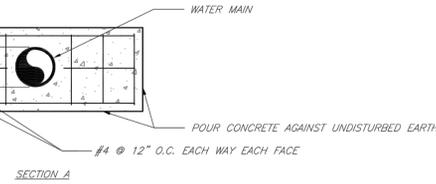
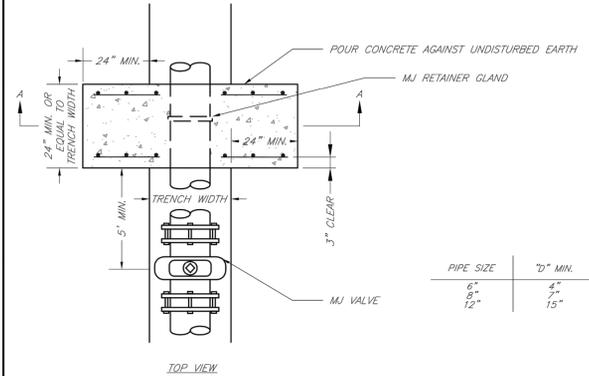
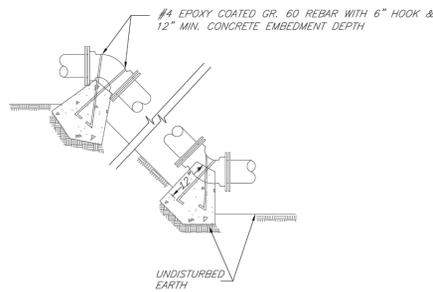
REQUIRED CONCRETE BEARING AREA (SQUARE FEET - SF)				
NOM. DIA. (INCHES)	TEE, PLUG	BEND	BEND	11.25 BEND
6	4.7	6.7	4.0	4.0
8	8.4	11.8	6.4	4.0
10	13.1	18.5	10.0	4.0
12	18.6	26.7	14.4	4.0
14	25.7	36.3	19.6	5.0
16	33.5	47.4	25.6	6.6
18	42.4	59.7	32.5	8.3
20	REST. JT.	REST. JT.	40.1	10.3
24	REST. JT.	REST. JT.	29.4	14.8

- NOTES:  
 1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.  
 2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.  
 3. BEARING AREA MUST BE AGAINST UNDISTURBED SOIL.  
 4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.

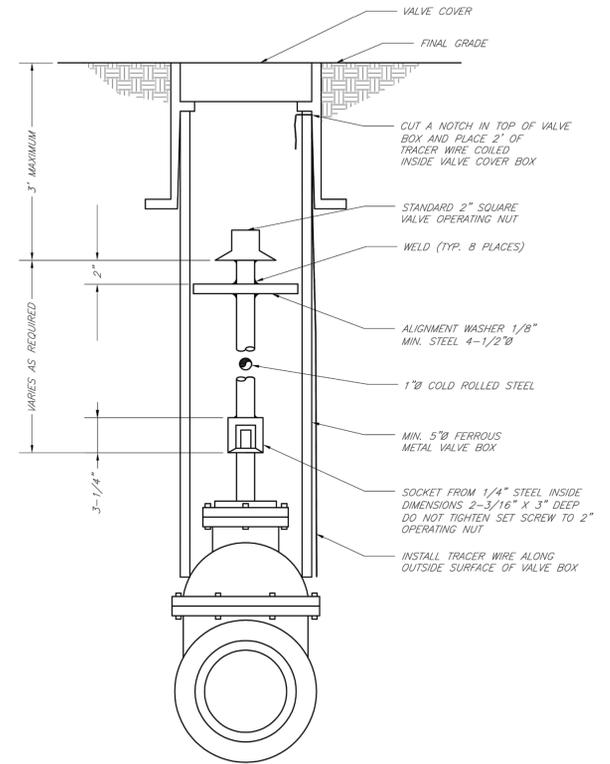


REQUIRED CONCRETE VOLUME (CUBIC FEET - CF)				
NOM. DIA. (INCHES)	TEE, PLUG	BEND	BEND	11.25 BEND
6	50.5	71.4	38.6	19.7
8	89.8	128.9	68.7	35.0
10	140.2	198.3	107.3	54.7
12	202.0	REST. JT.	154.8	78.8
14	REST. JT.	REST. JT.	210.4	107.3
16	REST. JT.	REST. JT.	140.1	70.4
18	REST. JT.	REST. JT.	177.3	89.1
20	REST. JT.	REST. JT.	REST. JT.	110.0
24	REST. JT.	REST. JT.	REST. JT.	158.4

- NOTES:  
 1. ALL BENDS WITHOUT RESTRAINED JOINTS SHALL HAVE CONCRETE THRUST BLOCKS INSTALLED FOR RESTRAINT.  
 2. MEGA LUGS MAY BE USED ONLY IN CONJUNCTION WITH CONCRETE THRUST BLOCKING.  
 3. BEARING MUST BE AGAINST UNDISTURBED SOIL.  
 4. DO NOT COVER JOINTS OR BOLTS (WHERE APPLICABLE) WITH CONCRETE.



NOTE:  
 THIS DETAIL NOT TO BE USED FOR PIPE GREATER THAN 12"



**LEE'S SUMMIT MISSOURI**  
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64663  
**HORIZONTAL THRUST BLOCKS**

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

**LEE'S SUMMIT MISSOURI**  
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64663  
**VERTICAL THRUST BLOCKS**

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

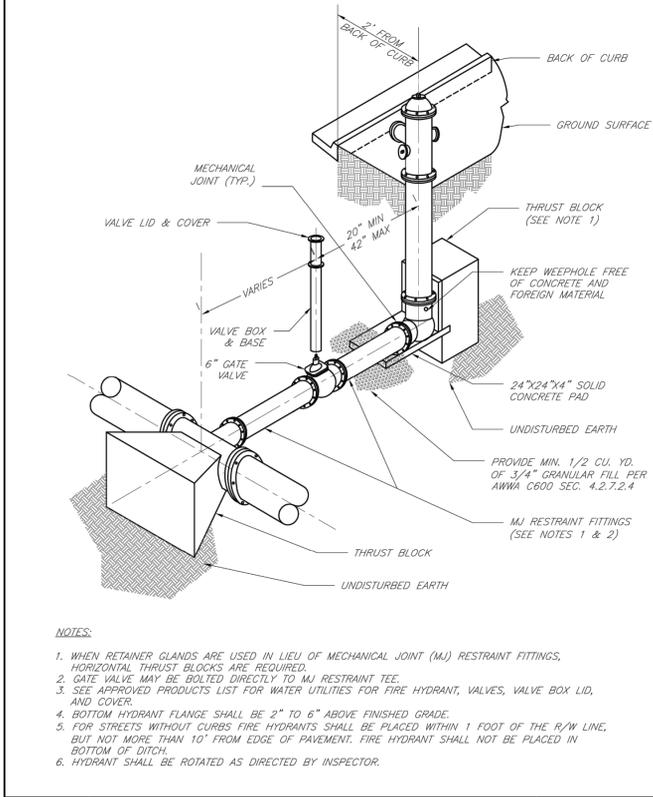
**LEE'S SUMMIT MISSOURI**  
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64663  
**STRADDLE BLOCK**

Date: 02/13  
 Drawn By: JN  
 Checked By: DL  
 FILE: WAT-3  
 Rev: 1/14  
 Rev:

**LEE'S SUMMIT MISSOURI**  
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64663  
**VALVE STEM EXTENSION AND VALVE BOX**

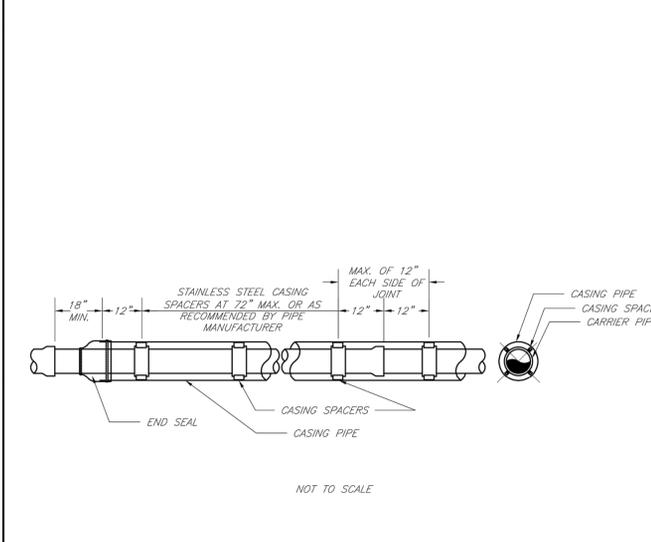
Date: 02/13  
 Drawn By: JN  
 Checked By: DL  
 FILE: WAT-9  
 Rev: 1/14  
 Rev:

STATE OF MISSOURI  
 LEON D. OSBOURN  
 ENGINEER  
 NO. # 021726  
 2319 N. JACKSON | P.O. BOX 1304  
 JUNCTION CITY, KANSAS 66441  
 PH. (785) 762-5040 | FAX (785) 762-7744  
 j.os@kve.com | www.kve.com



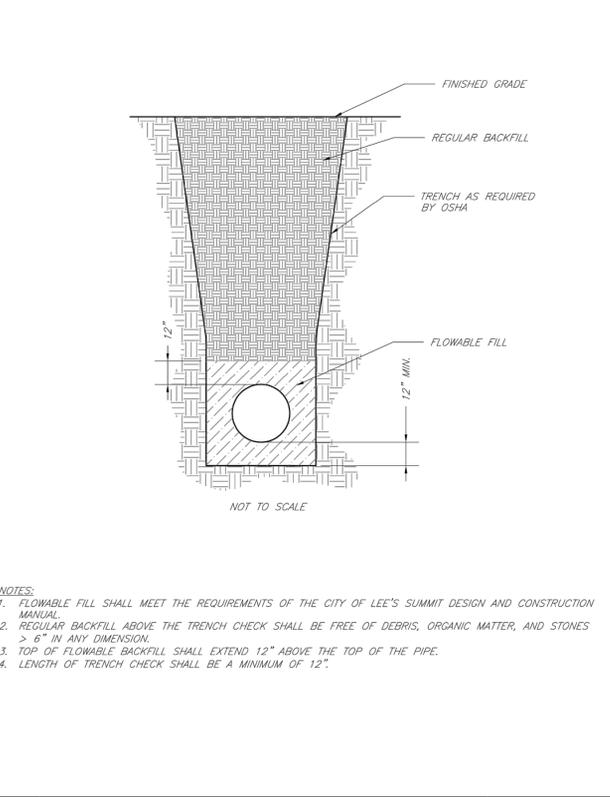
**LEE'S SUMMIT MISSOURI**  
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64663  
**HYDRANT INSTALLATION - STRAIGHT SET**

Date: 02/13  
 Drawn By: JN  
 Checked By: DL  
 FILE: WAT-7  
 Rev: 1/14  
 Rev:



**LEE'S SUMMIT MISSOURI**  
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64663  
**WATER CASING PIPE DETAIL**

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



**LEE'S SUMMIT MISSOURI**  
 PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64663  
**TRENCH CHECK**

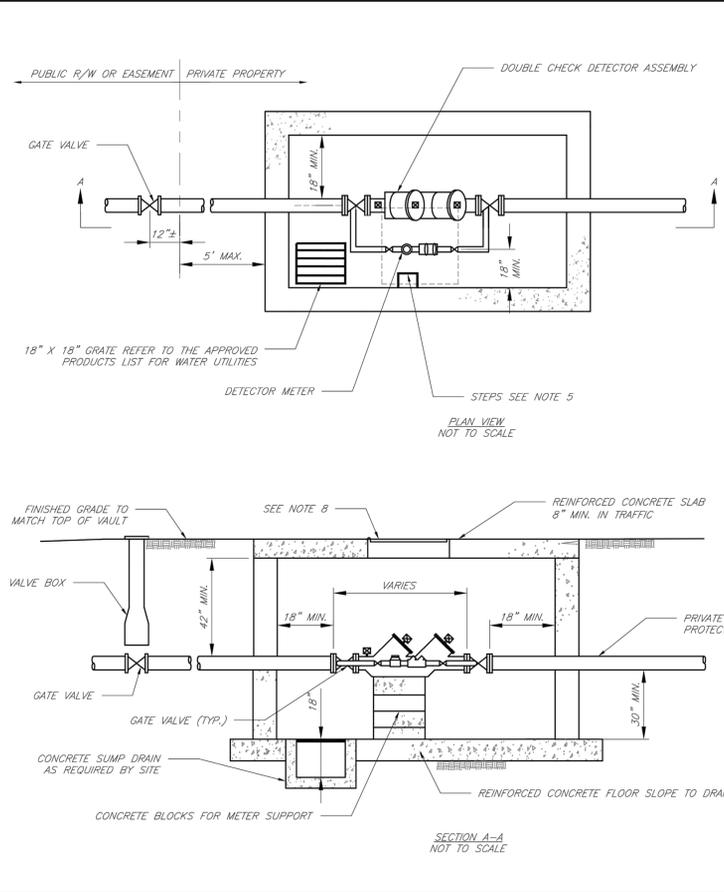
Date: 02/13  
 Drawn By: JN  
 Checked By: DL  
 FILE: WAT-6  
 Rev: 1/14  
 Rev:

**KAW VALLEY ENGINEERING**  
 KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN THE STATE OF MISSOURI UNDER LICENSE NO. 000842, EXPIRES 12/31/19

**STREETS OF WEST PRYOR**  
 NW QW PRYOR RD & NW LOWENSTEIN DR  
 LEE'S SUMMIT, MISSOURI

**PRIVATE ROAD PLANS**  
**WATER DETAILS**

PROJ. NO. A14-7067-1  
 DESIGNER LDO DRAWN BY JN  
 SHEET 7067-11R\_DET REV 0  
 C-27 0



- GENERAL NOTES:**
- METER VAULT WALLS TO BE POURED OR PRECAST CONCRETE. METER VAULT ROOF TO BE REINFORCED CONCRETE WITH OPENING CENTERED OVER DETECTOR METER. REINFORCED WALLS AND SLABS ARE TO BE DESIGNED BY THE OWNER'S ENGINEER OR PRECAST ENGINEER.
  - METER VAULT TO BE LOCATED, WHEN POSSIBLE, OUTSIDE TRAFFIC AREA AND WHERE SURFACE WATER WILL NOT DRAIN INTO IT. PROVIDE CONCRETE SUMP TO DRAIN TO AN ABOVE GROUND DISCHARGE POINT.
  - ALL PIPE AND FITTINGS FROM THE CITY WATER MAIN THROUGH THE VAULT SHALL BE PROVIDED WITH RESTRAINED JOINT FITTINGS.
  - ALL FITTINGS FOR THE DETECTOR METER TO BE BRASS.
  - STEPS SHALL BE IN ACCORDANCE WITH THE APPROVED PRODUCTS LIST FOR WATER UTILITIES AND SHALL BE ON 16" CENTERS.
  - A DEPARTMENT OF NATURAL RESOURCES APPROVED DOUBLE CHECK DETECTOR ASSEMBLY BACKFLOW PREVENTER MUST BE USED. FOR A COPY OF THE MISSOURI DEPARTMENT OF NATURAL RESOURCES APPROVED BACKFLOW PREVENTION ASSEMBLIES, CONTACT WATER UTILITIES AT 816-969-1900.
  - ALL VALVES SHALL HAVE RISING STEMS.
  - MANHOLE COVER SHALL BE A BILCO K-1 MODEL UNLESS IN A VEHICLE TRAFFIC AREA. SEE THE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR TRAFFIC CONDITIONS. THE COVER SHALL HAVE A 1-3/4" Ø HOLE DRILLED FOR A TOUCH/READ DEVICE.
  - A MINIMUM OF 18" CLEARANCE SHALL BE PROVIDED AROUND ALL PIPING, VALVES, APPURTENANCES, ETC.
  - CONTACT PUBLIC WORKS ENGINEERING FOR VAULTS THAT INCLUDE A FIRE DEPARTMENT CONNECTION OR A 3" OR LARGER METER.

**CITY OF LEE'S SUMMIT, MO**  
**PUBLIC WORKS DEPARTMENT**  
**ENGINEERING DIVISION**  
200 S. GARDEN STREET  
 LEE'S SUMMIT, MO 64063

**STANDARD DRAWINGS**  
 VAULT FOR DOUBLE CHECK DETECTOR CHECK

Drawn By: AS  
 Checked By: JL  
 Date: 12/14  
 Rev: 1/15

of  
 WAT-12

**STATE OF MISSOURI**  
**LEON D. OSBOURN**  
 ENGINEER  
 NUMBER 7-3-19  
 EXPIRES 12/31/19

LEON D. OSBOURN  
 ENGINEER  
 MO # 021726

2310 N. JACKSON | P.O. BOX 1304  
 JUNCTION CITY, KANSAS 66441  
 PH. (785) 762-5040 | FAX (785) 762-7744  
 j@kveeng.com | www.kveeng.com

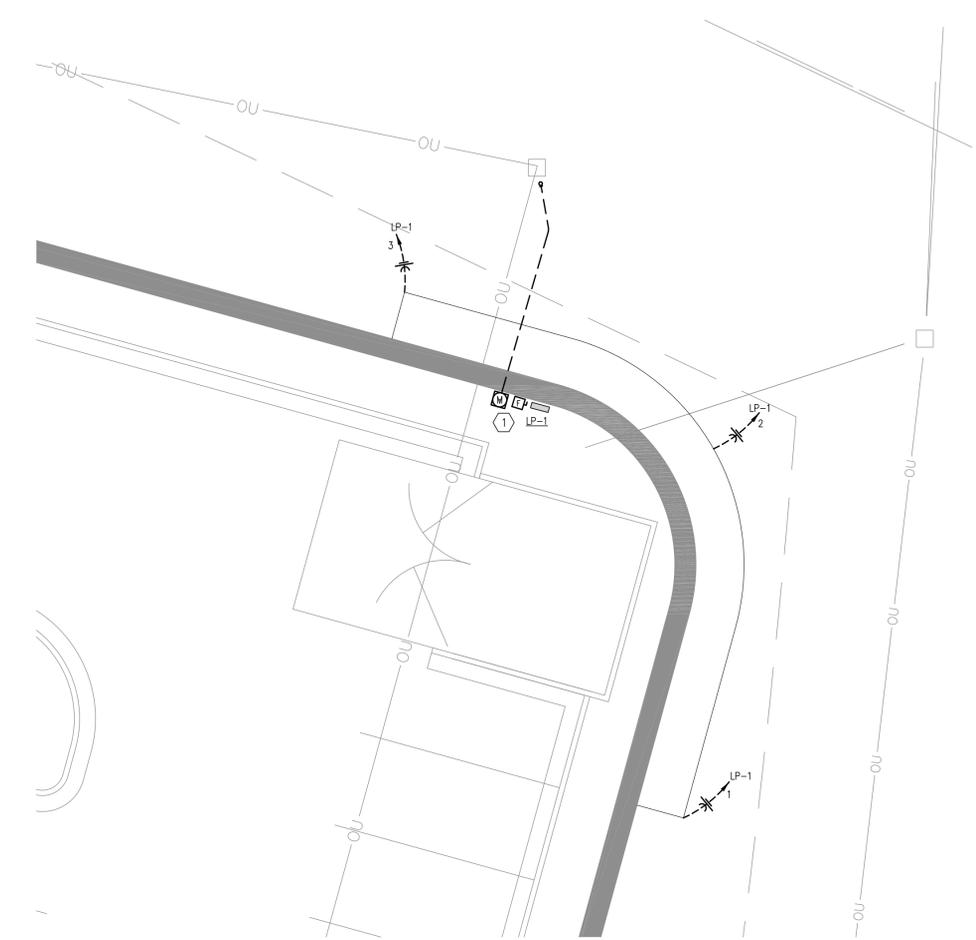
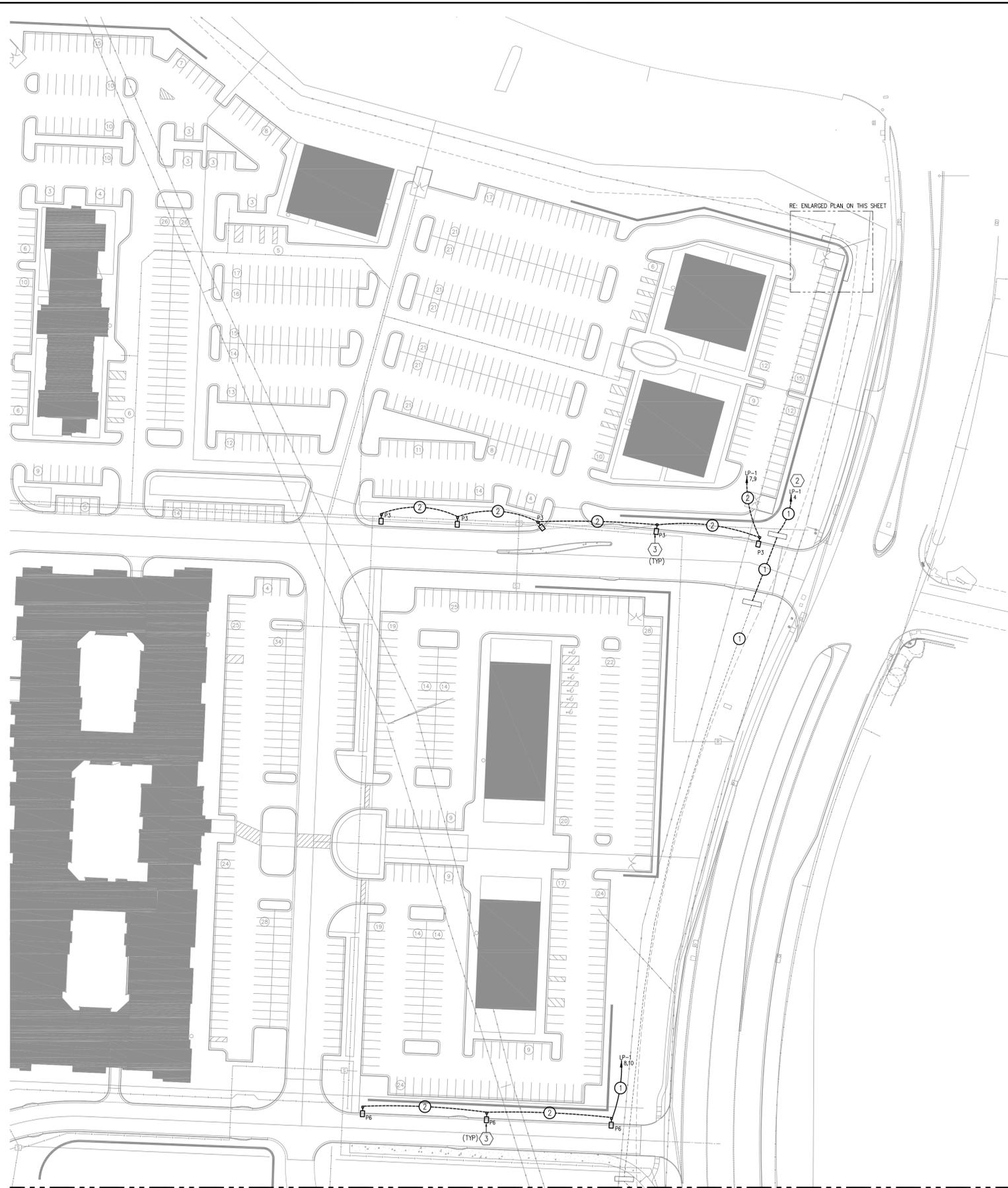
**KAW VALLEY ENGINEERING**  
 KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES IN THE STATE OF MISSOURI UNDER LICENSE # 000842. EXPIRES 12/31/19

REV	DATE	DESCRIPTION
0	5-16-19	INITIAL ISSUE
LDO	DSN	DWN
LDO	BKR	CHK

**STREETS OF WEST PRYOR**  
**NWQ NW PRYOR RD & NW LOWENSTEIN DR**  
**LEE'S SUMMIT, MISSOURI**

**PRIVATE ROAD PLANS**  
**WATER DETAILS**

PROJ. NO. **A14 7067-1**  
 DESIGNER **LDO** DRAWN BY **5**  
 CFN  
 SHEET **7067-11R\_DET** REV  
**C-28** **0**



- PLAN NOTES:**
- 1) PROVIDE NEW ELECTRICAL SERVICE ENTRANCE PER KCPL STANDARDS. COORDINATE WITH KCPL. RE: SHEET SE-3 FOR ADDITIONAL INFORMATION.
  - 2) CONDUCTORS SHALL BE INCREASED BASED ON VOLTAGE DROP. CONTRACTOR SHALL COORDINATE FINAL ENTRANCE SIGN WATTAGE WITH CONDUCTOR SIZES. PROVIDE NEMA 3R DISCONNECTING MEANS AT EACH ENTRANCE SIGN.
  - 3) CONTRACTOR SHALL PROGRAM LIGHT FIXTURES TO DIM TO 50% PER CITY STANDARDS. COORDINATE WITH LIGHTING MANUFACTURER FOR ADDITIONAL INFORMATION.

- FEEDER SCHEDULE:**
- 1) (2) #4 AWG, (1) #4 AWG GROUND IN 1-1/4" PVC CONDUIT
  - 2) (2) #8 AWG, (1) #8 AWG GROUND IN 1" PVC CONDUIT
  - 3) (2) #10 AWG, (1) #10 AWG GROUND IN 1" PVC CONDUIT
  - 4) (1) 3" PVC CONDUIT WITH TWO HOMERUNS, EACH WITH: (2) #1 AWG, (1) #1 AWG GROUND

- GENERAL NOTES:**
- 1) RE: SHEET SE-3 FOR GENERAL NOTES, SYMBOLS AND ANNOTATIONS.
  - 2) RE: SHEET SE-3 FOR PANEL SCHEDULE.
  - 3) UNDERGROUND POWER CIRCUITS AND FEEDERS SHALL BE IN PVC CONDUIT WITH WET RATED THIN/THIN INSULATED WIRING. RE: SHEET SE-3 FOR ADDITIONAL CONDUIT AND WIRING REQUIREMENTS.

**2 ENLARGED ELECTRICAL PLAN**  
SCALE: 1/8" = 1'-0"



**1 SITE ELECTRICAL PLAN**  
SCALE: 1:60

RE: SHEET SE-2 FOR CONTINUATION



REV	DATE	DESCRIPTION	AWN	DWN	CLB	CHK
0	6-28-19	CONSTRUCTION DOCUMENTS	AWN	DWN	CLB	CHK



CURTIS L. BRUNGARDT  
ENGINEER  
MO # 2003016693

2310 N. JACKSON | P.O. BOX 1304  
JUNCTION CITY, KANSAS 66441  
PH. (785) 762-5040 | FAX (785) 762-7744  
c.l.brungardt@kveeng.com | www.kveeng.com



**STREETS OF WEST PRYOR**  
NWQ NW PRYOR RD & NW LOWENSTEIN DR  
LEE'S SUMMIT, MISSOURI

PRIVATE ROAD PLANS  
SITE LIGHTING



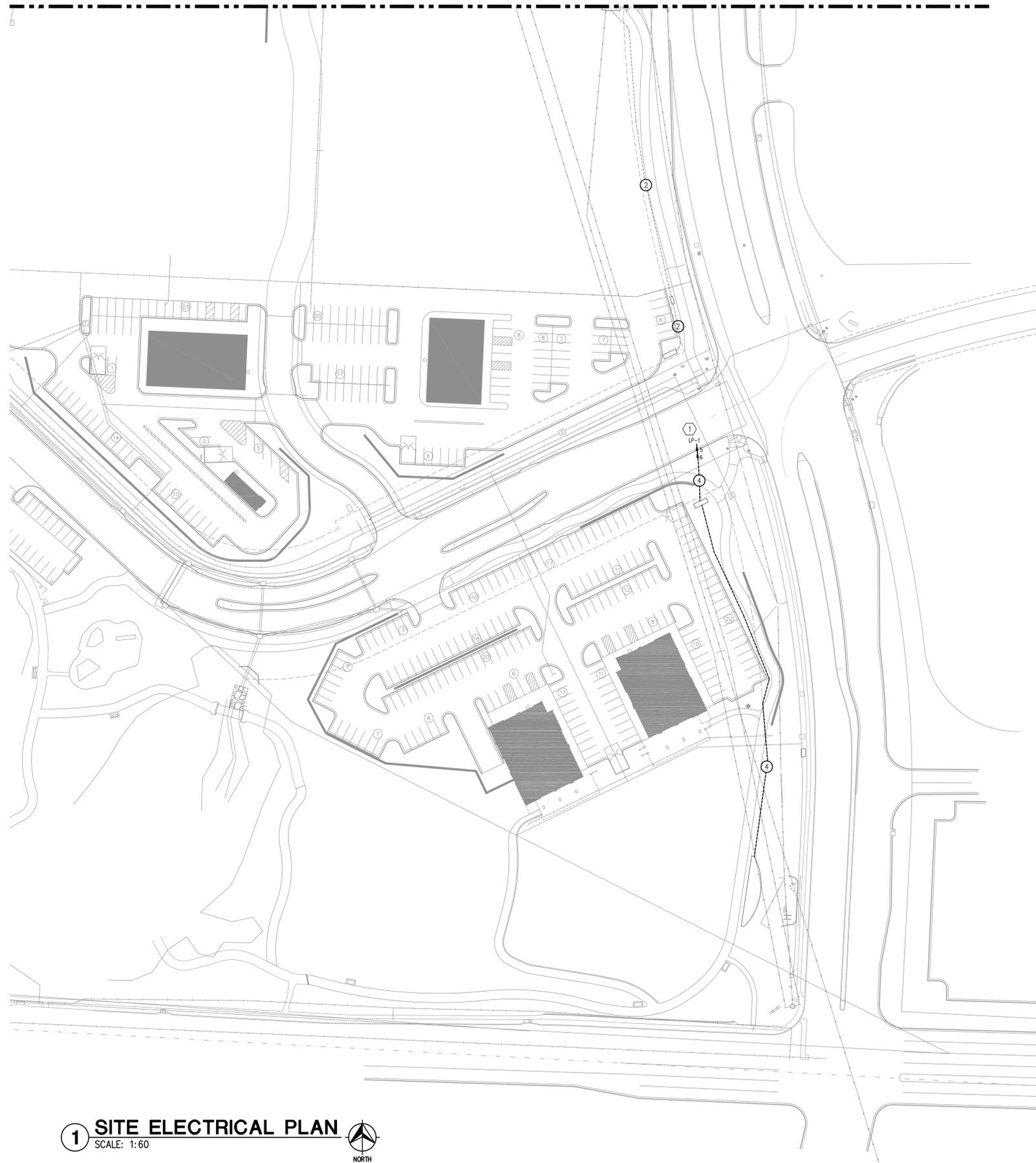
INTEGRITY. DESIRE. INNOVATION.  
184750 0000 Rev. 02.16.18  
1850 238 3977 | www.insitegroup.net

THIS DRAWING is provided as an instrument of service to the Engineer, and its intended use is limited to the Project Only. This Drawing shall be returned to Kaw Valley Engineering, Inc. upon completion of the construction work. All drawings, specifications, notes, designs, and arrangements appearing herein constitute the original and unmodified work of the Engineer. Any reproduction, use or disclosure of this proprietary information contained herein without the prior written consent of the Engineer is strictly prohibited.  
© Copyright 2019 InSite Group, Inc.

**ISG PROJECT NUMBER**  
16-5419-3

PROJ. NO.	A14_7067-1
DESIGNER	AWN
DRAWN BY	AWN
CFN	
SHEET	SE-1
REV	A

RE: SHEET SE-1 FOR CONTINUATION



**PLAN NOTES:**

- ① CONDUCTORS SHALL BE INCREASED BASED ON VOLTAGE DROP. CONTRACTOR SHALL COORDINATE FINAL ENTRANCE SIGN WATTAGE WITH CONDUCTOR SIZES. PROVIDE NEMA 3R DISCONNECTING MEANS AT EACH ENTRANCE SIGN.

**FEEDER SCHEDULE:**

- ① (2) #4 AWG, (1) #4 AWG GROUND IN 1-1/4" PVC CONDUIT
- ② (2) #8 AWG, (1) #8 AWG GROUND IN 1" PVC CONDUIT
- ③ (2) #10 AWG, (1) #10 AWG GROUND IN 1" PVC CONDUIT
- ④ (2) 3" PVC CONDUIT WITH TWO HOMERUNS, EACH WITH: (2) #2/0 AWG, (1) #2/0 AWG GROUND

**GENERAL NOTES:**

- 1) RE: SHEET SE-3 FOR GENERAL NOTES, SYMBOLS AND ANNOTATIONS.
- 2) RE: SHEET SE-3 FOR PANEL SCHEDULE.
- 3) UNDERGROUND POWER CIRCUITS AND FEEDERS SHALL BE IN PVC CONDUIT WITH WET RATED THHN/THWN INSULATED WIRING. RE: SHEET SE-3 FOR ADDITIONAL CONDUIT AND WIRING REQUIREMENTS.

	CLB
	AWN
	DSN
	DWN
	CHK

	CONSTRUCTION DOCUMENTS
	DESCRIPTION

0	6-28-19	REV	DATE
---	---------	-----	------



CURTIS L. BRUNGARDT  
ENGINEER  
MO # 2003016693

2310 N. JACKSON | P.O. BOX 1304  
JUNCTION CITY, KANSAS 66441  
PH. (785) 762-5040 | FAX (785) 762-7744  
j@kveeng.com | www.kveeng.com



**STREETS OF WEST PRYOR**  
NWQ NW PRYOR RD & NW LOWENSTEIN DR  
LEE'S SUMMIT, MISSOURI

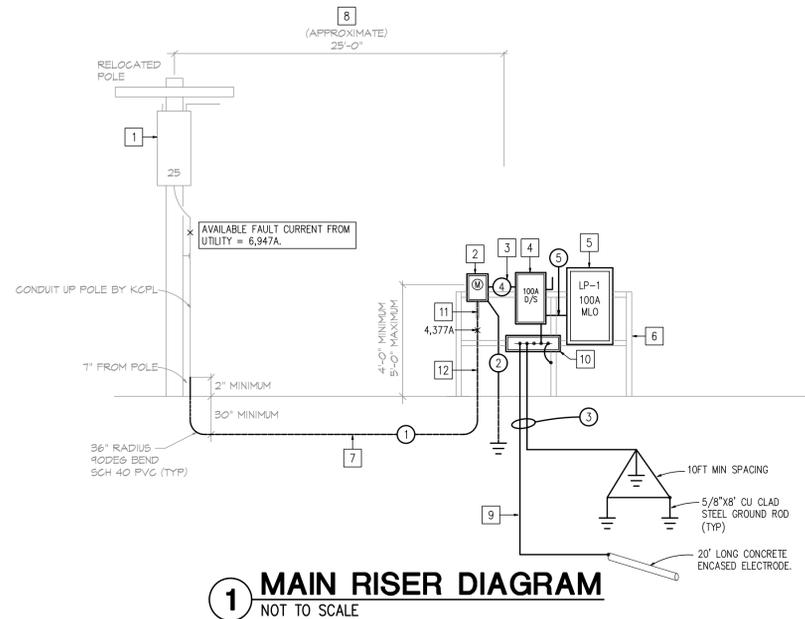
**PRIVATE ROAD PLANS**  
**SITE LIGHTING**

THE DRAWING IS PROVIDED AS AN INSTRUMENT OF SERVICE TO THE CLIENT AND IS NOT TO BE USED FOR ANY OTHER PURPOSE WITHOUT THE WRITTEN CONSENT OF THE ENGINEER. ANY REPRODUCTION, USE OR DISSEMINATION OF THIS DRAWING WITHOUT THE WRITTEN CONSENT OF THE ENGINEER IS STRICTLY PROHIBITED.

© Copyright 2019 InSite Group, Inc.  
ISG PROJECT NUMBER  
16-5419-3

**1 SITE ELECTRICAL PLAN**  
SCALE: 1:60

PROJ. NO.	A14_7067-1
DESIGNER	AWN
DRAWN BY	AWN
SHEET	SE-2
REV	A



PANELBOARD SCHEDULE: LP-1 (NORTH ENTRANCE)											
120/240 VOLTAGE		1 PHASE		MAIN BREAKER		FEEDER ENTRANCE:		PANEL LOCATION:			
100 AMP MAIN BUS		3 WIRE		X MAIN LUGS		X TOP		NORTH ENTRANCE			
3R NEMA ENCLOSURE		200% NEUT.		FEED THRU LUGS		BOTTOM		FEEDER CABLE:			
10,000 RMS SYMMETRICAL AMPS @		240 VOLTS		SUB-FEED BREAKER		MOUNT:		SEE ONE-LINE DIAGRAM			
6/28/19 DATE		X COPPER BUSS		SOLID NEUTRAL		X SURFACE		UTILITY			
X FLUSH											

POLE #	SERVICE	VA LOAD		LOAD TYPE	WIRE SIZE	C.B.		WIRE SIZE	LOAD TYPE	VA LOAD		SERVICE	POLE #
		L1	L2			TRIP	POLE			L1	L2		
1	NORTH SIGN #1	500		L 12	20	1	20	1	L	500		NORTH SIGN #2	2
3	NORTH SIGN #3		500	L 12	20	1	20	1	L	500		MIDDLE AREA SIGNS	4
5	SOUTH SIGN #1	500		L 12	20	1	20	1	L	500		SOUTH SIGN #2	6
7	NORTH ENTRANCE		415	L 8	20	2	20	2	L	249		SOUTH ENTRANCE	8
9	LIGHTS	415		L 8	20	2	20	2	L	249		LIGHTS	10
11	SPARE				20	2	20	2				SPARE	12
13	SPARE				20	2	20	2				SPARE	14
15	SPARE				20	2	20	2				SPARE	16
17	SPARE				20	1	20	1				SPARE	18
19	SPARE				20	1	20	1				SPARE	20
21	SPARE				20	1	20	1				SPARE	22
23	SPARE				20	1	20	1				SPARE	24
25	SPARE											SPARE	26
27	SPARE											SPARE	28
29	SPARE											SPARE	30
		1415	915			L1 - 2164	L2 - 2164			749	1249		
		CONNECTED VA/PH (LESS FEED THRU & SUB FEED)				L1 -	L2 -						
		CONNECTED VA/PH FROM FEED THRU AND SUB FEED				L1 -	L2 -						
		TOTAL CONNECTED VA/PH				L1 - 2164	L2 - 2164						
LOAD TYPE	CODE DEMAND REQUIREMENTS	CONNECTED VA		DEMAND VA		MIN. CODE VA (1.25 x CONT.)							
		THIS PANEL	SUB PNL'S	TOTAL									
LIGHTING (NEC 220-11)	100%	4328		4328	4328	5410							
RECEPTACLES (NEC 220-13)	1st 10,000VA + 1/2 x REMAINING	0	0	0	0	0							
LARGEST MOTOR (NEC 430-24)	1.25 x LARGEST FLA	0	0	0	0	0							
REMAINING MOTORS (NEC 430-24)	100% REMAINING MOTORS	0	0	0	0	0							
HEATING (NEC 220-15)	100%	0	0	0	0	0							
KITCHEN EQUIPMENT (NEC 220-20)	VARIES (SEE CODE SECTION)	0	0	0	0	0							
WATER HEATER	100%	0	0	0	0	0							
MISC.	100%	0	0	0	0	0							
SPARE	0.25 x CODE MIN. VA					1353							
TOTAL LOADS		4328	4328	4328	4328	6763							
SIZING LOAD						28 AMPS							

Notes:  
1. IF WIRE SIZE IS NOT SHOWN, REFERENCE ONELINE OR SITE PLANS.

### ELECTRICAL SYMBOLS

- 1 BRANCH CIRCUIT OR FEEDER - SEE WIRING LEGEND FOR CONDUCTOR & CONDUIT QUANTITY & SIZE
- UNDER FLOOR/GRADE CONDUIT
- PANELBOARD
- NON-FUSED DISCONNECT SWITCH.
- FUSED DISCONNECT SWITCH.
- JUNCTION BOX.
- ## PLAN NOTE DESIGNATION.
- ## DIAGRAM NOTE DESIGNATION.
- \*F=XXXX XXX = CALCULATED 3-PHASE FAULT CURRENT

### ELECTRICAL NOTATIONS

- A AMPS
- AG ABOVE COUNTER, GROUND FAULT
- G INDICATES GROUND FAULT
- W INDICATES WEATHERPROOF
- UNO UNLESS NOTED OTHERWISE
- TYP TYPICAL
- RE:1E2 REFERENCE DESIGNATION SHEET NUMBER
- DETAIL/PLAN NUMBER

### DIAGRAM NOTES:

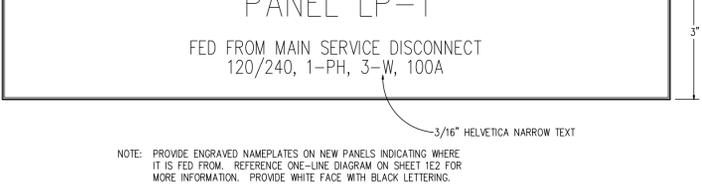
- EXISTING RELOCATED UTILITY POLE AND POLE MOUNTED TRANSFORMERS. COORDINATE EXACT LOCATION WITH CIVIL DRAWINGS.
- PROVIDE AND INSTALL NEW KCPL APPROVED METER SOCKET. NEW METER SHALL BE INSTALLED AT 4'-0" MINIMUM AND A MAXIMUM OF 5'-0" (CENTER OF SOCKET). INSTALL PER UTILITY COMPANY REQUIREMENTS.
- CONDUIT FROM METER SHALL BE 1-1/4" RIGID METALLIC CONDUIT.
- PROVIDE AND INSTALL NEW SERVICE RATED, NEMA 3R, 100A FUSED DISCONNECT SWITCH WITH 100A FUSES. DISCONNECT SHALL HAVE LUGS AND BAR FOR SERVICE GROUNDING. DISCONNECT SWITCH FUSES SHALL BE RATED FOR 100,000 AIC. CONTRACTOR SHALL TAG 100A DISCONNECT WITH PERMANENT LABEL.
- PROVIDE AND INSTALL NEW 100A, 120/240V, 1PH, 3W MAIN LUG ONLY PANEL. PANEL SHALL BE RATED FOR 35,000 AIC.
- PROVIDE NEW UNISTRUT SUPPORT SYSTEM FOR SERVICE ENTRANCE. CONTRACTOR SHALL INSTALL PER KCPL STANDARDS SEE DETAIL 2 ON THIS SHEET. CONTRACTOR SHALL GROUND UNISTRUT SYSTEM TO MAIN SYSTEM GROUNDING WITH A #6 AWG CONDUCTOR.
- PROVIDE NEW SERVICE CONDUIT AND CONDUCTORS. CONTRACTOR SHALL SUPPLY PULL STRING IN CONDUIT. CONDUIT SHALL EXTEND CONDUIT UP UTILITY AT A MINIMUM OF 2". PROVIDE SLIP JOINTS AT CONNECTIONS. CONTRACTOR SHALL PROVIDE ADDITIONAL LENGTH OF SERVICE CONDUCTORS TO ALLOW FOR KCPL TO INSTALLATION TO UTILITY TRANSFORMER. COORDINATE WITH KCPL FOR CONNECTION TO MAIN SERVICE DISCONNECT. RE: FEEDER SCHEDULE.
- APPROXIMATE HORIZONTAL DISTANCE FROM UTILITY POLE TO BUILDING SERVICE ENTRANCE. CONTRACTOR SHALL CONFIRM LENGTH REQUIRED TO GET CONDUIT BELOW RETAINING WALL. FIELD VERIFY EXACT LOCATION OF EXISTING UTILITY POLE AND VERIFY EXACT DISTANCE.
- CONNECT GROUNDING ELECTRODE CONDUCTOR TO AVAILABLE CONCRETE ENCASED ELECTRODE (I.E. RETAINING WALL AND SIGN). PROVIDE GROUNDING TO AVAILABLE CONNECTIONS PER NEC 250.
- PROVIDE AND INSTALL NEW COPPER GROUND BAR IN NEMA 3R WIREWAY FOR CONNECTIONS TO GROUNDING ELECTRODE SYSTEM.
- CONTRACTOR SHALL PROVIDE SLIP AND JOINT AND INSULATED BUSHINGS PER KCPL REQUIREMENTS.
- CONTRACTOR SHALL TRANSITION TO SCHEDULE 80 PVC AT OR BELOW GRADE. PROVIDE CLAMP AT FINISH GRADE TO UNISTRUT SYSTEM. LEAVE CLAMP LOOSE TO ALLOW SLIP JOINT TO WORK.

### FEEDER SCHEDULE:

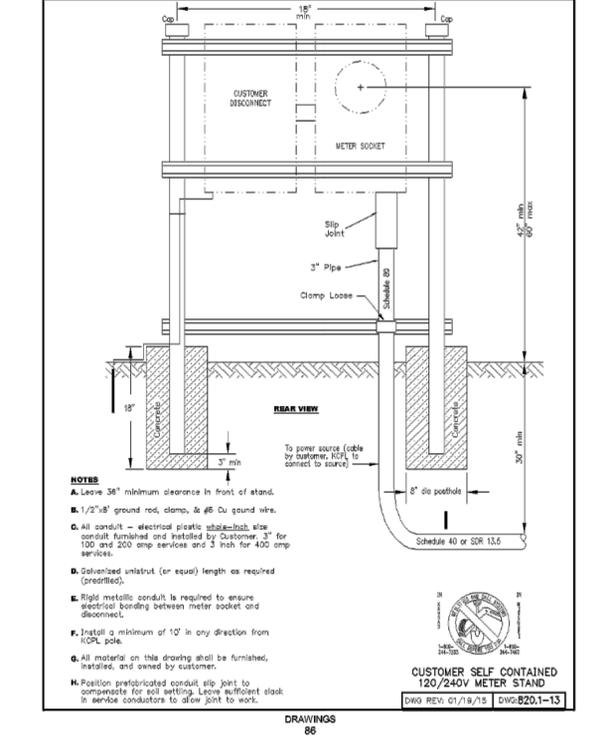
- (2) #1 AWG, COPPER CONDUCTORS, IN 3" PVC CONDUIT. CONDUCTORS BY CONTRACTOR. COORDINATE WITH KCPL.
- #6 SOLID BARE TINNED COPPER GROUND TO 1/2"x8FT COPPER CLAD STEEL GROUND ROD PER UTILITY REQUIREMENTS.
- #6 AWG SOLID BARE TINNED COPPER GROUND TO GROUND ROD, BUILDING STEEL, ENCASED ELECTRODE, ETC PER NEC 250.
- (2) #1 AWG, COPPER CONDUCTORS, IN 1-1/4" RIGID METAL CONDUIT.
- (2) #1 AWG, (1) #6 AWG GROUND, COPPER CONDUCTORS, IN 1-1/4" RIGID CONDUIT.

### GENERAL NOTES:

- THESE DRAWINGS ARE SCHEMATIC IN NATURE AND INTENDED TO DEPICT GENERAL SCOPE OF WORK. ALL WORK SHALL BE PERFORMED PER LOCAL AND STATE REQUIREMENTS.
- COORDINATE POWER REQUIREMENTS AND FINAL LOCATIONS OF ALL EQUIPMENT, DEVICES, ETC. WITH FINAL EQUIPMENT SELECTION AND INSTALL ALL NECESSARY DEVICES ALLOWING FOR END TERMINATION/CONNECTIONS.
- ALL WIRING SHALL BE IN PVC CONDUIT BELOW GRADE AND RIGID METAL CONDUIT ABOVE GRADE.
- UPDATE ALL PANELBOARD SCHEDULES.
- FURNISH, INSTALL AND CONNECT ALL WIRE, WIREWAY, CONDUIT, CONNECTORS, OUTLETS, ETC. NECESSARY TO ACHIEVE A COMPLETE ELECTRICAL INSTALLATION. ALTHOUGH SUCH WORK IS NOT SPECIFICALLY SHOWN OR SPECIFIED EQUIPMENT SHALL BE INSTALLED PER CODE REQUIREMENTS PROVIDING A SOUND, SECURE AND COMPLETE INSTALLATION.
- RE: THIS SHEET FOR ELECTRICAL SYMBOLS/NOTATIONS.
- RE: THIS SHEET FOR PANEL SCHEDULES.
- PROVIDE COPPER CONDUCTORS FOR LISTED APPLICATIONS AS FOLLOWS:  
UNDERGROUND POWER CIRCUITS AND FEEDERS: TYPE THHN/THWN, 600 VOLT, 75 DEGREE C (167 DEGREES F) WET RATING AND 90 DEGREES C (194 DEGREES F) DRY RATED THERMOSETTING FILLED INSULATING CABLE.  
\* MINIMUM BRANCH CIRCUIT WIRE SIZE IS #12AWG UNLESS NOTED OTHERWISE
- ALL FIRE RATED ASSEMBLIES SHALL BE MAINTAINED. CAULK AROUND ELECTRICAL PENETRATIONS TO MAINTAIN FIRE RESISTANCE RATING OF THE FIRE RATED ASSEMBLY.
- INSTALL ALL EQUIPMENT WHILE MAINTAINING ALL CLEARANCES PER EQUIPMENT MANUFACTURERS RECOMMENDATIONS AND PER LOCAL CODES.
- THE OWNER AND ENGINEER ARE NOT RESPONSIBLE FOR THE CONTRACTOR'S SAFETY PRECAUTIONS OR TO MEANS, METHODS, TECHNIQUES, CONSTRUCTION SEQUENCES, OR PROCEDURES REQUIRED TO PERFORM HIS/HER WORK.
- DRAWINGS ARE DESIGNED FOR THE MANUFACTURER'S MATERIALS, EQUIPMENT OR SERVICES NAMED ON PLANS AND ANY CHANGES AND THEIR ASSOCIATED COSTS, REQUIRED TO ACCOMMODATE OTHER APPROVED EQUIVALENT MATERIAL OR EQUIPMENT AS WELL AS SPACE REQUIREMENTS FOR THE OTHER APPROVED EQUIVALENT MATERIAL OR EQUIPMENT, MUST BE ASSUMED BY THE CONTRACTOR IN HIS/HER BID.
- CONTRACTOR SHALL CONTACT THE LOCAL ELECTRICAL UTILITY COMPANY AND ARRANGE FOR ELECTRIC SERVICE AS INDICATED ON DRAWINGS. INCLUDE ALL COSTS, CHARGES, FEES, ETC. INCURRED BY LOCAL AUTHORITIES INTO BID. PROVIDE ALL MATERIALS AS REQUIRED BY LOCAL AUTHORITIES FOR ELECTRIC SERVICE INSTALLATION. ALL WORK SHALL BE IN ACCORDANCE WITH REQUIREMENTS OF LOCAL AUTHORITIES.



### Customer Self Contained 120/240V Meter Stand



REV	DATE	DESCRIPTION	AWN	DWN	CLB	CHK
0	6-28-19	CONSTRUCTION DOCUMENTS	AWN	DWN	CLB	CHK

CURTIS L. BRUNGARDT  
ENGINEER  
MO # 2003016693

2310 N. JACKSON | P.O. BOX 1304  
JUNCTION CITY, KANSAS 66441  
PH. (785) 762-5040 | FAX (785) 762-7744  
www.kve.com | www.kve.com

**KAW VALLEY ENGINEERING**

**STREETS OF WEST PRYOR**  
NWQ NW PRYOR RD & NW LOWENSTEIN DR  
LEE'S SUMMIT, MISSOURI

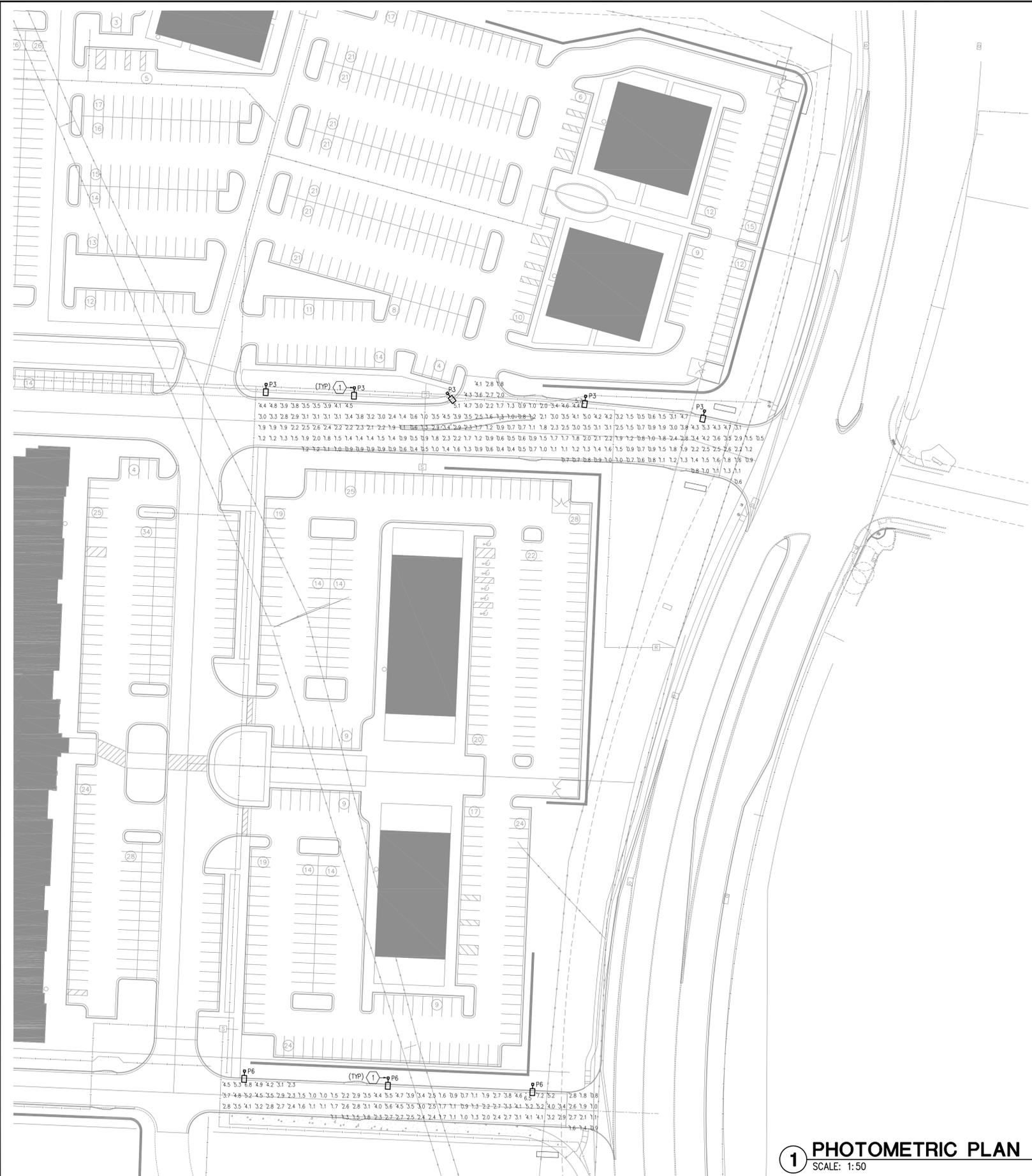
**PRIVATE ROAD PLANS**  
**SITE LIGHTING**

**InSite Group**  
DEDICATION. DESIRE. INTEGRITY.  
19416 South Street Rd., Ste. A, Lees Summit, MO 64081  
866.238.3877 | www.insitegroup.net

THIS DRAWING IS provided as an instrument of service to the Engineer, and its intended use is for the Project Only. It is to be used for the construction of the Project Only. It is not to be used for any other purpose. All drawings, specifications, and notes are to be read in conjunction with the contract documents. Any reproduction, use or disclosure of this information without the prior written consent of the Engineer is strictly prohibited.

© Copyright 2019 InSite Group, Inc.  
**ISO PROJECT NUMBER**  
16-5419-3

PROJ. NO.	A14-7067-1
DESIGNER	AWN
DRAWN BY	AWN
CFN	
SHEET	REV
SE-3	A



**PLAN NOTES:**

1) NEW POLE MOUNTED LIGHT FIXTURE SHALL BE INSTALLED IN APPROXIMATE LOCATION SHOWN. RE: LIGHTING FIXTURE SCHEDULE ON SHEET SL-2.

**CALCULATION SUMMARY**

AREA	AVE	MAX	MIN	MAX/MIN	AVE/MIN
ENTRANCE - NORTH	2.05	5.7	0.4	14.25	5.13
ENTRANCE - SOUTH	2.85	7.2	0.7	10.29	4.07

NOTES  
1) N/A

REV	DATE	DESCRIPTION	AWN	DWN	CLB	CHK
0	6-28-19	CONSTRUCTION DOCUMENTS				



CURTIS L. BRUNGARDT  
ENGINEER  
MO # 2003016693

2310 N. JACKSON | P.O. BOX 1304  
JUNCTION CITY, KANSAS 66441  
PH. (785) 762-5040 | FAX (785) 762-7744  
j.l@kveeng.com | www.kveeng.com

**KAW VALLEY ENGINEERING**

**STREETS OF WEST PRYOR**  
NWQ NW PRYOR RD & NW LOWENSTEIN DR  
LEE'S SUMMIT, MISSOURI

PRIVATE ROAD PLANS  
SITE LIGHTING

PROJ. NO.	A14_7067-1
DESIGNER	AWN
DRAWN BY	AWN
CFN	
SHEET	SL-1
REV	A

INTEGRITY GROUP, INC. 1000 S. LAMAR AVENUE, SUITE 100  
JUNCTION CITY, MISSOURI 66441  
PH. (785) 762-5040 | FAX (785) 762-7744  
www.insitegroup.com

THIS DRAWING IS PROVIDED AS AN INSTRUMENT OF SERVICE TO THE ENGINEER AND IS INTENDED FOR USE ON THE PROJECT ONLY. THE DRAWING REMAINS THE PROPERTY OF THE ENGINEER AND SHALL BE RETURNED TO HIM/HER UPON COMPLETION OF THE CONSTRUCTION WORK. ALL DRAWINGS, SPECIFICATIONS, AND DESIGN ARE THE PROPERTY OF THE ENGINEER. ANY REPRODUCTIONS, USE OR DISSEMINATION OF THIS INFORMATION WITHOUT THE WRITTEN CONSENT OF THE ENGINEER IS STRICTLY PROHIBITED.

© Copyright 2019 InSite Group, Inc.  
**ISG PROJECT NUMBER**  
16-5419-3

**1 PHOTOMETRIC PLAN**  
SCALE: 1:50



