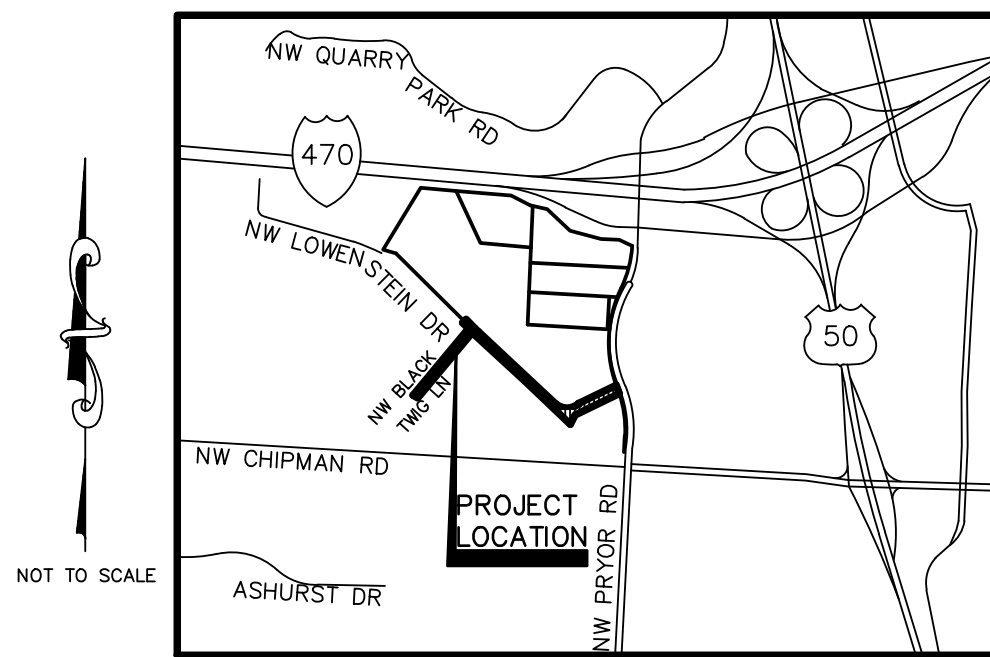


CONSTRUCTION PLANS FOR NW LOWENSTEIN DRIVE & NW BLACK TWIG LANE WATER LINE REPLACEMENT STREETS OF WEST PRYOR LEE'S SUMMIT, MISSOURI

MAY 2019
RECORD DRAWINGS

LEGEND

△ SECTION CORNER, ORIGIN UNKNOWN UNLESS OTHERWISE NOTED	○ SANITARY SEWER CLEANOUT
○ MONUMENT FOUND, ORIGIN UNCERTAIN UNLESS OTHERWISE NOTED	⊕ STORM SEWER MANHOLE
⊠ RIGHT-OF-WAY MARKER FOUND	⊕ TELEPHONE SIGN
(D) DESCRIBED	⊕ TELEPHONE MANHOLE
(M) MEASURED	⊕ TELEPHONE PEDESTAL
(C) CALCULATED	— T — UNDERGROUND TELEPHONE LINE
(P) PLATTED	⊕ SPLICE BOX
— STREET SIGN	⊕ FIBER OPTIC CABLE SIGN
⊠ CANOPY SUPPORT	— FOC — UNDERGROUND FIBER OPTIC CABLE
⊕ UTILITY POLE	⊕ TRAFFIC CONTROL POLE
⊕ UTILITY POLE W/ LIGHT	⊕ PULL BOX
⊕ UTILITY POLE W/TRANSFORMER	⊕ FLAG POLE
☆ LIGHT POLE	⊕ MAILBOX
⊕ DEADMAN ANCHOR	⊕ HANDICAP SIGN
(S) OU OVERHEAD UTILITY - # LINES	⊕ HANDICAP PAINTED SYMBOL
⊕ AIR CONDITIONING UNIT	⊕ LEFT TURN ARROW
⊕ ELECTRIC PEDESTAL	⊕ STRAIGHT ARROW
⊕ ELECTRIC METER	⊕ RIGHT TURN ARROW
⊕ ELECTRIC TRANSFORMER	⊕ GATE POST
⊕ BREAKER BOX	⊕ FENCE POST
— E — UNDERGROUND ELECTRIC LINE	⊕ WOOD FENCE
⊕ UTILITY MANHOLE	⊕ CHAIN LINK FENCE
⊕ CABLE TV SIGN	⊕ BARBED WIRE FENCE
⊕ CABLE TV PEDESTAL	⊕ DECIDUOUS TREE W/SIZE & DRIP LINE
⊕ GAS SIGN	⊕ EVERGREEN TREE W/SIZE & DRIP LINE
⊕ GAS METER	⊕ SAPLING TREE
— G — UNDERGROUND GAS LINE	⊕ SHRUB
⊕ GAS CATHODIC PROTECTION STATION	⊕ STUMP
— W — WATER LINE	⊕ TREE LINE
⊕ WATER LINE GATE VALVE	⊕ SHRUB LINE
⊕ WATER SPIGOT	⊕ PARKING STALL COUNT
⊕ WATER METER	⊕ 1' CONTOUR INTERVAL
⊕ WELL	⊕ RESTRICTED ACCESS
⊕ FIRE HYDRANT	⊕ B/B BACK OF CURB TO BACK OF CURB
⊕ SPRINKLER VALVE	⊕ E/E EDGE TO EDGE
⊕ SANITARY SEWER MANHOLE	
— S — SANITARY SEWER LINE	



LOCATION MAP
CITY OF LEE'S SUMMIT, MISSOURI

Accepted
Record Drawings

These plans have been reviewed for accuracy and are accepted for basic conformance to the approved construction drawings.

UTILITIES

Summary of Quantities			
Water Main			
Item No.	Item	Estimated Quantity	Unit
1	Connect to Existing Water Main	4	Ea.
2	6" Fire Line Main	76	L.F.
3	6" Water Main	41	L.F.
4	8" Water Main	539	L.F.
5	12" Water Main	1808	L.F.
6	1" Copper Water Service Line	164	L.F.
7	Fire Hydrant with 6" Valve	4	Ea.
8	Temporary Fire Hydrant	1	Ea.
9	Temporary Fire Hydrant with 8" Valve	1	Ea.
10	6" Gate Valve	1	Ea.
11	8" Gate Valve	6	Ea.
12	12" Butterfly Valve	7	Ea.
13	12"x12"x8" Tee	1	Ea.
14	12"x12"x8" Tee	3	Ea.
15	12"x12"x12" Tee	2	Ea.
16	12" to 6" Reducer	1	Ea.
17	12" to 8" Reducer	2	Ea.
18	Air Release Valve	1	Ea.
19	6"-45" Bend	6	Ea.
20	8"-45" Bend	4	Ea.
21	12"-45" Bend	6	Ea.

Erosion Control

Item No.	Item	Estimated Quantity	Unit
1	Erosion Control Devices, Sedimentation Fence	2140	L.F.
2	Erosion Control Devices, Curb Inlet Protection	18	Ea.
3	Seed	0.66	AC

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

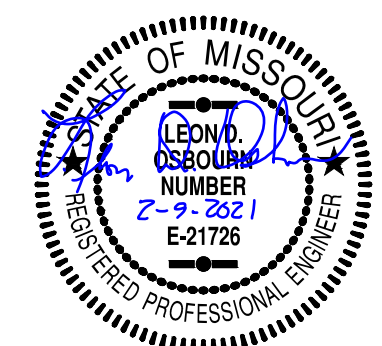
CAUTION - NOTICE TO CONTRACTOR
THE CONTRACTOR IS SPECIFICALLY CAUTIONED THAT THE LOCATION AND/OR ELEVATION OF EXISTING UTILITIES AS SHOWN ON THESE PLANS IS BASED ON RECORDS OF THE VARIOUS UTILITY COMPANIES AND, WHERE POSSIBLE, MEASUREMENTS TAKEN IN THE FIELD. THE INFORMATION IS NOT TO BE RELIED ON AS BEING EXACT OR COMPLETE. THE CONTRACTOR MUST CALL THE APPROPRIATE UTILITY COMPANY AT LEAST 72 HOURS BEFORE ANY EXCAVATION TO REQUEST EXACT FIELD LOCATION OF UTILITIES. IT SHALL BE THE RESPONSIBILITY OF THE CONTRACTOR TO RELOCATE ALL EXISTING UTILITIES WHICH CONFLICT WITH PROPOSED IMPROVEMENTS SHOWN ON THE PLANS. THE CONTRACTOR SHALL EXPOSE EXISTING UTILITIES AT LOCATIONS OF POSSIBLE CONFLICTS PRIOR TO ANY CONSTRUCTION.

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

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

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.

I HAVE REVIEWED THE AS-BUILT INFORMATION PROVIDED ON THESE RECORD DRAWINGS AND TAKE NO EXCEPTION TO THE INFORMATION PROVIDED ON SEPTEMBER 2, 2020 BY EMERY SAPP AND SONS, INC.



LEON D. OSBOURN
PROFESSIONAL ENGINEER

APPROVED THIS _____ DAY OF _____, _____
OWNER: MATT PENNINGTON

APPROVED THIS _____ DAY OF _____, _____
CITY APPROVAL

OWNER:
STREETS OF WEST PRYOR, LLC
7200 WEST 132ND STREET
OVERLAND PARK, KS 66213
CONTACT: MATT PENNINGTON
email: matt@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:
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JUNCTION CITY, KS 66441
785-762-5040
CONTACT: LEON D OSBOURN
EMAIL: ldo@kveng.com

AS-BUILT

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KCP&L
NATHAN MICHAEL
(913) 347-4310
Nathan.Michael@kcpcl.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
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Ryan.Alkire@cable.comcast.com

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

MISSOURI ONE CALL SYSTEM, INC.

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=984.97
BM #2: CHISELED "SQUARE" ON NORTHWEST CORNER AREA INLET, 25'± EAST OF CURB LINE AND ON-LINE WITH SOUTH CURB OF LOWENSTEIN DRIVE AT 90° BEND IN ROAD. ELEV=970.98

INDEX TO SHEETS

- C-1 TITLE SHEET
- C-2 GENERAL LAYOUT SHEET
- C-3 WATER LINE A - PLAN & PROFILE
- C-4 WATER LINE A - PLAN & PROFILE
- C-5 WATER LINE A - PLAN & PROFILE
- C-6 WATER LINE A - PLAN & PROFILE
- C-7 WATER LINE B & C - PLAN & PROFILE
- C-8 EROSION CONTROL PLAN
- C-9 DETAIL SHEET
- C-10 DETAIL SHEET
- C-11 DETAIL SHEET
- C-12 DETAIL SHEET
- C-13 DETAIL SHEET
- C-14 DETAIL SHEET

REV	DATE	DESCRIPTION
5	2-5-21	AS-BUILT PLANS
3	5-1-19	REVISED PER CITY COMMENTS
2	4-15-19	REVISED PER CITY COMMENTS
1	2-26-19	REVISED PER CITY COMMENTS
0	1-4-19	INITIAL ISSUE

LEON D. OSBOURN
ENGINEER
MO # 021726

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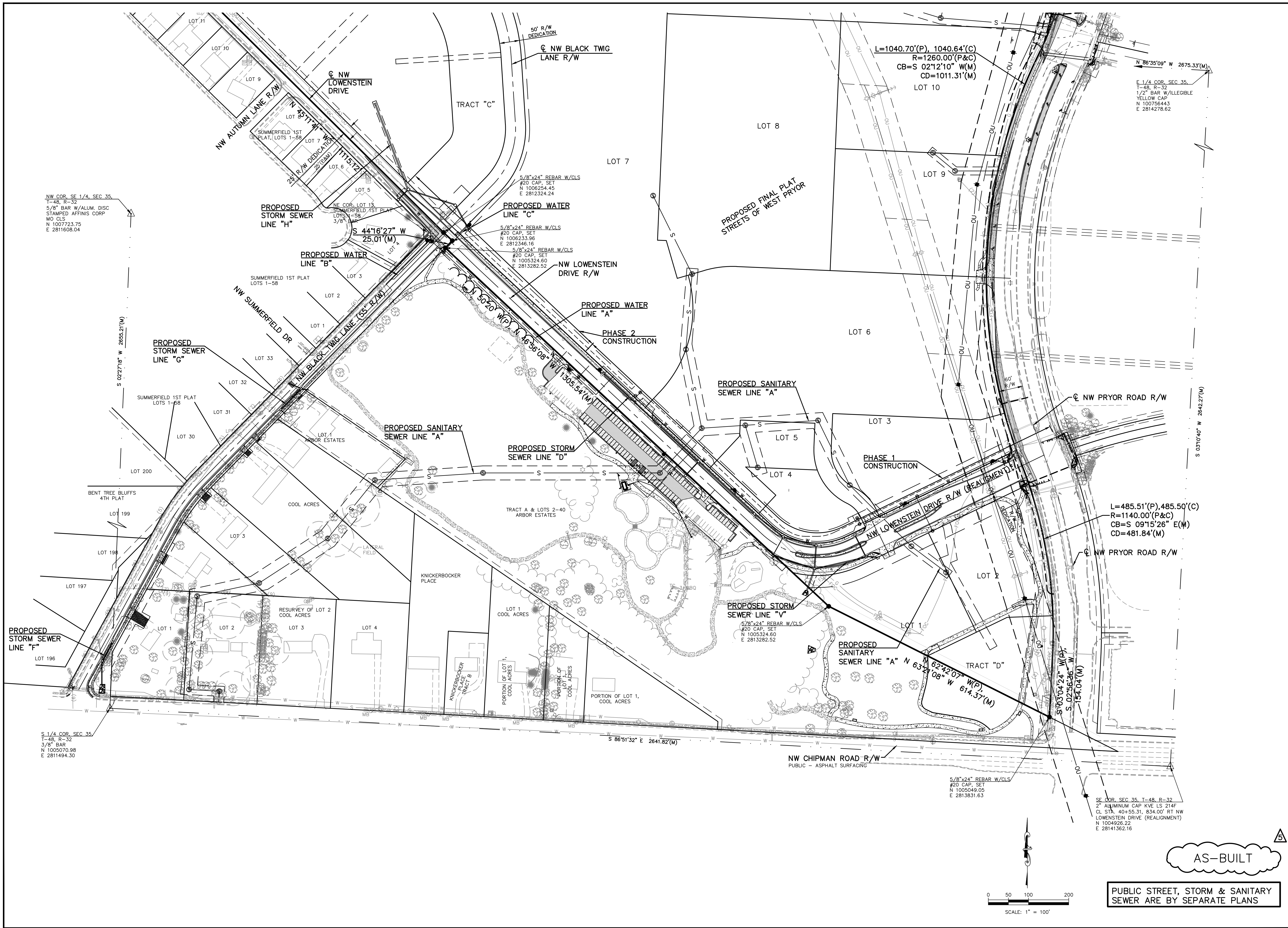
KAW VALLEY ENGINEERING

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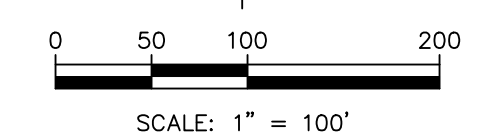
STREETS OF WEST PRYOR
NW QW PRYOR ROAD & NW LOWENSTEIN DRIVE
LEE'S SUMMIT, MISSOURI

WATER LINE PLANS
TITLE SHEET

PROJ. NO. **A14-7067-1**
DESIGNER **LDO** DRAWN BY **JT/BKR**
CFN **7067-1W_TS**
SHEET _____ REV _____
C-1 **5**



AS-BUILT



PUBLIC STREET, STORM & SANITARY SEWER ARE BY SEPARATE PLANS

PROJ. NO.	A14_7067-1
DESIGNER	LDO
DRAWN BY	JT/BKR
DATE	7-9-2021
SHEET	C-2
REV	5

REV	DATE	DESCRIPTION
0	1-4-19	INITIAL ISSUE
1	2-26-19	REVISED PER CITY COMMENTS
2	4-15-19	REVISED PER CITY COMMENTS
5	2-5-21	AS-BUILT PLANS

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

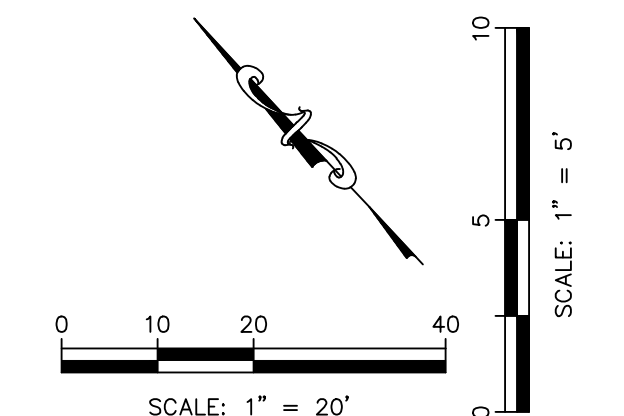
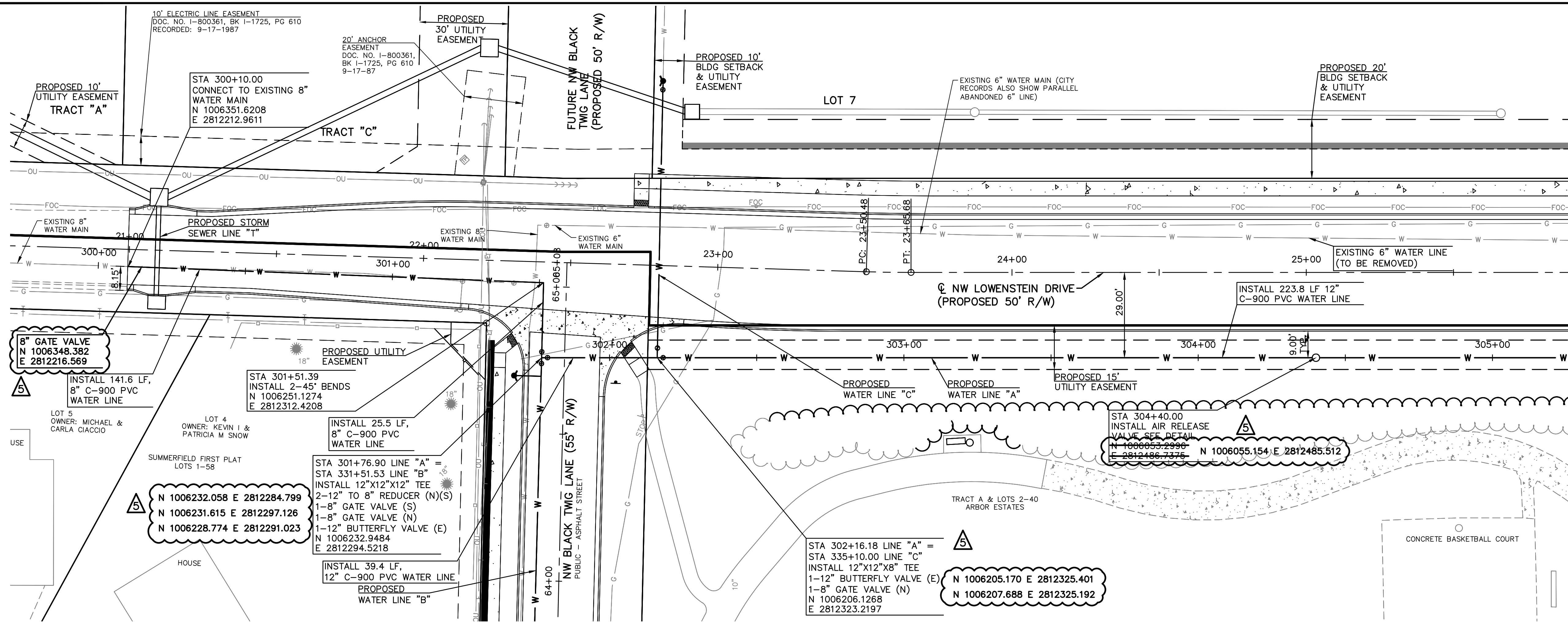
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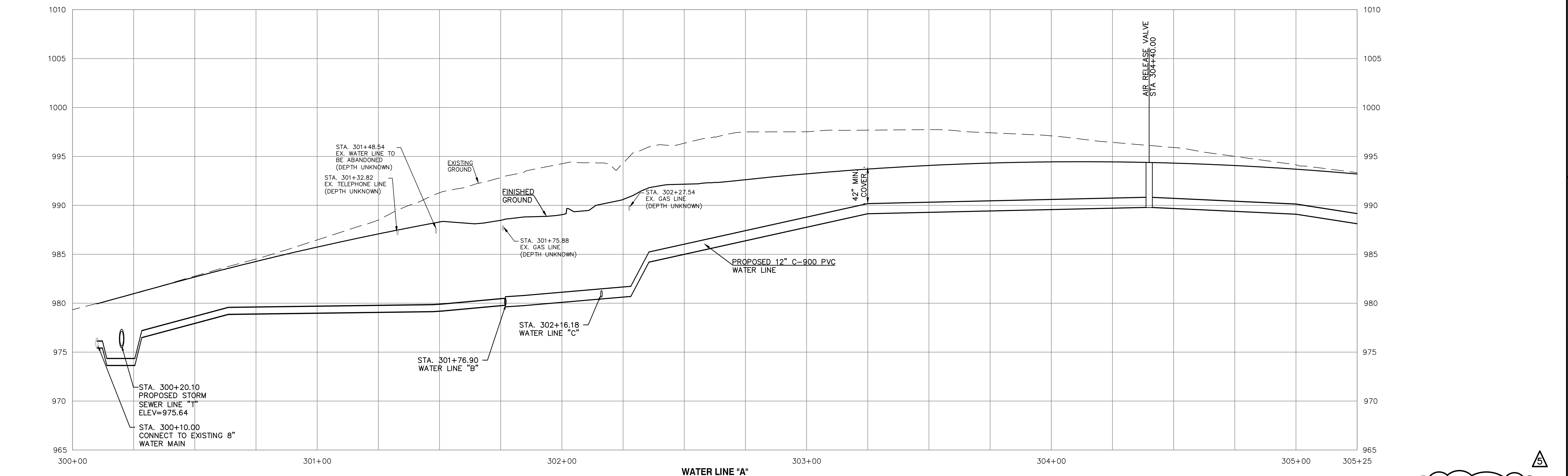
STREETS OF WEST PRYOR
NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE
LEES SUMMIT, MISSOURI

WATER LINE PLANS
GENERAL LAYOUT SHEET

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NOTE:
 AT ALL SANITARY SEWER AND STORMWATER CROSSINGS, THE WATER LINE SHALL BE INSTALLED WITH A MINIMUM VERTICAL CLEAR DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. A FULL LENGTH OF WATER PIPE (MINIMUM 20 FT) SHALL BE LOCATED WITH THE CENTER OF PIPE AT THE CROSSINGS SO THAT BOTH JOINTS ARE AS FAR FROM THE SEWER AS POSSIBLE.



AS-BUILT

PUBLIC STREET, STORM & SANITARY SEWER ARE BY SEPARATE PLANS

PROJ. NO.	A14-7067-1
DESIGNER	LDO
DRAWN BY	JT/BKR
DATE	7/2/2014
SHEET	C-3
REV	5

REV	DATE	DESCRIPTION
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2	4-15-19	REVISED PER CITY COMMENTS
3	5-1-19	REVISED PER CITY COMMENTS
5	2-5-21	AS-BUILT PLANS

LEON D. OSBOURN
 ENGINEER
 MO # 021726

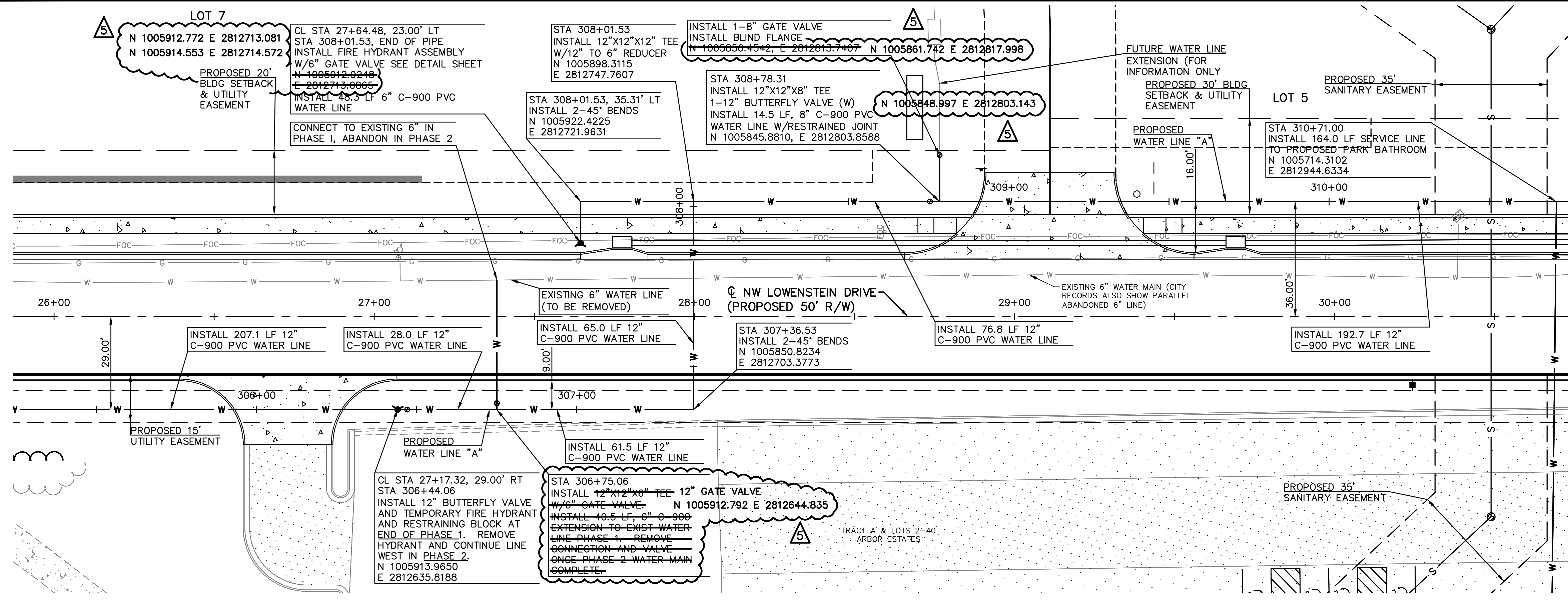
2319 N. JACKSON I.P.O. BOX 1304
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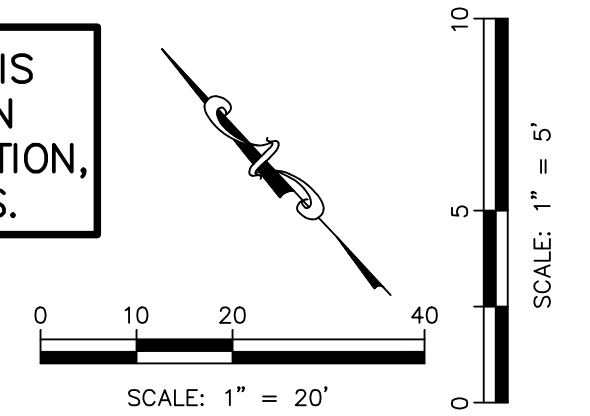
STREETS OF WEST PRYOR
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 LEES SUMMIT, MISSOURI

WATER LINE PLANS
 WATER LINE A - PLAN & PROFILE

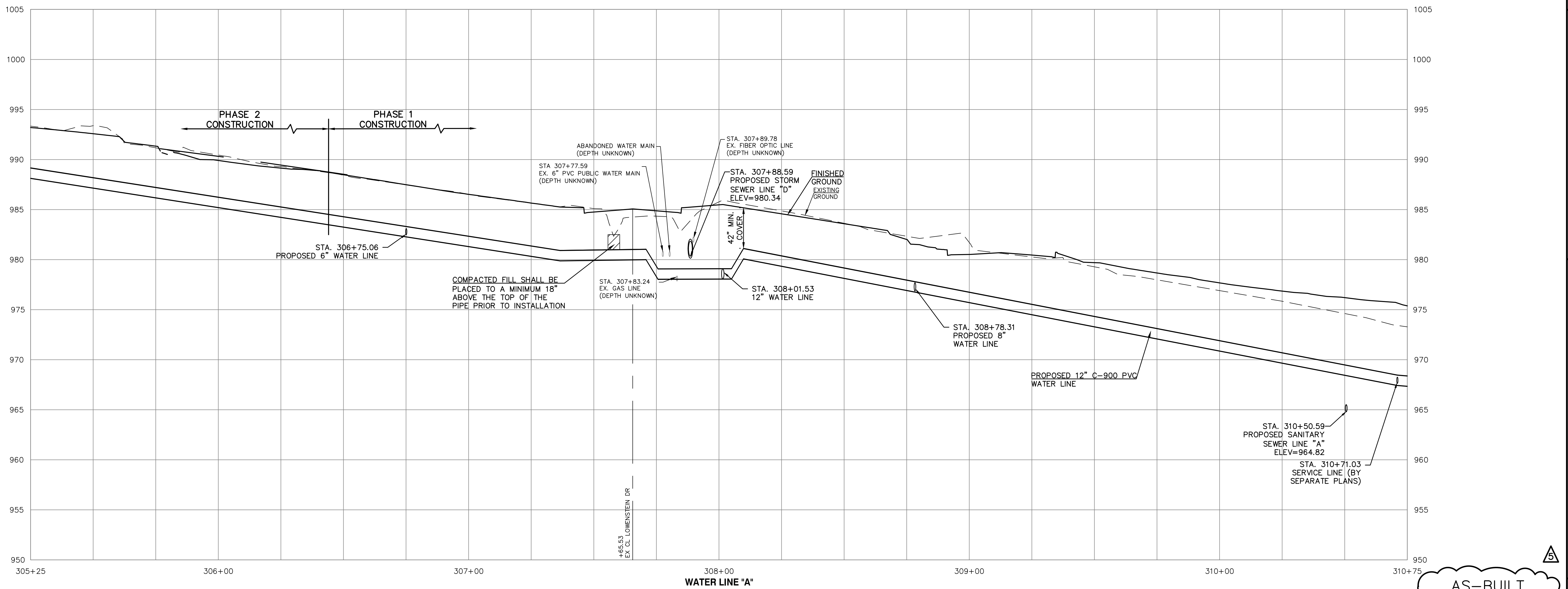
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PHASED CONSTRUCTION IS BASED ON COORDINATION WITH STREET CONSTRUCTION, UNDER SEPARATE PLANS.



NOTE:
AT ALL SANITARY SEWER AND STORMWATER CROSSINGS, THE WATER LINE SHALL BE INSTALLED WITH A MINIMUM VERTICAL CLEAR DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. A FULL LENGTH OF WATER PIPE (MINIMUM 20 FT) SHALL BE LOCATED WITH THE CENTER OF PIPE AT THE CROSSINGS SO THAT BOTH JOINTS ARE AS FAR FROM THE SEWER AS POSSIBLE.



AS-BUILT

PUBLIC STREET, STORM & SANITARY SEWER ARE BY SEPARATE PLANS

PROJ. NO.	A14_7067-1
DESIGNER	LDO
DRAWN BY	JT/BKR
DATE	7/2/2019
SHEET	C-4
REV	5

REV	DATE	DESCRIPTION
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1	2-26-19	REVISED PER CITY COMMENTS
2	4-15-19	REVISED PER CITY COMMENTS
3	5-1-19	REVISED PER CITY COMMENTS
5	2-5-21	AS-BUILT PLANS

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ENGINEER
MO # 021726

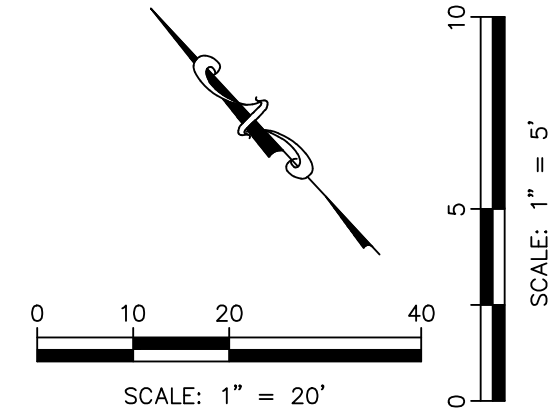
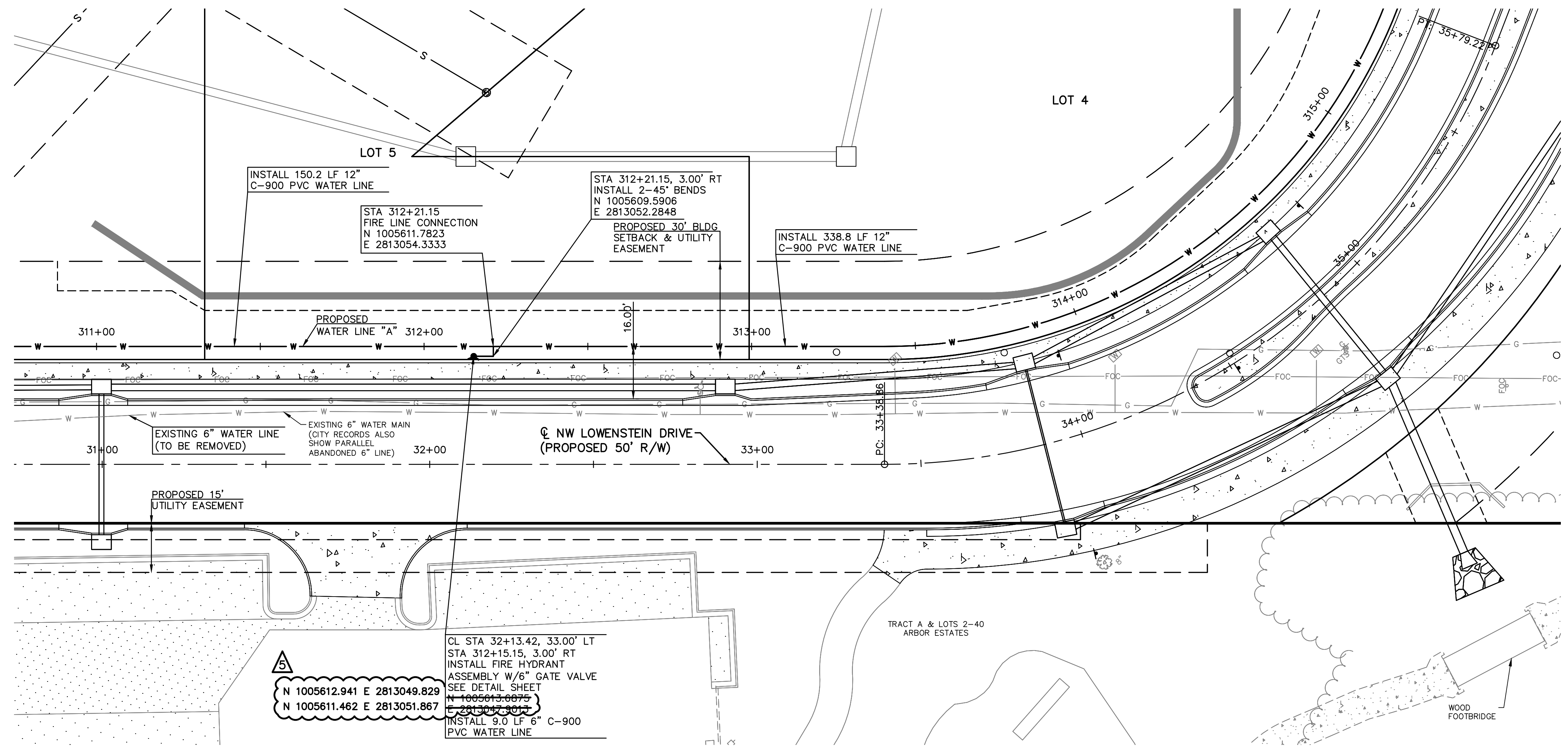
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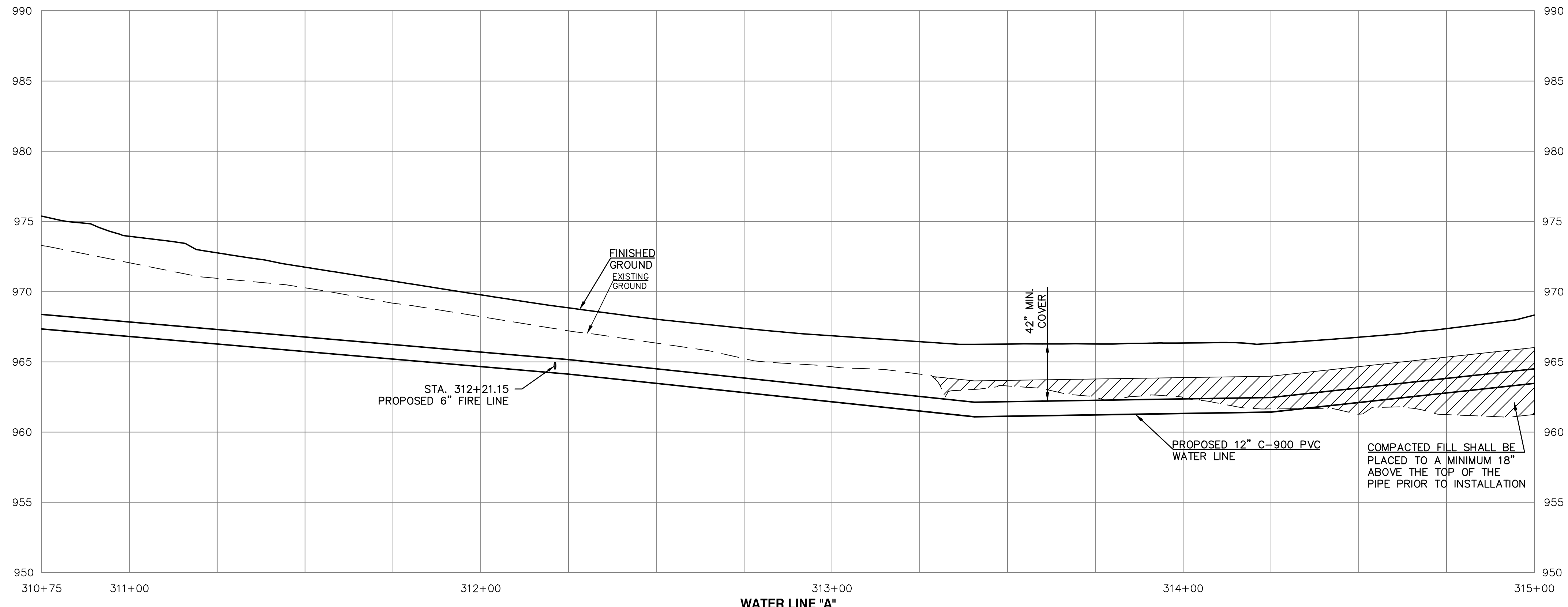
STREETS OF WEST PRYOR
NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE
LEES SUMMIT, MISSOURI

WATER LINE PLANS
WATER LINE A - PLAN & PROFILE

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NOTE:
 AT ALL SANITARY SEWER AND STORMWATER CROSSINGS,
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 VERTICAL CLEAR DISTANCE OF 18 INCHES BETWEEN THE
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 SHALL BE LOCATED WITH THE CENTER OF PIPE AT THE
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AS-BUILT

PUBLIC STREET, STORM & SANITARY
 SEWER ARE BY SEPARATE PLANS

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

REV	DATE	DESCRIPTION
0	1-4-19	INITIAL ISSUE
1	2-26-19	REVISED PER CITY COMMENTS
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LEON D. OSBOURN
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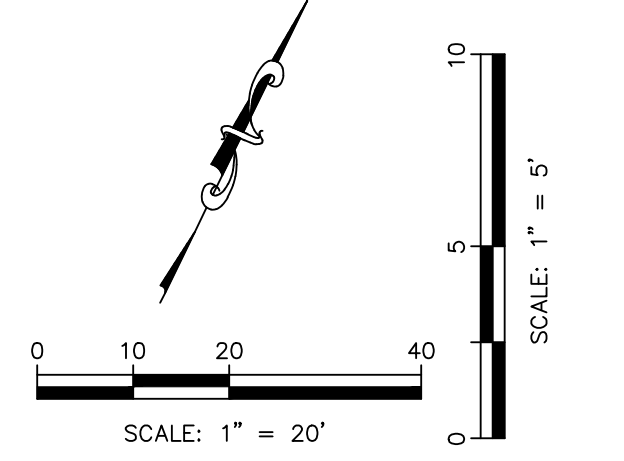
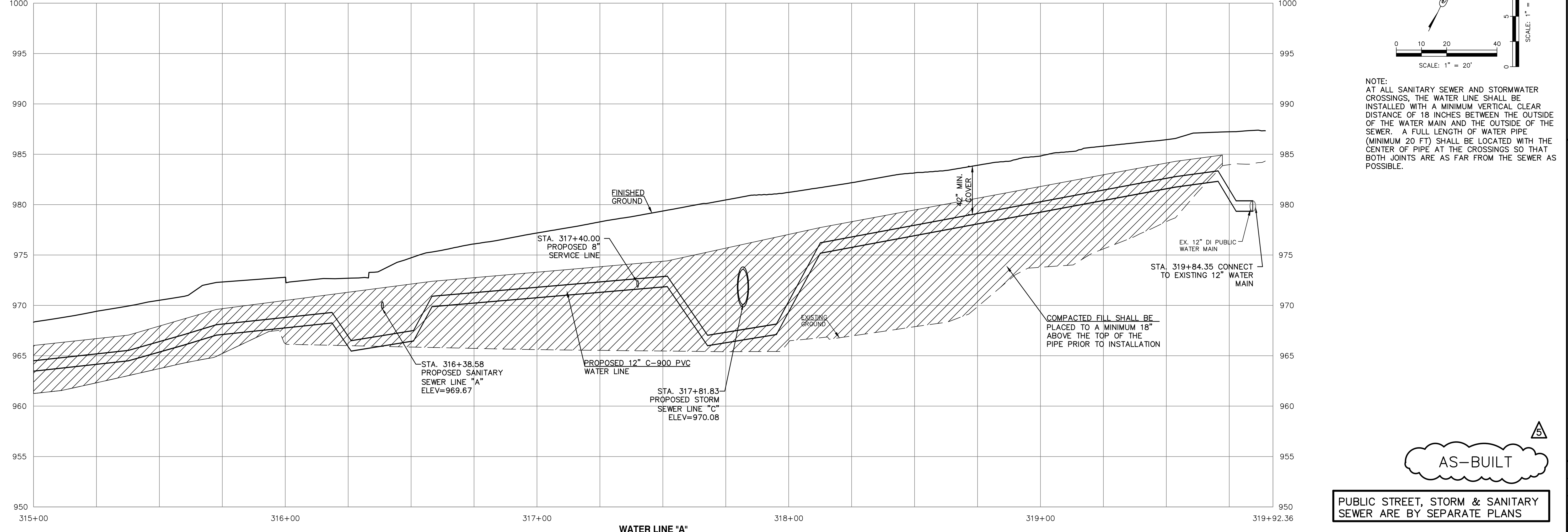
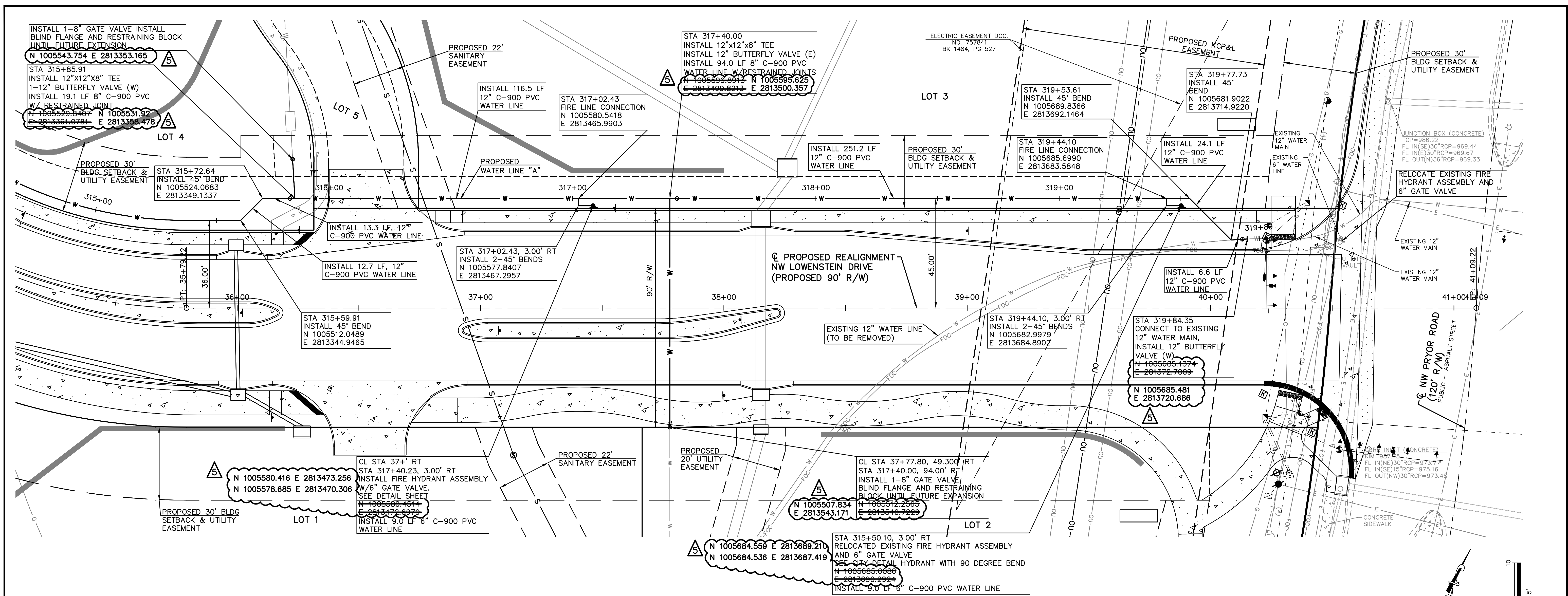
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 KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING
 SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 00864E.
 EXPIRES 12/31/19

STREETS OF WEST PRYOR
 NW Q NW PRYOR ROAD & NW LOWENSTEIN DRIVE
 LEES SUMMIT, MISSOURI

WATER LINE PLANS
 WATER LINE A - PLAN & PROFILE

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PROJ. NO.	A14_7067-1
DESIGNER	LDO
DRAWN BY	JT/BKR
DATE	7/20/20
SHEET	5

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

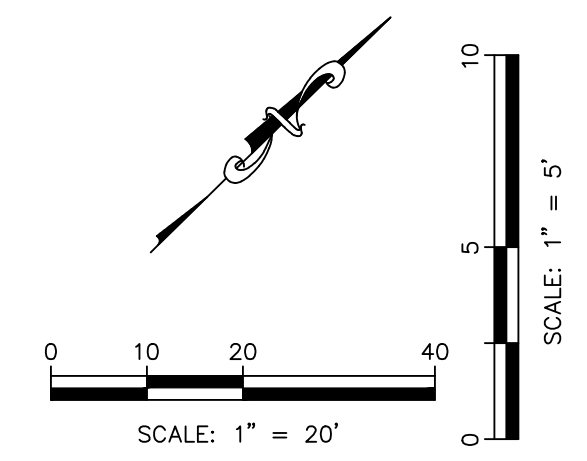
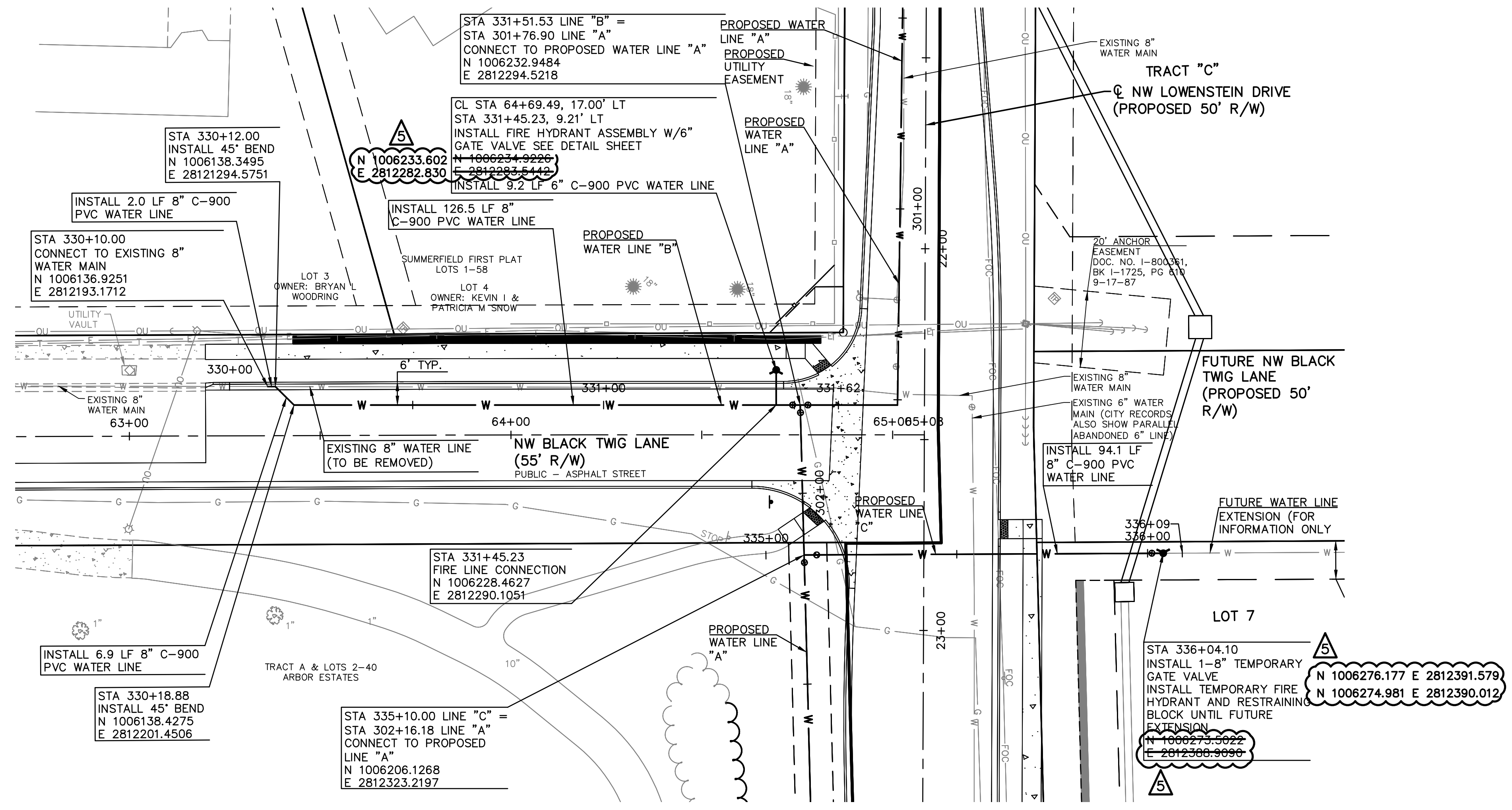
WATER LINE PLANS
 WATER LINE A - PLAN & PROFILE

PROF. SEAL
 LEON D. OSBOURN
 ENGINEER
 MO # 021726

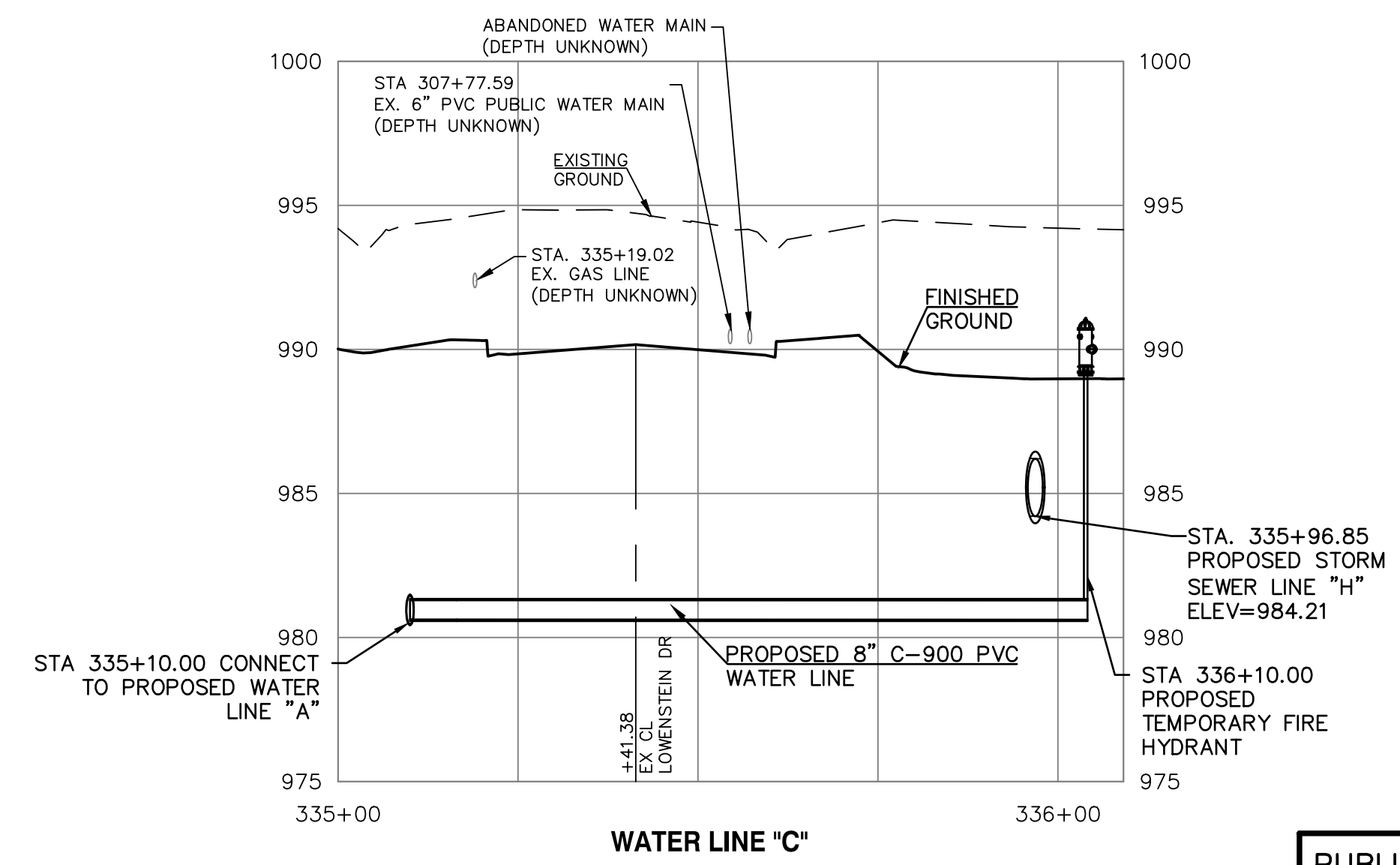
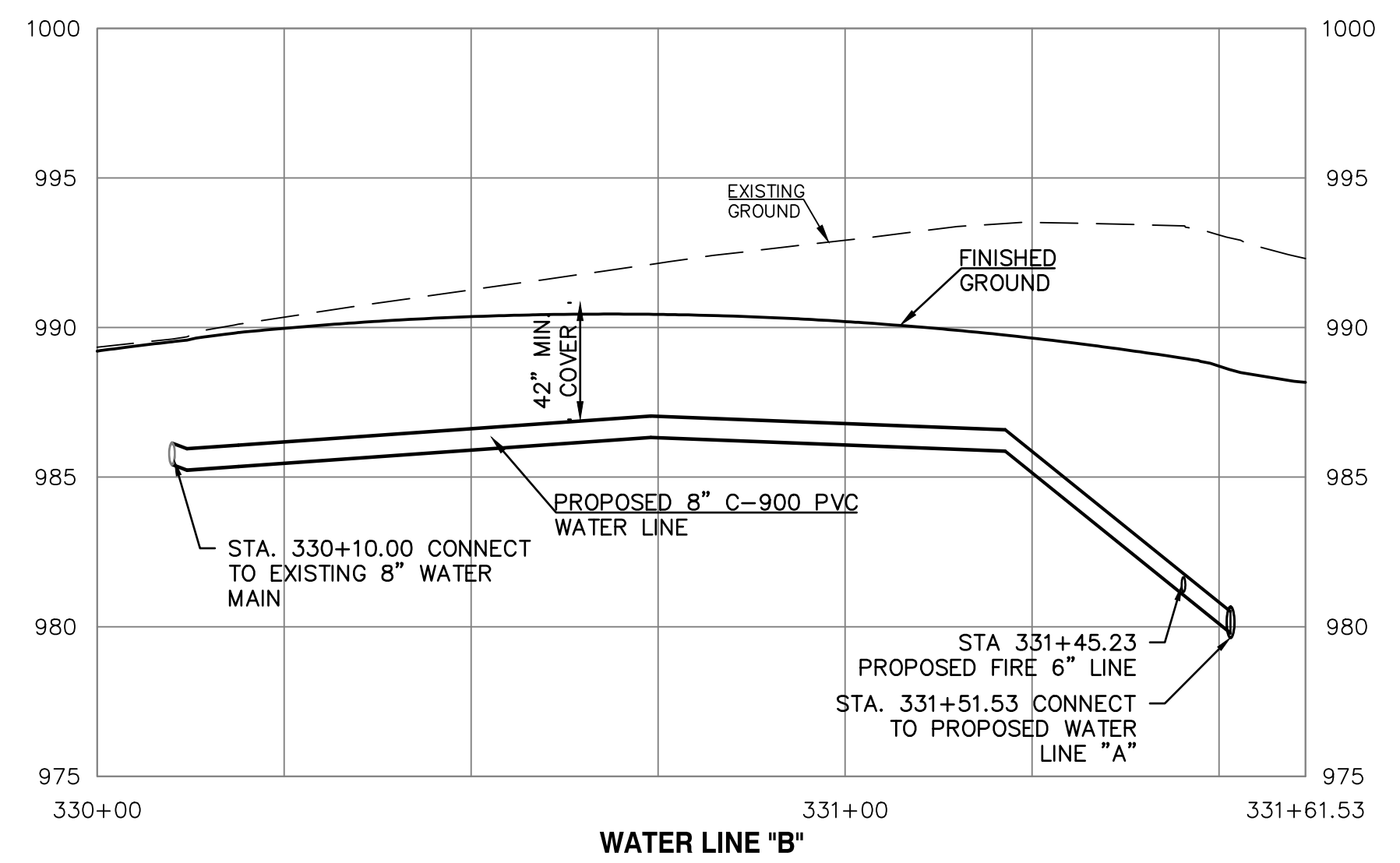
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NOTE:
 AT ALL SANITARY SEWER AND STORMWATER CROSSINGS, THE WATER LINE SHALL BE INSTALLED WITH A MINIMUM VERTICAL CLEAR DISTANCE OF 18 INCHES BETWEEN THE OUTSIDE OF THE WATER MAIN AND THE OUTSIDE OF THE SEWER. A FULL LENGTH OF WATER PIPE (MINIMUM 20 FT) SHALL BE LOCATED WITH THE CENTER OF PIPE AT THE CROSSINGS SO THAT BOTH JOINTS ARE AS FAR FROM THE SEWER AS POSSIBLE.



AS-BUILT

PUBLIC STREET, STORM & SANITARY SEWER ARE BY SEPARATE PLANS

PROJ. NO.	A14-7067-1
DESIGNER	LDO
DRAWN BY	JT/BKR
DATE	5/1/19
SHEET	C-7
REV	5

REV	DATE	DESCRIPTION
0	1-4-19	INITIAL ISSUE
1	2-26-19	REVISED PER CITY COMMENTS
2	4-15-19	REVISED PER CITY COMMENTS
3	5-1-19	REVISED PER CITY COMMENTS
5	2-5-21	AS-BUILT PLANS

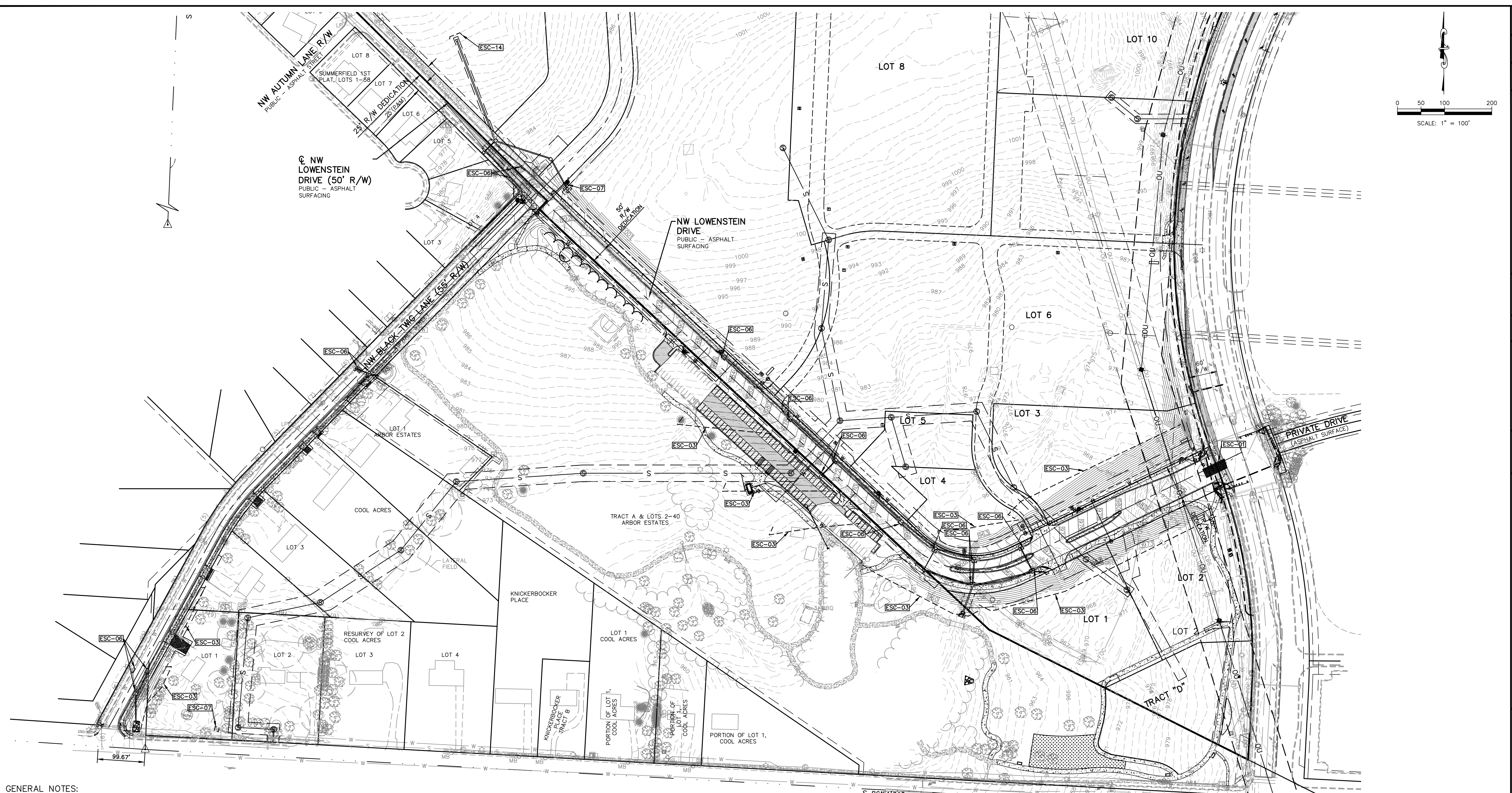
LEON D. OSBOURN	ENGINEER	MO # 021726
LEON D. OSBOURN	REGISTERED PROFESSIONAL ENGINEER	NUMBER 2-9-2021

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

KAW VALLEY ENGINEERING

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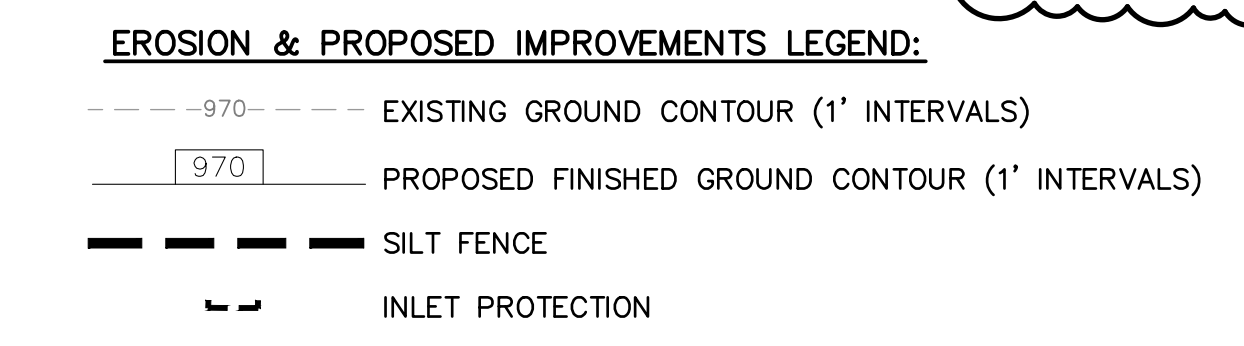
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- GENERAL NOTES:**
- PROPERTY LINE IS LIMITS OF CONSTRUCTION EXCEPT AS SHOWN.
 - THE CONTRACTOR SHALL INSTALL EROSION CONTROL MEASURES AS SHOWN ON THE DRAWINGS PRIOR TO BEGINNING EARTHWORK OPERATIONS.
 - THE CONTRACTOR SHALL MAINTAIN ALL SILT CONTROL MEASURES DURING CONSTRUCTION.
 - ALL SILT SHALL REMAIN ON SITE AND SURROUNDING STREETS SHALL BE KEPT CLEAR OF ALL MUD AND DEBRIS.
 - A SEDIMENTATION BARRIER IS TO BE INSTALLED AS SHOWN.
 - ACCUMULATED SEDIMENT SHALL BE REMOVED AND THE SEDIMENTATION BARRIERS MAINTAINED AS NEEDED TO PREVENT SEDIMENTATION BYPASS OF THE BARRIER.
 - SLOPES ARE TO BE LEFT IN A ROUGH CONDITION DURING GRADING.
 - 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.
 - SEDIMENT IS TO BE REMOVED FROM STORM WATER DRAINAGE SYSTEMS.
 - RIPRAP IS TO BE INSTALLED AT AREAS OF CONCENTRATED FLOW (I.E. CULVERT OUTLETS).
 - CONTRACTOR IS RESPONSIBLE FOR INSTALLING ANY ADDITIONAL EROSION CONTROL AS HE/SHE DEEMS NECESSARY.
 - 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.
 - TEMPORARY SEDIMENT FENCE TO REMAIN UNTIL ADEQUATE VEGETATION IS ESTABLISHED.
 - MUD AND DEBRIS SHALL BE CLEANED UP AT THE CONCLUSION OF EACH WORKING DAY, OR AFTER EACH RAINFALL IF SILT IS PRESENT.
 - 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.
 - INSTALL CONSTRUCTION ENTRANCE AT ANY POINT WHERE TRAFFIC WILL BE ENTERING OR LEAVING THE SITE AND AS SHOWN ON PLANS.
 - 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.
 - TOPSOIL IS TO BE PLACED IN AREAS UNSUITABLE FOR VEGETATIVE GROWTH.
 - STRIP TOPSOIL PRIOR TO EXCAVATION, STOCKPILE AND SPREAD ONTO DISKED SUBGRADE (4" MIN) A THICKNESS OF 4 INCHES.
 - 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.
 - 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.
 - GOOD HOUSEKEEPING PRACTICES SHALL BE MAINTAINED ON SITE TO KEEP SOLID WASTE FROM ENTRY INTO WATERS.
 - 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.
 - RIGHT OF WAY TO BE STABILIZED AS REQUIRED BY APWA SECTION 2400.
 - EROSION CONTROL IS TO BE PLACED IN PHASING AS CONSTRUCTION PROGRESSES.
 - 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.
 - 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.

CONTRACTOR TO COORDINATE EROSION CONTROL WITH MASS GRADING CONSTRUCTION AND LOWENSTEIN DRIVE IMPROVEMENTS IN PHASES

- 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
- ESC-14 OUTLET PROTECTION



AS-BUILT

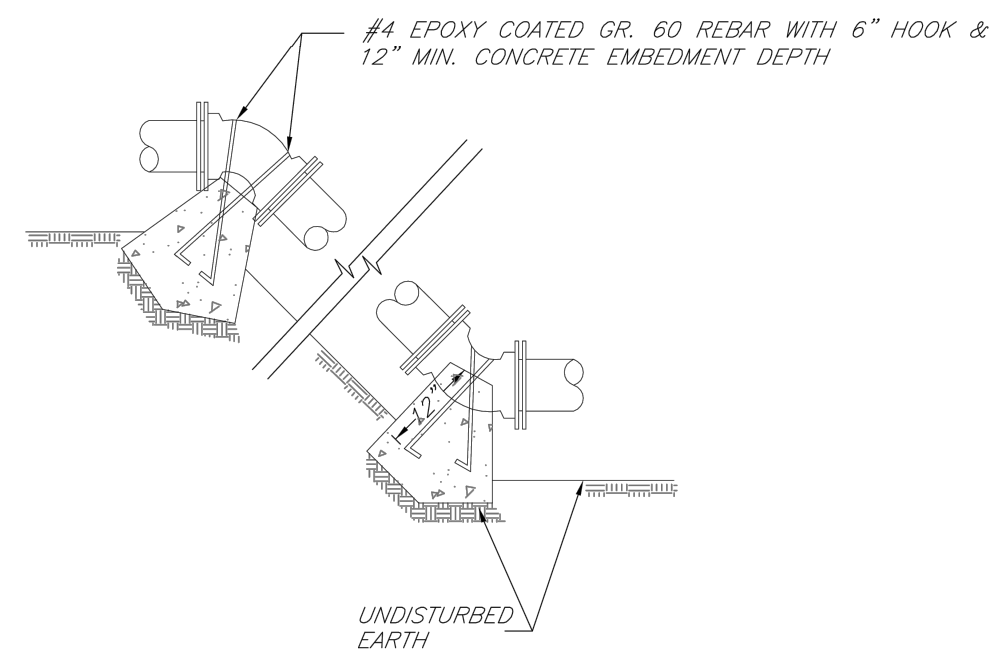
	<p>LEON D. OSBOURN ENGINEER MO # 021726</p>												
<p>KAW VALLEY ENGINEERING 2319 N. JACKSON I.P.O. BOX 1304 JUNCTION CITY, KANSAS 66441 PH. (785) 762-5040 FAX (785) 762-7744 jdo@kve.com www.kve.com</p>	<p>KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 00854E. EXPIRES 12/31/19</p>												
<p>STREETS OF WEST PRYOR NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE LEES SUMMIT, MISSOURI</p>	<p>WATER LINE PLANS EROSION CONTROL PLAN</p>												
<p>PROJ. NO. A14-7067-1</p> <p>DESIGNER LDO DRAWN BY JT/BKR</p> <p>DATE 7067-1W_ECP</p> <p>SHEET C-8 REV 5</p>	<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th>REV</th> <th>DATE</th> <th>DESCRIPTION</th> </tr> <tr> <td>0</td> <td>1-4-19</td> <td>INITIAL ISSUE</td> </tr> <tr> <td>1</td> <td>2-26-19</td> <td>REVISED PER CITY COMMENTS</td> </tr> <tr> <td>5</td> <td>2-5-21</td> <td>AS-BUILT PLANS</td> </tr> </table>	REV	DATE	DESCRIPTION	0	1-4-19	INITIAL ISSUE	1	2-26-19	REVISED PER CITY COMMENTS	5	2-5-21	AS-BUILT PLANS
REV	DATE	DESCRIPTION											
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REQUIRED CONCRETE VOLUME (CUBIC FEET - CF)

NOM. DIA. (INCHES)	TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	50.5	71.4	38.6	19.7	9.9
8	98.8	136.4	68.7	35.0	17.6
10	140.2	198.3	107.3	54.7	27.5
12	202.0	287.1	154.6	78.9	39.6
14	282.1	408.4	210.4	107.3	53.9
16	382.1	558.4	287.1	140.1	70.4
18	502.1	738.4	382.1	177.3	89.1
20	642.1	948.4	502.1	230.4	110.0
24	902.1	1308.4	682.1	310.4	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.



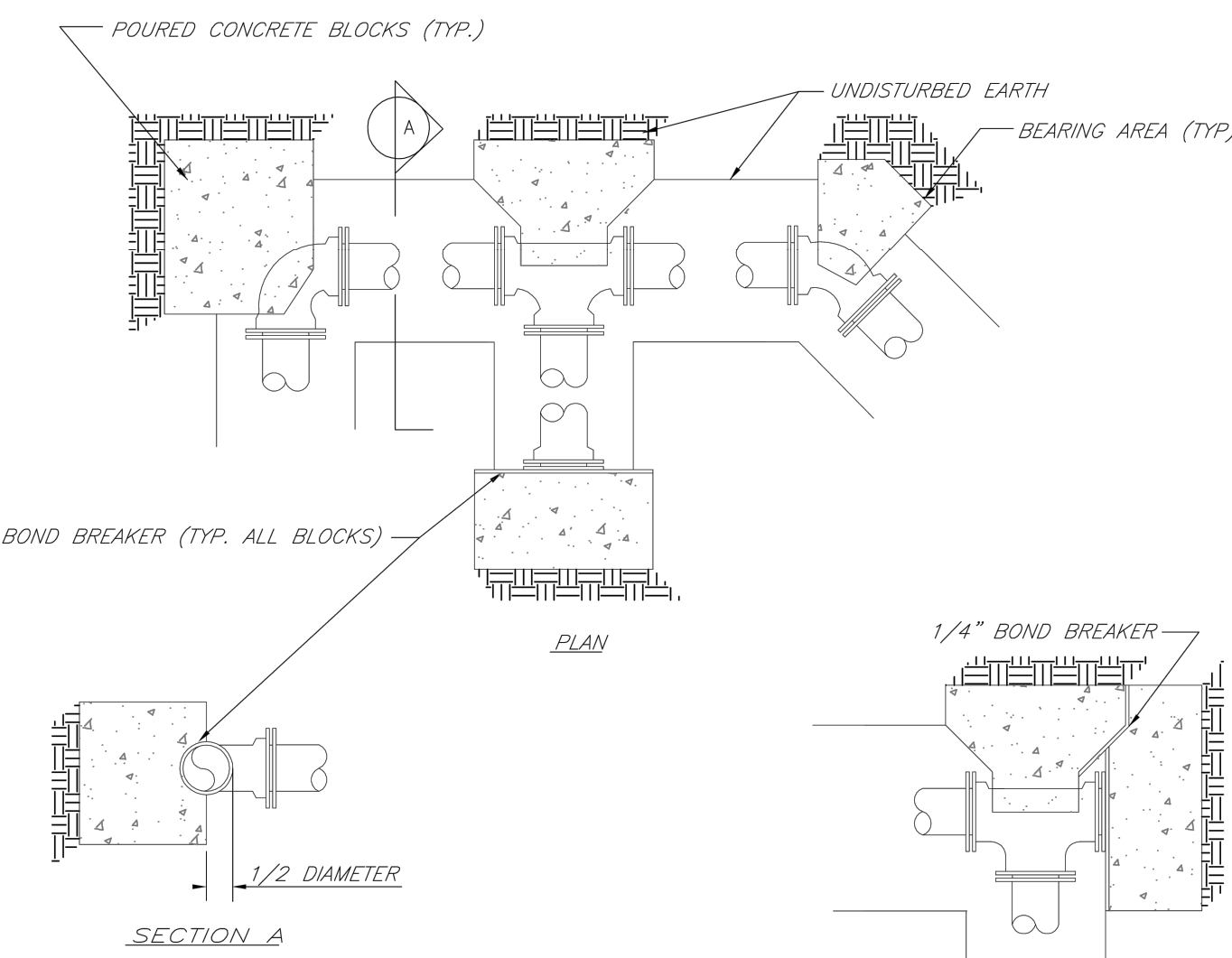
LEE'S SUMMIT MISSOURI
PUBLIC WORKS ENGINEERING DIVISION | 220 SE GREEN STREET | LEE'S SUMMIT, MO 64063

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

REQUIRED CONCRETE BEARING AREA (SQUARE FEET - SF)

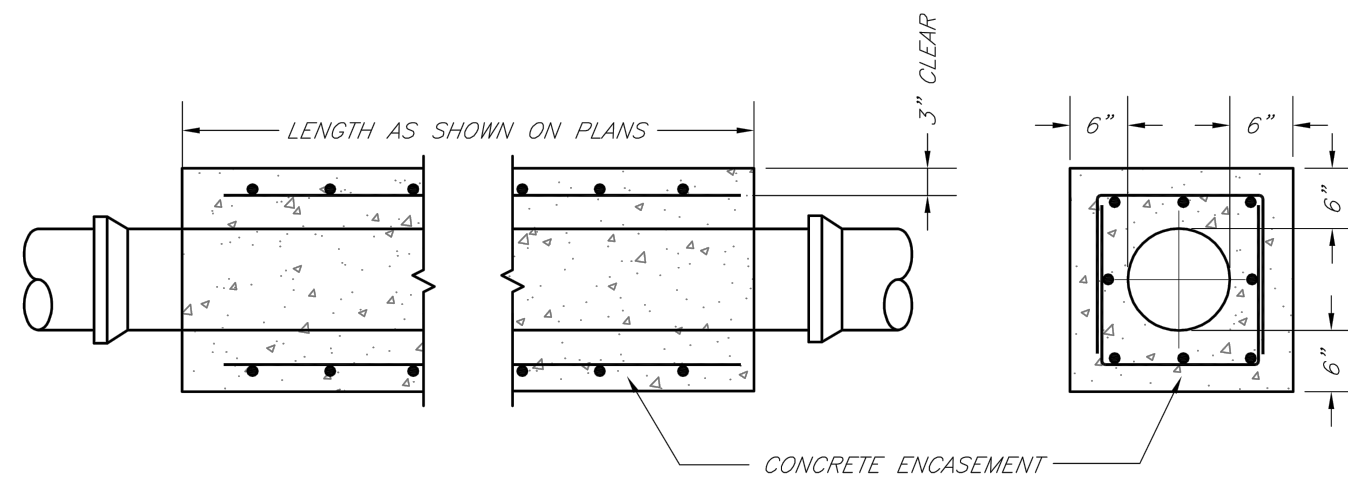
NOM. DIA. (INCHES)	TEE, PLUG	90 BEND	45 BEND	22.5 BEND	11.25 BEND
6	4.7	6.7	4.0	4.0	4.0
8	8.4	11.8	6.4	4.0	4.0
10	13.1	18.5	10.0	5.1	4.0
12	18.8	26.7	14.4	7.4	4.0
14	25.9	36.3	19.6	10.0	5.0
16	33.5	47.4	25.6	13.1	6.6
18	42.4	58.7	32.5	16.5	8.3
20	52.4	71.4	40.1	20.4	10.3
24	72.4	98.4	54.4	29.4	14.8

- 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.



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

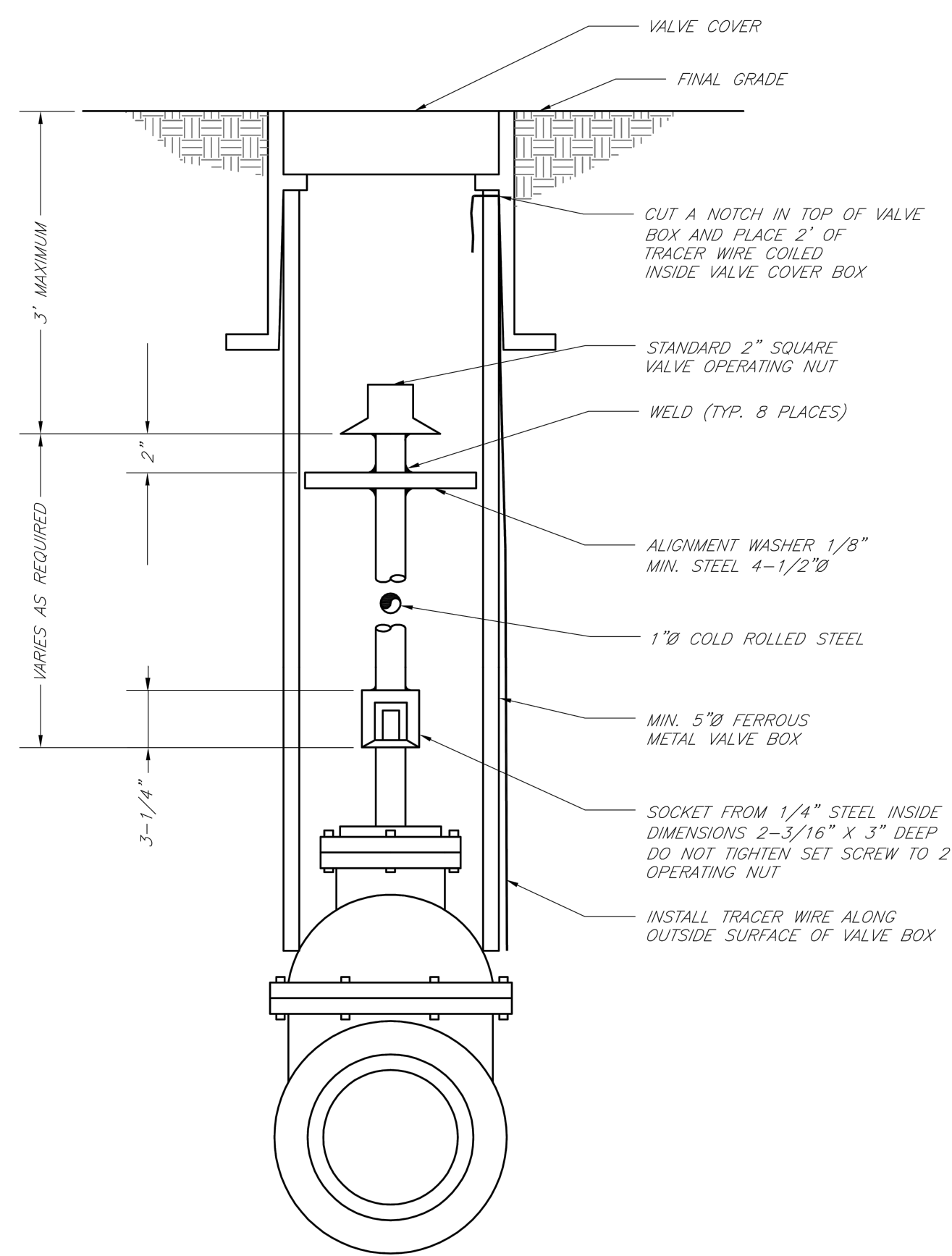
Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-1
Rev: 1/14



- NOTES:
1. INTERMEDIATE BELLS SHALL BE ENCASED.
 2. REINFORCING STEEL SHALL BE #4 @ 12" O.C. EACH WAY WITH A MINIMUM REBAR LAP OF 12".
 3. THIS DETAIL IS FOR PIPES 12" AND SMALLER.

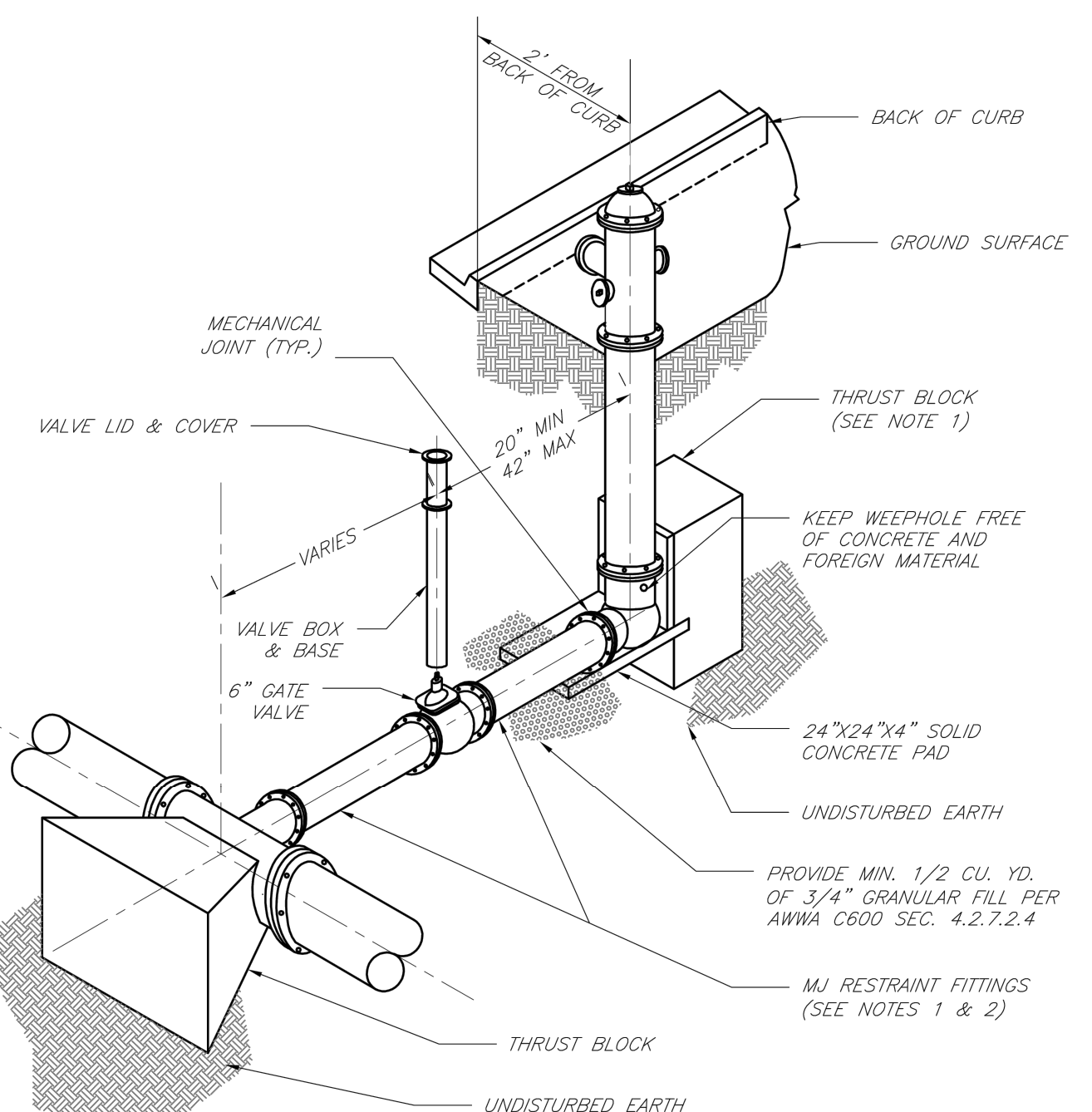
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Date: 02/13
Drawn By: JN
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FILE: WAT-4
Rev: 1/14



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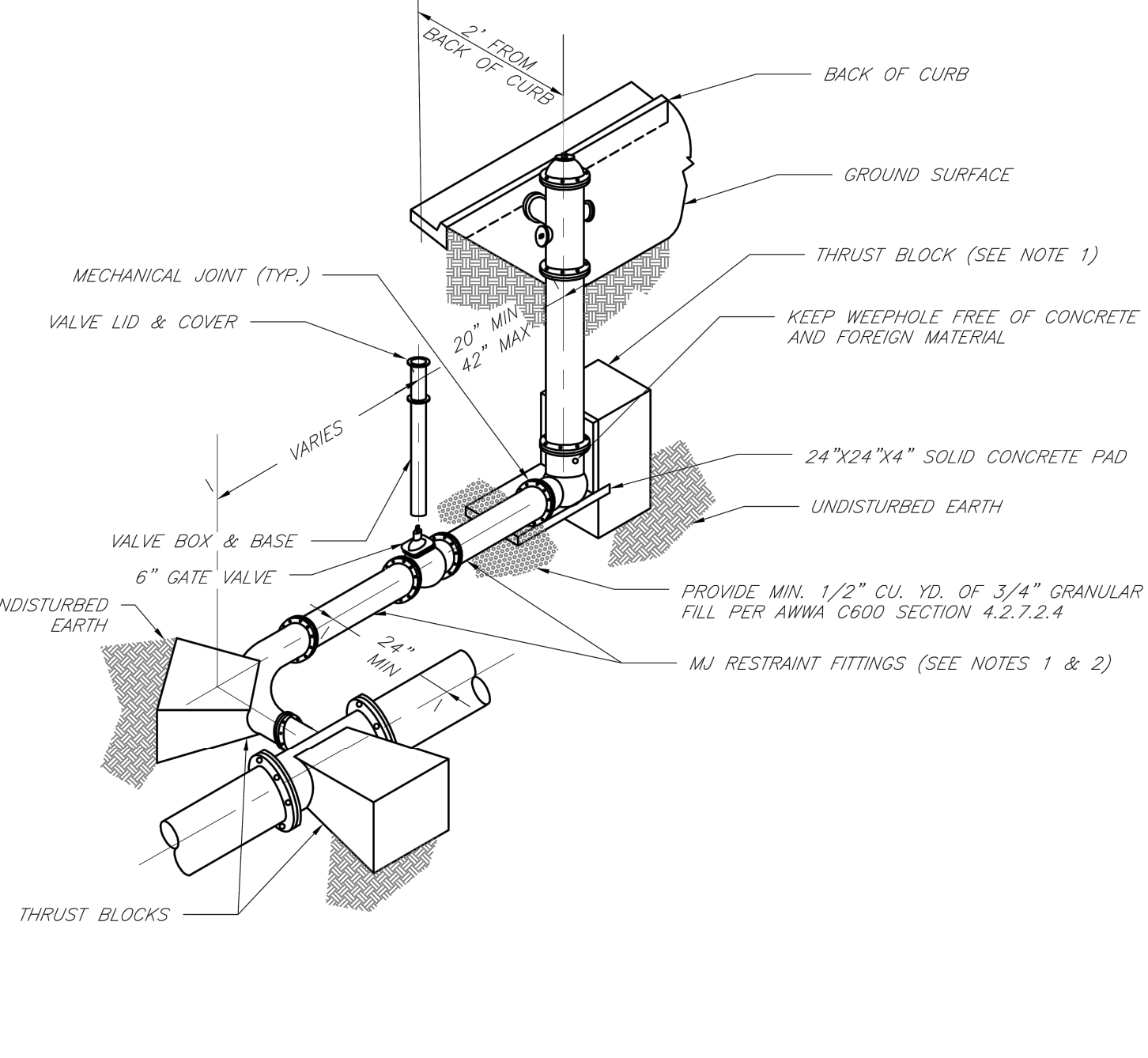
Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-9
Rev: 1/14



- NOTES:
1. WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
 2. GATE VALVE MAY BE BOLTED DIRECTLY TO MJ RESTRAINT TEE.
 3. SEE APPROVED PRODUCTS LIST FOR WATER UTILITIES FOR FIRE HYDRANT, VALVES, VALVE BOX LID, AND COVER.
 4. BOTTOM HYDRANT FLANGE SHALL BE 2" TO 6" ABOVE FINISHED GRADE.
 5. FOR STREETS WITHOUT CURBS FIRE HYDRANTS SHALL BE PLACED WITHIN 1 FOOT OF THE R/W LINE, BUT NOT MORE THAN 10' FROM EDGE OF PAVEMENT. FIRE HYDRANT SHALL NOT BE PLACED IN BOTTOM OF DITCH.
 6. HYDRANT SHALL BE ROTATED AS DIRECTED BY INSPECTOR.

LEE'S SUMMIT MISSOURI
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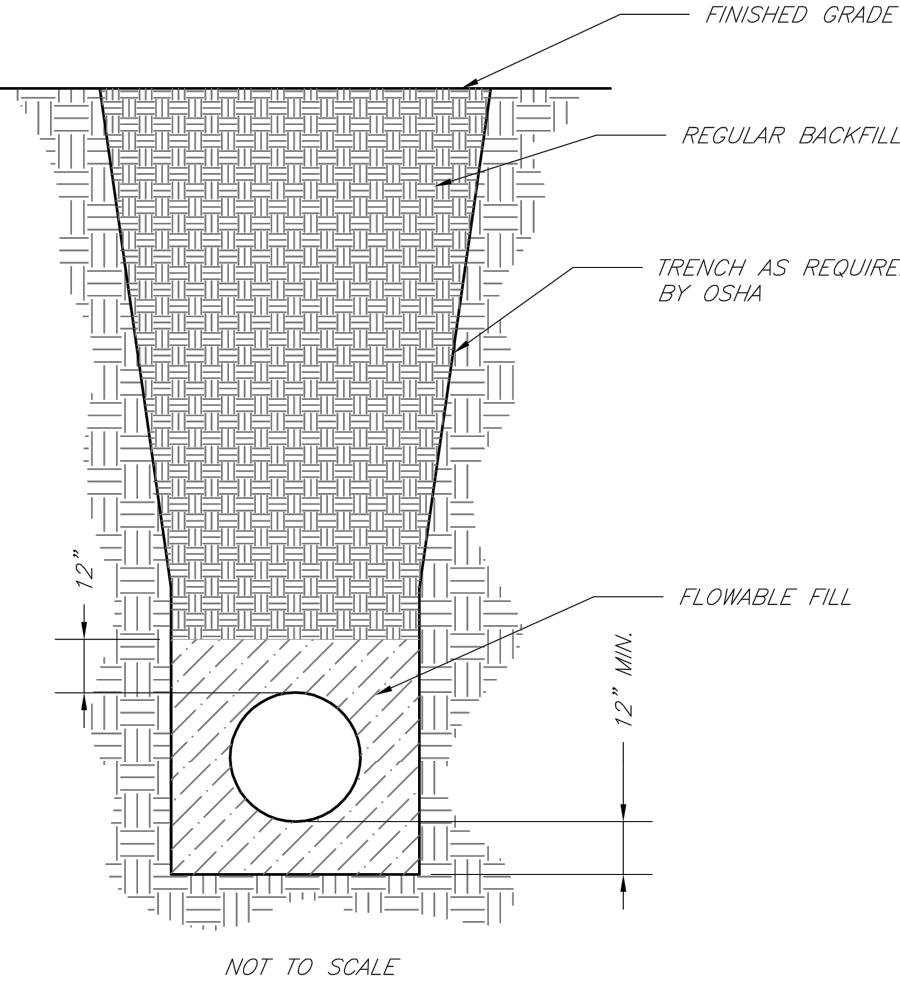
Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-7
Rev: 1/14



- NOTES:
1. WHEN RETAINER GLANDS ARE USED IN LIEU OF MECHANICAL JOINT (MJ) RESTRAINT FITTINGS, HORIZONTAL THRUST BLOCKS ARE REQUIRED.
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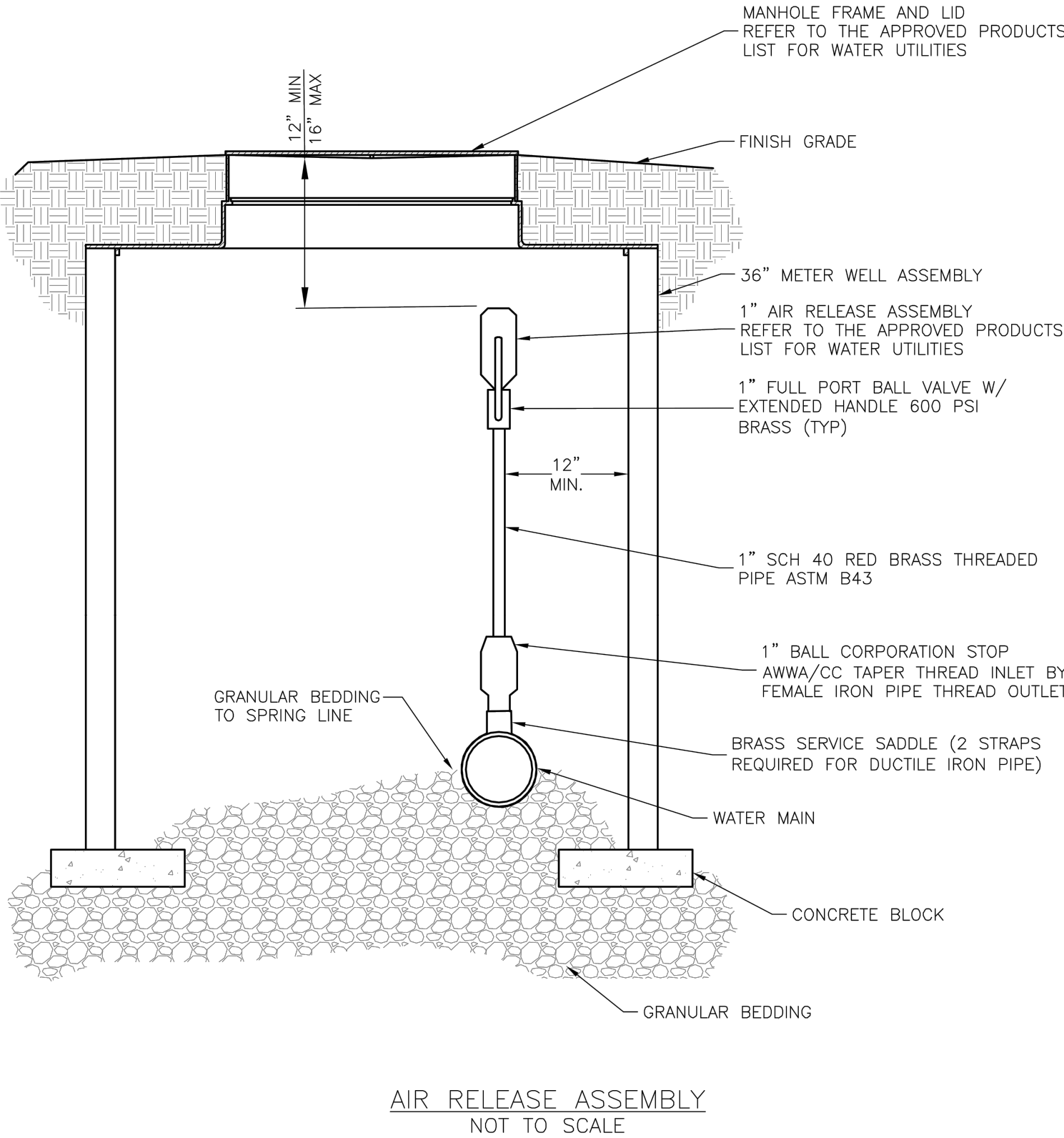
Date: 02/13
Drawn By: JN
Checked By: DL
FILE: WAT-8
Rev: 1/14



- NOTES:
1. FLOWABLE FILL SHALL MEET THE REQUIREMENTS OF THE CITY OF LEE'S SUMMIT DESIGN AND CONSTRUCTION MANUAL.
 2. REGULAR BACKFILL ABOVE THE TRENCH CHECK SHALL BE FREE OF DEBRIS, ORGANIC MATTER, AND STONES > 6" IN ANY DIMENSION.
 3. TOP OF FLOWABLE BACKFILL SHALL EXTEND 12" ABOVE THE TOP OF THE PIPE.
 4. LENGTH OF TRENCH CHECK SHALL BE A MINIMUM OF 12".

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

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



AIR RELEASE ASSEMBLY
NOT TO SCALE

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

Date: 04/17
Drawn By: MJF
Checked By: DL
FILE: WAT-10

REV	DATE	DESCRIPTION	DSN	DWN	CHK
5	2-5-21	AS-BUILT PLANS			
1	2-26-19	REVISED PER CITY COMMENTS			
0	1-4-19	INITIAL ISSUE			

LEON D. OSBOURN
ENGINEER
MO # 021726

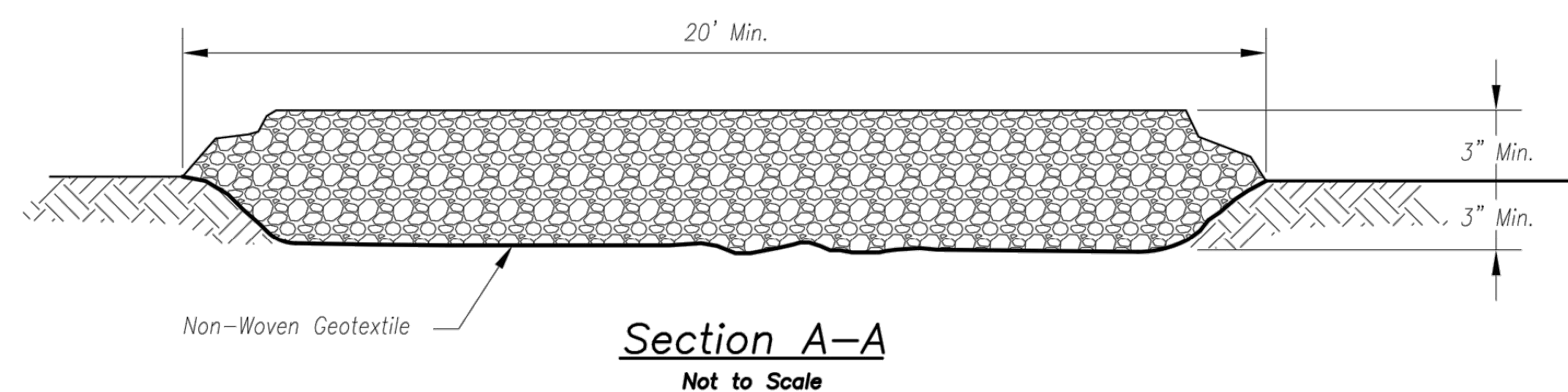
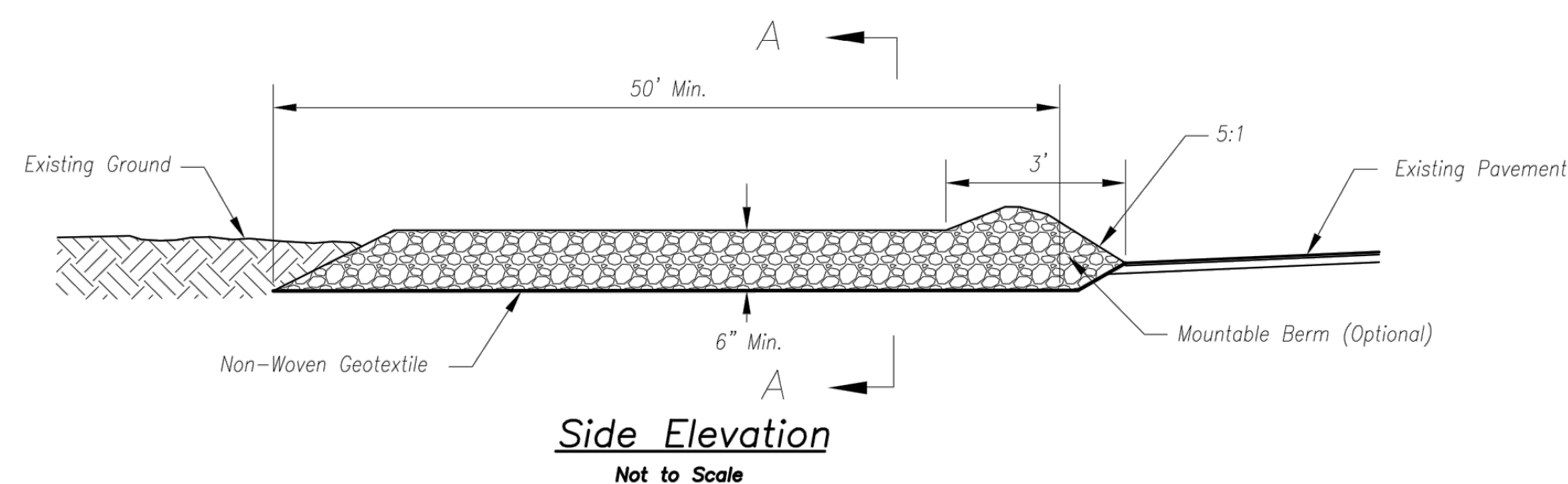
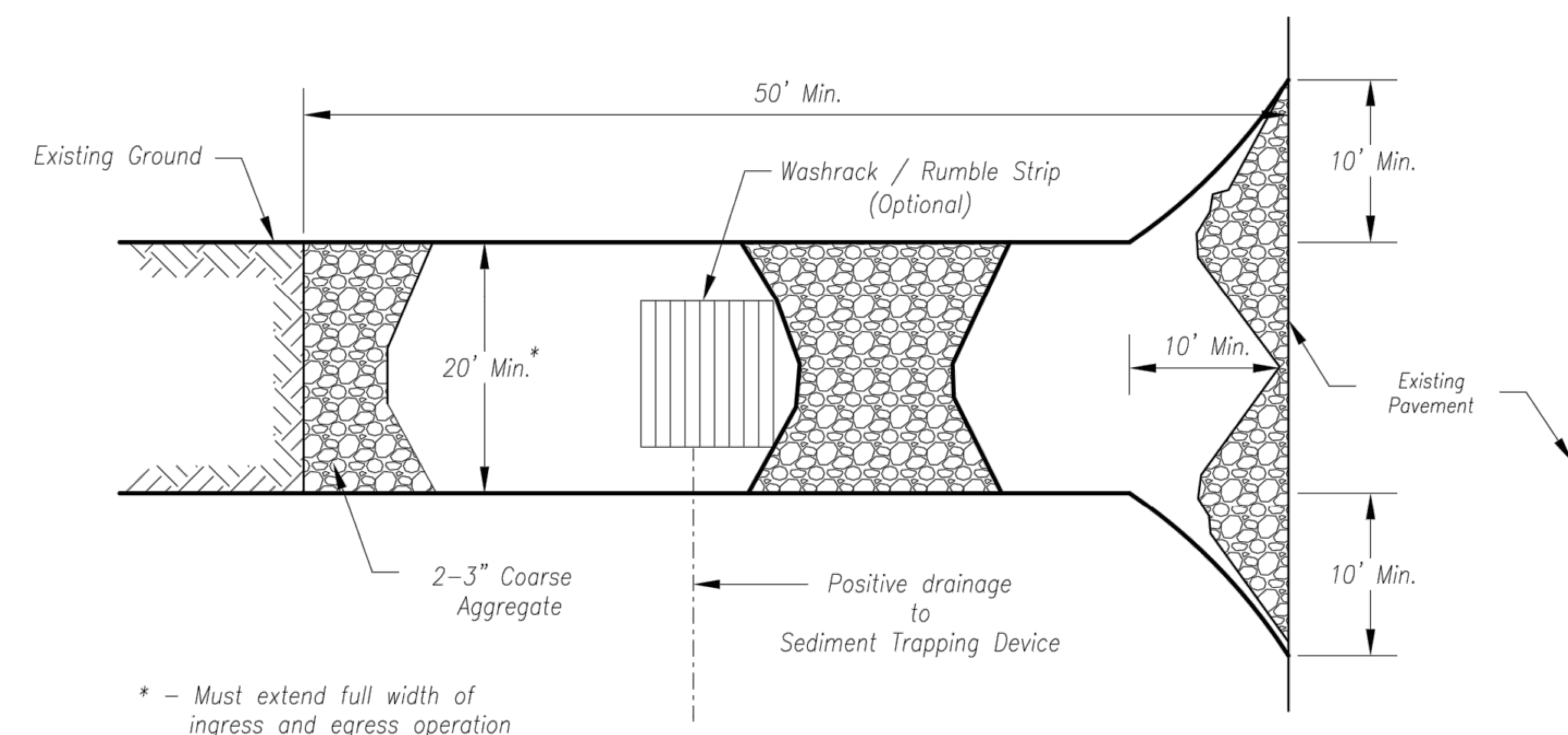
KAW VALLEY ENGINEERING
KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 00854E. EXPIRES 12/31/19

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

WATER LINE PLANS
DETAIL SHEET

PROJ. NO. A14-7067-1
DESIGNER LDO
DRAWN BY JT/BKR
SHEET 7067-1W_DET
REV C-9 5

AS-BUILT



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.

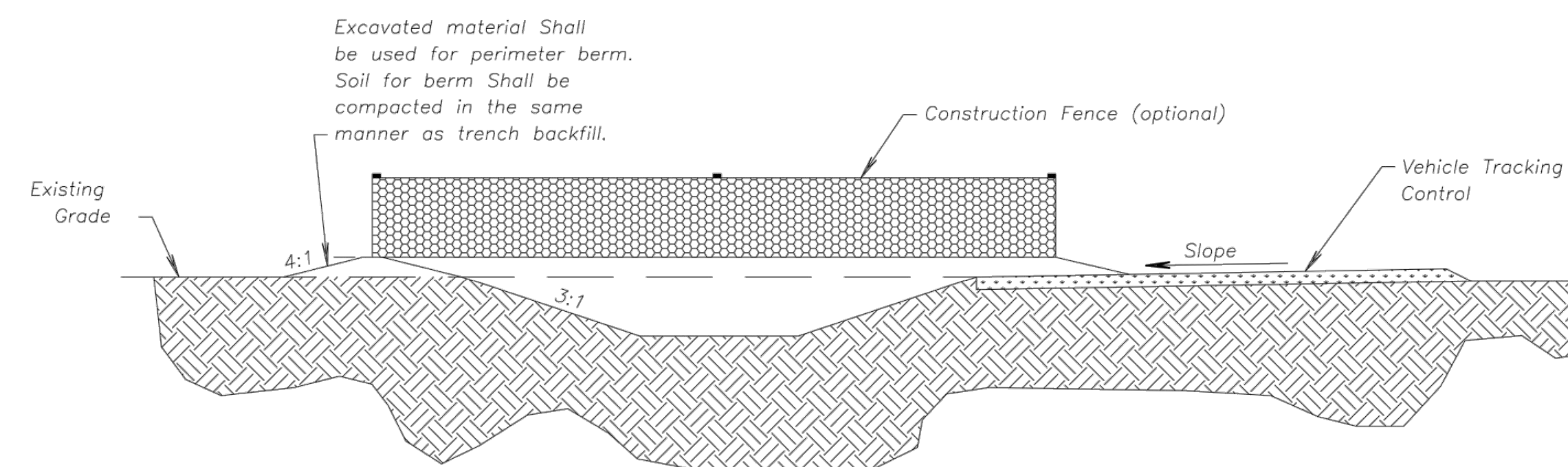
CONSTRUCTION ENTRANCE

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.



CONCRETE WASHOUT

AS-BUILT

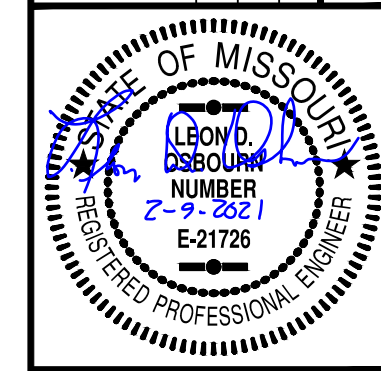
AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
KANSAS CITY METRO CHAPTER

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.

REV	DATE	DESCRIPTION
0	1-4-19	INITIAL ISSUE
1	2-26-19	REVISED PER CITY COMMENTS
5	2-5-21	AS-BUILT PLANS
LDO	JT	LDO
LDO	JT	LDO
LDO	JT/BKR	LDO
DSN	DWN	CHK



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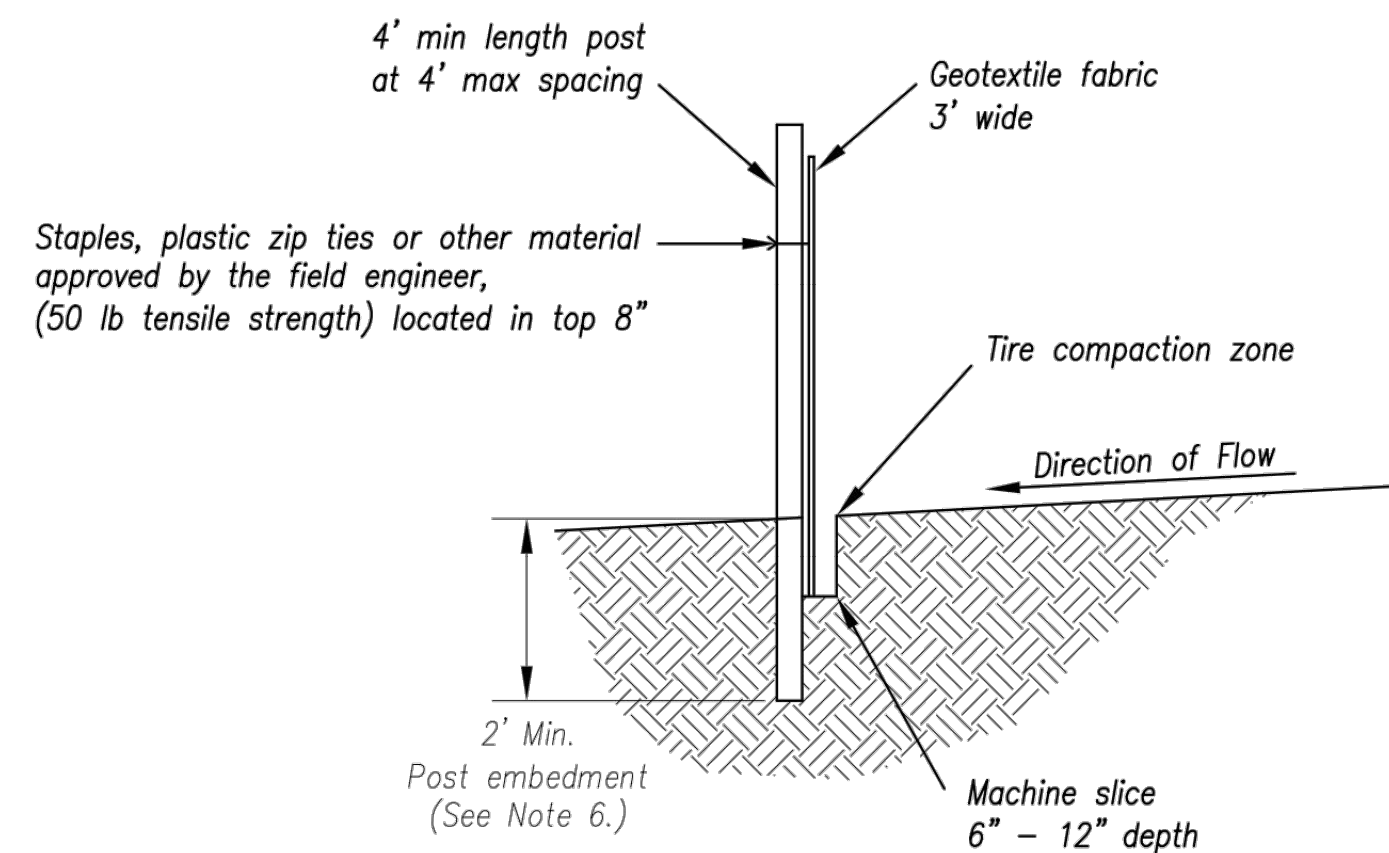
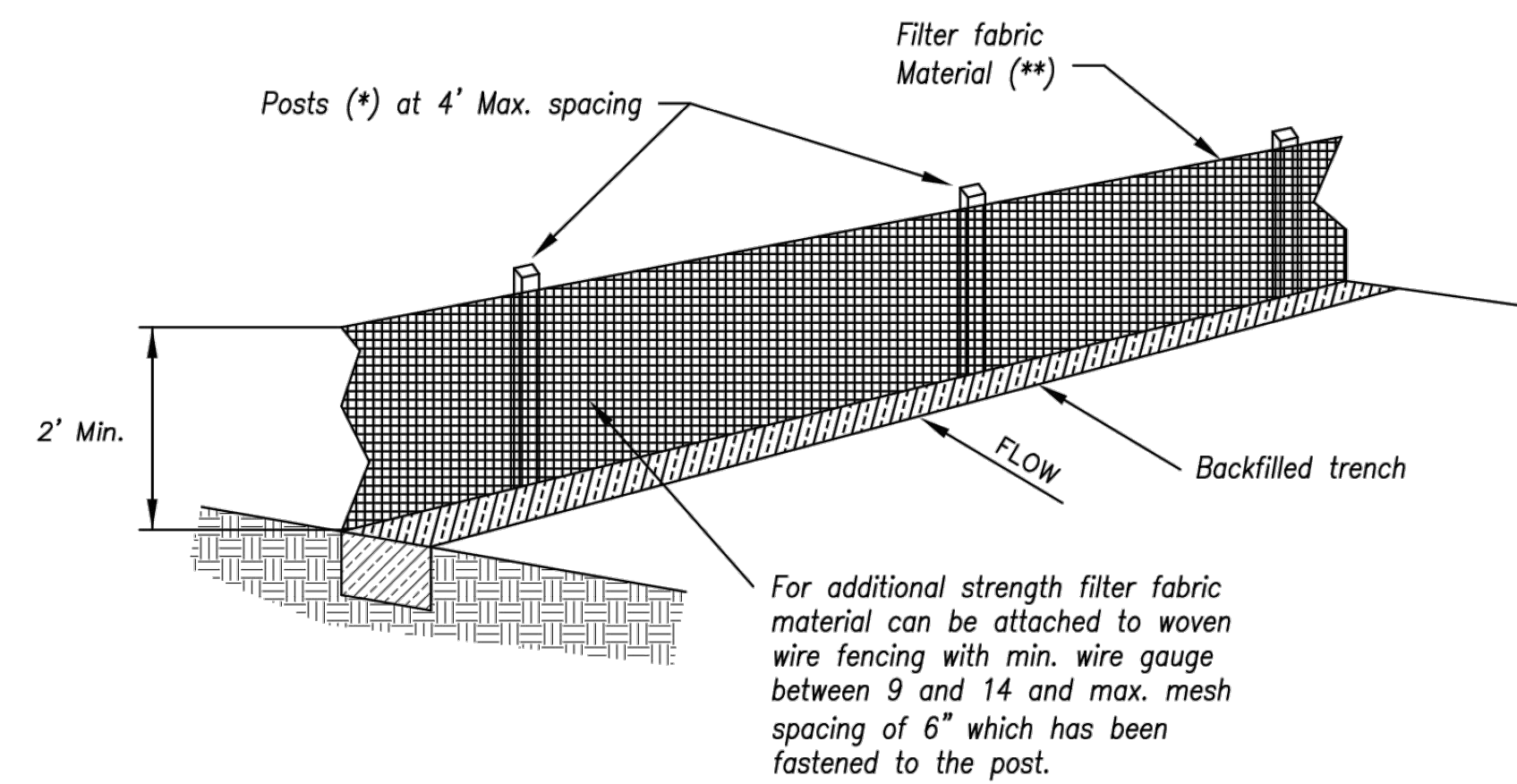
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STREETS OF WEST PRYOR
NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE
LEES SUMMIT, MISSOURI

WATER LINE PLANS
DETAIL SHEET

PROJ. NO.	A14-7067-1
DESIGNER	LDO
DRAWN BY	JT/BKR
CFN	7067-1W_DET
SHEET	5



- (*) **POSTS**
- MIN. LENGTH 4'
 - HARDWOOD 1 3/8" x 1 3/8"
 - NO.2 SOUTHERN PINE 2 5/8" x 2 5/8"
 - STEEL 1.33 LB/FT

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

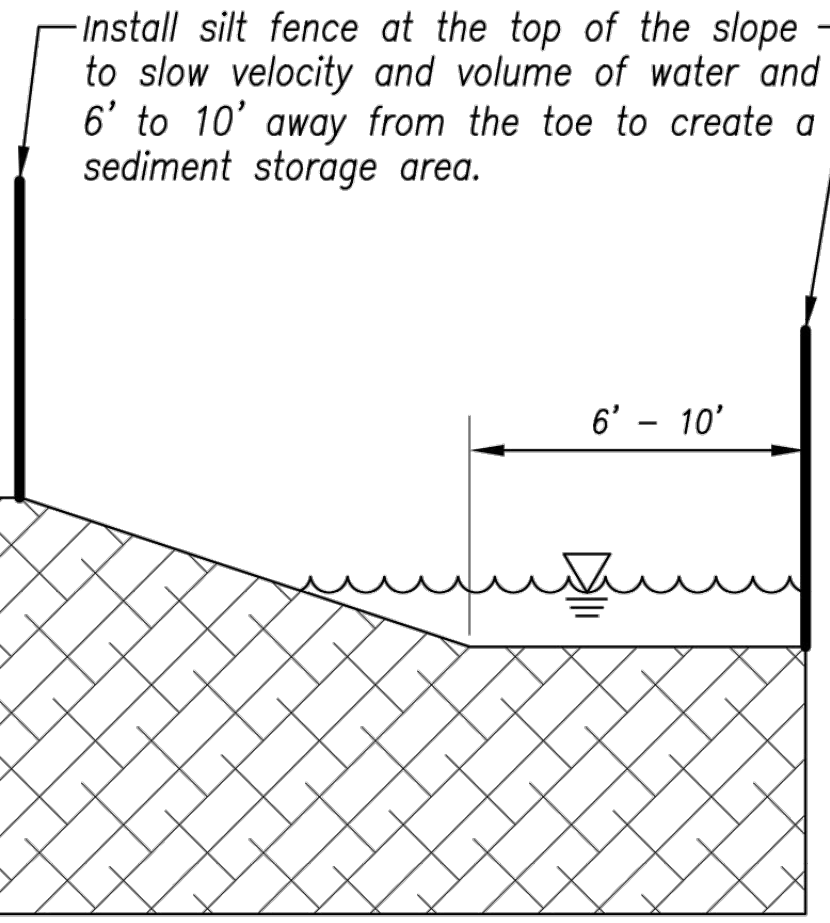
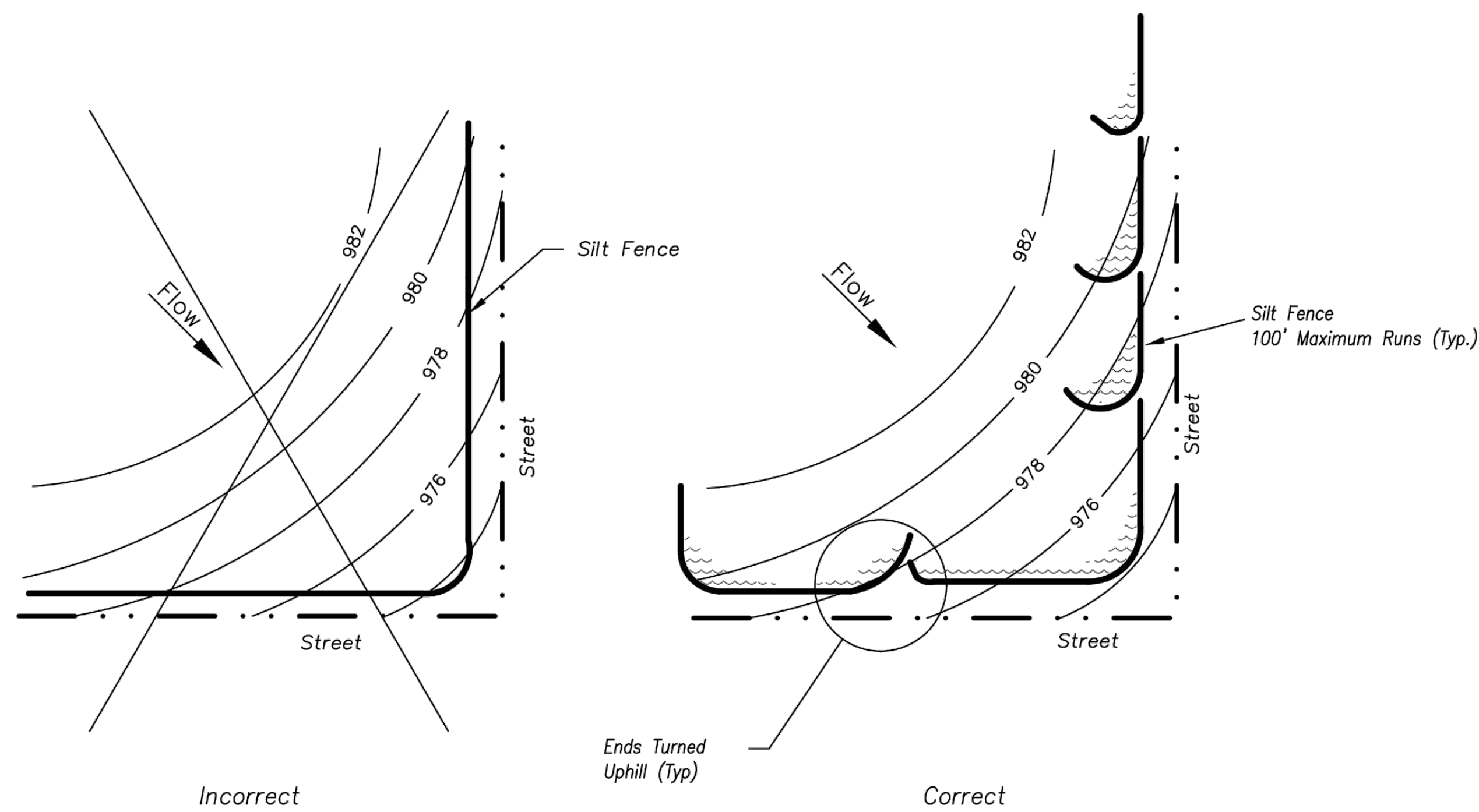
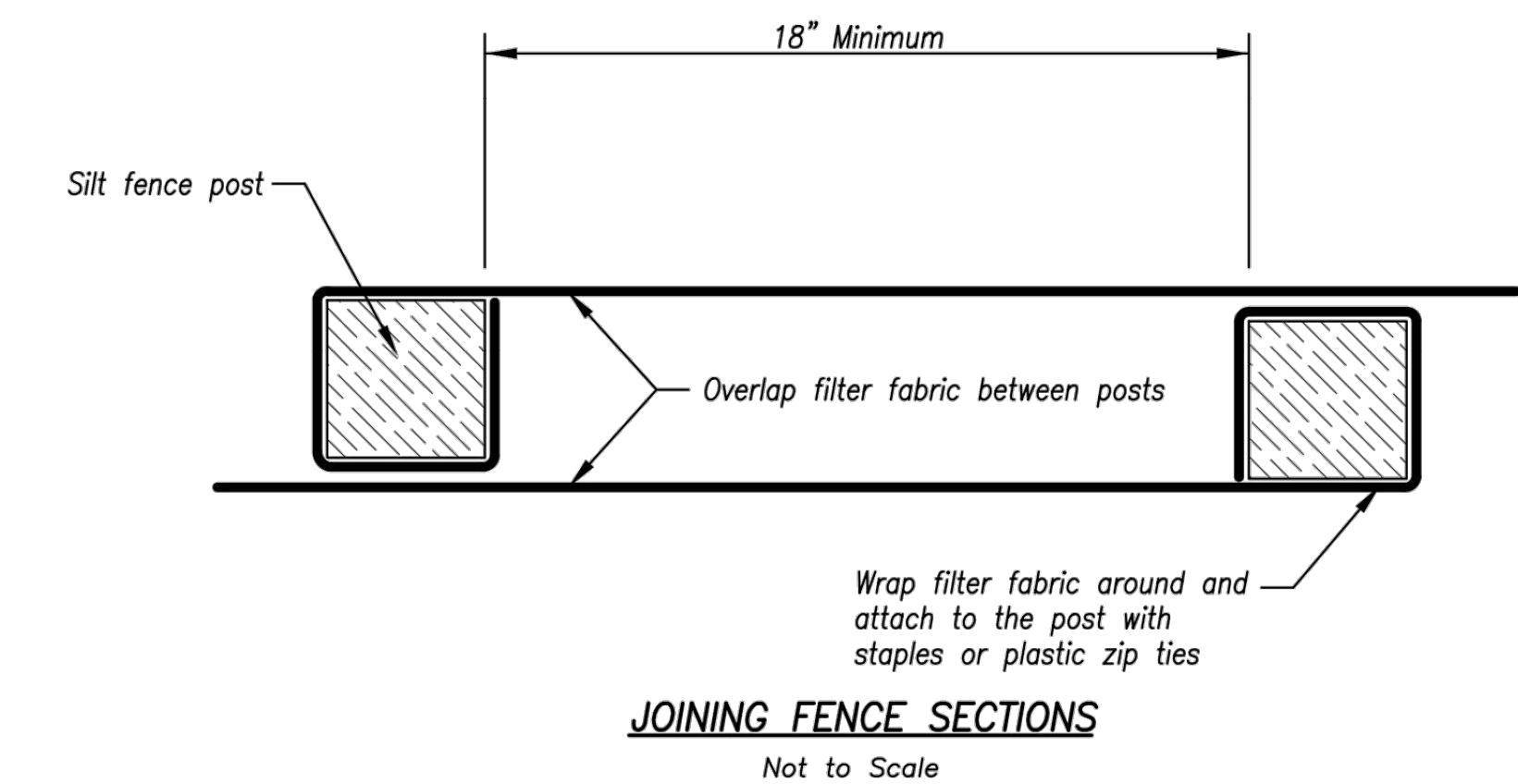
SILT FENCE DETAILS
Not to Scale

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.



AS-BUILT

AMERICAN PUBLIC WORKS ASSOCIATION
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KANSAS CITY METRO CHAPTER

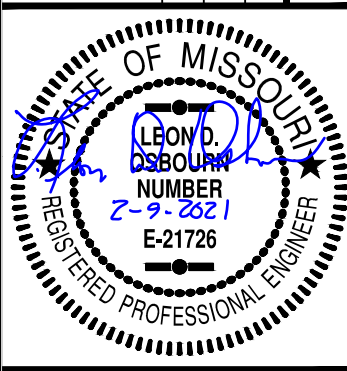
SILT FENCE

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

STREETS OF WEST PRYOR
NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE
LEES SUMMIT, MISSOURI

WATER LINE PLANS
DETAIL SHEET

PROJ. NO.	A14_7067-1
DESIGNER	LDO
DRAWN BY	JT/BKR
CFN	7067-1W_DET
SHEET	5



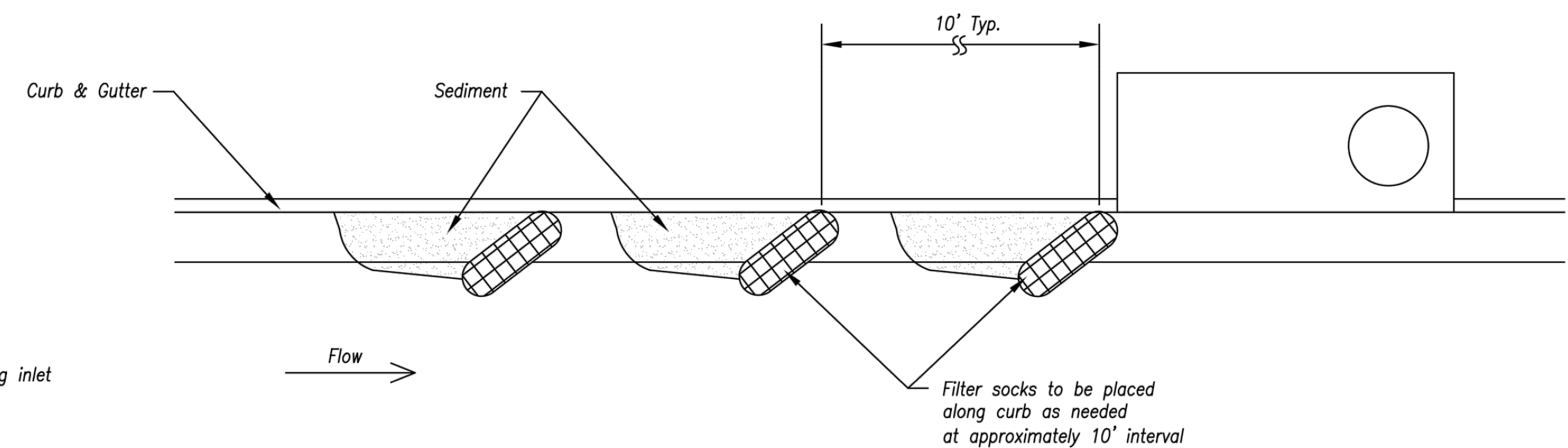
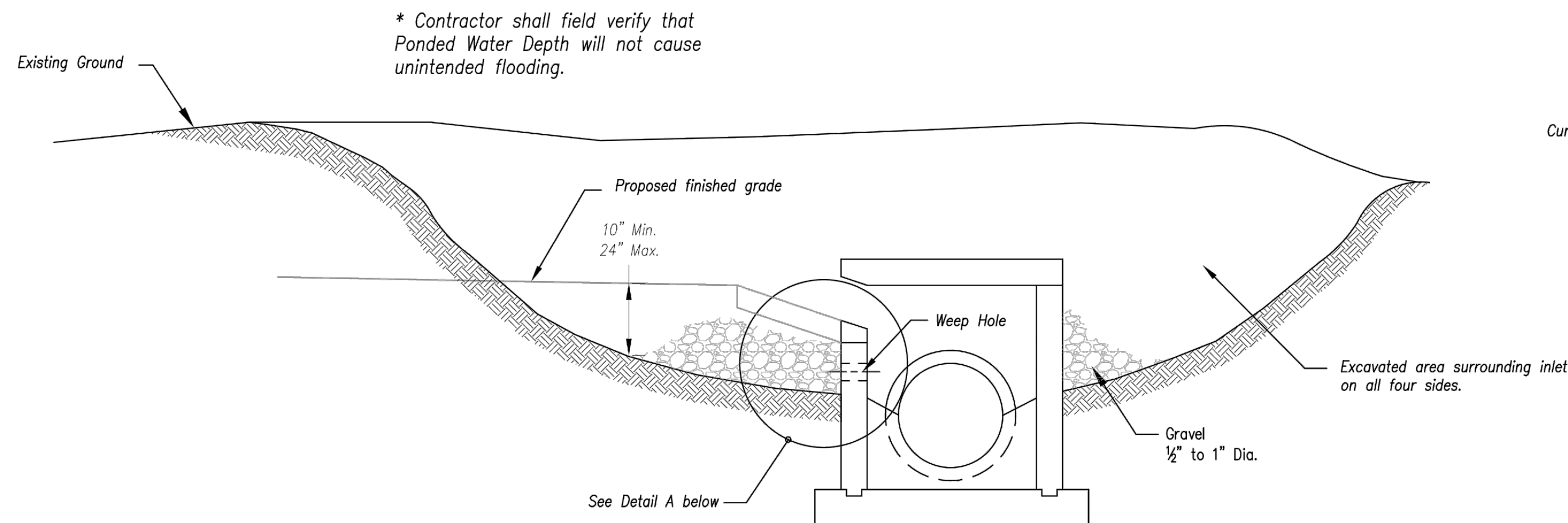
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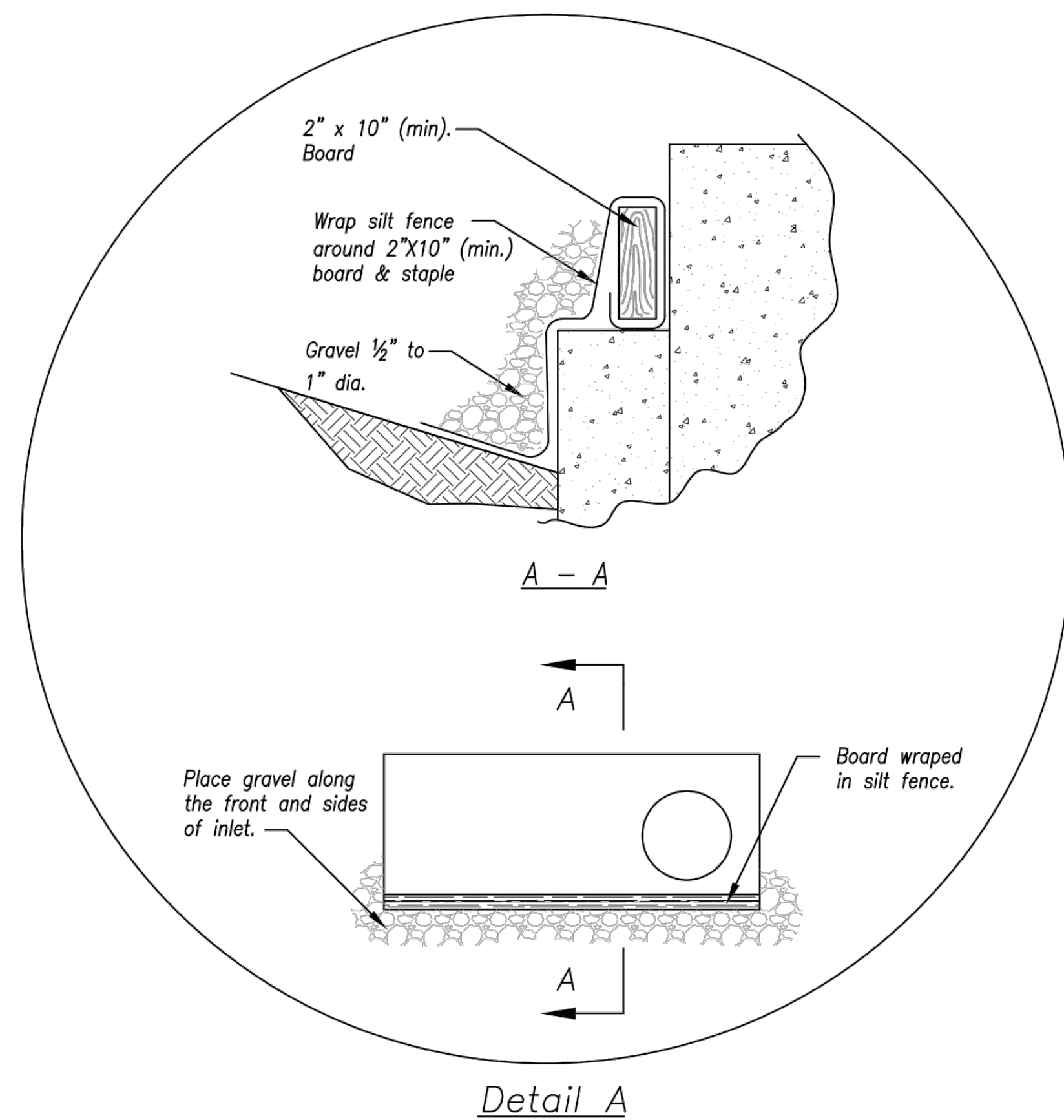
KAW VALLEY ENGINEERING

KAW VALLEY ENGINEERING, INC. IS AUTHORIZED TO OFFER ENGINEERING SERVICES BY MISSOURI STATE CERTIFICATE OF AUTHORITY # 00864E. EXPIRES 12/31/19

REV	DATE	DESCRIPTION
5	2-5-21	AS-BUILT PLANS
1	2-26-19	REVISED PER CITY COMMENTS
0	1-4-19	INITIAL ISSUE
		DSN
		DWN
		CHK



On Grade Curb Inlet Protection



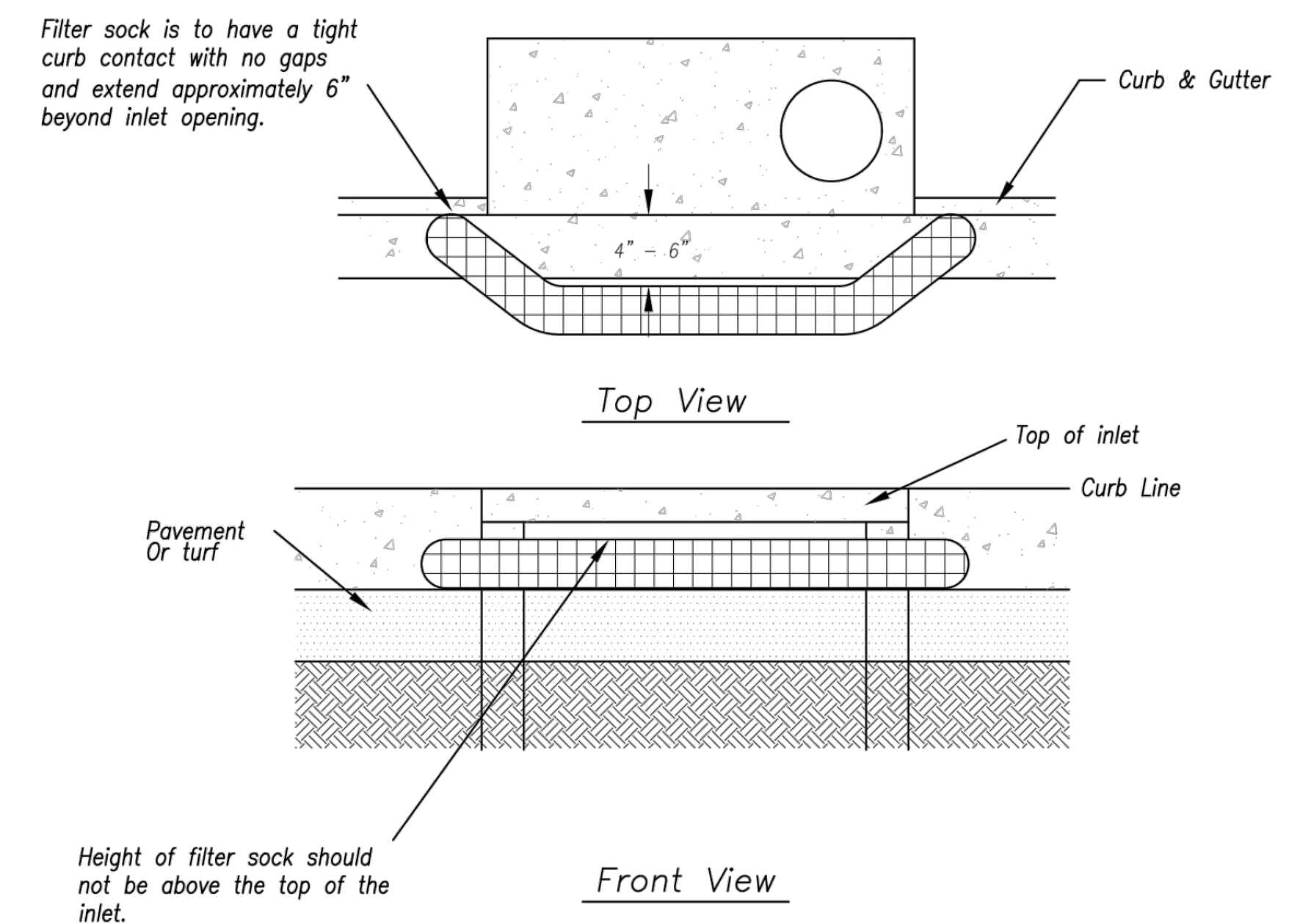
EARLY STAGE CURB INLET
(Open Box and Prior to Pouring
Curb and Inlet Throat)

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.

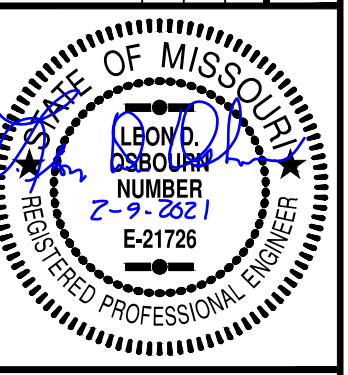


Sump Inlet Sediment Filter

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

AS-BUILT

REV	DATE	DESCRIPTION
5	2-5-21	AS-BUILT PLANS
1	2-26-19	REVISED PER CITY COMMENTS
0	1-4-19	INITIAL ISSUE
		DSN
		DWN
		CHK



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STREETS OF WEST PRYOR
NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE
LEES SUMMIT, MISSOURI

WATER LINE PLANS
DETAIL SHEET

AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter

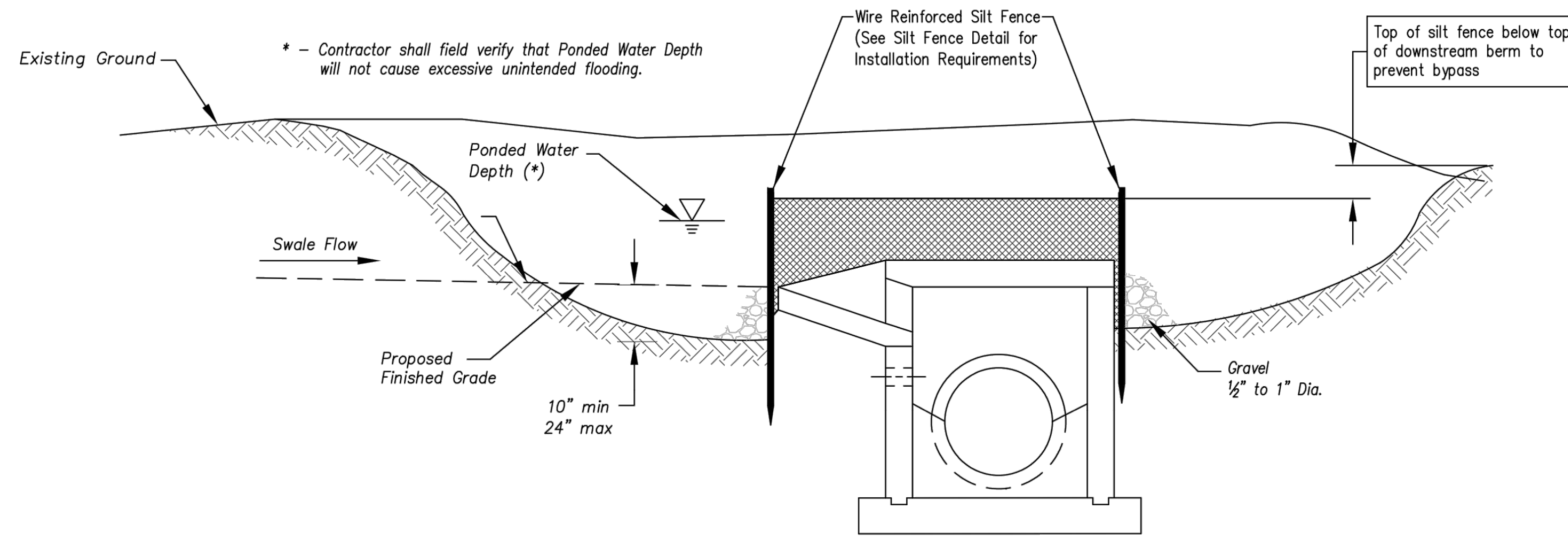
APWA

KANSAS CITY METRO CHAPTER

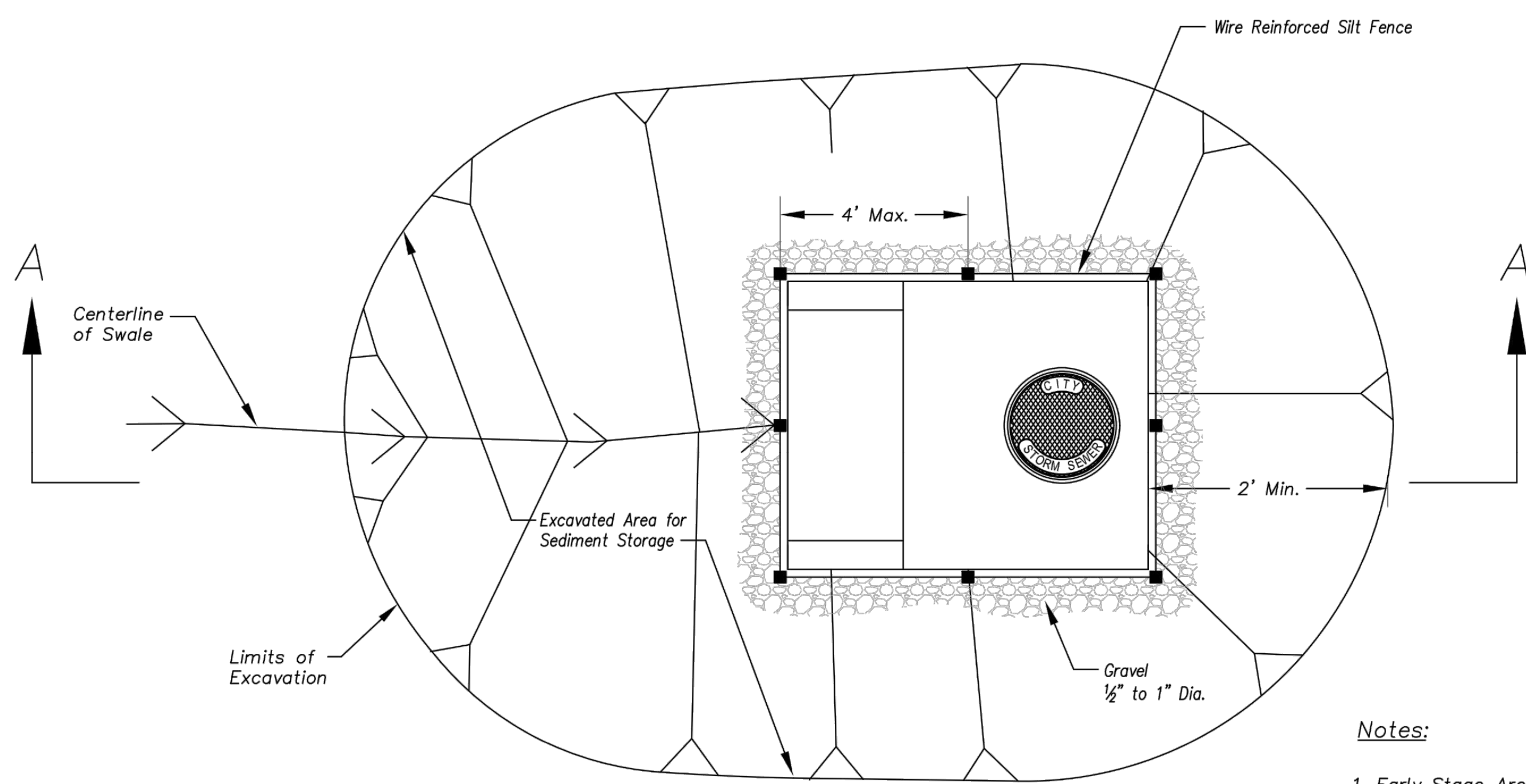
CURB INLET PROTECTION

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

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



Section A-A
Not to Scale

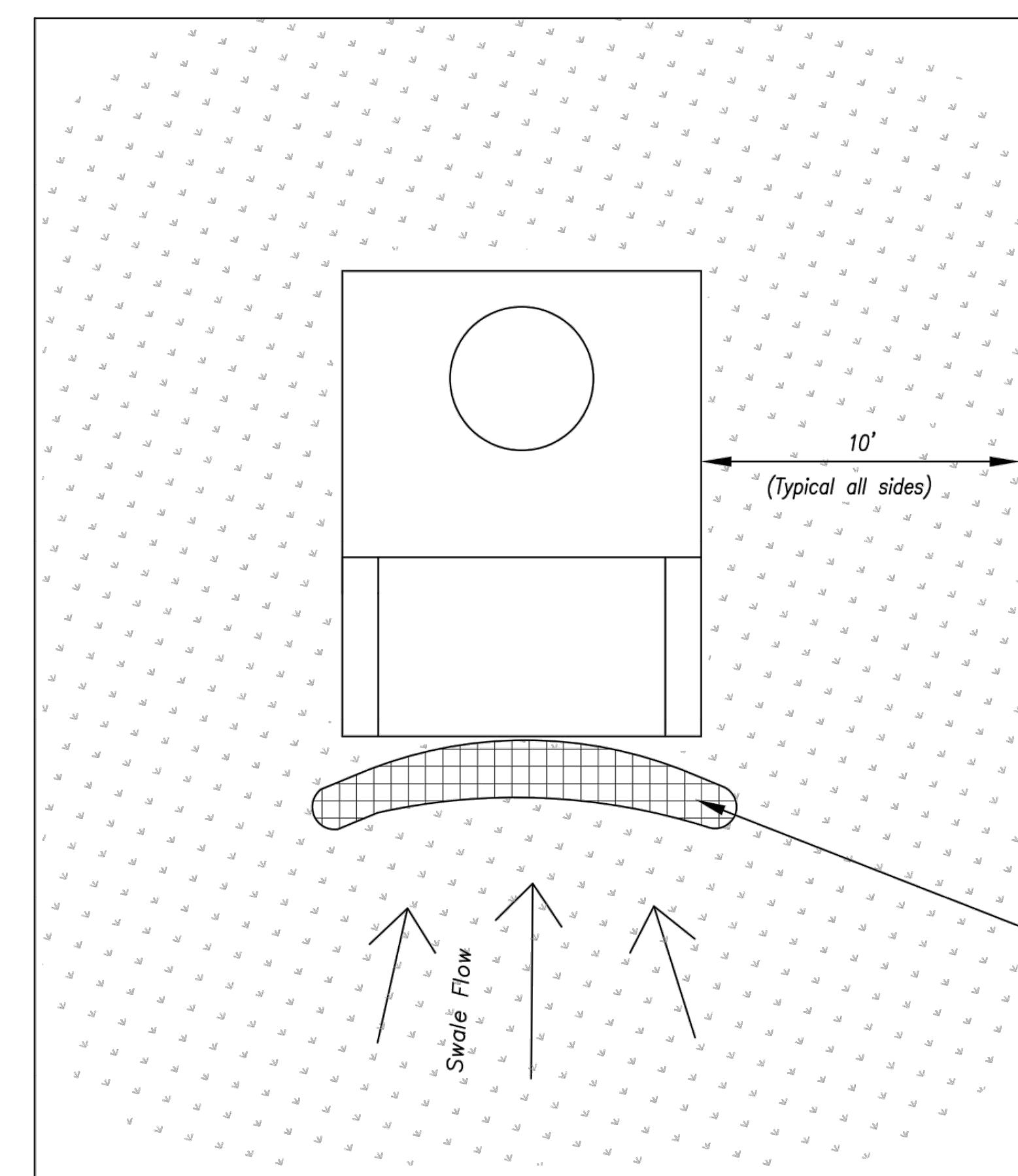


Plan
Not to Scale

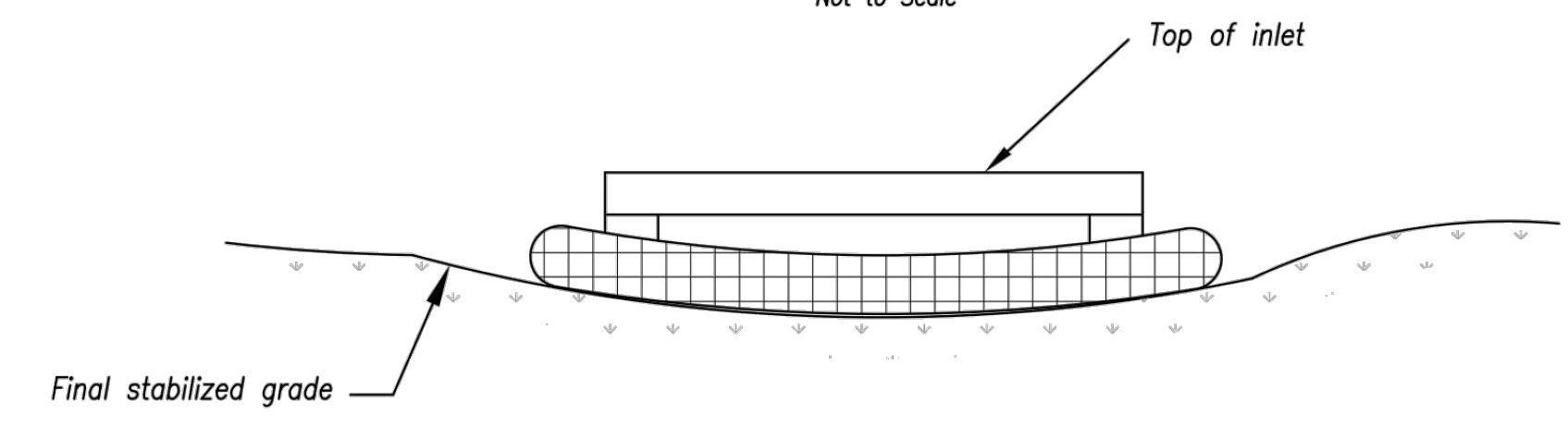
EARLY STAGE AREA INLET
(All open boxes and inlets not at final grade)

- 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.

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



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.

AS-BUILT

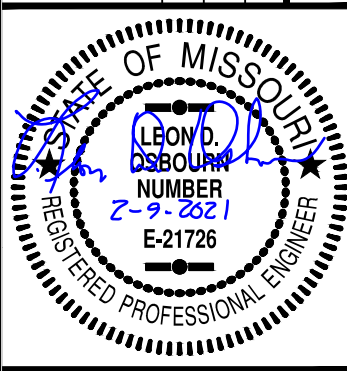
AMERICAN PUBLIC WORKS ASSOCIATION
Kansas City Metro Chapter
APWA
AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY METRO CHAPTER

AREA INLET AND JUNCTION BOX PROTECTION

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

PROJ. NO.	A14-7067-1	
DESIGNER	LDO	
DRAWN BY	JT/BKR	
DATE	10/24/2016	
SHEET	5	
REV		
REV	DATE	DESCRIPTION
0	1-4-19	INITIAL ISSUE
1	2-26-19	REVISED PER CITY COMMENTS
5	2-5-21	AS-BUILT PLANS
		LDO
		JT
		LDO
		JT/BKR
		LDO
		LDO
		DSN
		DWN
		CHK



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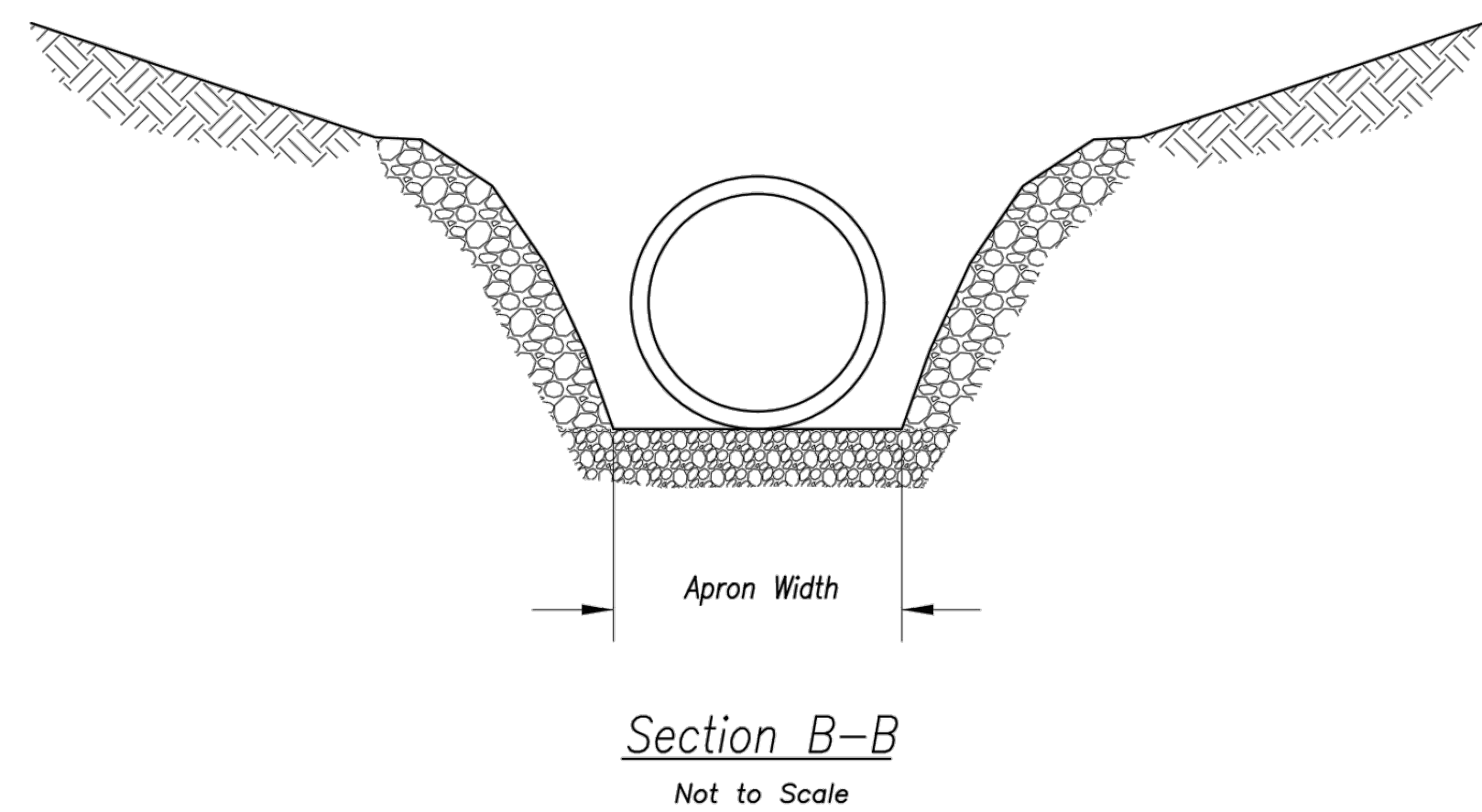
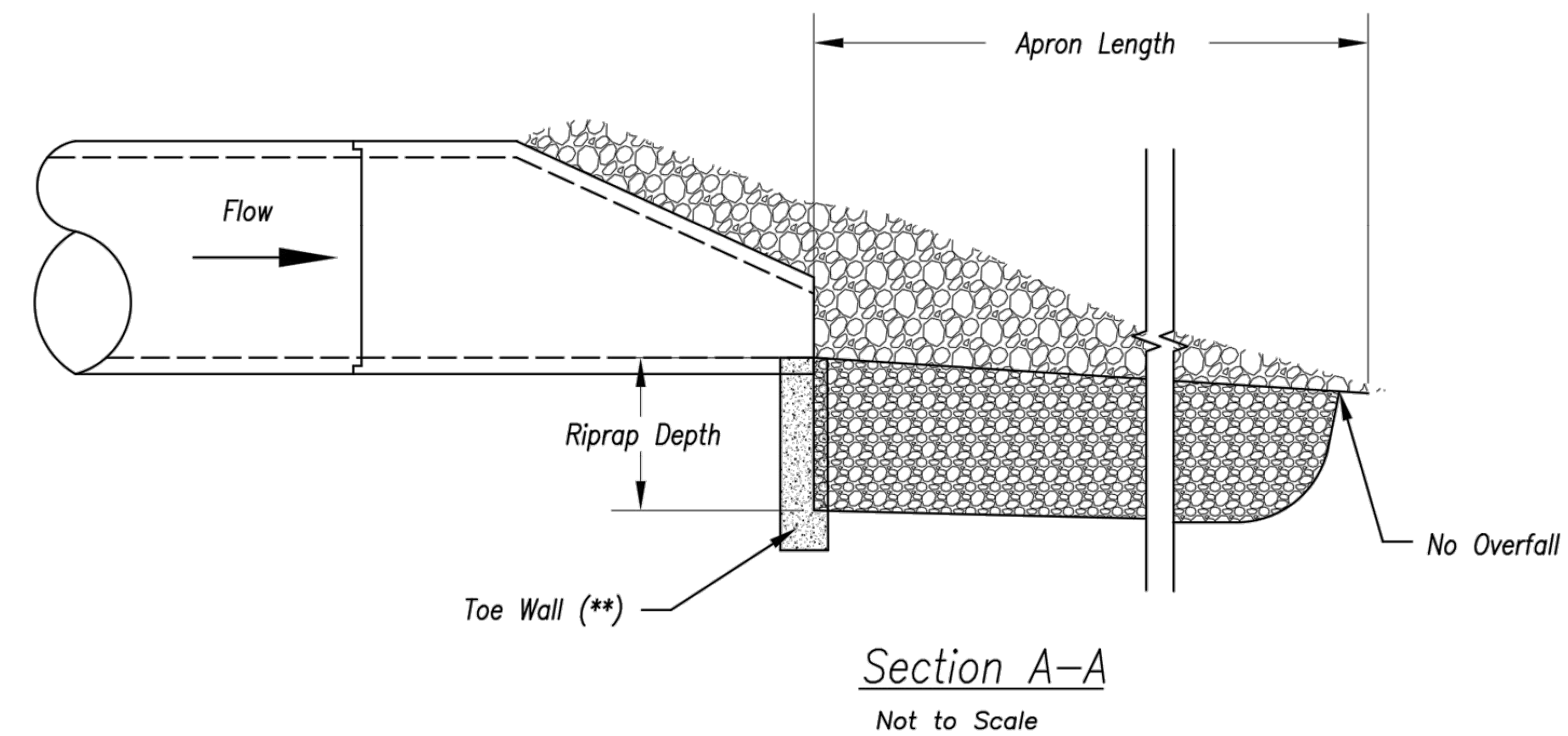
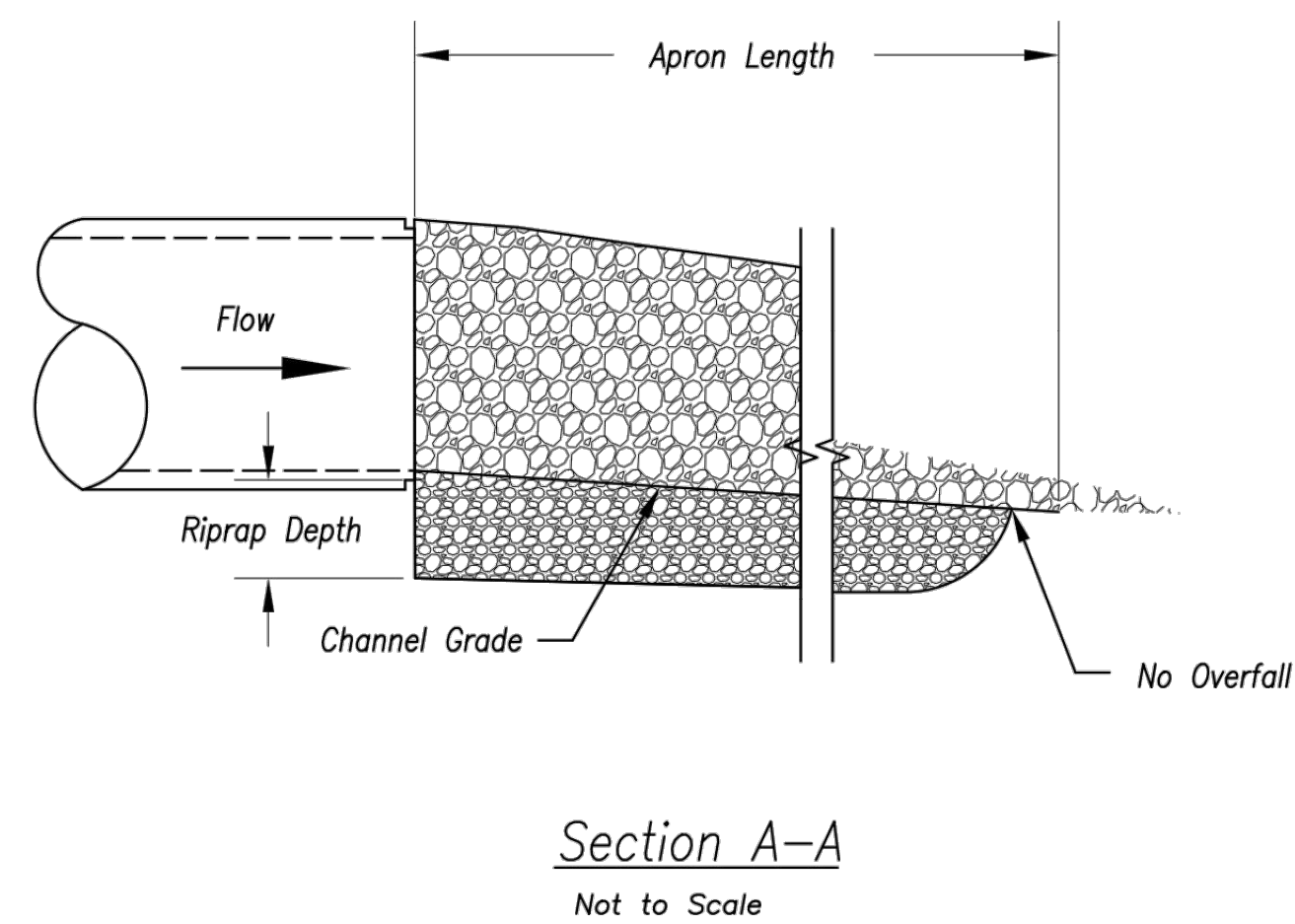
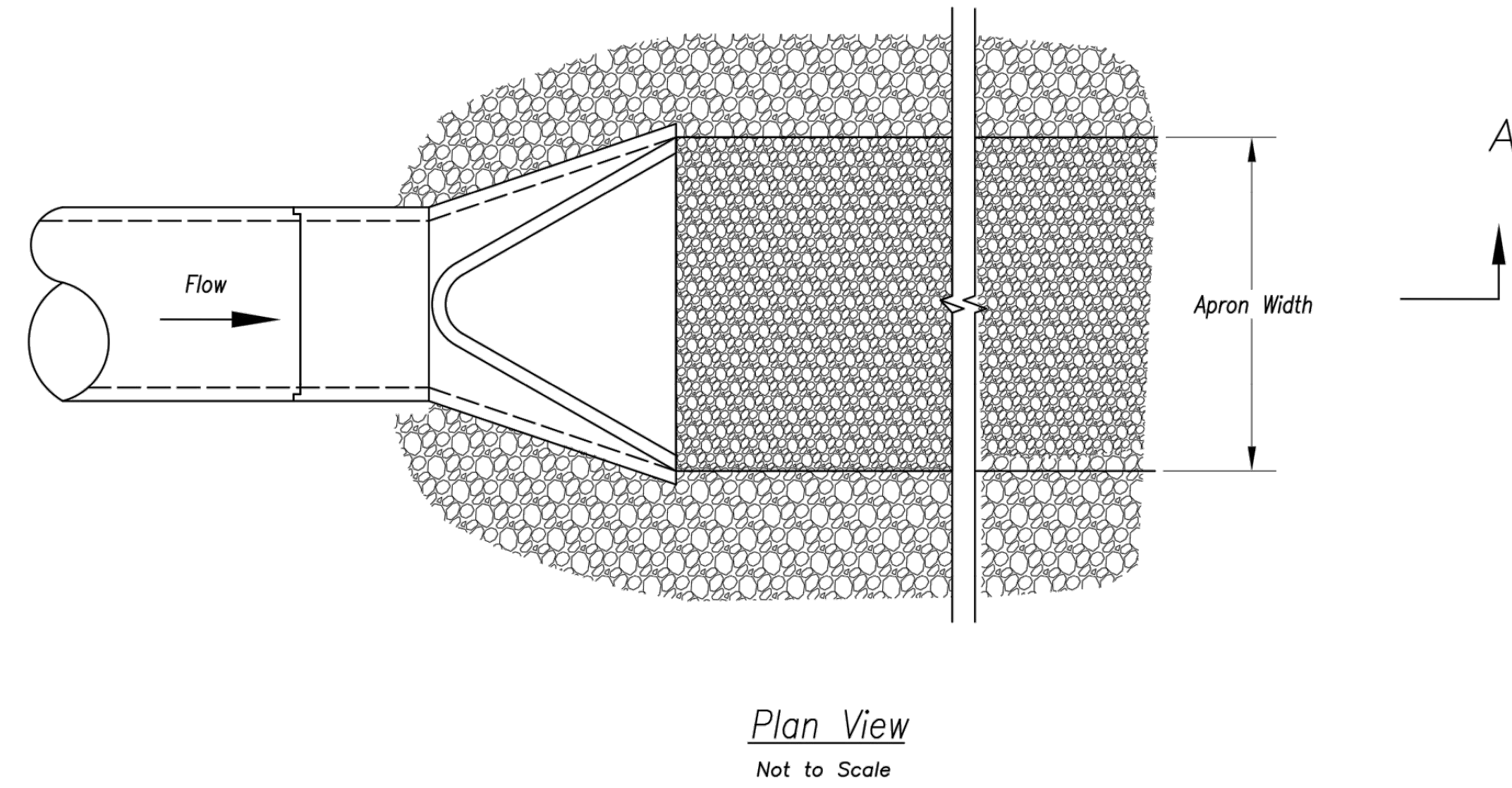
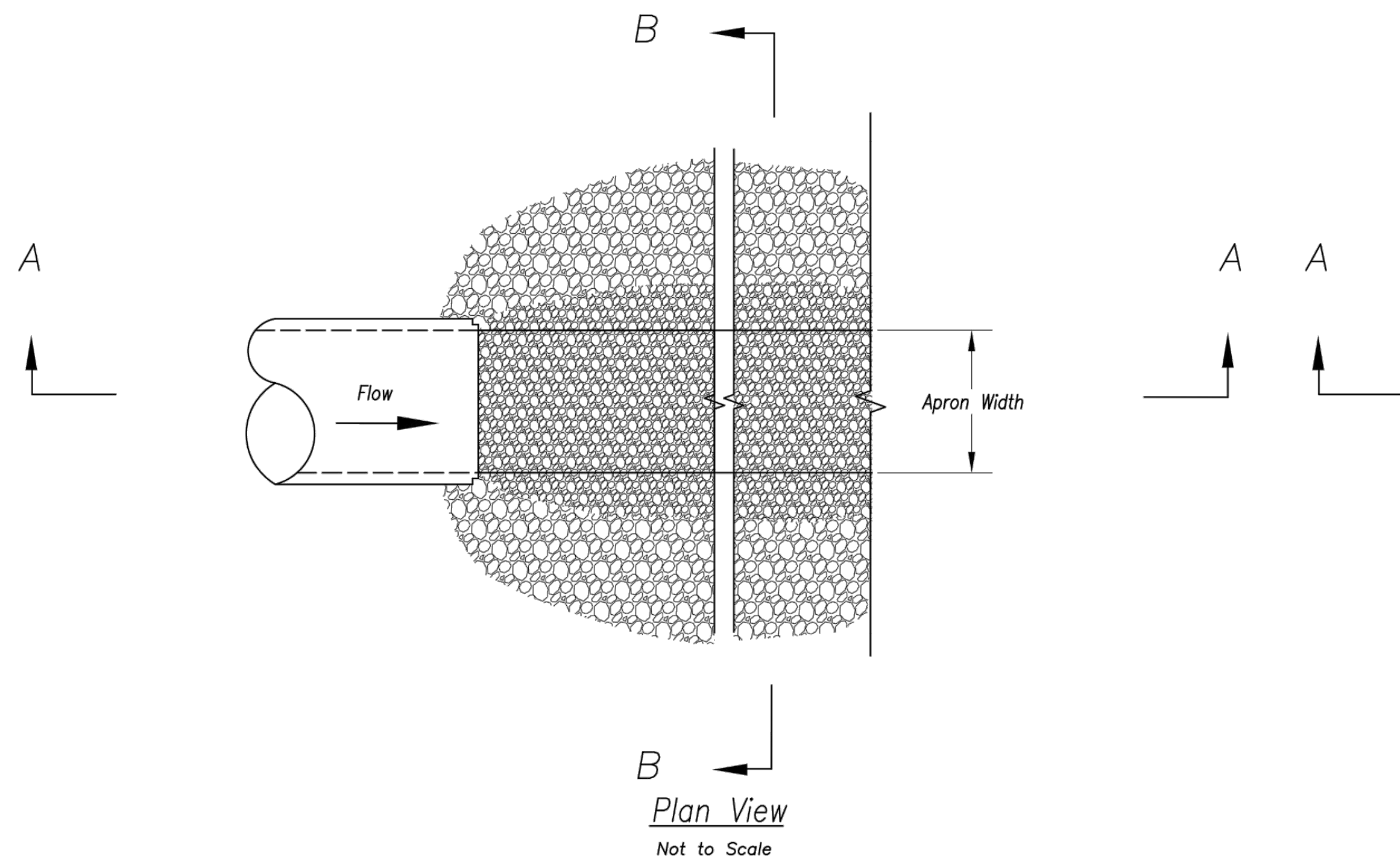
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STREETS OF WEST PRYOR
NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE
LEES SUMMIT, MISSOURI

WATER LINE PLANS
DETAIL SHEET



OUTLET PROTECTION WITH END SECTION

OUTLET PROTECTION W/O END SECTION

Notes:

1. Rock all sides steeper than 3:1.
2. Stabilize all disturbed areas downstream of outlet to the limits of disturbance.
3. Alternative outlet protection and slope stabilization measures may be used with approval by the Engineer.
4. Install riprap apron so that it is no higher than flowline of pipe.
5. Reference APWA Specification 2650 for rock type, size, and placement.

AS-BUILT

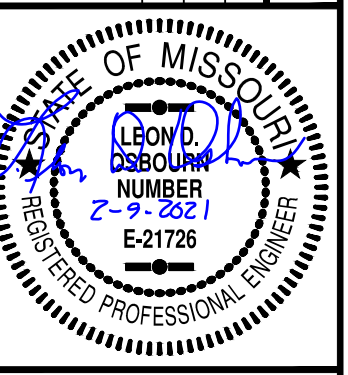
AMERICAN PUBLIC WORKS ASSOCIATION
 Kansas City Metro Chapter
APWA
 AMERICAN PUBLIC WORKS ASSOCIATION

KANSAS CITY METRO CHAPTER

STANDARD DRAWING NUMBER ESC-14
 ADOPTED: 10/24/2016

OUTLET PROTECTION

PROJ. NO.	A14-7067-1		
DESIGNER	LDO		
DRAWN BY	JT/BKR		
CFN	7067-1W_DET		
SHEET	5		
REV	5		
REV	0	1-4-19	INITIAL ISSUE
REV	1	2-26-19	REVISED PER CITY COMMENTS
REV	5	2-5-21	AS-BUILT PLANS
DSN	JT	LDO	
DWN	JT	LDO	
CHK	JT/BKR	LDO	
DESCRIPTION	WATER LINE PLANS		
DESCRIPTION	DETAIL SHEET		
DESCRIPTION	STREETS OF WEST PRYOR		
DESCRIPTION	NWQ NW PRYOR ROAD & NW LOWENSTEIN DRIVE		
DESCRIPTION	LEES SUMMIT, MISSOURI		



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