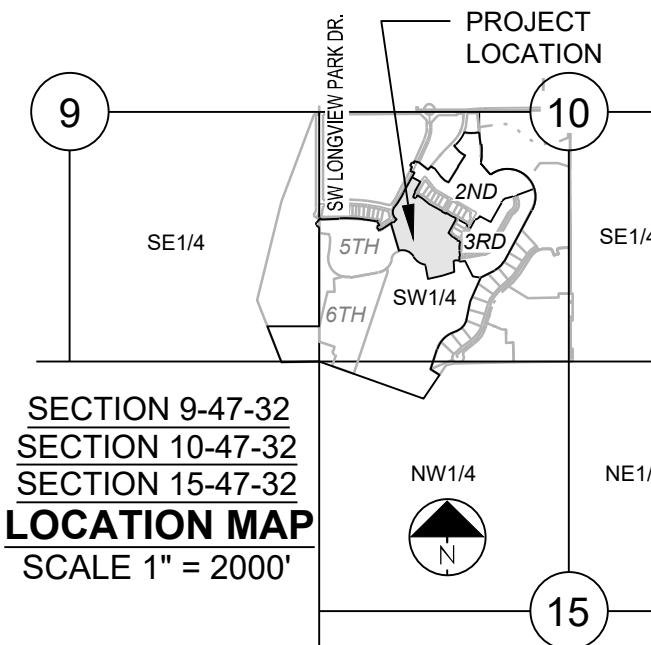




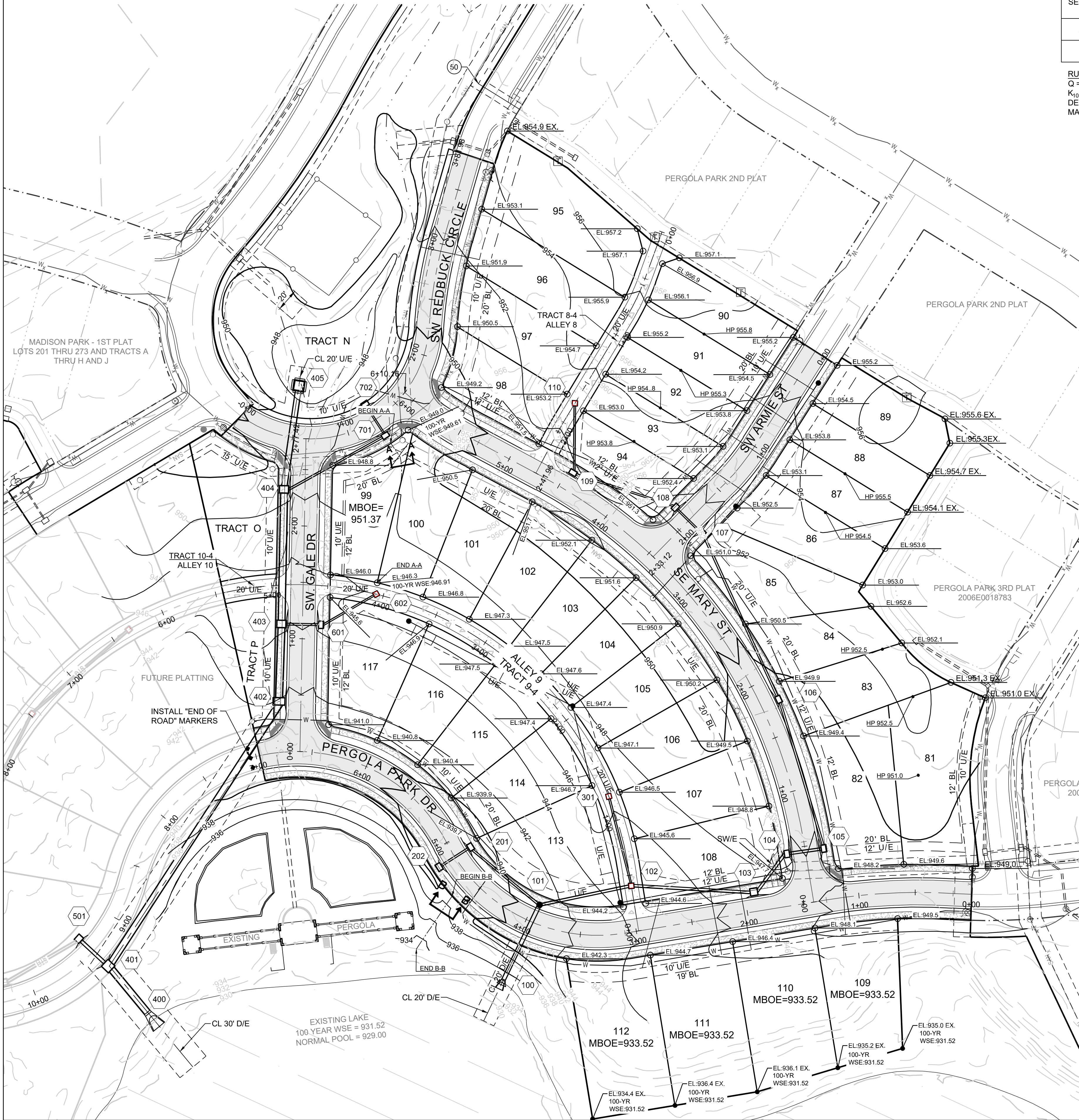
NORTHING: 998893.4148
EASTING: 2803318.5413
ELEV. 1004.09

2
OF 28



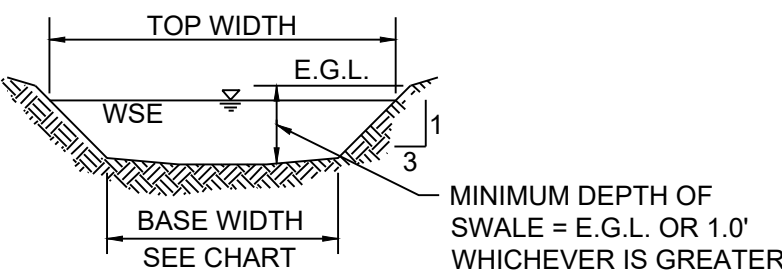
PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
CONTROL
- LEE'S SUMMIT, MISSOURI

I:\PROJECTS\2019\19-0023\0 DWG Plans\6 0 SS\19-002-SS-GRAD.dwg, 7/30/2019 4:23:08 PM, 1:1



NOTES:

1. MBOE = MINIMUM BUILDING OPENING ELEVATION FOR HOUSES ADJACENT TO ENGINEERED OVERFLOW SWALES SHALL BE MINIMUM 2 FEET ABOVE THE 100 YR WATER SURFACE ELEVATION.
2. EGL = ENERGY GRADE LINE (100 YR)
3. WSE = WATER SURFACE ELEVATION (100 YR)
4. ENGINEERED SWALES TO BE GRADED TO NORMAL DEPTH OF FLOW (WATER SURFACE ELEVATION) OR 1.0 FT, WHICHEVER IS GREATER. MINIMUM SLOPE OF ENGINEERED SWALES SHALL BE AS NOTED.
5. MBOE'S ADJACENT TO SUMPED INLETS SHALL BE A MINIMUM OF 1' ABOVE TOP OF ADJACENT BERM



100 YR OVERFLOW SWALE SECTIONS
SECTION 1-2

100 YEAR OVERFLOW SWALES												
SECTION	DRAINAGE AREA (AC.)	Q100 (CFS)	Q10 (CFS)	DESIGN OVERFLOW (CFS)	BED SLOPE (%)	BASE WIDTH (FT.)	SIDE SLOPE	TOP WIDTH (FT.)	NORMAL DEPTH (FT.)	VELOCITY (FPS)	VELOCITY HEAD (FT.)	EGL (FT.)
A-A	2.16	18.39	-	18.3900	2.13	5	3:1	8.68	0.61	4.39	0.30	0.91
B-B	6.93	59.00	-	59.0000	7.25	10	3:1	13.55	0.59	8.48	1.12	1.71

RUNOFF CALCULATIONS:
 $Q = K \cdot C \cdot I \cdot A$
 $K_{10} = 1.0$ $K_{100} = 1.25$ $C = 0.51$ $I =$ INTENSITY
 $\text{DESIGN OVERFLOW} = Q_{\text{OVERFLOW}} = Q_{100} - Q_{10}$
MANNINGS "n" = .030 FOR SWALES

LOT TYPE TABLE		
LOT #	BASEMENT TYPE	MBOE
81	STANDARD	953.00
82	STANDARD	952.50
83	STANDARD	953.00
84	STANDARD	953.00
85	STANDARD	954.00
86	STANDARD	955.00
87	STANDARD	956.00
88	STANDARD	957.00
89	STANDARD	957.00
90	STANDARD	958.00
91	STANDARD	957.50
92	STANDARD	957.00
93	STANDARD	956.50
94	STANDARD	955.50
95	STANDARD	957.50
96	STANDARD	957.00
97	STANDARD	955.00
98	STANDARD	953.50
99	STANDARD	951.37
100	STANDARD	951.50
101	STANDARD	952.00
102	STANDARD	952.00
103	STANDARD	952.00
104	STANDARD	952.00
105	STANDARD	952.00
106	STANDARD	951.50
107	STANDARD	950.50
108	STANDARD	949.50
109	WALKOUT	933.52
110	WALKOUT	933.52
111	WALKOUT	933.52
112	DAYLIGHT	933.52
113	STANDARD	947.50
114	STANDARD	948.50
115	STANDARD	949.00
116	STANDARD	948.50
117	STANDARD	948.00

- DENOTES OVERFLOW SWALE
- EL:000.00 DENOTES FINISHED GRADE ELEVATION
- EL:000.00 (EX.) DENOTES EXISTING GRADE ELEVATION
- HP 000.00 DENOTES LOT HIGH POINT ELEVATION
- DENOTES RETAINING WALL

MISSOURI GEOGRAPHIC REFERENCE SYSTEM
BENCH MARK:

BM JA-148, IS A STAMPED KC METRO DISK SET IN CONCRETE LOCATED 2 MILES WEST OF THE INTERSECTION OF HIGHWAY 50 AND 3RD ST. IT IS 44 FT NORTH OF THE CENTER OF 3RD ST. AND 102.5 FT WEST OF THE CENTER OF THE EXIT FROM THE ADJACENT PARKING LOT.

ELEV. 935.18

PROJECT BENCHMARK:

CHISELED "SQUARE" ON STORM CURB INLET AT NORTHWEST INTERSECTION OF SW. TOWER PARK DRIVE AND SW. LONGVIEW BOULEVARD.

NORTHING: 998893.4148
EASTING: 2803318.5413
ELEV. 1004.09

SCHLAGEL & ASSOCIATES, P.A.
Engineers-Planners-Surveyors-Landscape Architects
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificates of Authority
#E2002003600-F #LAC201003237 #LS200200859-F



PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
- LEE'S SUMMIT, MISSOURI

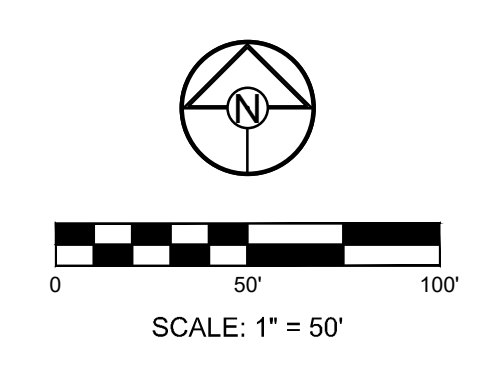
REVISION DATE	DESCRIPTION
6-26-19	CITY COMMENTS
7-30-19	CITY COMMENTS

DRAWN BY:	BAL
CHECKED BY:	MAB
DATE PREPARED:	4-15-19
PROJ. NUMBER:	19-002

MASTER
DRAINAGE PLAN
- LOT INFO

SHEET

4
OF 28



GUTTER SPREAD AND INLET CAPACITY CALCULATIONS - PERGOLA PARK 4TH PLAT

DESIGN STORM 10
"K" FACTOR 1.00

CURB TYPE "A" = LAZY BACK
CURB TYPE "B" = HIGH BACK

RUNOFF CALCULATIONS

INLET #	COMPOSITE "C"	AREA	INLET Tc	INTENSITY	RUNOFF	UPSTREAM INLET	UPSTREAM INLET	UPSTREAM INLET	UPSTREAM INLET	BYPASS FROM UPSTREAM INLET	TOTAL RUNOFF	STREET GRADE	STREET CROSS SLOPE	CURB TYPE	INLET LENGTH	EFFECTIVE LENGTH 80% CAP	INLET INTERCEPTION	BYPASS TO DOWNSTREAM INLET	STREET GRADE	STREET CROSS SLOPE	DEPTH AT CURB	SPREAD OF FLOW
LINE 1																						
102	0.66	0.22	5	7.35	1.07	301				0.22	1.29	1.56	2.08	A	4	3.2	1.11	0.18	1.56	2.08	0.14	7.27
103	0.66	0.21	5	7.35	1.02	104				0.09	1.10	2.18	2.08	A	6	4.8	0.98	0.12	2.18	2.08	0.12	6.50
104	0.66	0.28	5	7.35	1.36					0.00	1.36	1.10	2.08	A	6	4.8	1.27	0.09	1.10	2.08	0.15	7.87
105	0.66	0.43	5	7.35	2.09	106				0.22	2.30	1.10	2.08	A	6	4.8	1.98	0.33	1.10	2.08	0.19	9.49
106	0.66	0.39	5	7.35	1.89	107				0.19	2.08	1.10	2.08	A	6	4.8	1.86	0.22	1.10	2.08	0.18	9.15
107	0.66	0.31	5	7.35	1.50					0.00	1.50	1.71	2.08	A	6	4.8	1.31	0.19	1.71	2.08	0.15	7.55
108	0.66	0.36	5	7.35	1.75					0.00	1.75	1.71	2.08	A	6	4.8	1.49	0.26	1.71	2.08	0.16	7.96
109	0.66	0.18	5	7.35	0.87	108				0.26	1.13	4.00	2.08	A	6	4.8	0.97	0.16	4.00	2.08	0.11	5.90
110	0.66	0.21	5	7.35	1.02					0.00	1.02	4.00	2.08	A	4	3.2	0.81	0.20	4.00	2.08	0.11	5.69
LINE 2																						
201	0.66	1.22	5	7.35	5.92	102	103	601		0.84	6.76	SUMP	2.08	A	6	4.8	16.80	0.00	SUMP	2.08	< 0.21	< 10.50
202	0.66	0.32	5	7.35	1.55					0.00	1.55	SUMP	2.08	A	6	4.8	16.80	0.00	SUMP	2.08	< 0.21	< 10.50
LINE 3																						
301	0.66	0.32	5	7.35	1.55					0.00	1.55	1.56	2.08	A	4	3.2	1.33	0.22	1.56	2.08	0.15	7.76
LINE 4																						
401	0.66	0.34	5	7.35	1.65					0.00	1.65	SUMP	2.08	A	8	6.4	17.92	0.00	SUMP	2.08	< 0.21	< 10.50
402	0.66	0.04	5	7.35	0.19	403				0.02	0.21	3.24	2.08	A	6	4.8	0.20	0.00	3.24	2.08	0.06	3.48
403	0.66	0.07	5	7.35	0.34	404				0.01	0.35	3.24	2.08	A	6	4.8	0.33	0.02	3.24	2.08	0.08	4.12
404	0.66	0.06	5	7.35	0.29					0.00	0.29	3.24	2.08	A	6	4.8	0.28	0.01	3.24	2.08	0.07	3.88
LINE 5																						
501	0.66	1.08	5	7.35	5.24	402	FUT 502			0.19	5.42	SUMP	2.08	A	6	4.8	13.44	0.00	SUMP	2.08	< 0.21	< 10.50
FUT 502	0.66	0.10	5	7.35	0.49	FUT 503				0.87	1.36	2.12	2.08	A	6	4.8	1.18	0.18	2.12	2.08	0.14	7.01
FUT 503	0.66	0.49	5	7.35	2.38	FUT 504				0.73	3.11	1.49	2.08	A	4	3.2	2.24	0.87	1.49	2.08	0.20	10.00
FUT 504	0.66	0.45	5	7.35	2.18	FUT 505				0.63	2.81	1.49	2.08	A	4	3.2	2.08	0.73	1.49	2.08	0.19	9.65
FUT 505	0.66	0.46	5	7.35	2.23	FUT 506				0.35	2.58	1.49	2.08	A	4	3.2	1.95	0.63	1.49	2.08	0.18	9.36
FUT 506	0.66	0.42	5	7.35	2.04					0.00	2.04	1.12	2.08	A	4	3.2	1.69	0.35	1.12	2.08	0.18	9.05
LINE 6																						
601	0.66	0.36	5	7.35	1.75	602				0.48	2.23	3.24	2.08	A	6	4.8	1.70	0.53	3.24	2.08	0.15	7.75
602	0.66	0.54	5	7.35	2.62					0.00	2.62	1.12	2.08	A	4	3.2	2.14	0.48	1.12	2.08	0.20	9.90
LINE 7																						
701	0.66	1.14	5	7.35	5.53					0.00	5.53	SUMP	2.08	A	6	4.8	16.80	0.00	SUMP	2.08	< 0.21	< 10.50
702	0.66	0.27	5	7.35	1.31					0.00	1.31	SUMP	2.08	A	6	4.8	16.80	0.00	SUMP	2.08	< 0.21	< 10.50

NOTES:

1. CAPACITY OF INLETS ON GRADE DETERMINED USING ROUTINE OUTLINED ON PGS 56-95 TO 56-97, SECTION 5600 APWA
2. CAPACITY OF SUMP INLETS CALCULATED USING FIGURE 5604-21, SECTION 5600 APWA
3. MANNINGS "n" VALUE FOR COMBINED ASPHALT PAVEMENT AND CONCRETE CURB - 0.014

STRUCTURE 405 INLET CAPACITY:

9' X 9' AREA INLET WITH OPENINGS ON ALL FOUR SIDES. TOP ELEVATION IS 948.00 AND MAX PONDING ELEVATION IS 949.50.

A = 38.50 AC.
Tc = 14.30
"C" VALUE = 0.66
100 YEAR DESIGN STORM
"K" = 1.25
INTENSITY (in/hr) = 7.51
h = 10"
H = 2.25'
L = 36'

QActual = KCIA
Qcap = Co h L (2 g H)^{1/2} , WHERE Co =0.67 AND g = 32.2 FT/S2

QActual = (1.25)(0.66)(7.51)(38.50) = 238.54 cfs
Qcap = (0.67)(.83)(36)(2*32.2*2.25)^{1/2} = 241.98 cfs
80% Qcap = 192.79 cfs

SINCE 80%Qcap < QActual

TRASH RACK IS UTILIZED TO MAKE UP FOR MISSING FLOW

Qtrash = CA(2gH)^{1/2}
C = 0.6
A = 81'
G = 32.2 (ft/s)
H = 1.50'

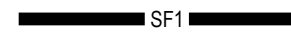
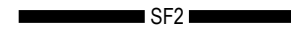
Qtrash = (0.6)(81)(2*32.2*1.50)^{1/2} = 477.67 cfs
80%Qtrash = 382.13 cfs

80%Qtrash + 80% Qcap = 382.13 + 192.79 = 574.92 cfs > QActual

10 YEAR RUNOFF CALCULATIONS

Design Storm:		10																													
"K" Value:		1.00																													
"F" Factor:		1.00																													
Runoff Calculations														Pipe Properties																	
Inlet #	Area (acres)	"C" Value	Cumul. Area (acres)	Cumul. Cx/A	Tc	Intensity	Runoff To Inlet	Cumul. Runoff	Pipe Cap.	Pipe Vel.	Up Piped Inlet 1	Up Piped Inlet 2	Up Area (acres)	Up Cx/A	Up Inlet	Down Inlet	Pipe Type	"n" Value	Pipe Size	Length	Slope %	Drop In Inlet	FL Up	FL Down	Inlet Top	HGL Elev.					
LINE 100																															
101	0.00	0.66	4.45	2.94	7.1	6.76	0.00	19.87	69.95	9.90	201		1.54	1.02	101	100	RCP	0.013	36	73.29	1.10	4.00	929.31	928.50	940.87	931.01					
102	0.22	0.66	2.91	1.92	7.0	6.79	0.99	13.04	47.77	15.21	301		0.32	0.21	102	101	HDPE	0.012	24	83.24	3.80	0.50	936.47	933.31	944.57	938.05					
103	0.21	0.66	2.37	1.56	6.7	6.86	0.95	10.73	20.50	6.53			0.00	0.00	103	102	HDPE	0.012	24	108.82	0.70	0.50	937.73	936.97	946.89	939.15					
104	0.28	0.66	2.16	1.43	6.6	6.89	1.27	9.82	23.25	7.40			0.00	0.00	104	103	HDPE	0.012	24	44.75	0.90	0.50	938.63	938.23	948.15	939.98					
105	0.43	0.66	1.88	1.24	6.5	6.92	1.96	8.58	18.18	5.79			0.00	0.00	105	104	HDPE	0.012	24	33.01	0.55	0.50	939.32	939.13	948.14	940.57					
106	0.39	0.66	1.45	0.96	6.2	7.00	1.80	6.70	12.97	7.34			0.00	0.00	106	105	HDPE	0.012	18	138.15	1.30	0.50	941.61	939.82	949.55	942.83					
107	0.31	0.66	1.06	0.70	5.7	7.14	1.46	5.00	9.86	5.58			0.00	0.00	107	106	HDPE	0.012	18	162.07	0.75	0.50	943.33	942.11	951.64	944.36					
108	0.36	0.66	0.75	0.50	5.6	7.17	1.70	3.55	7.00	5.70			0.00	0.00	108	107	HDPE	0.012	15	33.00	1.00	0.50	944.16	943.83	951.64	945.07					
109	0.18	0.66	0.39	0.26	5.2	7.28	0.87	1.87	5.19	4.23			0.00	0.00	109	108	HDPE	0.012	15	95.94	0.55	2.50	945.18	944.66	951.79	946.03					
110	0.21	0.66	0.21	0.14	5.0	7.35	1.02	1.02	5.42	4.42			0.00	0.00	110	109	HDPE	0.012	15	61.51	0.60	N/A	948.05	947.68	952.89	948.52					
LINE 200																															
201	1.22	0.66	1.54	1.02	5.1	7.32	5.90	7.44	14.39	8.15			0.00	0.00	201	101	HDPE	0.012	18	79.83	1.60	0.50	932.08	930.81	939.38	933.38					
202	0.32	0.66	0.32	0.21	5.0	7.35	1.55	1.55	9.86	5.58			0.00	0.00	202	101	HDPE	0.012	18	33.00	0.75	N/A	932.83	932.58	939.38	933.07					
LINE 300																															
301	0.32	0.66	0.32	0.21	5.0	7.35	1.55	1.55	13.64	11.12			0.00	0.00	301	102	HDPE	0.012	15	81.86	3.80	N/A	940.33	937.22	946.25	940.92					
LINE 400																															
401	0.34	0.66	44.32	29.25	15.1	5.16	1.16	150.90	270.74	11.40	501		3.00	1.98	401	400	RCP	0.013	66	53.87	0.65	0.50	928.13	927.88	936.28	932.29					
402	0.04	0.66	40.98	27.05	14.7	5.22	0.14	141.30	260.12	10.95			0.00	0.00	402	401	RCP	0.013	66	279.37	0.60	0.50	932.61	928.63	941.80	934.31					
403	0.07	0.66	40.94	27.02	14.6	5.24	0.24	141.61	260.12	10.95	601		0.90	0.59	403	402	RCP	0.013	66	68.66	0.60	0.50	931.22	930.81	944.19	935.23					
404	0.06	0.66	39.97	26.38	14.4	5.27	0.21	139.04	249.04	10.48	701		1.41	0.93	404	403	RCP	0.013	66	119.40	0.55	1.00	932.38	931.72	948.34	936.34					
405	38.50	0.66	38.50	25.41	14.3	5.29	134.34	134.34	240.84	15.14			0.00	0.00	405	404	RCP	0.013	54	92.89	1.50	N/A	934.77	933.38	948.00	939.02					
LINE 500																															
501	1.08	0.66	3.00	1.98	6.3	6.96	4.96	13.78	34.42	7.01			0.00	0.00	501	401	HDPE	0.012	30	35.50	0.60	0.50	931.34	931.13	936.98	932.84					
FUT 502	0.10	0.66	1.92	1.27	6.2	7.00	0.46	8.88	25.70	8.18			0.00	0.00	FUT 502	501	HDPE	0.012	24	76.93	1.10	0.50	932.69	931.84	938.01	933.97					
FUT 503	0.49	0.66	1.82	1.20	6.1	7.02	2.27	8.44	25.70	8.18			0.00	0.00	FUT 503	FUT 502	HDPE	0.012	24	35.15	1.10	0.50	933.58	933.19	938.71	934.82					
FUT 504	0.45	0.66	1.33	0.88	5.8	7.11	2.11	6.24	12.47	7.05			0.00	0.00	FUT 504	FUT 503	HDPE	0.012	18	123.35	1.20	0.50	935.56	934.08	940.55	936.73					
FUT 505	0.46	0.66	0.88	0.58	5.4	7.23	2.20	4.20	8.44	4.78			0.00	0.00	FUT 505	FUT 504	HDPE	0.012	18	121.26	0.55	0.50	936.72	936.06	942.25	937.67					
FUT 506	0.42	0.66	0.42	0.28	5.0	7.35	2.04	2.04	8.44	4.78			0.00	0.00	FUT 506	FUT 505	HDPE	0.012	18	113.83	0.55	N/A	937.85	937.22	943.60	938.49					
LINE 600																															
601	0.36	0.66	0.90	0.59	5.1	7.32	1.74	4.35	19.71	11.15			0.00	0.00	601	403	HDPE	0.012	18	36.00	3.00	0.50	936.30	935.22	944.19	937.32					
602	0.54	0.66	0.54	0.36	5.0	7.35	2.62	2.62	12.12	9.88			0.00	0.00	602	601	HDPE	0.012	15	55.86	3.00	N/A	938.47	936.80	946.28	939.25					
LINE 700																															
701	1.14	0.66	1.41	0.93	5.1	7.31	5.50	6.81	12.97	7.34			0.00	0.00	701	404	HDPE	0.012	18	102.48	1.30	0.50	941.71	940.38	949.02	942.94					
702	0.27	0.66	0.27	0.18	5.0	7.35	1.31	1.31	5.19	4.23			0.00	0.00	702	701	HDPE	0.012	15	33.00	0.55	N/A	942.93	942.21	949.02	942.93					



LEGEND	
	TEMP. CONSTRUCTION ENTRANCE AND STAGING AREA
	CONCRETE WASHOUT AREA
	SILT FOAM DIKE - STAKED & INSTALL PER MFR'S RECOMMENDATIONS
	BMP PLAN REF. NO.
	SILT FENCE FOR INLET PROTECTION PRIOR TO STRUCTURE TOP
	SUPER SEDIMENT SILT FENCE (PRIOR TO LAND DISTURBANCE)
	SILT FENCE (PRIOR TO LAND DISTURBANCE)
	SILT FENCE (DURING CONSTRUCTION)
	LIMITS OF DISTURBANCE
	EXISTING CONTOURS
	PROPOSED CONTOURS
	GRAVEL FILTER FOR STORM SEWER STRUCTURES ONLY

DISTURBED AREA = 9.01 A.C.

SITE SPECIFIC NOTES:

- | | | |
|----|--|---|
| 1. | THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION. | OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. THE DISTURBED AREAS SHALL BE PROTECTED FROM EROSION BY STABILIZING THE AREA WITH MULCH OR OTHER SIMILARLY EFFECTIVE SOIL STABILIZING BMPs. INITIAL STABILIZATION ACTIVITIES MUST BE COMPLETED WITHIN 14 DAYS AFTER SOIL DISTURBING ACTIVITIES CEASE. |
| 2. | THERE ARE NO WETLANDS, NATURAL OR ARTIFICIAL WATER STORAGE DETENTION AREAS IN THE PROJECT AREA. | |
| 3. | NO PART OF THE PROJECT LIES WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD INSURANCE RATE MAP NUMBER 29095C0414G DATED JANUARY 20TH, 2017. | 7. |
| 4. | ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED ACCORDING TO THE BMP STAGING CHART. | ALL PERIMETER SILT FENCE, EARTH DIKES, SEDIMENT BASINS, AND ROCK CONSTRUCTION RETAINMENTS WILL BE INSTALLED BEFORE GRADING OPERATIONS BEGIN. |
| 5. | ADDITIONAL EROSION CONTROL MAY BE REQUIRED BY THE CITY ENGINEER AT ANY TIME EXISTING MEASURES ARE FOUND TO BE INEFFECTIVE OR PROBLEMATIC AREAS ARE NOTED IN THE FIELD. | 8. |
| | | SILT FENCE AND EARTH DIKES THAT ARE PLACED BEFORE GRADING BEGINS WILL BE MAINTAINED BY THE GRADING CONTRACTOR. |
| | | 9. |
| | | AREAS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE SODDED IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE. |

		EROSION AND SEDIMENT CONTROL STAGING CHART				
		PROJECT STAGE	BMP PLAN REF. NO	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
PRE-CLEARING PHASE	A - PRIOR TO LAND DISTURBANCE	1		CONSTRUCTION ENTRANCE & STAGING AREA	D	MAINTAIN, REPAIR, OR REPLACE AS NECESSARY
		2		SUPER SEDIMENT FENCE	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
		3		SILT FENCE (PRIOR TO LAND DISTURBANCE)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
CONSTRUCTION PHASE	B - MASS GRADING	4		SILT FENCE (DURING CONSTRUCTION)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
	C - UTILITY CONSTRUCTION	5		CONCRETE WASHOUT AREA	E	MAINTAIN, REPAIR, OR REPLACE AS NECESSARY
		6		INLET PROTECTION (SILT FENCE)	D/E	PLACE SILT FENCE AROUND ALL STORM SEWER STRUCTURES / YARD AREA STORM STRUCTURES TO HAVE SILT FENCE REMOVED ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
FINAL STABILIZATION PHASE	D - AFTER PAVING OPERATIONS	7		INLET PROTECTION (GRAVEL FILTER BAGS)	E	BOARDS SHALL BE PLACED IN FRONT OF INLET OPENING FROM THE TIME SILT FENCE IS REMOVED UNTIL SUCH TIME THAT THE CURB / THROAT IS POURED. PLACE GRAVEL FILTER BAGS AT THE OPENING OF ALL CURB INLETS IMMEDIATELY AFTER THE INLET THROATS ARE POURED
		8		SILT FENCE (AFTER CURB CONSTRUCTION)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
		9		SEEDING AND MULCHING	E	ALL DISTURBED AREAS AFTER 14 DAYS OF CONSTRUCTION INACTIVITY
	E - UNTIL CLOSURE OF LAND DISTURBANCE PERMIT					ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES MAY BE REQUIRED ANY TIME CURRENT MEASURES ARE FOUND TO BE INEFFECTIVE.

STATE OF MISSOURI
MARK ALLEN BREUER
NUMBER
PE-2009007268
PROFESSIONAL ENGINEER
07-31-19

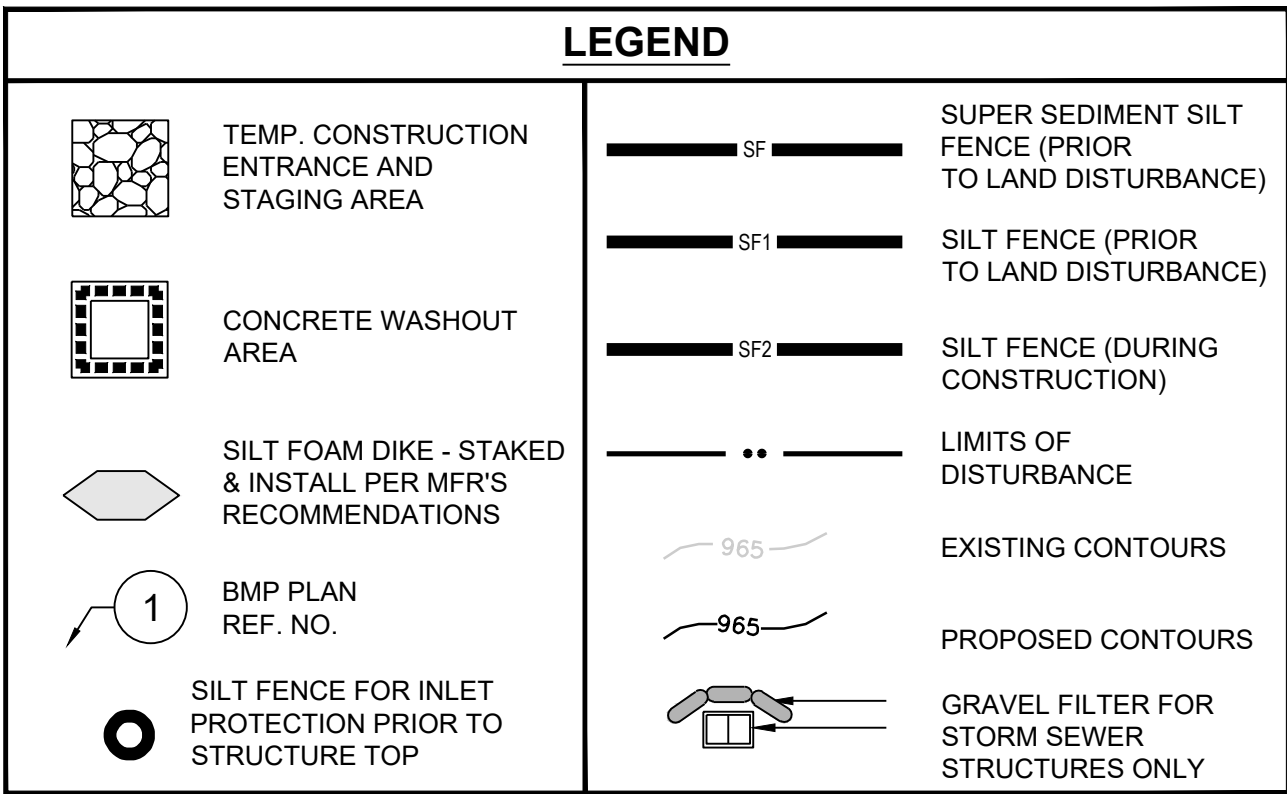
PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
CONTROL
- LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
1. 6-26-19	CITY COMMENTS
2. 7-30-19	CITY COMMENTS
3.	
4.	
5.	
6.	
7.	
8.	

PRE
CONSTRUCTION
EROSION
CONTROL

SHEET

OF 28



SITE SPECIFIC NOTES:

1. THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.
2. THERE ARE NO WETLANDS, NATURAL OR ARTIFICIAL WATER STORAGE DETENTION AREAS IN THE PROJECT AREA.
3. NO PART OF THE PROJECT LIES WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD INSURANCE RATE MAP NUMBER 29095C0414G DATED JANUARY 20TH, 2017.
4. ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED ACCORDING TO THE BMP STAGING CHART.
5. ADDITIONAL EROSION CONTROL MAY BE REQUIRED BY THE CITY ENGINEER AT ANY TIME EXISTING MEASURES ARE FOUND TO BE INEFFECTIVE OR PROBLEMATIC AREAS ARE NOTED IN THE FIELD.

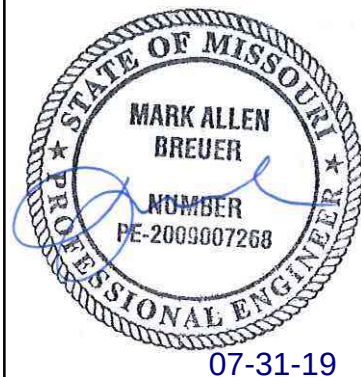
6. STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING, OR OTHER SOIL DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. THE DISTURBED AREAS SHALL BE PROTECTED FROM EROSION BY STABILIZING THE AREA WITH MULCH OR OTHER SIMILARLY EFFECTIVE SOIL STABILIZING BMPs. INITIAL STABILIZATION ACTIVITIES MUST BE COMPLETED WITHIN 14 DAYS AFTER SOIL DISTURBING ACTIVITIES CEASE.
7. ALL PERIMETER SILT FENCE, EARTH DIKES, SEDIMENT BASINS, AND ROCK CONSTRUCTION ENTRANCES WILL BE INSTALLED BEFORE GRADING OPERATIONS BEGIN.
8. SILT FENCE AND EARTH DIKES THAT ARE PLACED BEFORE GRADING BEGINS WILL BE MAINTAINED BY THE GRADING CONTRACTOR.
9. AREAS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE SODDED IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE.

EROSION AND SEDIMENT CONTROL STAGING CHART					
	PROJECT STAGE	BMP PLAN REF. NO	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
PRE-CLEARING PHASE	A - PRIOR TO LAND DISTURBANCE	1	CONSTRUCTION ENTRANCE & STAGING AREA	D	MAINTAIN, REPAIR, OR REPLACE AS NECESSARY
		2	SUPER SEDIMENT FENCE	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
		3	SILT FENCE (PRIOR TO LAND DISTURBANCE)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
CONSTRUCTION PHASE	B - MASS GRADING	4	SILT FENCE (DURING CONSTRUCTION)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
	C - UTILITY CONSTRUCTION	5	CONCRETE WASHOUT AREA	E	MAINTAIN, REPAIR, OR REPLACE AS NECESSARY
		6	INLET PROTECTION (SILT FENCE)	D/E	PLACE SILT FENCE AROUND ALL STORM SEWER STRUCTURES / YARD AREA STORM STRUCTURES TO HAVE SILT FENCE REMOVED ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
FINAL STABILIZATION PHASE	D - AFTER PAVING OPERATIONS	7	INLET PROTECTION (GRAVEL FILTER BAGS)	E	BOARDS SHALL BE PLACED IN FRONT OF INLET OPENING FROM THE TIME SILT FENCE IS REMOVED UNTIL SUCH TIME THAT THE CURB / THROAT IS POURED. PLACE GRAVEL FILTER BAGS AT THE OPENING OF ALL CURB INLETS IMMEDIATELY AFTER THE INLET THROATS ARE POURED
		8	SILT FENCE (AFTER CURB CONSTRUCTION)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
		9	SEEDING AND MULCHING	E	ALL DISTURBED AREAS AFTER 14 DAYS OF CONSTRUCTION INACTIVITY
	E - UNTIL CLOSURE OF LAND DISTURBANCE PERMIT				ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES MAY BE REQUIRED ANY TIME CURRENT MEASURES ARE FOUND TO BE INEFFECTIVE.



SCHLAGEL & ASSOCIATES, P.A.
Engineers • Planners • Surveyors • Landscape Architects
 14920 West 107th Street • Lenexa, Kansas 66215
 (913) 492-5158 • Fax: (913) 492-8400
 WWW.SCHLAGELASSOCIATES.COM

Missouri State Council of Authority
 #E20002003800-F #LAC200100537 #LS200100859-F



PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
CONTROL
- LEE'S SUMMIT, MISSOURI

DRAWN BY:	REVISION DATE	DESCRIPTION
BAL	6-28-19	CITY COMMENTS
	7-30-19	CITY COMMENTS
CHECKED BY:		
MAB		
DATE PREPARED:		
4-15-19		
PROJ. NUMBER:		

EROSION CONTROL PLAN

SHEET

I:\PROJECTS\2019\19-0023\0 DWG Plans\6 0 SS\19-002-SS-EROS.dwg, 7/30/2019 4:24:04 PM, 1:1



LEGEND	
	TEMP. CONSTRUCTION ENTRANCE AND STAGING AREA
	CONCRETE WASHOUT AREA
	SILT FOAM DIKE - STAKED & INSTALL PER MFR'S RECOMMENDATIONS
	BMP PLAN REF. NO.
	SILT FENCE FOR INLET PROTECTION PRIOR TO STRUCTURE TOP
	SUPER SEDIMENT SILT FENCE (PRIOR TO LAND DISTURBANCE)
	SILT FENCE (PRIOR TO LAND DISTURBANCE)
	SILT FENCE (DURING CONSTRUCTION)
	LIMITS OF DISTURBANCE
	EXISTING CONTOURS
	PROPOSED CONTOURS
	GRAVEL FILTER FOR STORM SEWER STRUCTURES ONLY

DISTURBED AREA = 9.01 A.C.

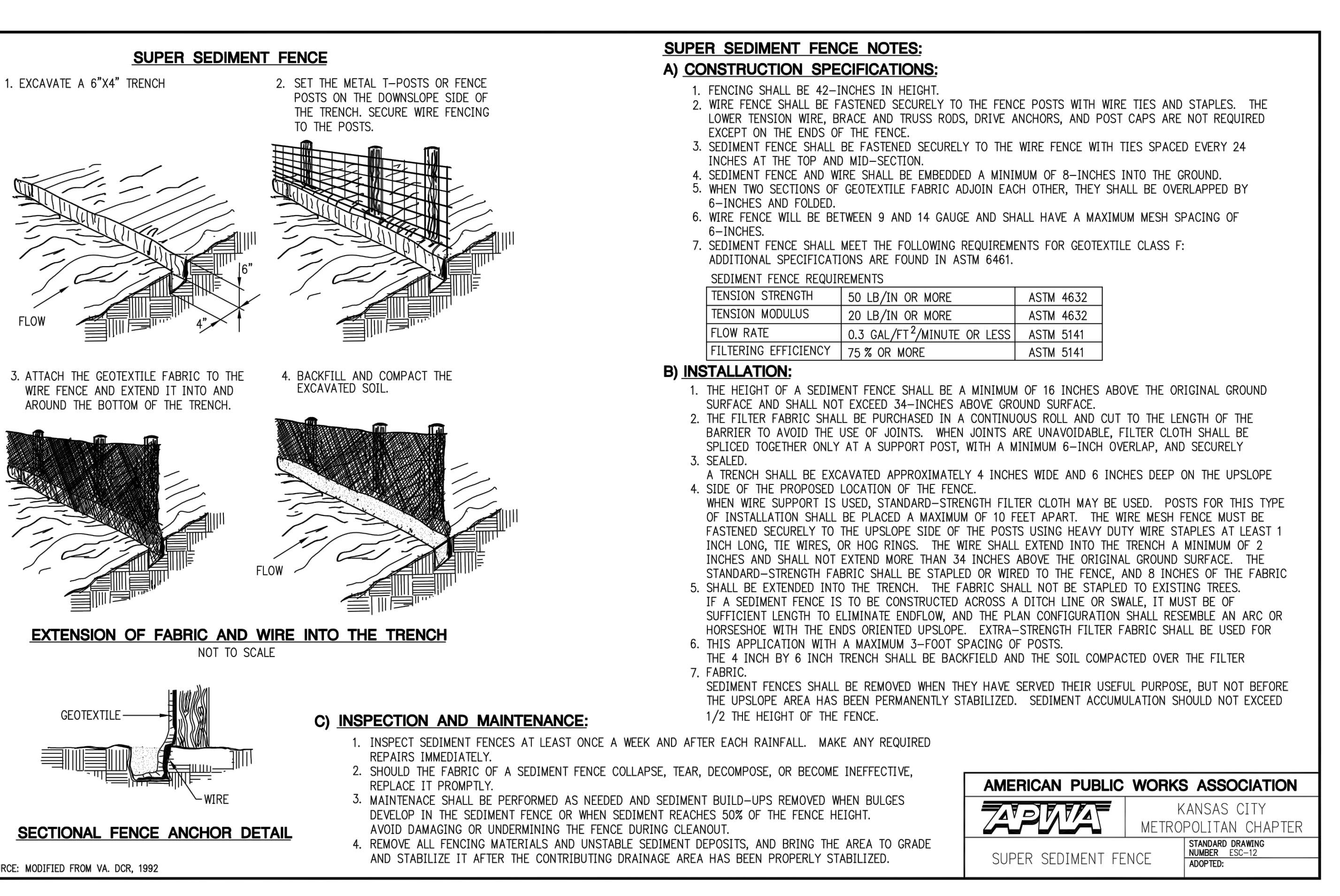
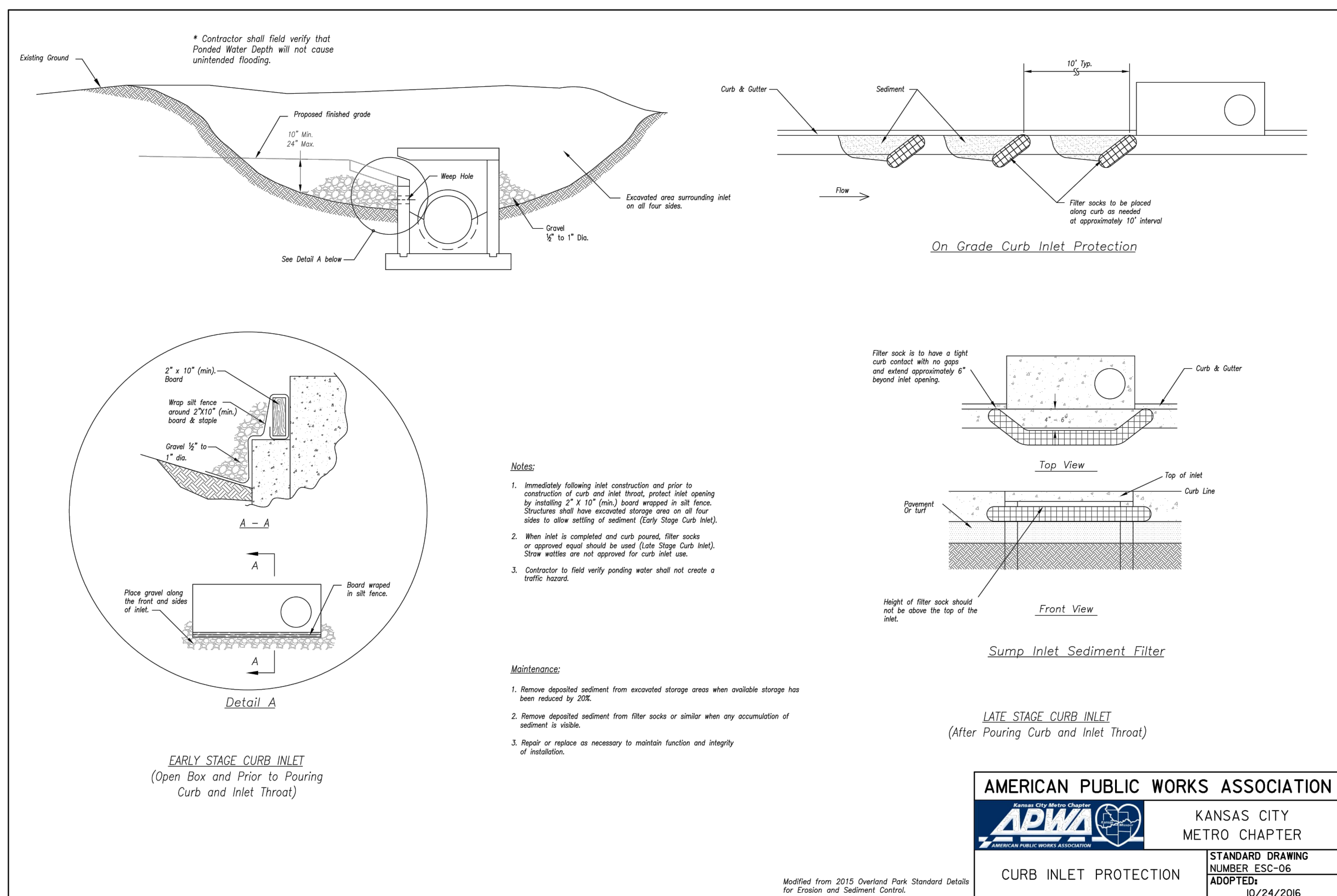
SITE SPECIFIC NOTES:

- THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATION.
- THERE ARE NO WETLANDS, NATURAL OR ARTIFICIAL WATER STORAGE DETENTION AREAS IN THE PROJECT AREA.
- NO PART OF THE PROJECT LIES WITHIN THE 100 YEAR FLOOD PLAIN PER FEMA FLOOD INSURANCE RATE MAP NUMBER 29095C0414G DATED JANUARY 20TH, 2017.
- ALL EROSION AND SEDIMENTATION CONTROL MEASURES SHALL BE IMPLEMENTED ACCORDING TO THE BMP STAGING CHART.
- ADDITIONAL EROSION CONTROL MAY BE REQUIRED BY THE CITY ENGINEER AT ANY TIME EXISTING MEASURES ARE FOUND TO BE INEFFECTIVE OR PROBLEMATIC AREAS ARE NOTED IN THE FIELD.
- STABILIZATION OF DISTURBED AREAS MUST, AT A MINIMUM, BE INITIATED IMMEDIATELY WHENEVER ANY CLEARING, GRADING, EXCAVATING, OR OTHER SOIL DISTURBING ACTIVITIES HAVE PERMANENTLY CEASED ON ANY PORTION OF THE SITE, OR TEMPORARILY CEASED ON ANY PORTION OF THE SITE AND WILL NOT RESUME FOR A PERIOD EXCEEDING 14 CALENDAR DAYS. THE DISTURBED AREAS SHALL BE PROTECTED FROM EROSION BY STABILIZING THE AREA WITH MULCH OR OTHER SIMILARLY EFFECTIVE SOIL STABILIZING BMPs. INITIAL STABILIZATION ACTIVITIES MUST BE COMPLETED WITHIN 14 DAYS AFTER SOIL DISTURBING ACTIVITIES CEASE.
- ALL PERIMETER SILT FENCE, EARTH DIKES, SEDIMENT BASINS, AND ROCK CONSTRUCTION ENTRANCES WILL BE INSTALLED BEFORE GRADING OPERATIONS BEGIN.
- SILT FENCE AND EARTH DIKES THAT ARE PLACED BEFORE GRADING BEGINS WILL BE MAINTAINED BY THE GRADING CONTRACTOR.
- AREAS WITHIN PUBLIC RIGHT-OF-WAY SHALL BE SODDED IMMEDIATELY AFTER CONSTRUCTION IS COMPLETE.

EROSION AND SEDIMENT CONTROL STAGING CHART				
PROJECT STAGE	BMP PLAN REF. NO.	BMP DESCRIPTION	REMOVE AFTER STAGE	NOTES:
A - PRIOR TO LAND DISTURBANCE	1	CONSTRUCTION ENTRANCE & STAGING AREA	D	MAINTAIN, REPAIR, OR REPLACE AS NECESSARY
	2	SUPER SEDIMENT FENCE	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
	3	SILT FENCE (PRIOR TO LAND DISTURBANCE)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
B - MASS GRADING	4	SILT FENCE (DURING CONSTRUCTION)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
C - UTILITY CONSTRUCTION	5	CONCRETE WASHOUT AREA	E	MAINTAIN, REPAIR, OR REPLACE AS NECESSARY
	6	INLET PROTECTION (SILT FENCE)	D/E	PLACE SILT FENCE AROUND ALL STORM SEWER STRUCTURES / YARD AREA STORM STRUCTURES TO HAVE SILT FENCE REMOVED ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
D - AFTER PAVING OPERATIONS	7	INLET PROTECTION (GRAVEL FILTER BAGS)	E	BOARDS SHALL BE PLACED IN FRONT OF INLET OPENING FROM THE TIME SILT FENCE IS REMOVED UNTIL SUCH TIME THAT THE CURB / THROAT IS POURED. PLACE GRAVEL FILTER BAGS AT THE OPENING OF ALL CURB INLETS IMMEDIATELY AFTER THE INLET THROATS ARE POURED
	8	SILT FENCE (AFTER CURB CONSTRUCTION)	E	PLACE WHERE INDICATED, REPAIR OR REPLACE AS NECESSARY AND REMOVE ONLY WHEN GRADED AREAS HAVE SUFFICIENT GROUND COVER ESTABLISHED
	9	SEEDING AND MULCHING	E	ALL DISTURBED AREAS AFTER 14 DAYS OF CONSTRUCTION INACTIVITY
E - UNTIL CLOSURE OF LAND DISTURBANCE PERMIT				ADDITIONAL SEDIMENT AND EROSION CONTROL MEASURES MAY BE REQUIRED ANY TIME CURRENT MEASURES ARE FOUND TO BE INEFFECTIVE.

REVISION DATE	DESCRIPTION
6-26-19	CITY COMMENTS
7-30-19	CITY COMMENTS
8-15-19	CITY COMMENTS
9-10-19	CITY COMMENTS
10-02-19	CITY COMMENTS

DRAWN BY: BAL	CHECKED BY: MAB	DATE PREPARED: 4-15-19	PROJ. NUMBER: 19-002
POST CONSTRUCTION EROSION CONTROL			





NOTE:
THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL
EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATIONS.

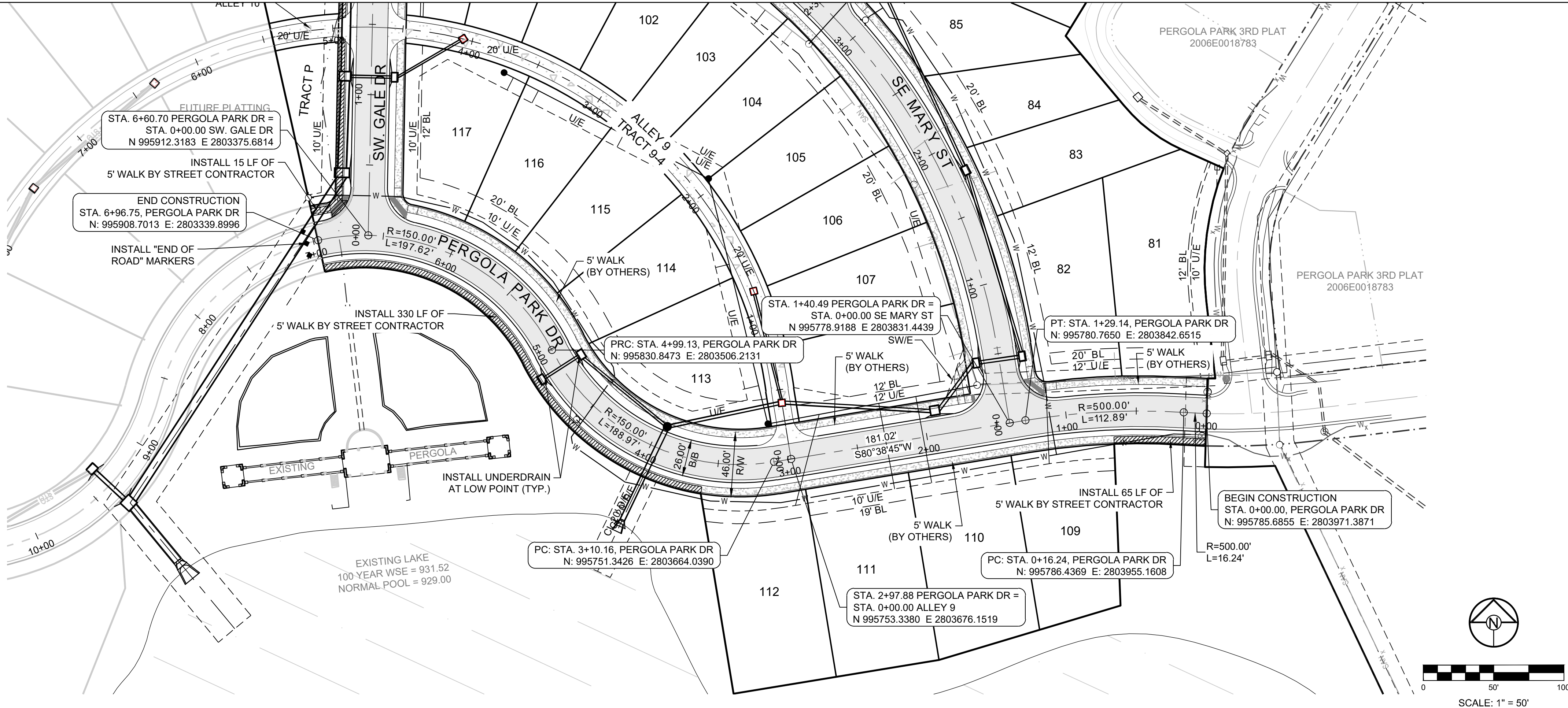
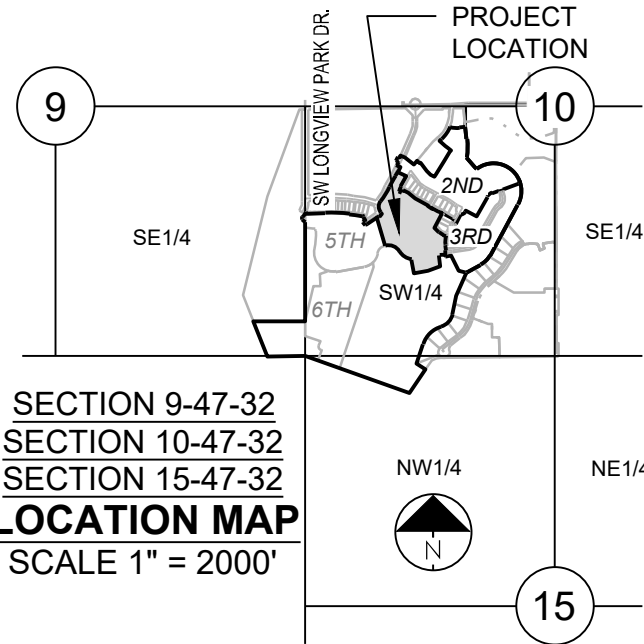
MISSOURI GEOGRAPHIC REFERENCE SYSTEM
BENCH MARK:

BM JA-148, IS A STAMPED KC METRO DISK SET IN CONCRETE LOCATED
2 MILES WEST OF THE INTERSECTION OF HIGHWAY 50 AND 3RD ST. IT IS
44 FT NORTH OF THE CENTER OF 3RD ST. AND 102.5 FT WEST OF THE
CENTER OF THE EXIT FROM THE ADJACENT PARKING LOT.

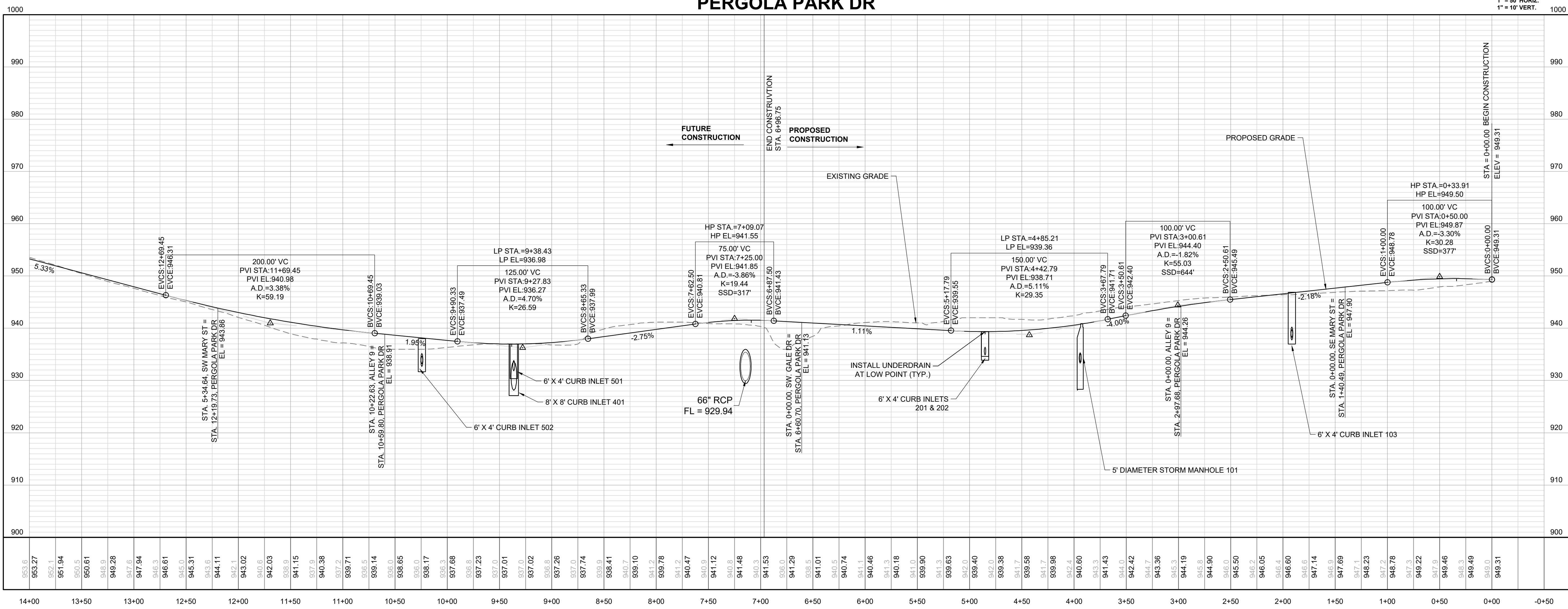
PROJECT BENCHMARK:

CHISELED "SQUARE" ON STORM CURB INLET AT NORTHWEST
INTERSECTION OF SW. TOWER PARK DRIVE AND SW. LONGVIEW
BOULEVARD.

NORTHING: 998893.4148
EASTING: 2803318.5413
ELEV. 1004.09



PERGOLA PARK DR

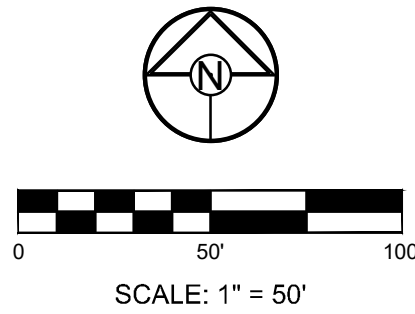


SCHLAGEL & ASSOCIATES, P.A.
Engineers-Planners-Surveyors-Landscape Architects
14920 West 10th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificates of Authority
#E2002003600-F #LAC200100237 #LS200200859-F

07-31-19

PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
- LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
6-26-19	CITY COMMENTS
7-30-19	CITY COMMENTS
8-15-19	CITY COMMENTS
9-10-19	CITY COMMENTS
10-15-19	CITY COMMENTS
11-15-19	CITY COMMENTS
12-15-19	CITY COMMENTS
1-15-20	CITY COMMENTS
2-15-20	CITY COMMENTS
3-15-20	CITY COMMENTS
4-15-20	CITY COMMENTS
5-15-20	CITY COMMENTS
6-15-20	CITY COMMENTS
7-15-20	CITY COMMENTS
8-15-20	CITY COMMENTS
9-15-20	CITY COMMENTS
10-15-20	CITY COMMENTS
11-15-20	CITY COMMENTS
12-15-20	CITY COMMENTS
1-15-21	CITY COMMENTS
2-15-21	CITY COMMENTS
3-15-21	CITY COMMENTS
4-15-21	CITY COMMENTS
5-15-21	CITY COMMENTS
6-15-21	CITY COMMENTS
7-15-21	CITY COMMENTS
8-15-21	CITY COMMENTS
9-15-21	CITY COMMENTS
10-15-21	CITY COMMENTS
11-15-21	CITY COMMENTS
12-15-21	CITY COMMENTS
1-15-22	CITY COMMENTS
2-15-22	CITY COMMENTS
3-15-22	CITY COMMENTS
4-15-22	CITY COMMENTS
5-15-22	CITY COMMENTS
6-15-22	CITY COMMENTS
7-15-22	CITY COMMENTS
8-15-22	CITY COMMENTS
9-15-22	CITY COMMENTS
10-15-22	CITY COMMENTS
11-15-22	CITY COMMENTS
12-15-22	CITY COMMENTS
1-15-23	CITY COMMENTS
2-15-23	CITY COMMENTS
3-15-23	CITY COMMENTS
4-15-23	CITY COMMENTS
5-15-23	CITY COMMENTS
6-15-23	CITY COMMENTS
7-15-23	CITY COMMENTS
8-15-23	CITY COMMENTS
9-15-23	CITY COMMENTS
10-15-23	CITY COMMENTS
11-15-23	CITY COMMENTS
12-15-23	CITY COMMENTS
1-15-24	CITY COMMENTS
2-15-24	CITY COMMENTS
3-15-24	CITY COMMENTS
4-15-24	CITY COMMENTS
5-15-24	CITY COMMENTS
6-15-24	CITY COMMENTS
7-15-24	CITY COMMENTS
8-15-24	CITY COMMENTS
9-15-24	CITY COMMENTS
10-15-24	CITY COMMENTS
11-15-24	CITY COMMENTS
12-15-24	CITY COMMENTS
1-15-25	CITY COMMENTS
2-15-25	CITY COMMENTS
3-15-25	CITY COMMENTS
4-15-25	CITY COMMENTS
5-15-25	CITY COMMENTS
6-15-25	CITY COMMENTS
7-15-25	CITY COMMENTS
8-15-25	CITY COMMENTS
9-15-25	CITY COMMENTS
10-15-25	CITY COMMENTS
11-15-25	CITY COMMENTS
12-15-25	CITY COMMENTS
1-15-26	CITY COMMENTS
2-15-26	CITY COMMENTS
3-15-26	CITY COMMENTS
4-15-26	CITY COMMENTS
5-15-26	CITY COMMENTS
6-15-26	CITY COMMENTS
7-15-26	CITY COMMENTS
8-15-26	CITY COMMENTS
9-15-26	CITY COMMENTS
10-15-26	CITY COMMENTS
11-15-26	CITY COMMENTS
12-15-26	CITY COMMENTS
1-15-27	CITY COMMENTS
2-15-27	CITY COMMENTS
3-15-27	CITY COMMENTS
4-15-27	CITY COMMENTS
5-15-27	CITY COMMENTS
6-15-27	CITY COMMENTS
7-15-27	CITY COMMENTS
8-15-27	CITY COMMENTS
9-15-27	CITY COMMENTS
10-15-27	CITY COMMENTS
11-15-27	CITY COMMENTS
12-15-27	CITY COMMENTS
1-15-28	CITY COMMENTS
2-15-28	CITY COMMENTS
3-15-28	CITY COMMENTS
4-15-28	CITY COMMENTS
5-15-28	CITY COMMENTS
6-15-28	CITY COMMENTS
7-15-28	CITY COMMENTS
8-15-28	CITY COMMENTS
9-15-28	CITY COMMENTS
10-15-28	CITY COMMENTS
11-15-28	CITY COMMENTS
12-15-28	CITY COMMENTS
1-15-29	CITY COMMENTS
2-15-29	CITY COMMENTS
3-15-29	CITY COMMENTS
4-15-29	CITY COMMENTS
5-15-29	CITY COMMENTS
6-15-29	CITY COMMENTS
7-15-29	CITY COMMENTS
8-15-29	CITY COMMENTS
9-15-29	CITY COMMENTS
10-15-29	CITY COMMENTS
11-15-29	CITY COMMENTS
12-15-29	CITY COMMENTS
1-15-30	CITY COMMENTS
2-15-30	CITY COMMENTS
3-15-30	CITY COMMENTS
4-15-30	CITY COMMENTS
5-15-30	CITY COMMENTS
6-15-30	CITY COMMENTS
7-15-30	CITY COMMENTS
8-15-30	CITY COMMENTS
9-15-30	CITY COMMENTS
10-15-30	CITY COMMENTS
11-15-30	CITY COMMENTS
12-15-30	CITY COMMENTS
1-15-31	CITY COMMENTS
2-15-31	CITY COMMENTS
3-15-31	CITY COMMENTS
4-15-31	CITY COMMENTS
5-15-31	CITY COMMENTS
6-15-31	CITY COMMENTS
7-15-31	CITY COMMENTS
8-15-31	CITY COMMENTS
9-15-31	CITY COMMENTS
10-15-31	CITY COMMENTS
11-15-31	CITY COMMENTS
12-15-31	CITY COMMENTS
1-15-32	CITY COMMENTS
2-15-32	CITY COMMENTS
3-15-32	CITY COMMENTS
4-15-32	CITY COMMENTS
5-15-32	CITY COMMENTS
6-15-32	CITY COMMENTS
7-15-32	CITY COMMENTS
8-15-32	CITY COMMENTS
9-15-32	CITY COMMENTS
10-15-32	CITY COMMENTS
11-15-32	CITY COMMENTS
12-15-32	CITY COMMENTS
1-15-33	CITY COMMENTS
2-15-33	CITY COMMENTS
3-15-33	CITY COMMENTS
4-15-33	CITY COMMENTS
5-15-33	CITY COMMENTS
6-15-33	CITY COMMENTS
7-15-33	CITY COMMENTS
8-15-33	CITY COMMENTS
9-15-33	CITY COMMENTS
10-15-33	CITY COMMENTS
11-15-33	CITY COMMENTS
12-15-33	CITY COMMENTS
1-15-34	CITY COMMENTS
2-15-34	CITY COMMENTS
3-15-34	CITY COMMENTS
4-15-34	CITY COMMENTS
5-15-34	CITY COMMENTS
6-15-34	CITY COMMENTS
7-15-34	CITY COMMENTS
8-15-34	CITY COMMENTS
9-15-34	CITY COMMENTS
10-15-34	CITY COMMENTS
11-15-34	CITY COMMENTS
12-15-34	CITY COMMENTS
1-15-35	CITY COMMENTS
2-15-35	CITY COMMENTS
3-15-35	CITY COMMENTS
4-15-35	CITY COMMENTS
5-15-35	CITY COMMENTS
6-15-35	CITY COMMENTS
7-15-35	CITY COMMENTS
8-15-35	CITY COMMENTS
9-15-35	CITY COMMENTS
10-15-35	CITY COMMENTS
11-15-35	CITY COMMENTS
12-15-35	CITY COMMENTS
1-15-36	CITY COMMENTS
2-15-36	CITY COMMENTS
3-15-36	CITY COMMENTS
4-15-36	CITY COMMENTS
5-15-36	CITY COMMENTS
6-15-36	CITY COMMENTS
7-15-36	CITY COMMENTS
8-15-36	CITY COMMENTS
9-15-36	CITY COMMENTS
10-15-36	CITY COMMENTS
11-15-36	CITY COMMENTS
12-15-36	CITY COMMENTS
1-15-37	CITY COMMENTS
2-15-37	CITY COMMENTS
3-15-37	CITY COMMENTS
4-15-37	CITY COMMENTS
5-15-37	CITY COMMENTS
6-15-37	CITY COMMENTS
7-15-37	CITY COMMENTS
8-15-37	CITY COMMENTS
9-15-37	CITY COMMENTS
10-15-37	CITY COMMENTS
11-15-37	CITY COMMENTS
12-15-37	CITY COMMENTS
1-15-38	CITY COMMENTS
2-15-38	CITY COMMENTS
3-15-38	CITY COMMENTS
4-15-38	CITY COMMENTS
5-15-38	CITY COMMENTS
6-15-38	CITY COMMENTS
7-15-38	CITY COMMENTS
8-15-38	CITY COMMENTS
9-15-38	CITY COMMENTS
10-15-38	CITY COMMENTS
11-15-38	CITY COMMENTS
12-15-38	CITY COMMENTS
1-15-39	CITY COMMENTS
2-15-39	CITY COMMENTS
3-15-39	CITY COMMENTS
4-15-39	CITY COMMENTS
5-15-39	CITY COMMENTS
6-15-39	CITY COMMENTS
7-15-39	CITY COMMENTS
8-15-39	CITY COMMENTS
9-15-39	CITY COMMENTS
10-15-39	CITY COMMENTS
11-15-39	CITY COMMENTS
12-15-39	CITY COMMENTS
1-15-40	CITY COMMENTS
2-15-40	CITY COMMENTS
3-15-40	CITY COMMENTS
4-15-40	CITY COMMENTS
5-15-40	CITY COMMENTS
6-15-40	CITY COMMENTS
7-15-40	CITY COMMENTS
8-15-40	CITY COMMENTS
9-15-40	CITY COMMENTS
10-15-40	CITY COMMENTS
11-15-40	CITY COMMENTS
12-15-40	CITY COMMENTS
1-15-41	CITY COMMENTS
2-15-41	CITY COMMENTS
3-15-41	CITY COMMENTS
4-15-41	CITY COMMENTS
5-15-41	CITY COMMENTS
6-15-41	CITY COMMENTS
7-15-41	CITY COMMENTS
8-15-41	CITY COMMENTS
9-15-41	CITY COMMENTS
10-15-41	CITY COMMENTS
11-15-41	CITY COMMENTS
12-15-41	CITY COMMENTS
1-15-42	CITY COMMENTS
2-15-42	CITY COMMENTS
3-15-42	CITY COMMENTS
4-15-42	CITY COMMENTS
5-15-42	CITY COMMENTS
6-15-42	CITY COMMENTS
7-15-42	CITY COMMENTS
8-15-42	CITY COMMENTS
9-15-42	CITY COMMENTS
10-15-42	CITY COMMENTS
11-15-42	CITY COMMENTS
12-15-42	CITY COMMENTS
1-15-43	CITY COMMENTS
2-15-43	CITY COMMENTS
3-15-43	CITY COMMENTS
4-15-43	CITY COMMENTS
5-15-43	CITY COMMENTS
6-15-43	CITY COMMENTS
7-15-43	CITY COMMENTS
8-15-43	CITY COMMENTS
9-15-43	CITY COMMENTS
10-15-43	CITY COMMENTS
11-15-43	CITY COMMENTS
12-15-43	CITY COMMENTS
1-15-44	CITY COMMENTS
2-15-44	CITY COMMENTS
3-15-44	CITY COMMENTS
4-15-44	CITY COMMENTS
5-15-44	CITY COMMENTS
6-15-44	CITY COMMENTS
7-15-44	CITY COMMENTS
8-15-44	CITY COMMENTS
9-15-44	CITY COMMENTS
10-15-44	CITY COMMENTS
11-15-44	CITY COMMENTS
12-15-44	CITY COMMENTS
1-15-45	CITY COMMENTS
2-15-45	CITY COMMENTS
3-15-45	CITY COMMENTS
4-15-45	CITY COMMENTS
5-15-45	CITY COMMENTS
6-15-45	CITY COMMENTS
7-15-45	CITY COMMENTS
8-15-45	CITY COMMENTS
9-15-45	CITY COMMENTS
10-15-45	CITY COMMENTS
11-15-45	CITY COMMENTS
12-15-45	CITY COMMENTS
1-15-46	CITY COMMENTS
2-15-46	CITY COMMENTS
3-15-46	CITY COMMENTS
4-15-46	CITY COMMENTS
5-15-46	CITY COMMENTS
6-15-46	CITY COMMENTS
7-15-46	CITY COMMENTS
8-15-46	CITY COMMENTS
9-15-46	CITY COMMENTS
10-15-46	CITY COMMENTS
11-15-46	CITY COMMENTS
12-15-46	CITY COMMENTS
1-15-47	CITY COMMENTS
2-15-47	CITY COMMENTS
3-15-47	CITY COMMENTS
4-15-47	CITY COMMENTS
5-15-47	CITY COMMENTS
6-15-47	CITY COMMENTS
7-15-47	CITY COMMENTS
8-15-47	CITY COMMENTS
9-15-47	CITY COMMENTS
10-15-47	CITY COMMENTS
11-15-47	CITY COMMENTS
12-15-47	CITY COMMENTS
1-15-48	CITY COMMENTS
2-15-48	CITY COMMENTS
3-15-48	CITY COMMENTS
4-15-48	CITY COMMENTS
5-15-48	CITY COMMENTS
6-15-48	CITY COMMENTS
7-15-48	CITY COMMENTS
8-15-48	CITY COMMENTS
9-15-48	CITY COMMENTS
10-15-48	CITY COMMENTS
11-15-48	CITY COMMENTS
12-15-48	CITY COMMENTS
1-15-49	CITY COMMENTS
2-15-49	CITY COMMENTS
3-15-49	CITY COMMENTS
4-15-49	CITY COMMENTS
5-15-49	CITY COMMENTS
6-15-49	CITY COMMENTS
7-15-49	CITY COMMENTS
8-15-49	CITY COMMENTS
9-15-49	CITY COMMENTS
10-15-49	CITY COMMENTS
11-15-49	CITY COMMENTS
12-15-49	CITY COMMENTS
1-15-50	CITY COMMENTS
2-15-50	CITY COMMENTS
3-15-50	CITY COMMENTS
4-15-50	CITY COMMENTS
5-15-50	CITY COMMENTS
6-15-50	CITY COMMENTS
7-15-50	CITY COMMENTS
8-15-50	CITY COMMENTS
9-15-50	CITY COMMENTS
10-15-50	CITY COMMENTS
11-15-50	CITY COMMENTS
12-15-50	CITY COMMENTS
1-15-51	CITY COMMENTS
2-15-51	CITY COMMENTS
3-15-51	CITY COMMENTS
4-15-51	CITY COMMENTS
5-15-51	CITY COMMENTS
6-15-51	CITY COMMENTS
7-15-51	CITY COMMENTS
8-15-51	CITY COMMENTS
9-15-51	CITY COMMENTS
10-15-51	CITY COMMENTS
11-15-51	CITY COMMENTS
12-15-51	CITY COMMENTS
1-15-52	CITY COMMENTS
2-15-52	CITY COMMENTS
3-15-52	CITY COMMENTS
4-15-52	CITY COMMENTS
5-15-52	CITY COMMENTS
6-15-52	CITY COMMENTS
7-15-52	CITY COMMENTS
8-15-52	CITY COMMENTS
9-15-52	CITY COMMENTS
10-15-52	CITY COMMENTS
11-15-52	CITY COMMENTS
12-15-52	CITY COMMENTS
1-15-53	CITY COMMENTS
2-15-53	CITY COMMENTS
3-15-53	CITY COMMENTS
4-15-53	CITY COMMENTS
5-15-53	CITY COMMENTS
6-15-53	CITY COMMENTS
7-15-53	CITY COMMENTS
8-15-53	CITY COMMENTS
9-15-53	CITY COMMENTS
10-15-53	CITY COMMENTS
11-15-53	CITY COMMENTS
12-15-53	CITY COMMENTS
1-15-54	CITY COMMENTS
2-15-54	CITY COMMENTS
3-15-54	CITY COMMENTS
4-15-54	CITY COMMENTS
5-15-54	CITY COMMENTS
6-15-54	CITY COMMENTS
7-15-54	CITY COMMENTS
8-15-54	CITY COMMENTS
9-15-54	CITY COMMENTS
10-15-54	CITY COMMENTS
11-15-54	CITY COMMENTS
12-15-54	CITY COMMENTS
1-15-55	CITY COMMENTS
2-15-55	CITY COMMENTS
3-15-55	CITY COMMENTS
4-15-55	CITY COMMENTS
5-15-55	CITY COMMENTS
6-15-55	CITY COMMENTS
7-15-55	CITY COMMENTS
8-15-55	CITY COMMENTS
9-15-55	CITY COMMENTS
10-15-55	CITY COMMENTS
11-15-55	CITY COMMENTS
12-15-55	CITY COMMENTS
1-15-56	CITY COMMENTS
2-15-56	CITY COMMENTS
3-15-56	CITY COMMENTS
4-15-56	CITY COMMENTS
5-15-56	CITY COMMENTS
6-15-56	CITY COMMENTS
7-15-56	CITY COMMENTS
8-15-56	CITY COMMENTS
9-15-56	CITY COMMENTS
10-15-56	CITY COMMENTS
11-15-56	CITY COMMENTS
12-15-56	CITY COMMENTS
1-15-57	CITY COMMENTS
2-15-57	CITY COMMENTS
3-15-57	CITY COMMENTS
4-15-57	CITY COMMENTS
5-15-57	CITY COMMENTS
6-15-57	CITY COMMENTS
7-15-57	CITY COMMENTS
8-15-57	CITY COMMENTS
9-15-57	CITY COMMENTS
10-15-57	CITY COMMENTS
11-15-57	CITY COMMENTS
12-15-57	CITY COMMENTS
1-15-58	CITY COMMENTS
2-15-58	CITY COMMENTS
3-15-58	CITY COMMENTS
4-15-58	CITY COMMENTS
5-15-58	CITY COMMENTS
6-15-58	CITY COMMENTS
7-15-58	CITY COMMENTS
8-15-58	CITY COMMENTS
9-15-58	CITY COMMENTS
10-15-58	CITY COMMENTS
11-15-58	CITY COMMENTS
12-15-58	CITY COMMENTS
1-15-59	CITY COMMENTS
2-15-59	CITY COMMENTS
3-15-59	CITY COMMENTS



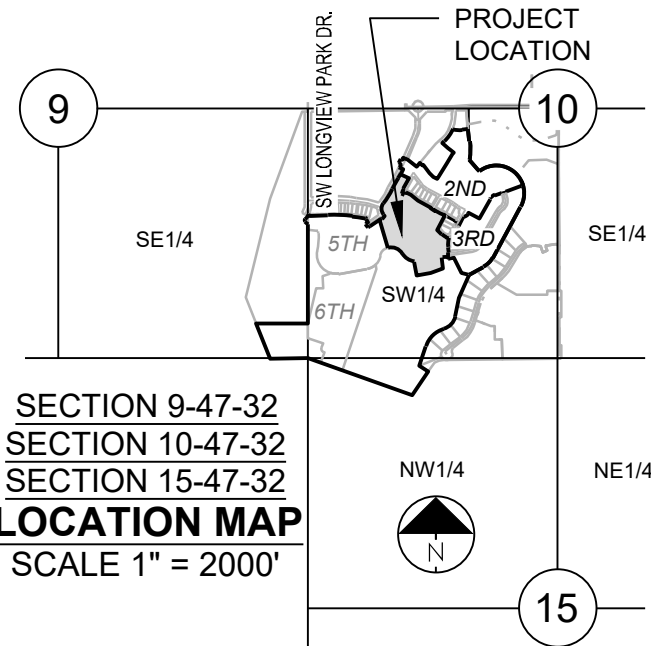
MISSOURI GEOGRAPHIC REFERENCE SYSTEM
BENCH MARK:

BM JA-148, IS A STAMPED KC METRO DISK SET IN CONCRETE LOCATED 2 MILES WEST OF THE INTERSECTION OF HIGHWAY 50 AND 3RD ST. IT IS 44 FT NORTH OF THE CENTER OF 3RD ST. AND 102.5 FT WEST OF THE CENTER OF THE EXIT FROM THE ADJACENT PARKING LOT.

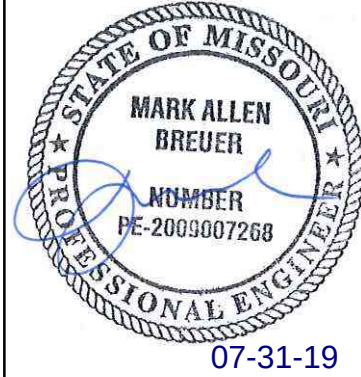
PROJECT BENCHMARK:

CHISELED "SQUARE" ON STORM CURB INLET AT NORTHWEST INTERSECTION OF SW. TOWER PARK DRIVE AND SW. LONGVIEW BOULEVARD.

NORTHING: 998893.4148
EASTING: 2803318.5413
ELEV. 1004.09



SCHLAGE & ASSOCIATES, P.A.
Engineers-Planners-Surveyors-Landscape Architects
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGEASSOCIATES.COM
Missouri State Certification of Authority
#E2002002003800.F #LAC200100537 #LS2002000859.F



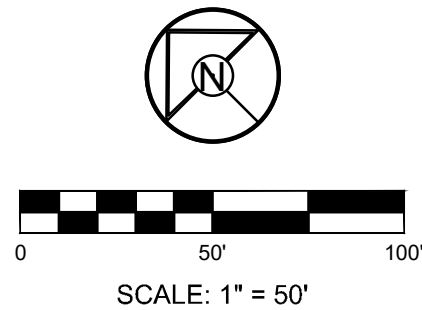
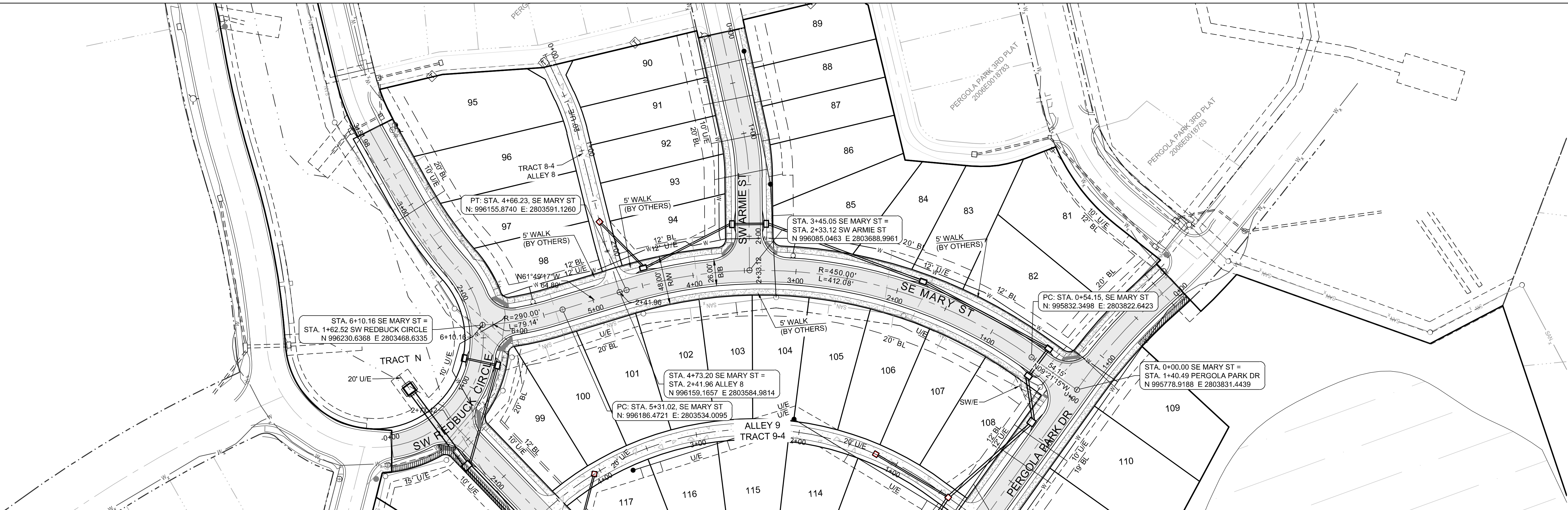
PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
CONTROL
- LEE'S SUMMIT, MISSOURI

DRAWN BY:		REVISION DATE	DESCRIPTION
BAL		1 6-26-19	CITY COMMENTS
		2 7-30-19	CITY COMMENTS
CHECKED BY:		3	
MAB		4	
		5	
DATE PREPARED		6	
4-15-19		7	
PROJ. NUMBER:		8	

GALE DR.

SHEET

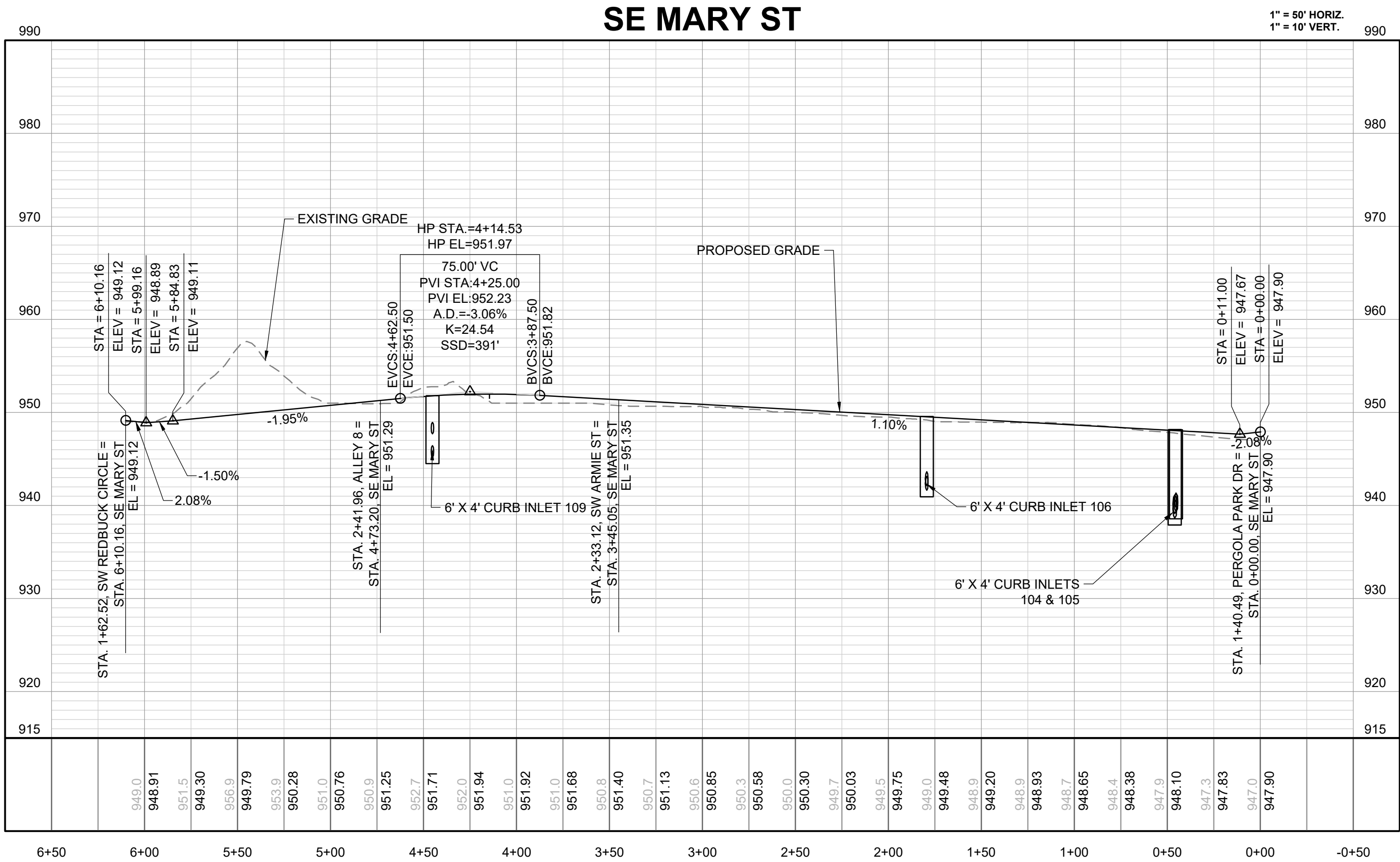
I:\PROJECTS\2019\19-0023\0 DWG Plans\6 0 SS\19-002-SS-P&P.dwg, 7/30/2019 4:25:18 PM, 1:1



NOTE:

THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATIONS.

SE MARY ST



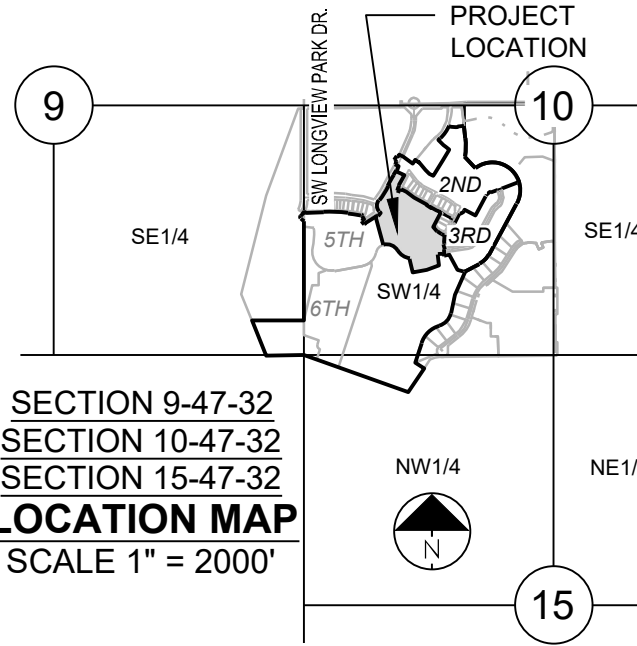
MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCH MARK:

BM JA-148, IS A STAMPED KC METRO DISK SET IN CONCRETE LOCATED 2 MILES WEST OF THE INTERSECTION OF HIGHWAY 50 AND 3RD ST. IT IS 44 FT NORTH OF THE CENTER OF 3RD ST. AND 102.5 FT WEST OF THE CENTER OF THE EXIT FROM THE ADJACENT PARKING LOT.

PROJECT BENCHMARK:

CHISELED "SQUARE" ON STORM CURB INLET AT NORTHWEST INTERSECTION OF SW. TOWER PARK DRIVE AND SW. LONGVIEW BOULEVARD.

NORTHING: 998893.4148
EASTING: 2803318.5413
ELEV. 1004.09



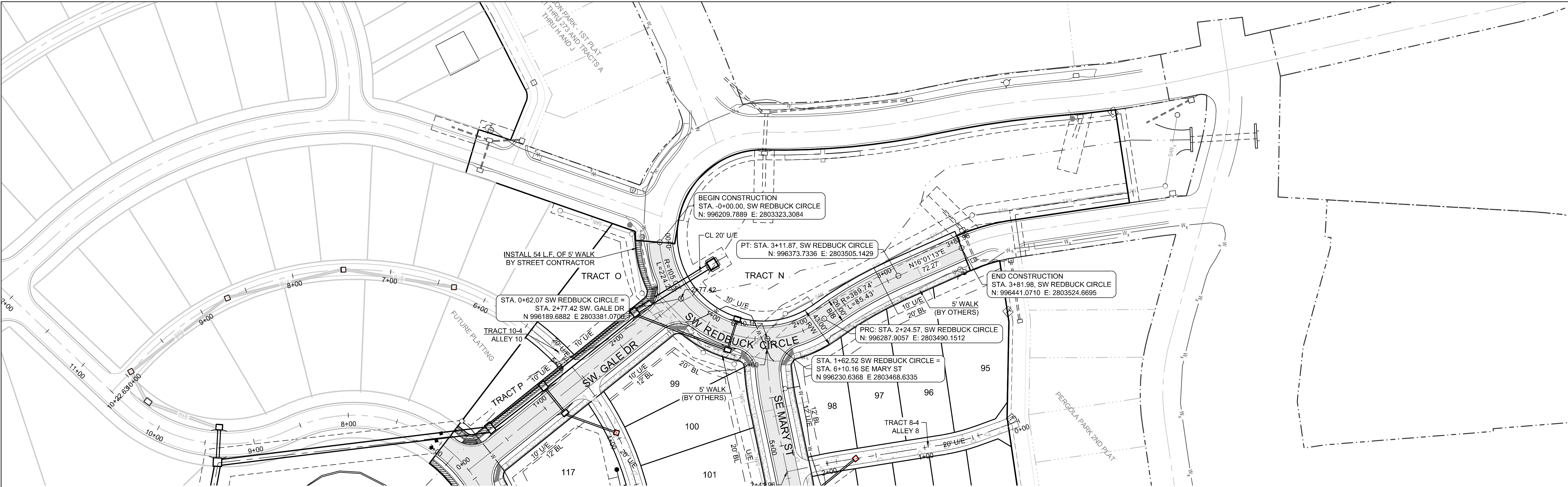
**PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
- LEE'S SUMMIT, MISSOURI**

REVISION DATE	DESCRIPTION
6-26-19	CITY COMMENTS
7-30-19	CITY COMMENTS

DRAWN BY:	BAL
CHECKED BY:	MAB
DATE PREPARED:	4-15-19
PROJ. NUMBER:	19-002

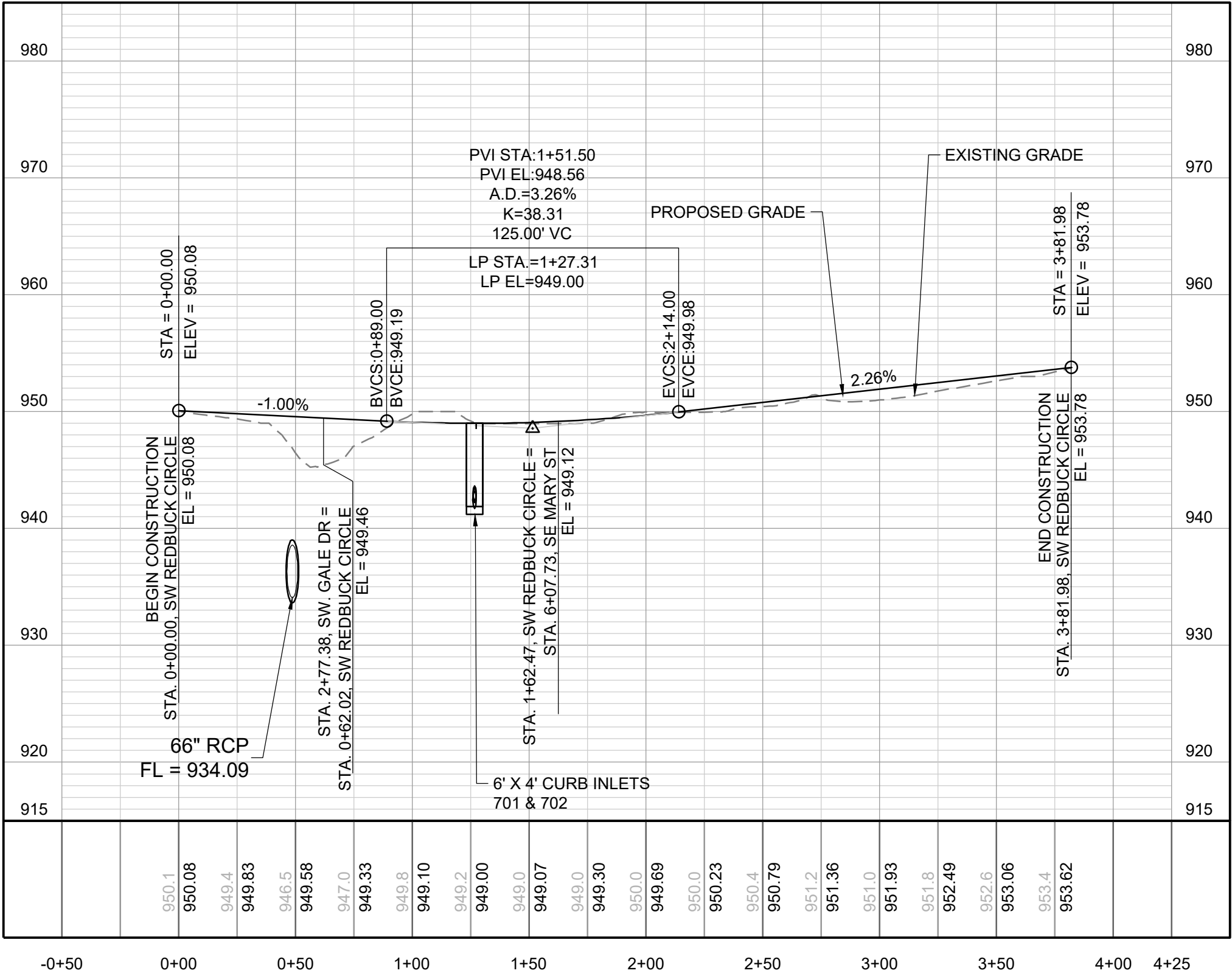
SE MARY ST

I:\PROJECTS\2019\19-0023\0 DWG Plans\6 0 SS\19-002-SS-P&P.dwg, 7/30/2019 4:25:34 PM, 1:1



NOTE:
THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATIONS.

SW REDBUCK CIRCLE



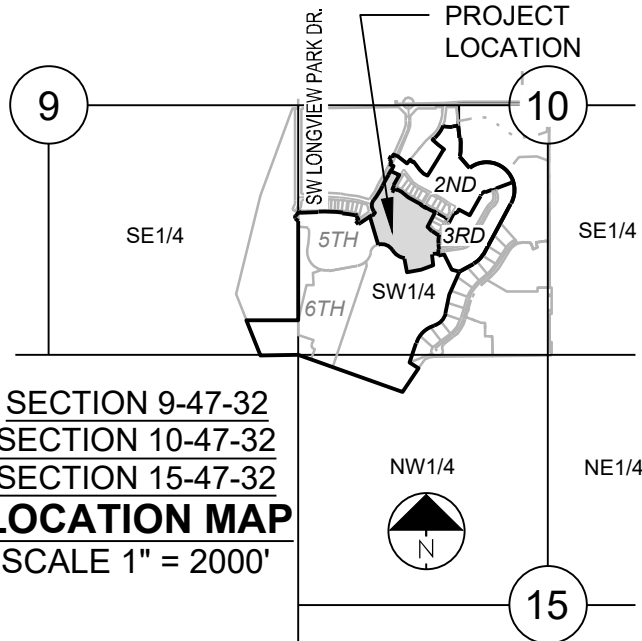
MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCH MARK:

BM JA-148, IS A STAMPED KC METRO DISK SET IN CONCRETE LOCATED 2 MILES WEST OF THE INTERSECTION OF HIGHWAY 50 AND 3RD ST. IT IS 44 FT NORTH OF THE CENTER OF 3RD ST. AND 102.5 FT WEST OF THE CENTER OF THE EXIT FROM THE ADJACENT PARKING LOT.

PROJECT BENCHMARK:

CHISELED "SQUARE" ON STORM CURB INLET AT NORTHWEST INTERSECTION OF SW. TOWER PARK DRIVE AND SW. LONGVIEW BOULEVARD.

NORTHING: 988893.4148
EASTING: 2803318.5413
ELEV. 1004.09

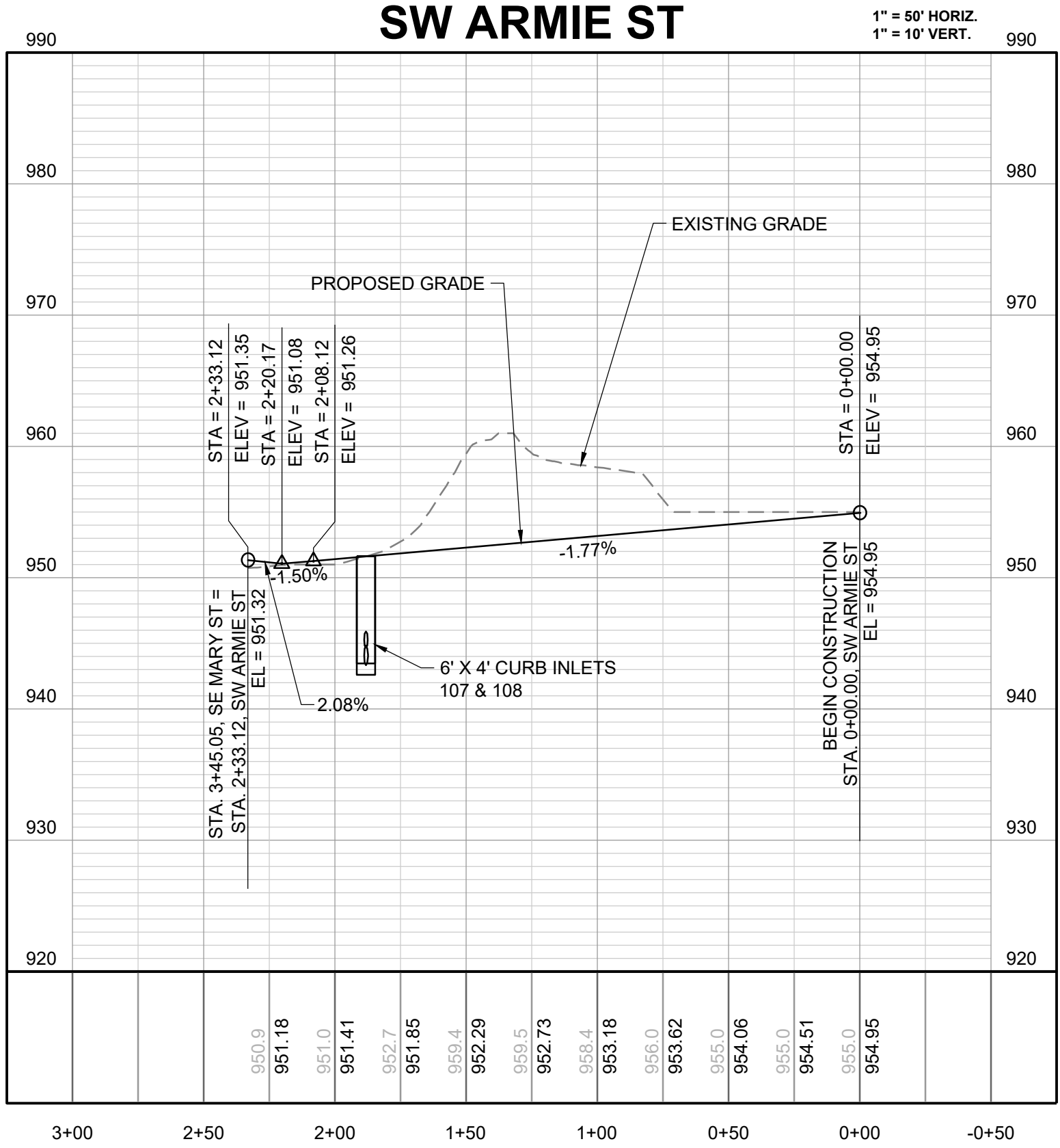
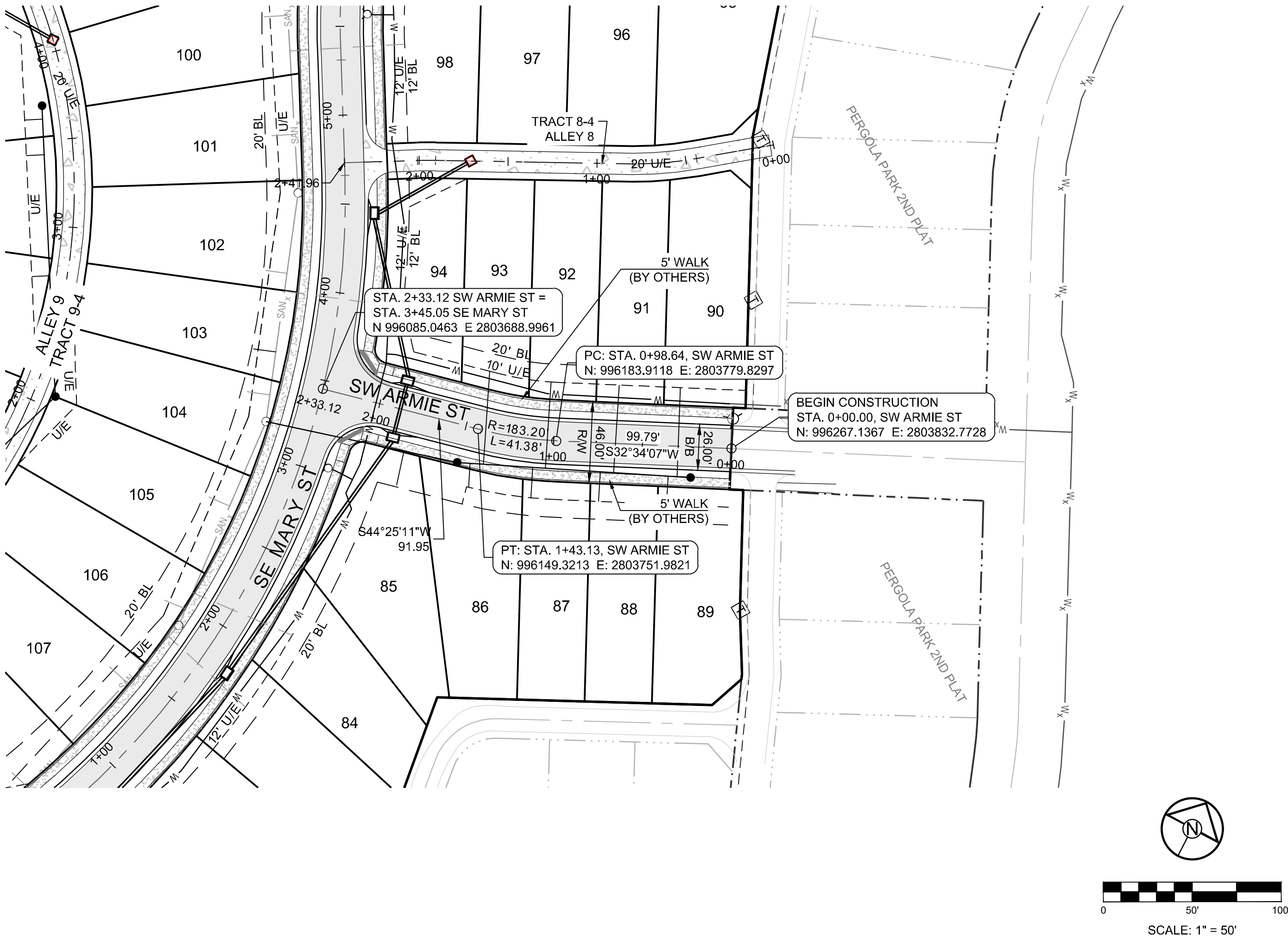


**PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
CONTROL - LEE'S SUMMIT, MISSOURI**

REVISION DATE	DESCRIPTION
1 6-26-19	CITY COMMENTS
2 7-30-19	CITY COMMENTS
3	
4	
5	
6	
7	
8	
9	
10	

DRAWN BY: BAL	CHECKED BY: MAB	DATE PREPARED: 4-15-19	PROJ. NUMBER: 19-002
------------------	--------------------	---------------------------	-------------------------

SW REDBUCK CR



NOTE:

THE CONTRACTOR IS RESPONSIBLE FOR VERIFYING ALL EXISTING UTILITY LOCATIONS PRIOR TO EXCAVATIONS.

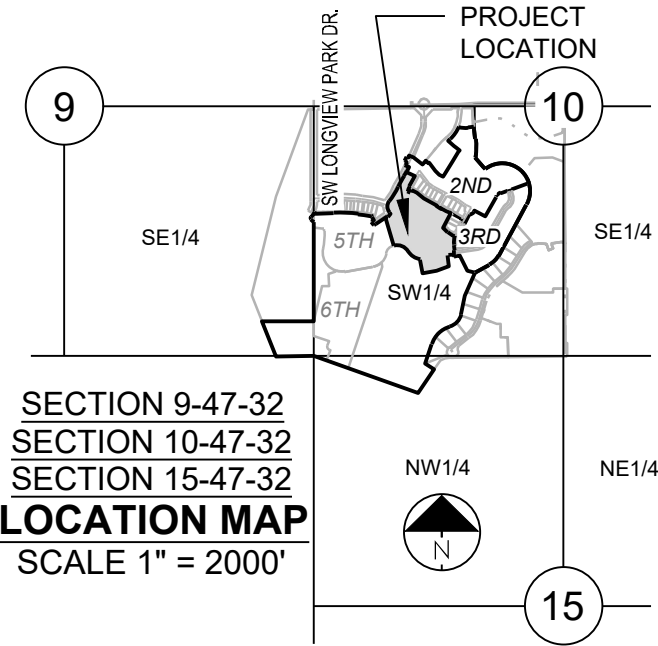
MISSOURI GEOGRAPHIC REFERENCE SYSTEM BENCH MARK:

BM JA-148, IS A STAMPED KC METRO DISK SET IN CONCRETE LOCATED 2 MILES WEST OF THE INTERSECTION OF HIGHWAY 50 AND 3RD ST. IT IS 44 FT NORTH OF THE CENTER OF 3RD ST. AND 102.5 FT WEST OF THE CENTER OF THE EXIT FROM THE ADJACENT PARKING LOT.

PROJECT BENCHMARK:

CHISELED "SQUARE" ON STORM CURB INLET AT NORTHWEST INTERSECTION OF SW. TOWER PARK DRIVE AND SW. LONGVIEW BOULEVARD.

NORTHING: 998893.4148
EASTING: 2803318.5413
ELEV. 1004.09

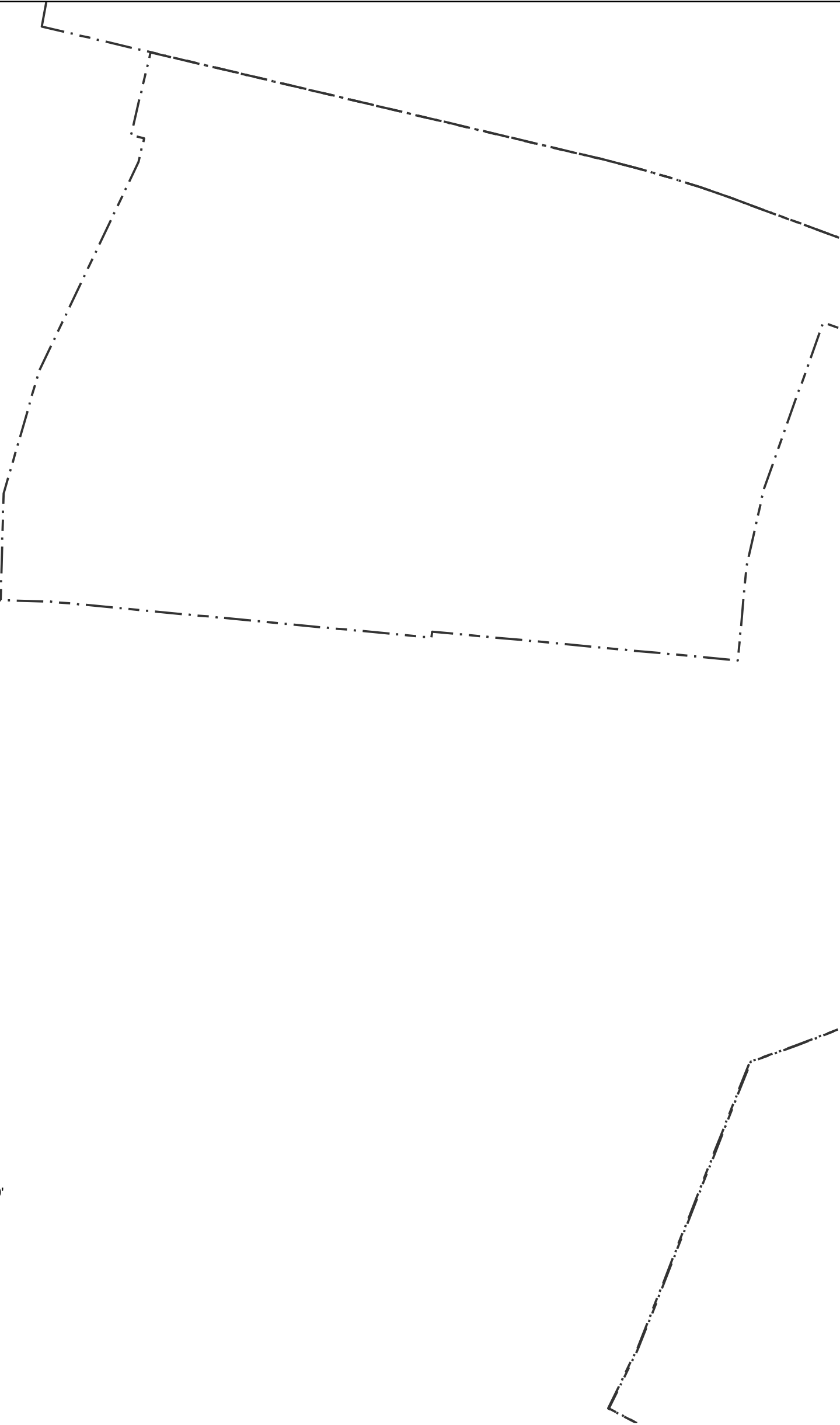


PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
- LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
1. 6-26-19	CITY COMMENTS
2. 7-30-19	CITY COMMENTS
3. 8-1-19	
4. 8-1-19	
5. 8-1-19	
6. 8-1-19	
7. 8-1-19	
8. 8-1-19	

DRAWN BY:	BAL
CHECKED BY:	MAB
DATE PREPARED:	4-15-19
PROJ. NUMBER:	19-002

SW.ARMIE ST



BM JA-148, IS A STAMPED KC METRO DISK SET IN CONCRETE LOCATED 2 MILES WEST OF THE INTERSECTION OF HIGHWAY 50 AND 3RD ST. IT IS 44 FT NORTH OF THE CENTER OF 3RD ST. AND 102.5 FT WEST OF THE CENTER OF THE EXIT FROM THE ADJACENT PARKING LOT.

CHISELED "SQUARE" ON STORM CURB INLET AT NORTHWEST
INTERSECTION OF SW. TOWER PARK DRIVE AND SW. LONGVIEW
BOULEVARD.

NORTHING: 998893.414
EASTING: 2803318.5413
ELEV. 1004.09



SHEET	ALLEY 8				<table><tr><td>REVISION</td><td>DATE</td><td>DESCRIPTION</td></tr><tr><td>DRAWN BY:</td><td></td><td></td></tr><tr><td>DAL</td><td>6-26-19</td><td>CITY COMMENTS</td></tr><tr><td>CHECKED BY:</td><td></td><td></td></tr><tr><td>MAB</td><td>7-30-19</td><td>CITY COMMENTS</td></tr><tr><td>DATE PREPARED:</td><td></td><td></td></tr><tr><td>4-15-19</td><td></td><td></td></tr><tr><td>PROJ. NUMBER:</td><td></td><td></td></tr><tr><td>19-002</td><td></td><td></td></tr></table>	REVISION	DATE	DESCRIPTION	DRAWN BY:			DAL	6-26-19	CITY COMMENTS	CHECKED BY:			MAB	7-30-19	CITY COMMENTS	DATE PREPARED:			4-15-19			PROJ. NUMBER:			19-002		
	REVISION	DATE	DESCRIPTION																													
	DRAWN BY:																															
	DAL	6-26-19	CITY COMMENTS																													
	CHECKED BY:																															
	MAB	7-30-19	CITY COMMENTS																													
	DATE PREPARED:																															
	4-15-19																															
	PROJ. NUMBER:																															
	19-002																															
PERGOLA PARK 4TH PLAT STREET, STORMWATER, MASTER DRAINAGE PLAN AND EROSION AND SEDIMENT CONTROL - LEE'S SUMMIT, MISSOURI																																
 07-31-19																																
 SCHLAGEL & ASSOCIATES, P.A. Engineers • Planners • Surveyors • Landscape Architects 14920 West 107th Street • Lenexa, Kansas 66215 (913) 492-5158 • Fax: (913) 492-8400 WWW.SCHLAGELASSOCIATES.COM Missouri State Certificates of Authority #E2000038000-F #L20001005237 #L2000200859-F																																

I:\PROJECTS\2019\19-0023\3.0 DWG Plans\6.0 SS\19-002-SS-STORM-P&P.dwg, 7/30/2019 4:27:51 PM, 1:1

Storm Sewer Construction Notes	
Structure	Notes
FUT 502	STA 0+76.93, FUTURE LINE 500 INSTALL STA 0+76.93, FUTURE LINE 500 INSTALL 6 X 4 CURB INLET 193°25'14" N 995707.5662 E 2803113.0569
FUT 503	STA 1+12.08, FUTURE LINE 500 INSTALL STA 1+12.08, FUTURE LINE 500 INSTALL 4 X 4 GRATE INLET 169°43'04" N 995713.8518 E 2803078.4775
FUT 504	STA 2+35.43, FUTURE LINE 500 INSTALL STA 2+35.43, FUTURE LINE 500 INSTALL 4 X 4 GRATE INLET 72°05'54" N 995837.0622 E 2803084.2863
FUT 505	STA 3+56.69, FUTURE LINE 500 INSTALL STA 3+56.59, FUTURE LINE 500 INSTALL 4 X 4 GRATE INLET 52°37'51" N 995945.8094 E 2803137.9371
FUT 506	STA 4+70.52, FUTURE LINE 500 INSTALL STA 4+70.52, FUTURE LINE 500 INSTALL 4 X 4 GRATE INLET 50°25'10" N 996020.4745 E 2803223.8584
100	STA 0+00.00, LINE 100 INSTALL 36 INCH RCP END SECTION 245°32'19" N 995710.1628 E 2803556.3233
101	STA 0+73.29, LINE 100 INSTALL STANDARD 5' DIA ECCENTRIC MANHOLE 64°18'24" N 995776.2064 E 2803588.0987
102	STA 1+56.53, LINE 100 INSTALL 4 X 4 GRATE INLET 3°50'59" N 995793.2103 E 2803669.5838
103	STA 2+65.35, LINE 100 INSTALL 6 X 6 CURB INLET 9°57'32" N 995787.8967 E 2803778.2777
104	STA 3+10.10, LINE 100 INSTALL 6 X 4 CURB INLET 97°24'23" N 995821.6253 E 2803807.6866

Storm Sewer Construction Notes	
Structure	Notes
105	STA 3+43.11, LINE 100 INSTALL 6 X 4 CURB INLET 280°10'20" N 995826.3378 E 2803840.3550
106	STA 4+81.26, LINE 100 INSTALL 6 X 4 CURB INLET 118°45'35" N 995958.5759 E 2803800.3782
107	STA 6+43.33, LINE 100 INSTALL 6 X 4 CURB INLET 44°50'34" N 996105.6524 E 2803732.2907
108	STA 6+76.33, LINE 100 INSTALL 6 X 4 CURB INLET 44°41'26" N 996128.7494 E 2803708.7210
109	STA 7+72.27, LINE 100 INSTALL 6 X 4 CURB INLET 150°45'35" N 996159.6705 E 2803617.9003
110	STA 8+33.78, LINE 100 INSTALL 4 X 4 GRATE INLET 88°27'08" N 996221.1611 E 2803619.5619
201	STA 0+79.83, LINE 200 INSTALL 6 X 4 CURB INLET 121°29'35" N 995827.6413 E 2803527.0512
202	STA 1+12.83, LINE 200 INSTALL 6 X 4 CURB INLET 302°29'18" N 995809.9160 E 2803499.2157
301	STA 0+81.86, LINE 300 INSTALL 4 X 4 GRATE INLET 14°06'51" N 995872.6005 E 2803649.6217
400	STA 0+05.04, LINE 400 INSTALL 66 INCH RCP END SECTION. 310°08'56" N 995680.9362 E 2803240.2414

Storm Sewer Construction Notes	
Structure	Notes
401	STA 0+58.91, LINE 400 INSTALL 8 X 8 CURB INLET 137°02'37" N 995722.1112 E 2803205.5082
402	STA 3+38.28, LINE 400 INSTALL 6 X 10 CURB INLET 88°53'13" N 995956.8083 E 2803357.0420
403	STA 4+06.93, LINE 400 INSTALL 6 X 8 CURB INLET 268°53'13" N 996025.4529 E 2803358.3756
404	STA 5+26.34, LINE 400 INSTALL 6 X 8 CURB INLET 268°53'13" N 996144.8345 E 2803360.6949
405	STA 6+19.23, LINE 400 INSTALL 9 X 9 AREA INLET WITH OPENINGS ON ALL 4 SIDES AND TRASH RACK (REF. DETAIL SHEET 24) 261°16'29" N 996236.6583 E 2803374.7329
501	STA 0+35.50, LINE 500 INSTALL 6 X 4 CURB INLET 45°44'53" N 995746.3024 E 2803179.5267
601	STA 0+36.00, LINE 600 INSTALL 6 X 4 CURB INLET 268°53'13" N 996024.7536 E 2803394.3688
602	STA 0+91.86, LINE 600 INSTALL 4 X 4 GRATE INLET 40°21'37" N 996051.9081 E 2803443.1821
701	STA 1+02.48, LINE 700 INSTALL 6 X 4 CURB INLET 28°19'30" N 996192.5919 E 2803451.3689
702	STA 1+35.48, LINE 700 INSTALL 6 X 4 CURB INLET 212°54'17" N 996220.2979 E 2803433.4418



REVISION DATE

DESCRIPTION

6-26-19

1

CITY COMMENTS

7-30-19

2

CITY COMMENTS

3

4

5

6

7

8

DRAWN BY:

BAL

CHECKED BY:

MAB

DATE PREPARED:

4-15-19

PROJ. NUMBER:

19-002

STORM PLAN

SHEET

21

OF 28

SCHLAGEL & ASSOCIATES, P.A.

Engineers-Planners-Surveyors-Landscape Architects

14920 West 10th Street • Lenexa, Kansas 66215

(913) 492-5158 • Fax: (913) 492-8400

WWW.SCHLAGELASSOCIATES.COM

Missouri State Certificates of Authority

#E2002003600-F #AC200100237 #LS200200859-F

STATE OF MISSOURI

MARK ALLEN BREUER

NUMBER

PE-2003007268

PERSONAL ENGINEER

07-31-19

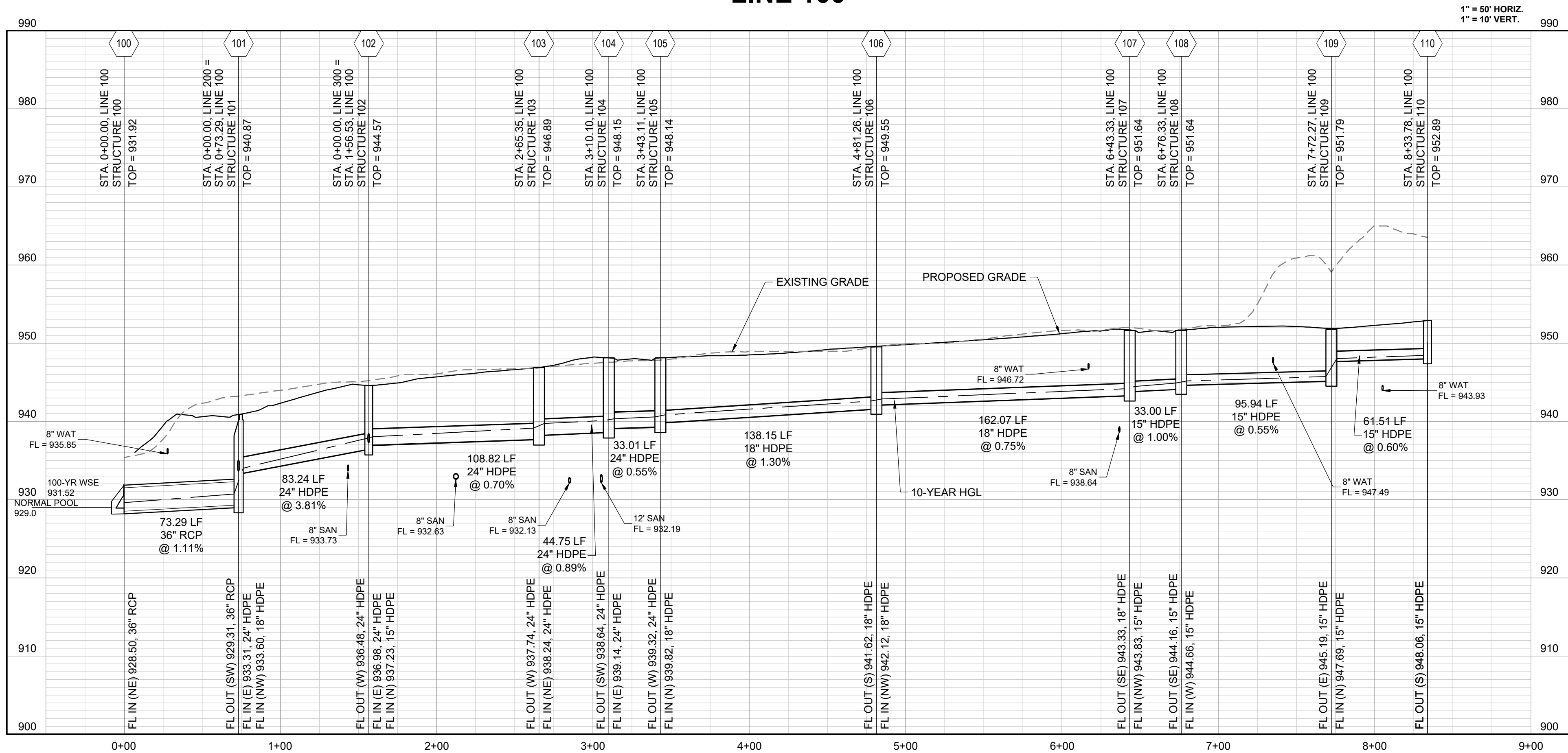
PERGOLA PARK 4TH PLAT

STREET, STORMWATER, MASTER DRAINAGE

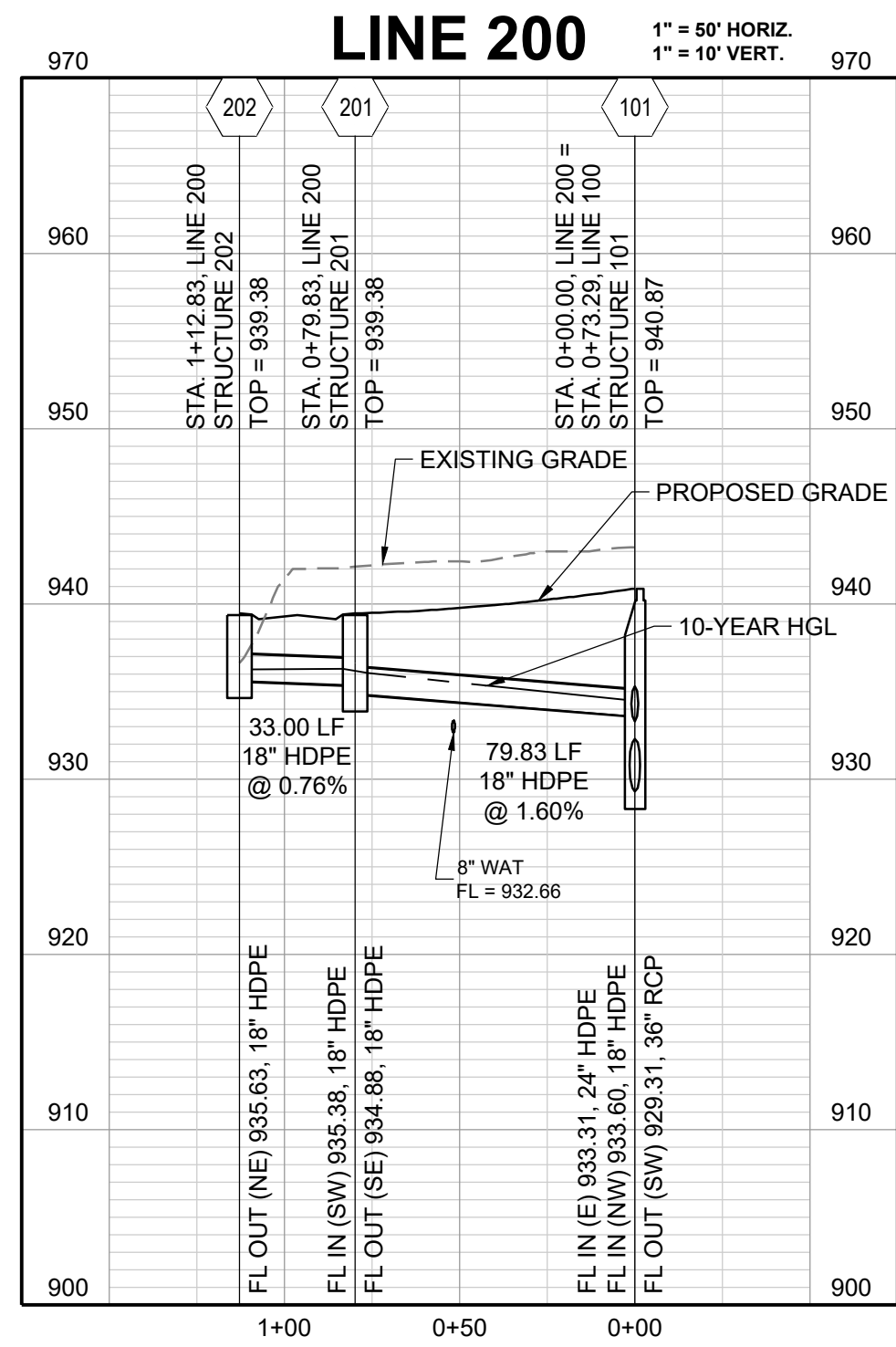
PLAN AND EROSION AND SEDIMENT

- LEE'S SUMMIT, MISSOURI

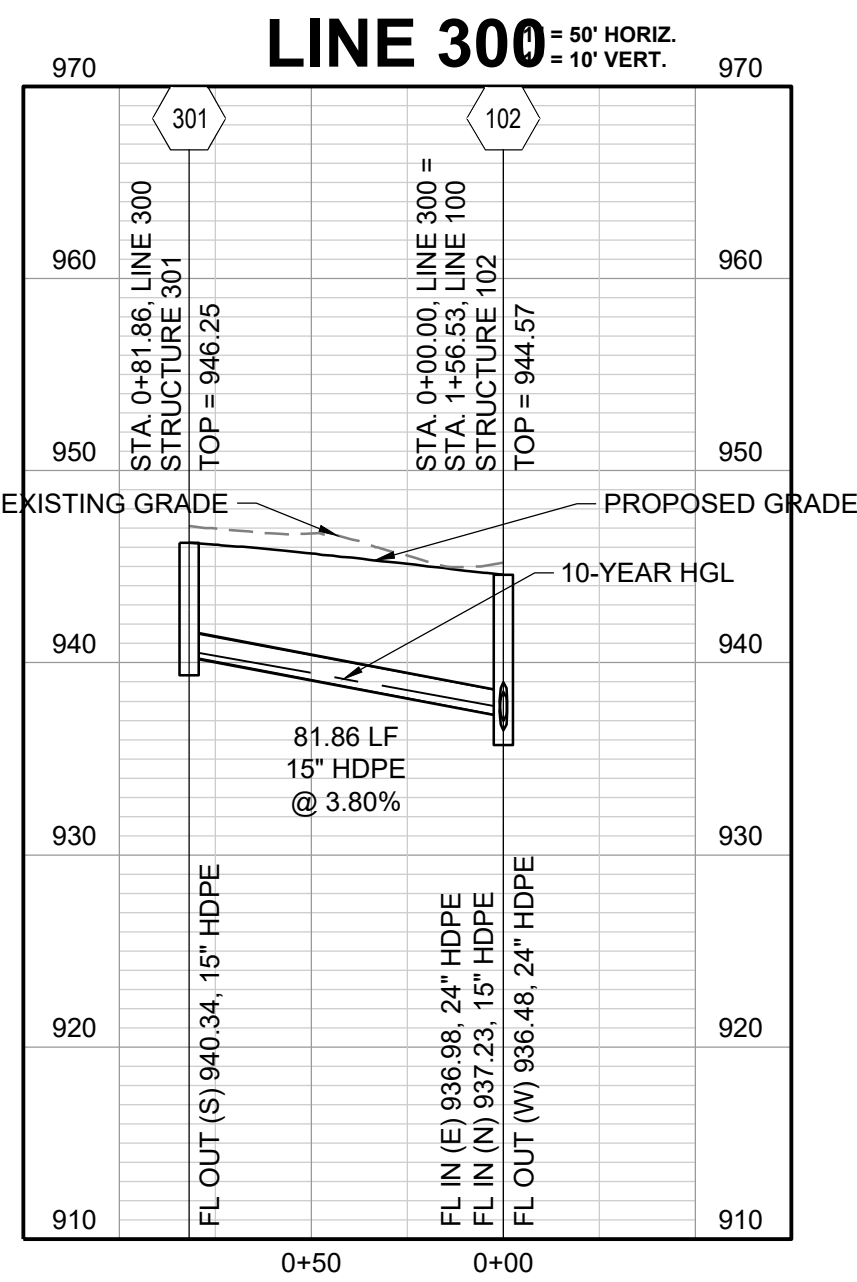
LINE 100



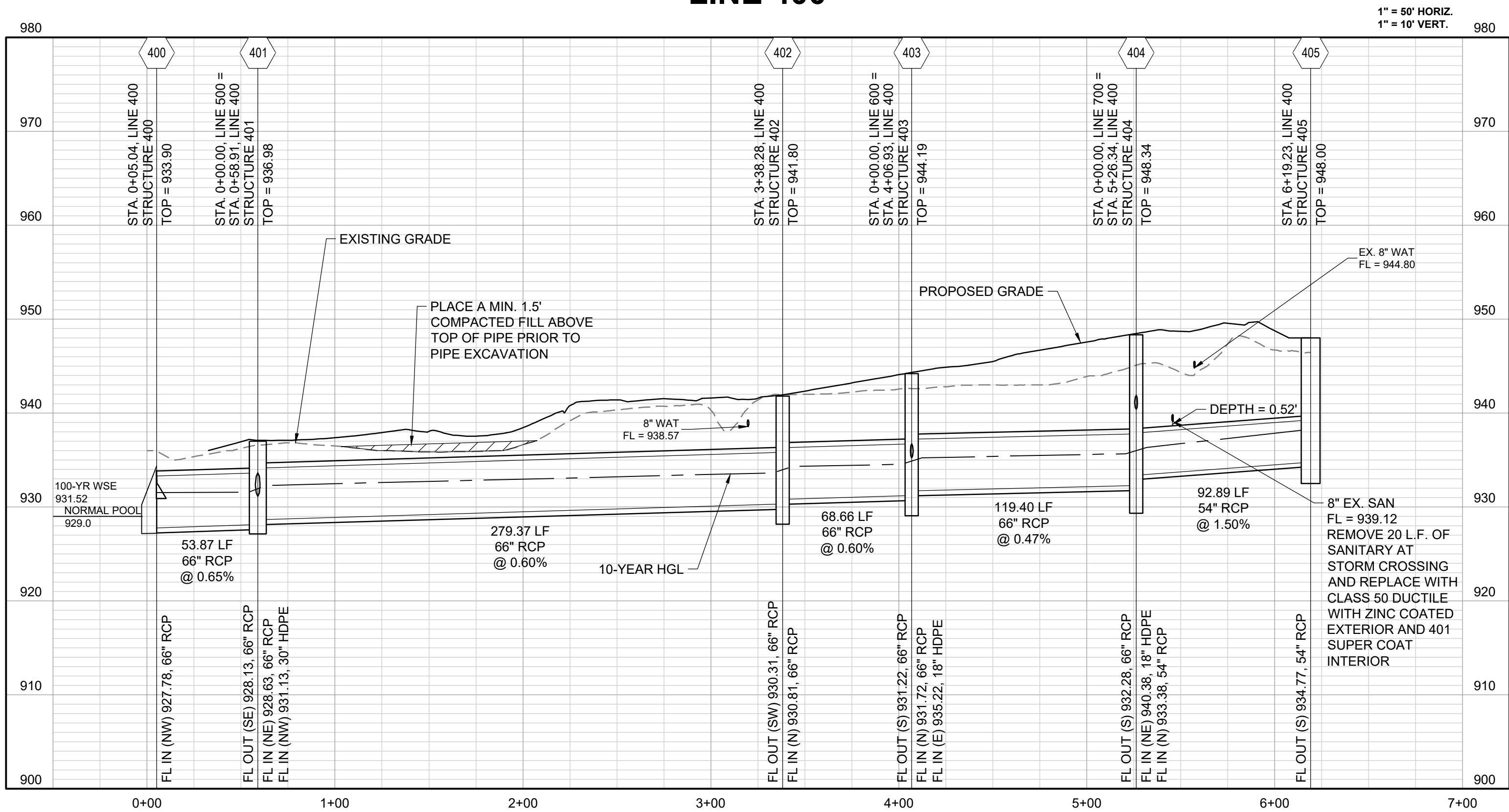
LINE 200



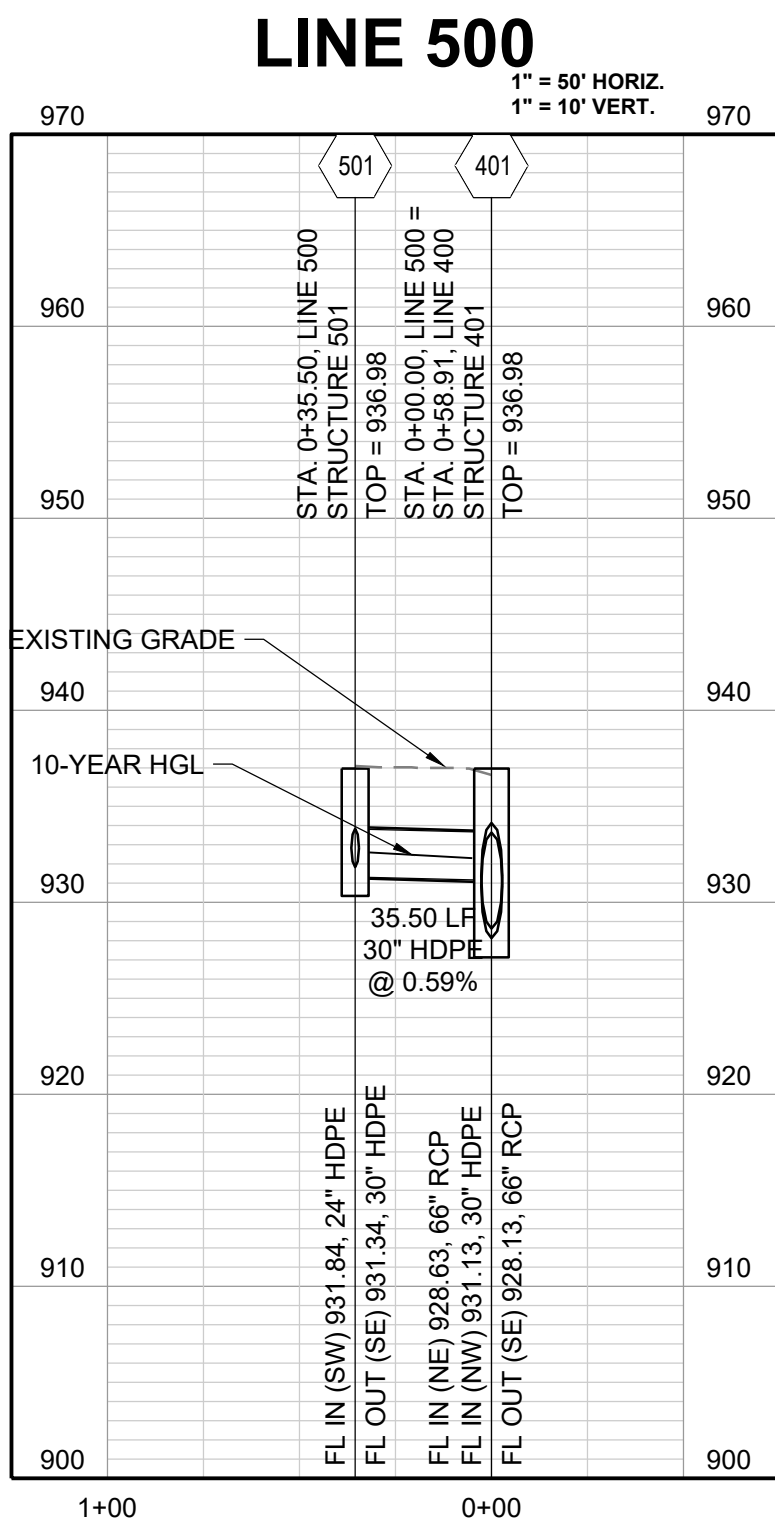
LINE 300



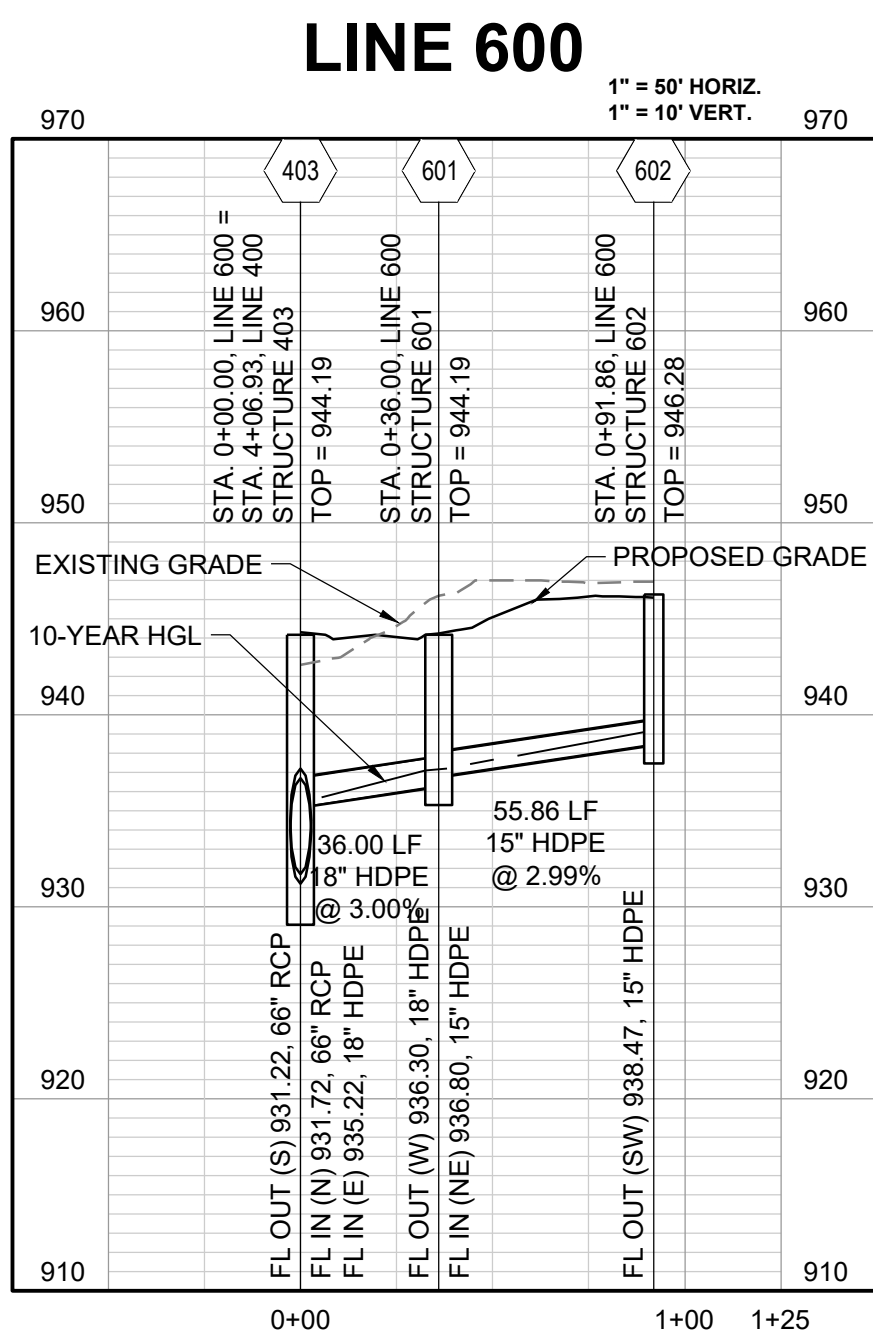
LINE 400



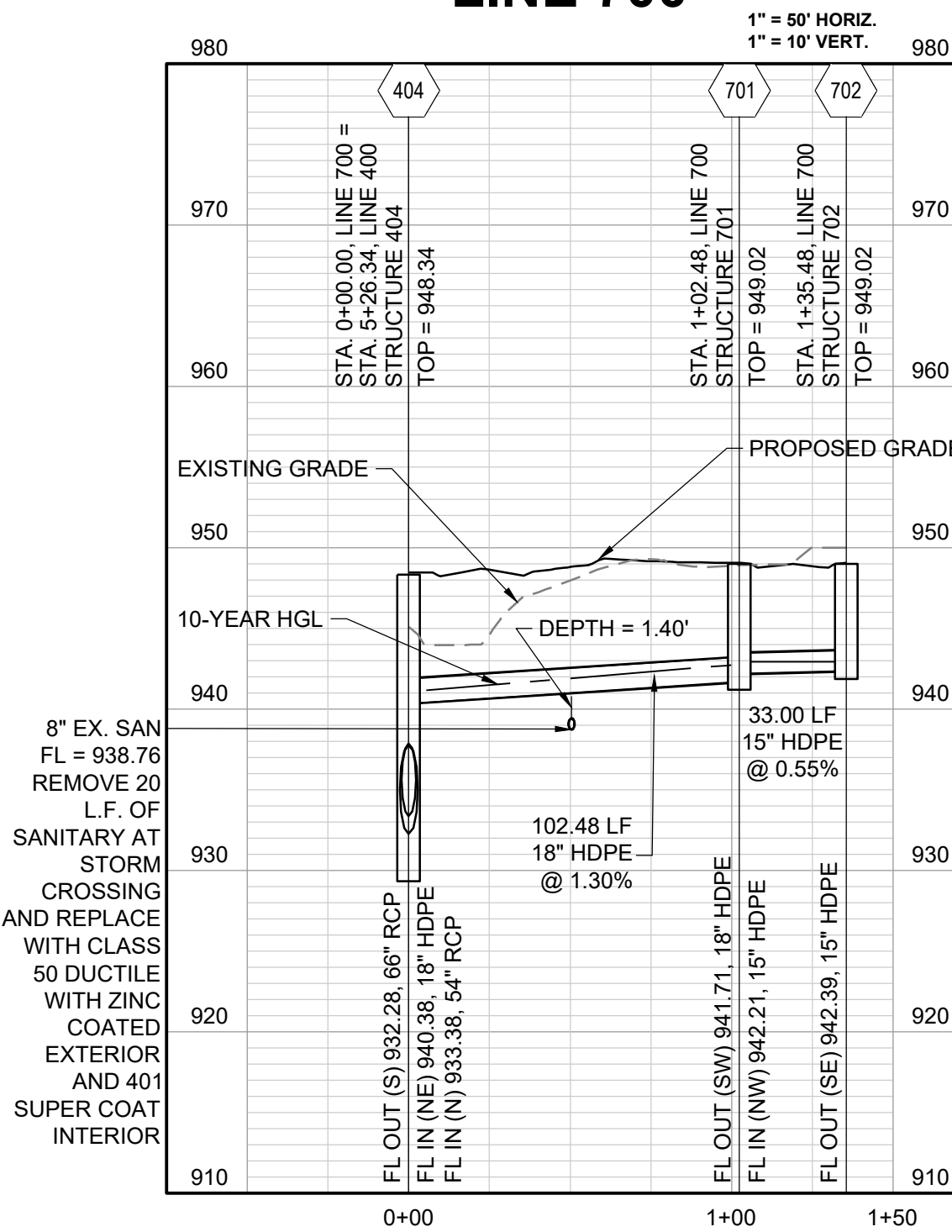
LINE 500



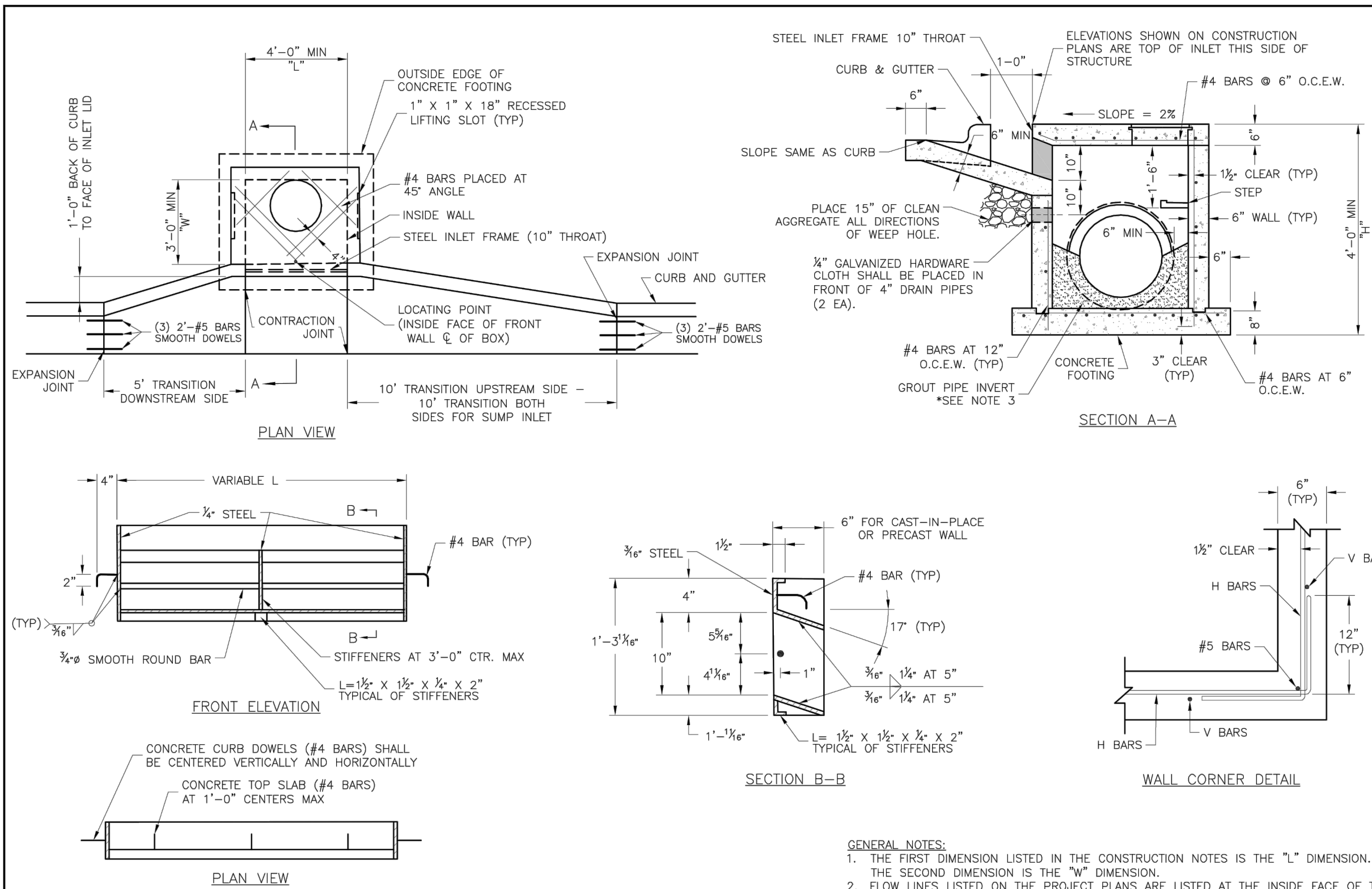
LINE 600



LINE 700



I:\PROJECTS\2019\19-0023\0 Design\0.0 DWG Plans\6.0 SS\19-002-SS-DET.dwg, 7/30/2019 4:28:15 PM, 1:1



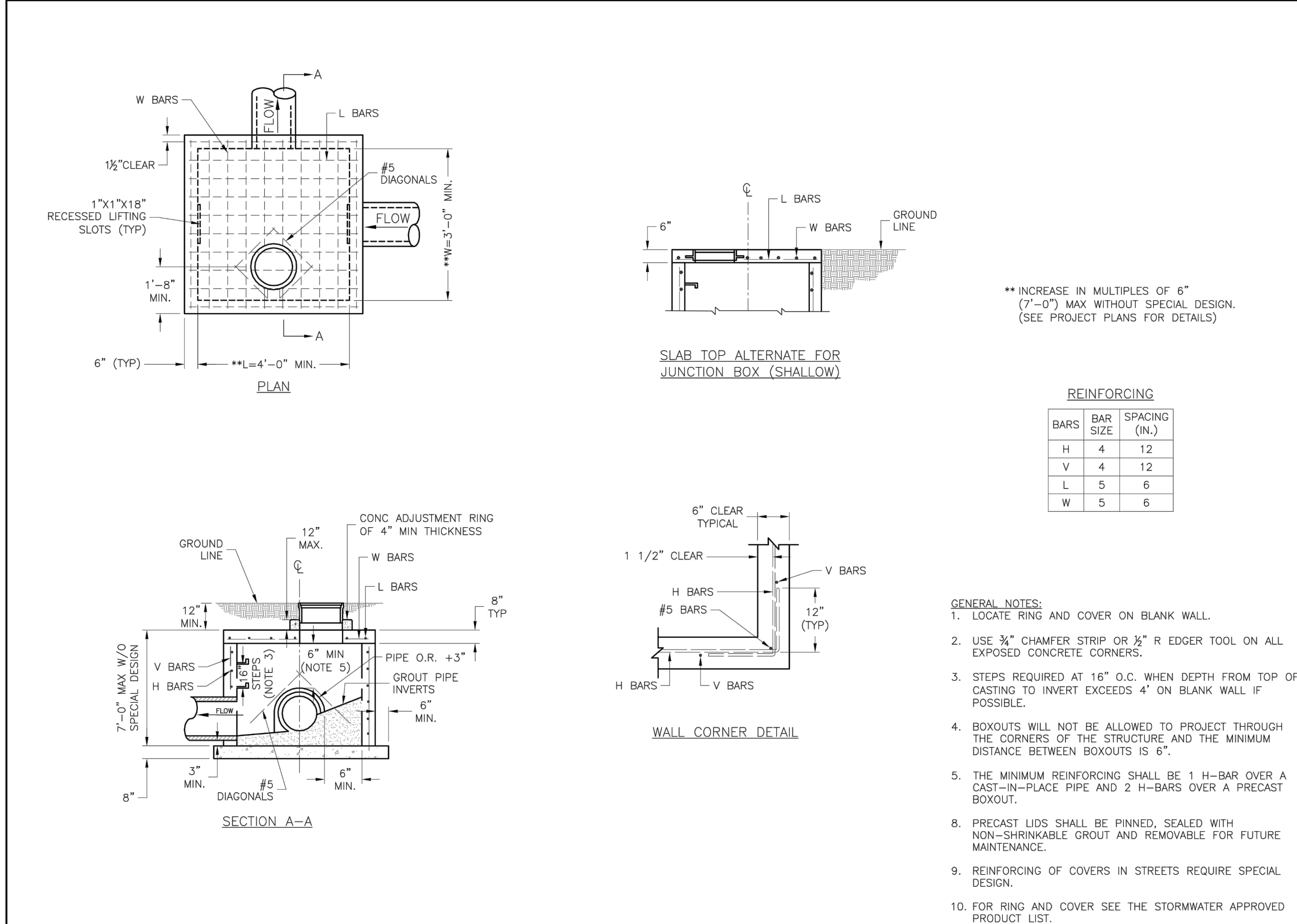
- STEEL FRAME NOTES:**
1. ALL WELDS SHALL BE PERFORMED IN ACCORDANCE WITH APPROPRIATE AWS SPECIFICATIONS AND PROCEDURES.
 2. ALL WELDS ON EXPOSED SURFACES SHALL BE DRESSED SO AS TO PROVIDE A PLEASING FINISHED APPEARANCE.
 3. THE ENTIRE FRAME SHALL BE PAINTED A SINGLE COAT OF CHEM-PRIME #37H-78 PRIMER (GRAY) OR EQUAL.
- GENERAL NOTES:**
1. THE FIRST DIMENSION LISTED IN THE CONSTRUCTION NOTES IS THE "L" DIMENSION. THE SECOND DIMENSION IS THE "W" DIMENSION.
 2. FLOW LINES LISTED ON THE PROJECT PLANS ARE LISTED AT THE INSIDE FACE OF THE WALL.
 3. FLOOR OF INLET GROUDED AND SHAPED TO MATCH PIPE INVERT TO PROVIDE SMOOTH FLOW.
 4. LOCATE MH RING AND COVER ON BLANK WALL IF POSSIBLE.
 5. STEPS SHALL BE SPACED AT 1'-4" O.C. VERTICALLY ON BLANK WALL IF POSSIBLE.
 6. BEVEL ALL EXPOSED EDGES WITH 3/4" CHAMFER OR 1/2" TOOLED EDGE.
 7. ON-GRADE INLETS SHALL CONFORM TO THE STREET GRADE AND SUMP INLETS SHALL BE LEVEL.
 8. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON-SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
 9. LIFTING RINGS SHALL BE REMOVED AND SEALED WITH NON-SHRINKABLE GROUT
 10. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

**LEE'S SUMMIT
MISSOURI**

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

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

STM-1



**INCREASE IN MULTIPLES OF 6"
(7"-0") MAX WITHOUT SPECIAL DESIGN.
(SEE PROJECT PLANS FOR DETAILS)

REINFORCING

BARS	BAR SIZE	SPACING (IN.)
H	4	12
V	4	12
L	5	6
W	5	6

GENERAL NOTES:

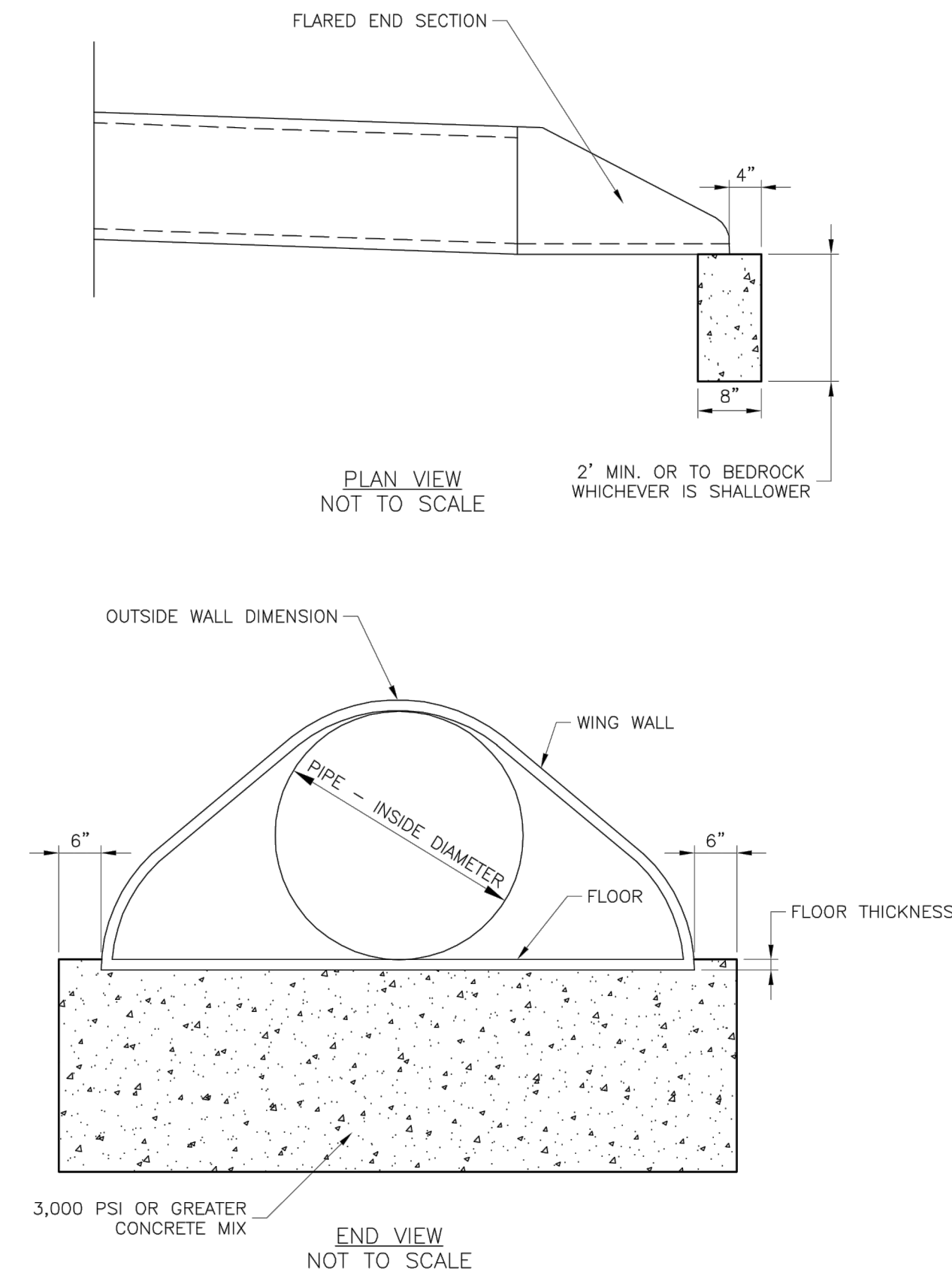
1. LOCATE RING AND COVER ON BLANK WALL.
2. USE 3/4" CHAMFER STRIP OR 1/2" R EDGER TOOL ON ALL EXPOSED CONCRETE CORNERS.
3. STEPS REQUIRED AT 16" O.C. WHEN DEPTH FROM TOP OF CASTING TO INVERT EXCEEDS 4' ON BLANK WALL IF POSSIBLE.
4. BOXOUTS WILL NOT BE ALLOWED TO PROJECT THROUGH THE CORNERS OF THE STRUCTURE AND THE MINIMUM DISTANCE BETWEEN BOXOUTS IS 6".
5. THE MINIMUM REINFORCING SHALL BE 1 H-BAR OVER A CAST-IN-PLACE PIPE AND 2 H-BARS OVER A PRECAST BOXOUT.
6. PRECAST LIDS SHALL BE PINNED, SEALED WITH NON-SHRINKABLE GROUT AND REMOVABLE FOR FUTURE MAINTENANCE.
7. REINFORCING OF COVERS IN STREETS REQUIRE SPECIAL DESIGN.
8. FOR RING AND COVER SEE THE STORMWATER APPROVED PRODUCT LIST.

**LEE'S SUMMIT
MISSOURI**

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

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

STM-3



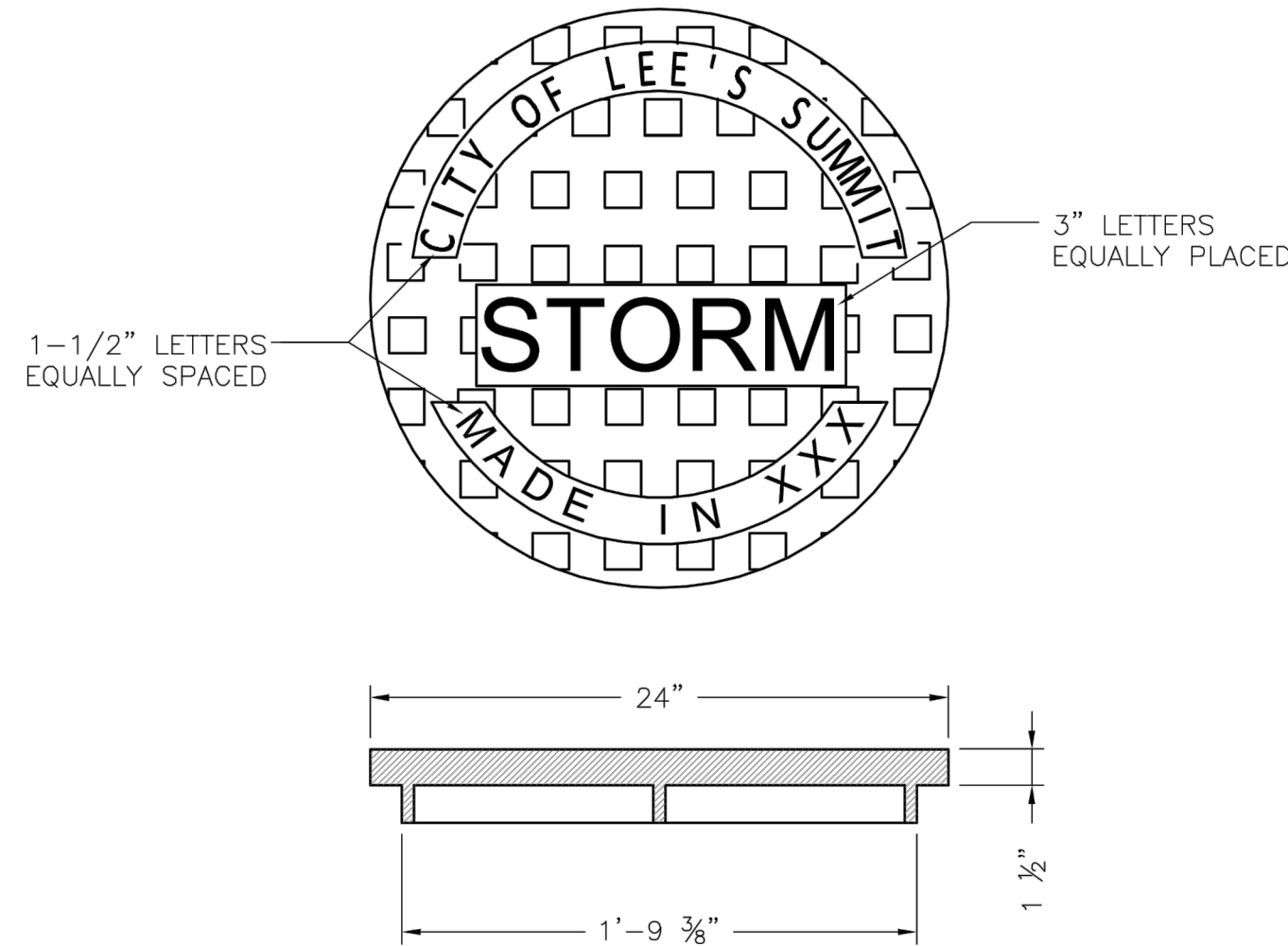
**LEE'S SUMMIT
MISSOURI**

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

FLARED END SECTION SUPPORT DETAIL

Date: 04/17
Drawn By: MIF
Checked By: DL

STM-5



STANDARD 24" MANHOLE COVER
MINIMUM WEIGHT = 160 LB
NOTE: PICK HOLES NOT SHOWN

*COVER AND FRAME MODEL INFORMATION REFER TO
THE STORMWATER APPROVED PRODUCT LIST.



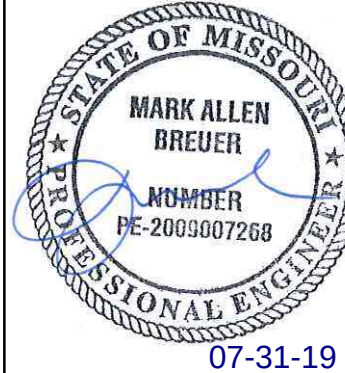
**LEE'S SUMMIT
MISSOURI**

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

STORM MANHOLE COVER DETAIL

Date: 04/17
Drawn By: MIF
Checked By: DL

STM-6



PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
- LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
1. 6-26-19	CITY COMMENTS
2. 7-30-19	CITY COMMENTS
3. 8-1-19	CITY COMMENTS
4. 8-1-19	CITY COMMENTS
5. 8-1-19	CITY COMMENTS
6. 8-1-19	CITY COMMENTS
7. 8-1-19	CITY COMMENTS
8. 8-1-19	CITY COMMENTS

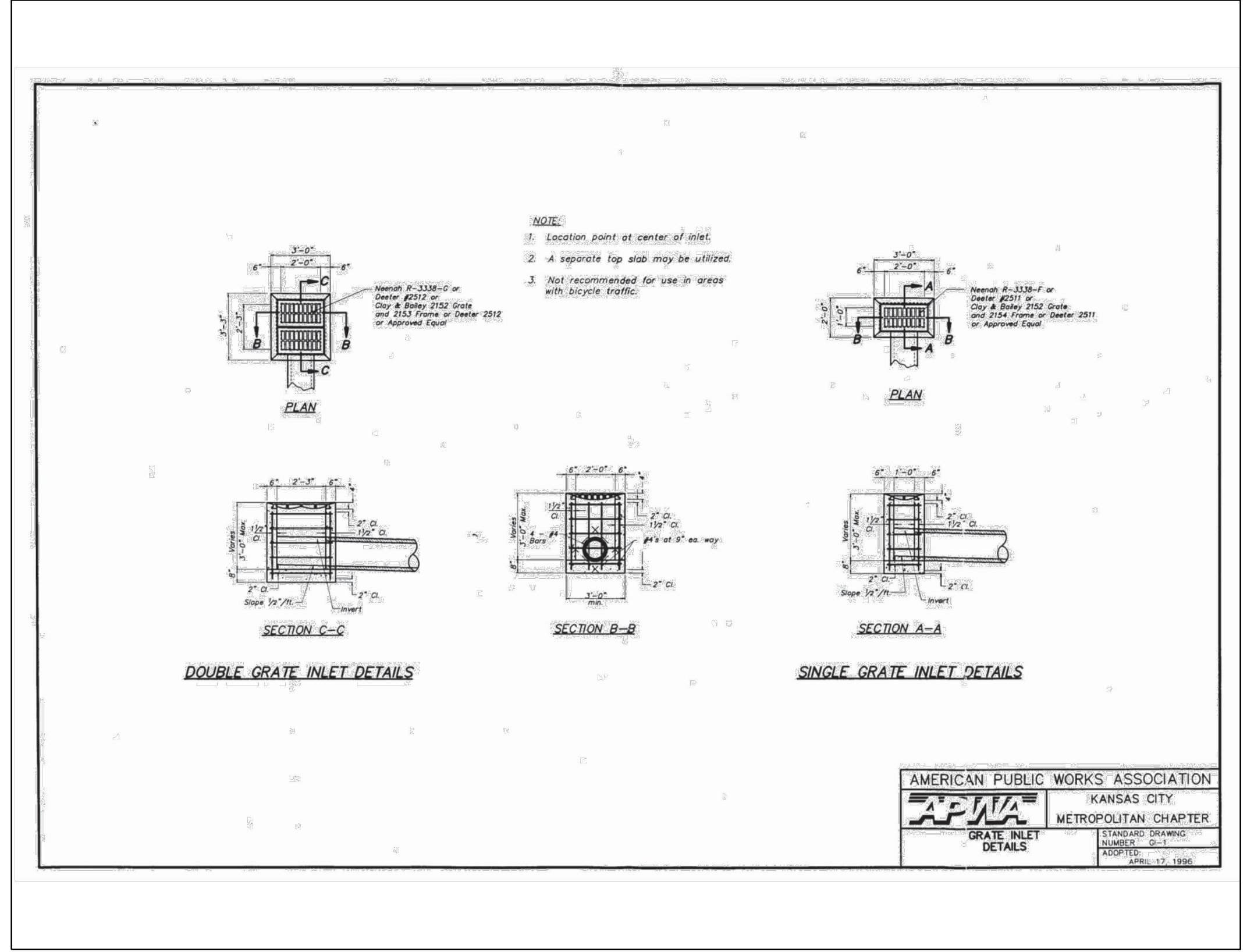
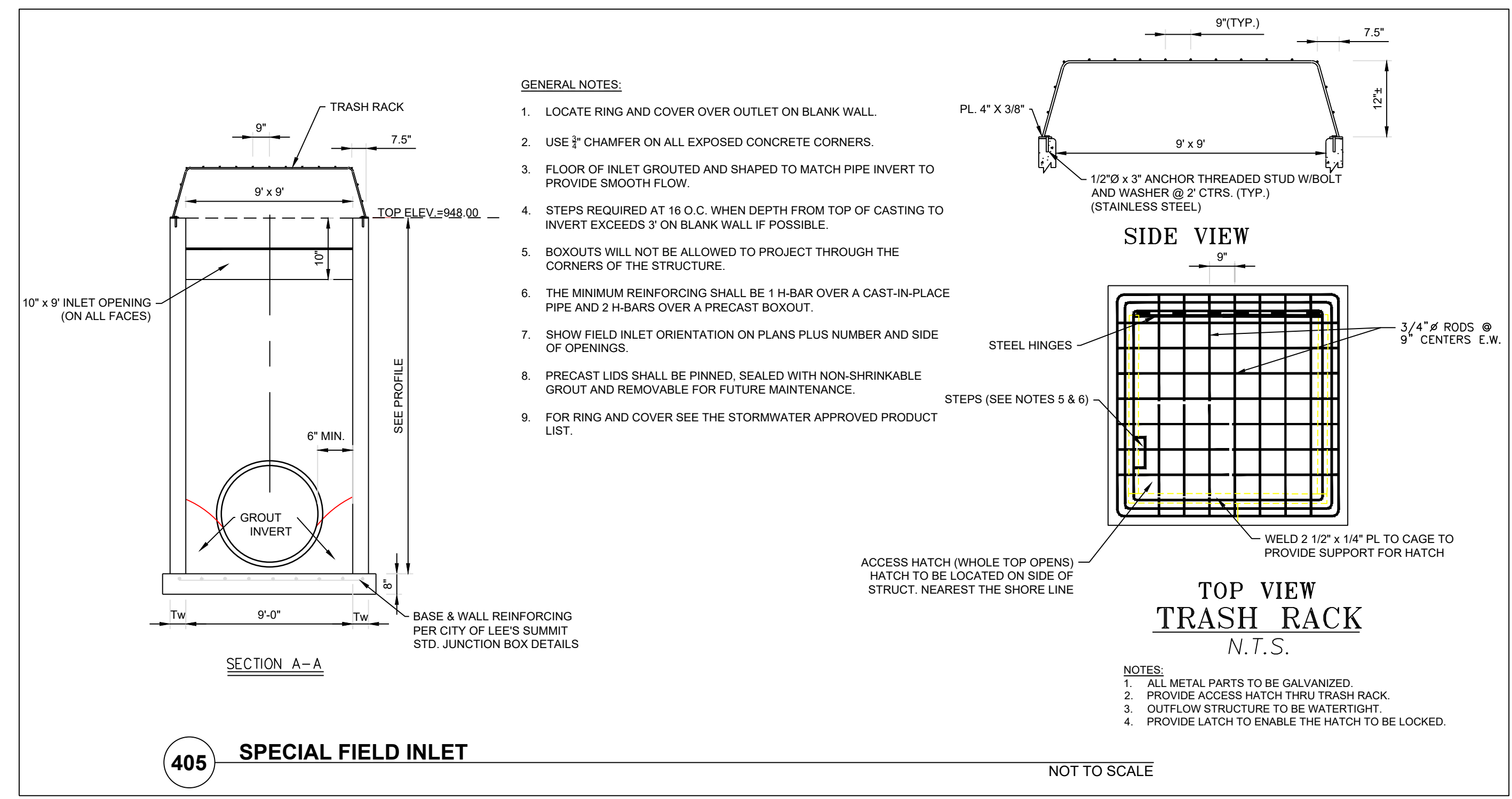
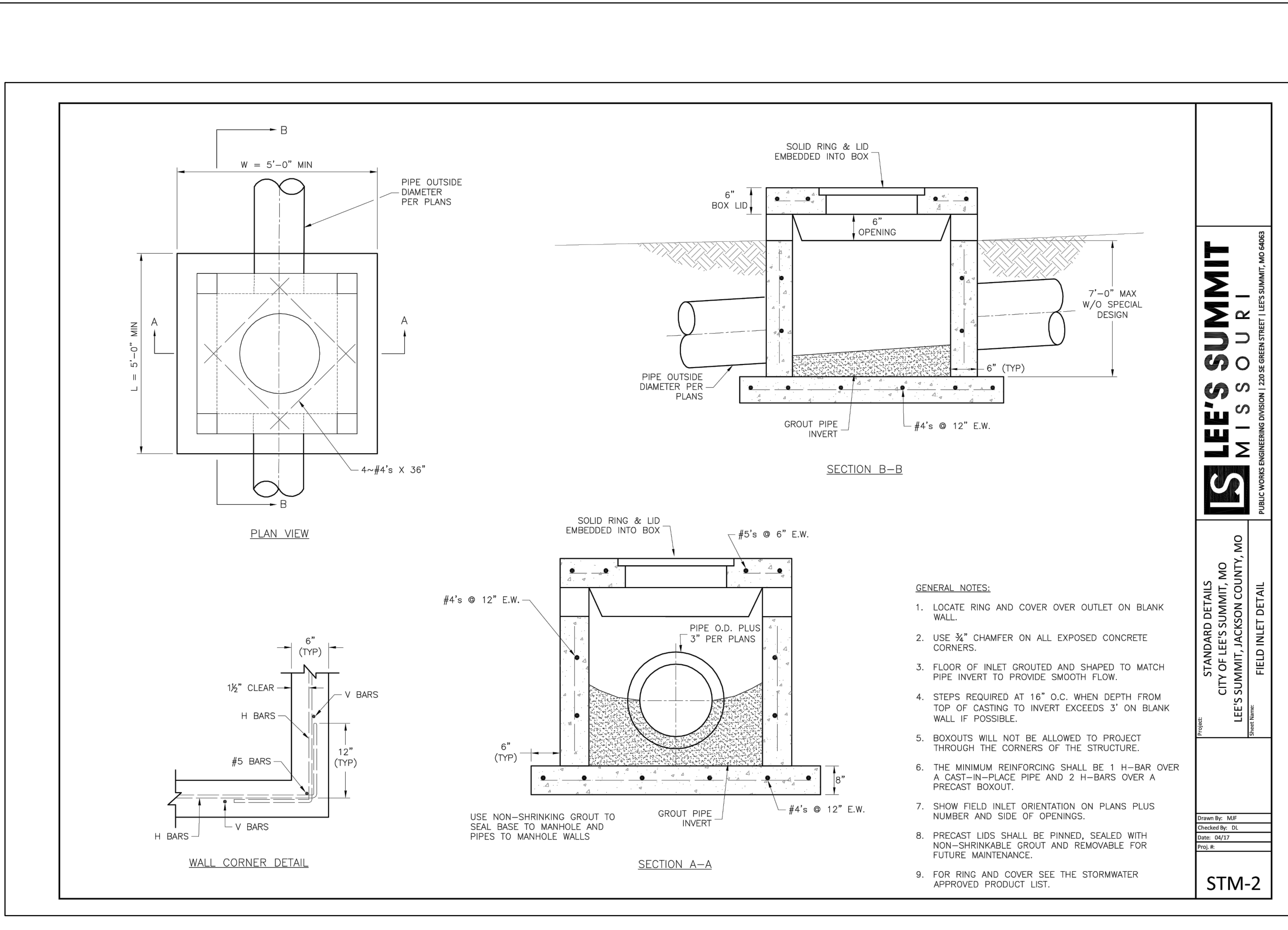
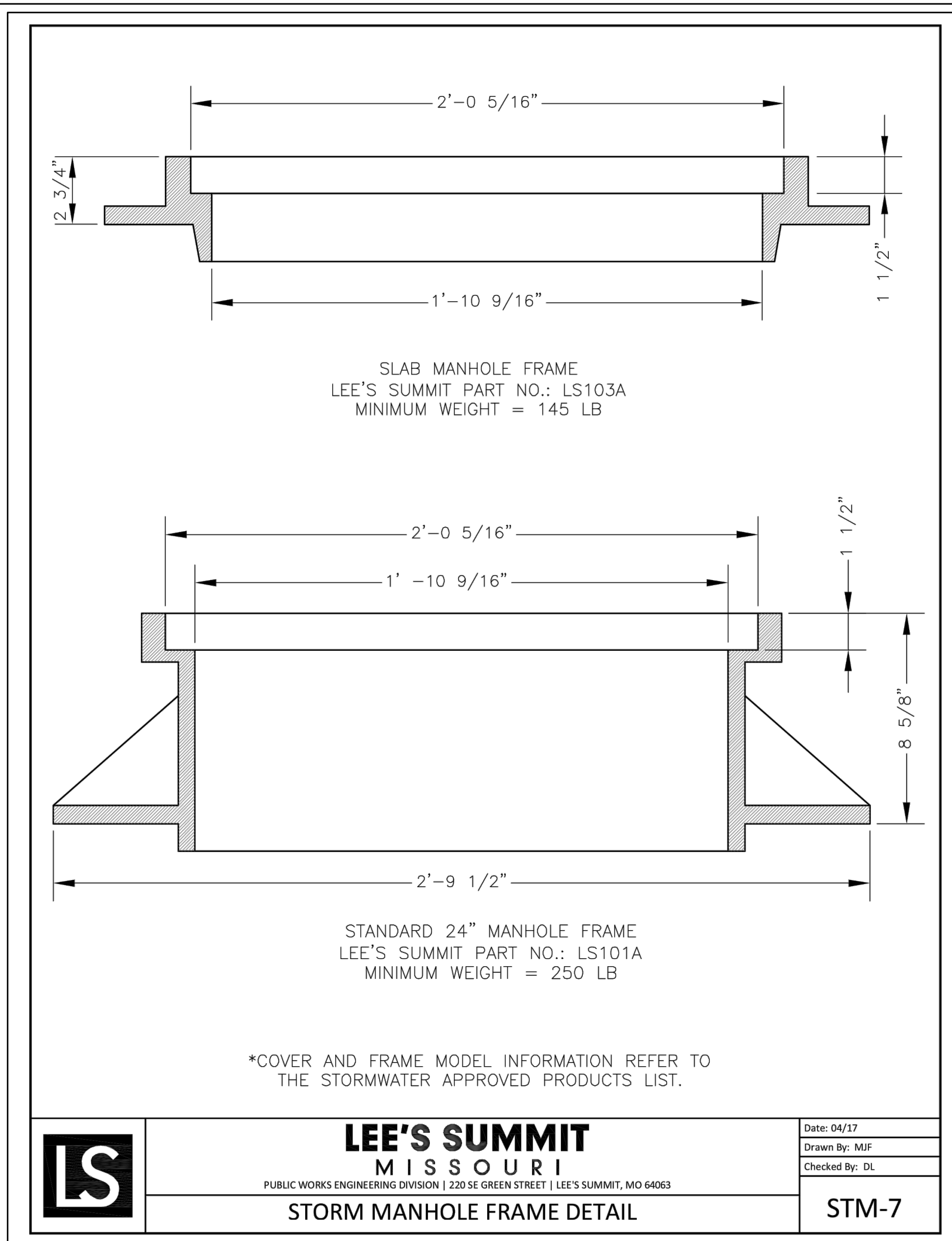
DRAWN BY: BAL
CHECKED BY: MAB
DATE PREPARED: 4-15-19
PROJ. NUMBER: 19-002

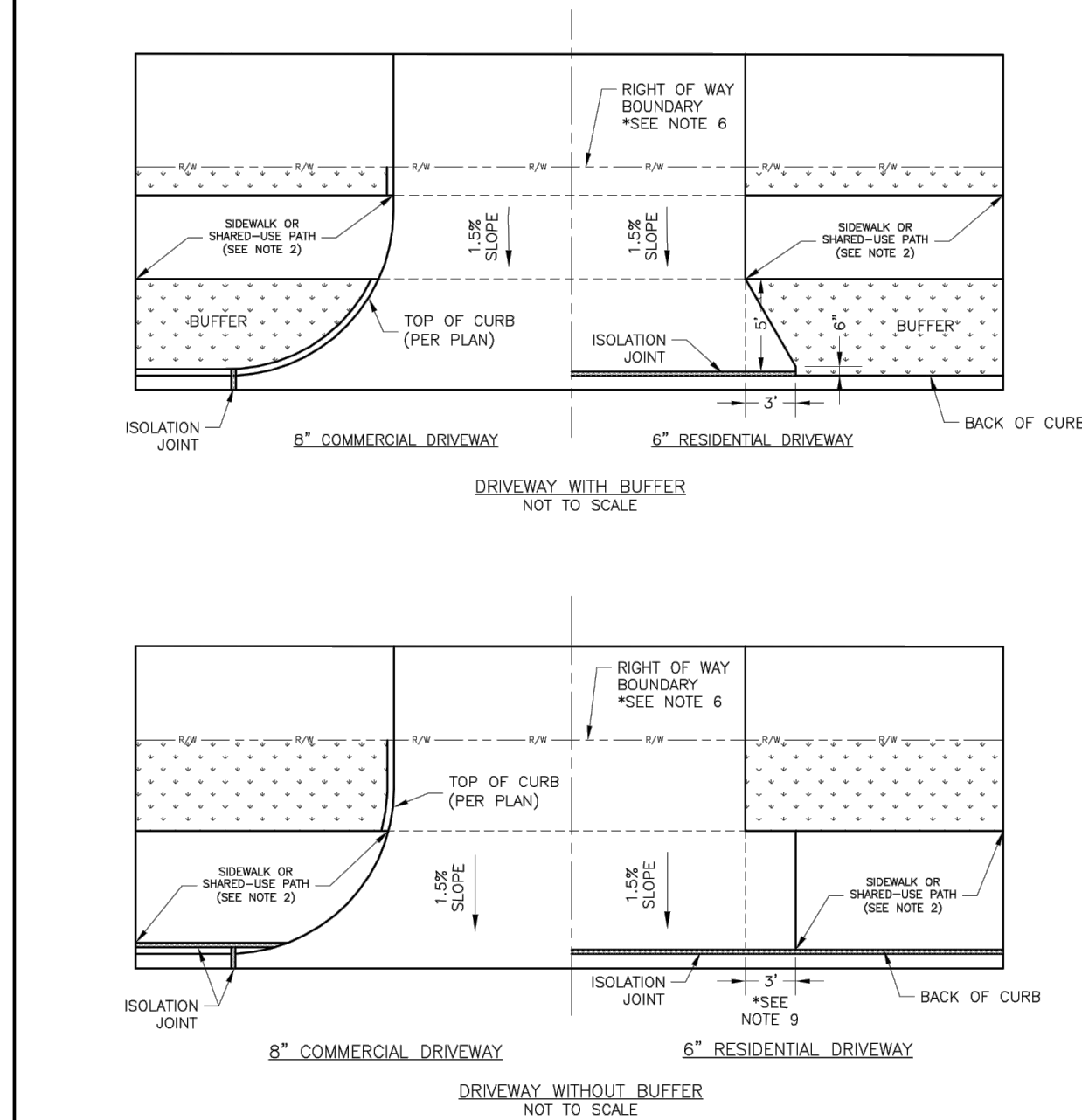
DETAIL SHEET

SHEET

23
OF 28

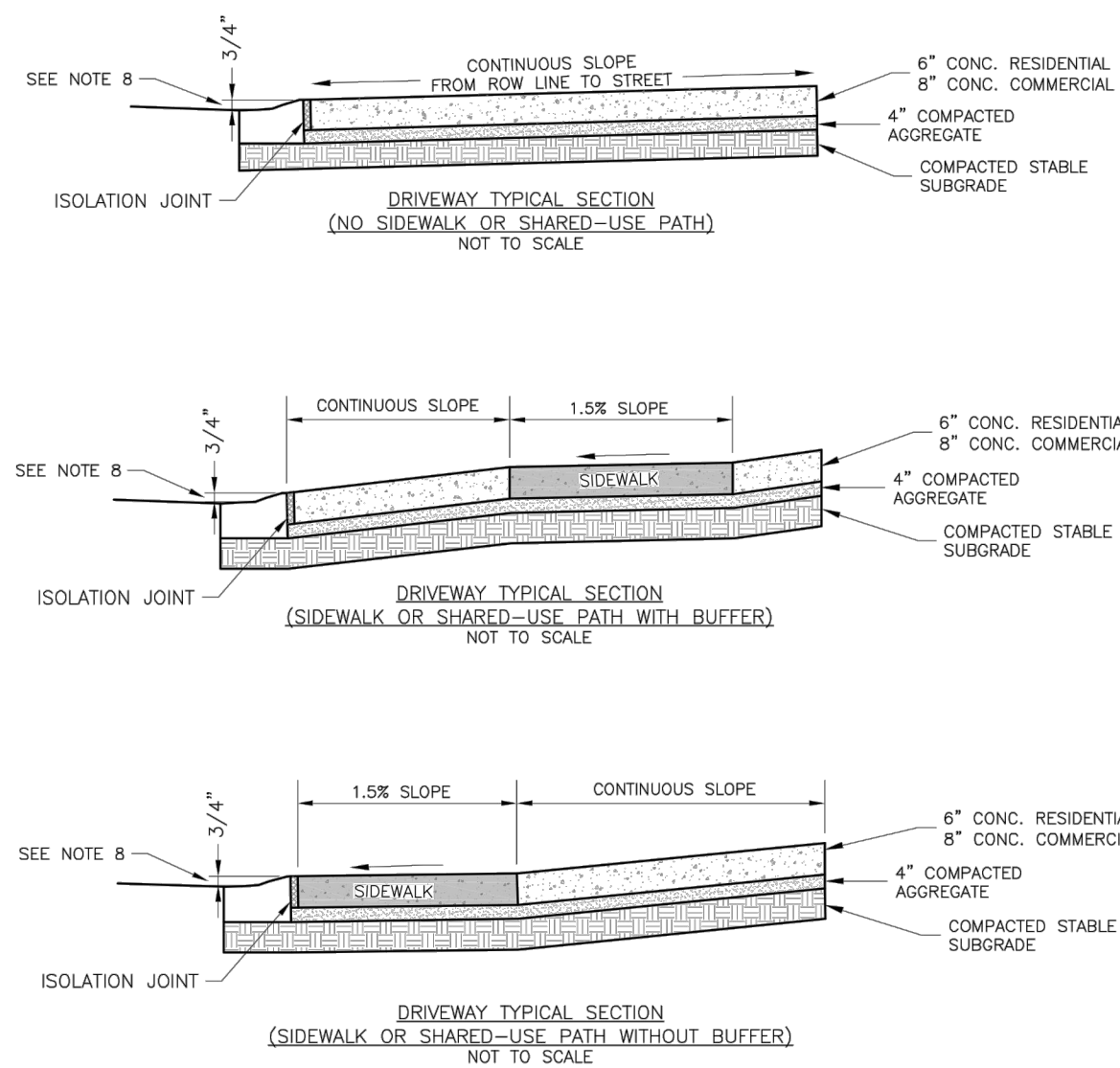
SCHLAGEL & ASSOCIATES, P.A.
Engineers-Planners-Surveyors-Landscape Architects
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASSOCIATES.COM
Missouri State Certificates of Authority
#E2002003600-F #LAC201005237 #LS200200859-F





GENERAL NOTES

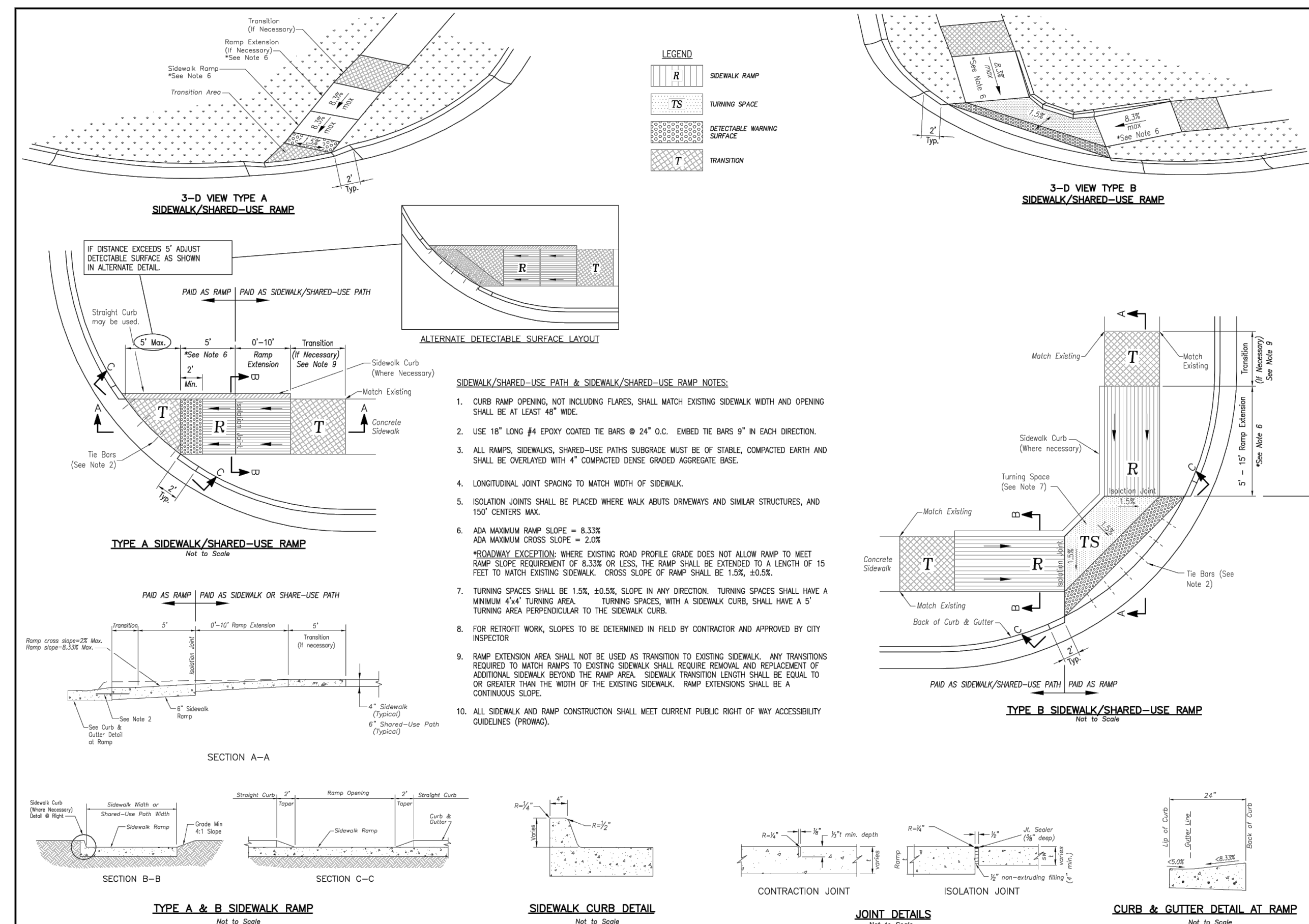
1. SUBGRADE SHALL BE STABLE, COMPACTED EARTH AND SHALL BE OVERLAIN WITH 4" COMPACTED SLOPE AGGREGATE BASE.
2. ALL DRIVE APPROACHES SHALL MEET CURRENT PUBLIC RIGHT OF WAY ACCESSIBILITY GUIDELINES (PROWAG) FOR SLOPE REQUIREMENTS WHEN SIDEWALK IS REQUIRED (SEE ADA RAMP RETROFIT TALLS).
3. JOINT AT BACK OF CURB LINE SHALL BE AN ISOLATION JOINT FOR RESIDENTIAL DRIVEWAYS.
4. MINIMUM 4K CONCRETE MIX IS REQUIRED FOR ALL CURBS.
5. COMMERCIAL DRIVEWAYS AND DRIVEWAY APPROACHES, IN THE PUBLIC RIGHT OF WAY, SHALL BE KOMB40 CONCRETE MIX.
6. CURB AND DRIVEWAY APPROACHES SHALL BE FINISHED TO MATCH ADJACENT DRIVEWAY SURFACE.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.
8. 3/4" FROM TOP OF CURB TO FLOWLINE AT DRIVEWAY (TYPE C-61 CURB ONLY) MUST MAINTAIN ORIGINAL FLOWLINE OF CURB.
9. THE FINISHING CURB SHALL BE 4" THICK, EXTENDING 12" FROM DRIVEWAY TO CURB.
10. THE MAXIMUM WIDTH OF A RESIDENTIAL DRIVEWAY IS 36 FEET WITHIN THE RIGHT OF WAY.



LS **LEE'S SUMMIT**
MISSOURI

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

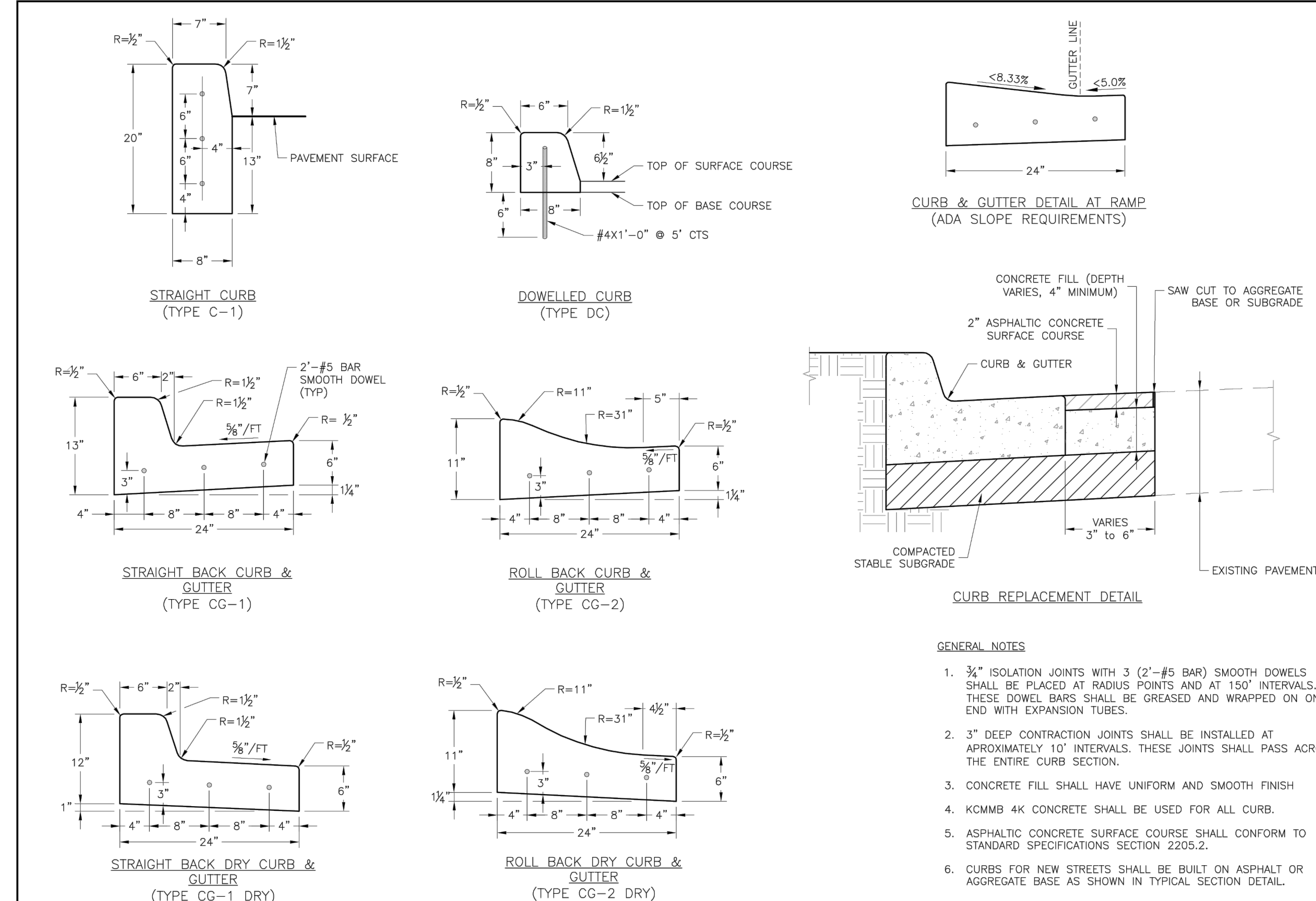
Project:	LE
Sheet Name:	
Drawn By: MIF Checked By: DL Date: 04/17 Proj. #:	
GEN-1	



LS **LEE'S SUMMIT**
MISSOURI

TANDARD DETAILS
OF LEE'S SUMMIT, MO
MIT, JACKSON COUNTY, MO

Project:	LE	Sheet Name
Drawn By: MJF Checked By: DL Date: 04/17 Proj. #: GEN-3A		



GENERAL NOTES

1. 3" ISOLATION JOINTS SHALL BE 3 (2" - #5 BAR) SMOOTH DOWELS SPACED PLACED AT RADIIUS POINTS AND AT 150" INTERVALS. THESE DOWEL BARS SHALL BE GREASED AND WRAPPED ON ONE END WITH EXPANSION TUBES.
2. 3" DEEP CONTRACTION JOINTS SHALL BE INSTALLED AT APPROXIMATELY 10' INTERVALS. THESE JOINTS SHALL PASS ACROSS THE ENTIRE CURB SECTION.
3. CONCRETE FILL SHALL HAVE UNIFORM AND SMOOTH FINISH.
4. KCMCB 4X CONCRETE SHALL BE USED FOR ALL CURB.
5. ASPHALTIC CONCRETE SURFACE COURSE SHALL CONFORM TO STANDARD SPECIFICATIONS SECTION 2205.2.
6. CURBS FOR NEW STREETS SHALL BE BUILT ON ASPHALT OR AGGREGATE BASE AS SHOWN IN TYPICAL SECTION DETAIL.
7. WHITE CURING COMPOUND MUST BE APPLIED UNIFORMLY TO THE CONCRETE SURFACE IMMEDIATELY AFTER FINAL FINISHING.

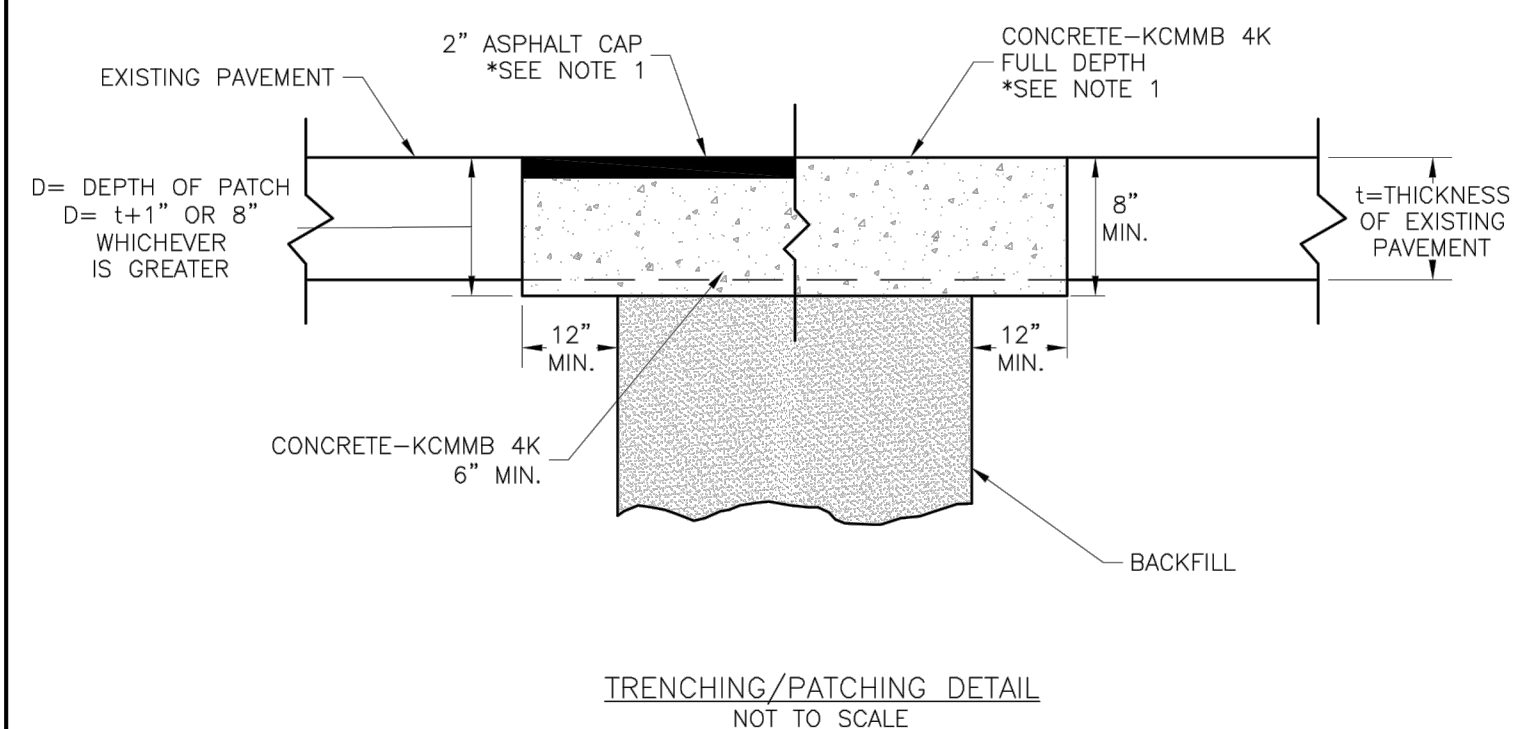
LEE'S SUMMIT
MISSOURI

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

Pro _____

Drawn By: MUF
Checked By: DIL
Date: 04/17
Proj. R:

GEN-4



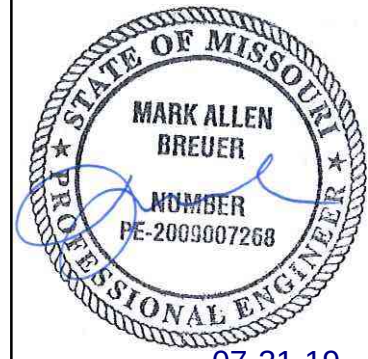
NOTE:

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 64063
	TRENCHING/PATCHING ROADWAYS DETAIL

Date: 04/17
Drawn By: MJF
Checked By: DL
GEN-5

SCHLAGEL & ASSOCIATES, P.A.
Engineers • Planners • Surveyors • Landscape Architects
14920 West 107th Street • Lenexa, Kansas 66215
(913) 492-5158 • Fax: (913) 492-8400
WWW.SCHLAGELASOCIATES.COM
Missouri State Certificates of Authority
#E20020038000-F #LA2001005237 #LS2002008659-F



PERGOLA PARK 4TH PLAT
STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
CONTROL - LEE'S SUMMIT, MISSOURI

REVISION DATE	DESCRIPTION
1. 6-26-19	CITY COMMENTS
2. 7-30-19	CITY COMMENTS
3.	
4.	
5.	
6.	
7.	
8.	

DETAIL SHEET

SHEET

25

28

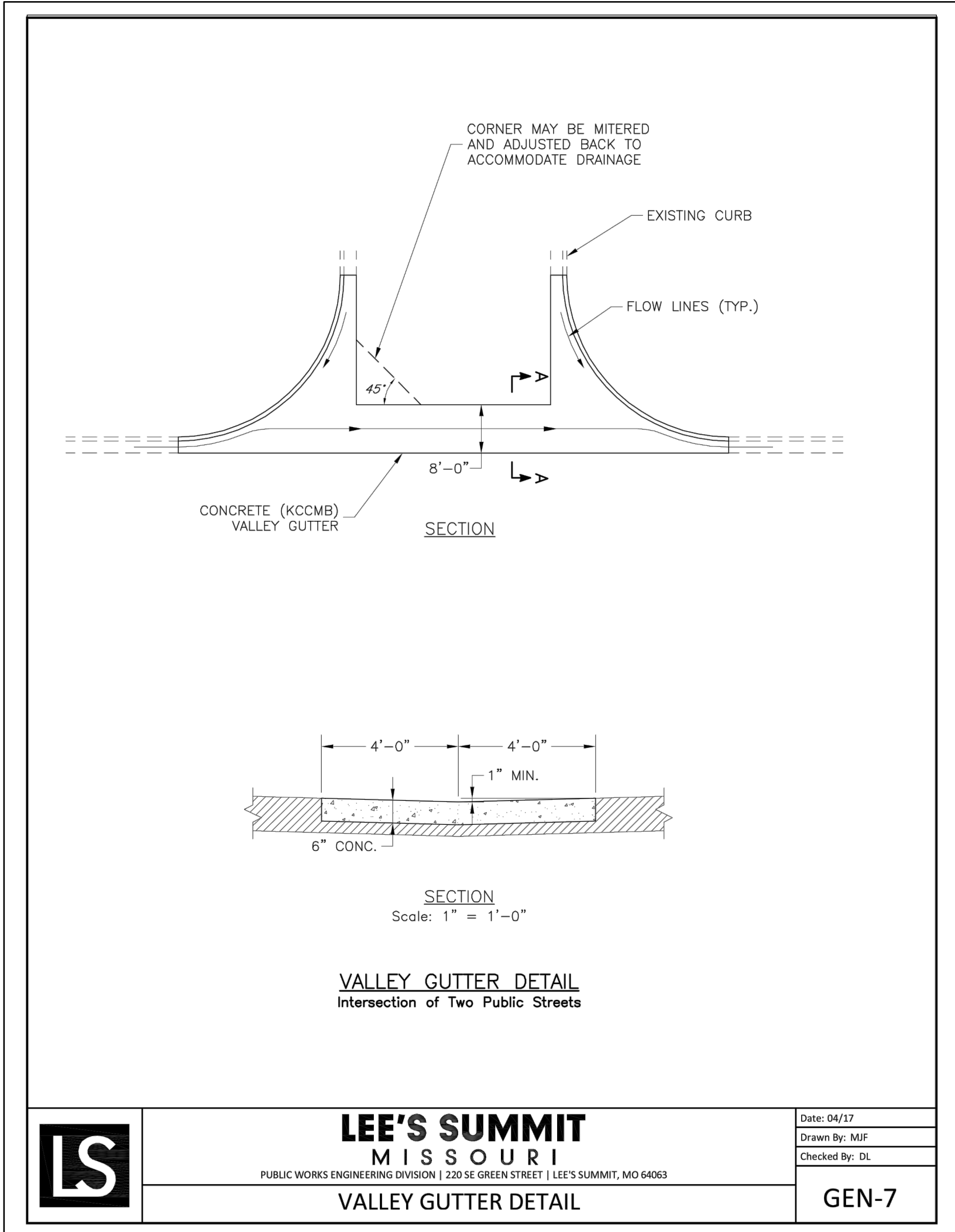
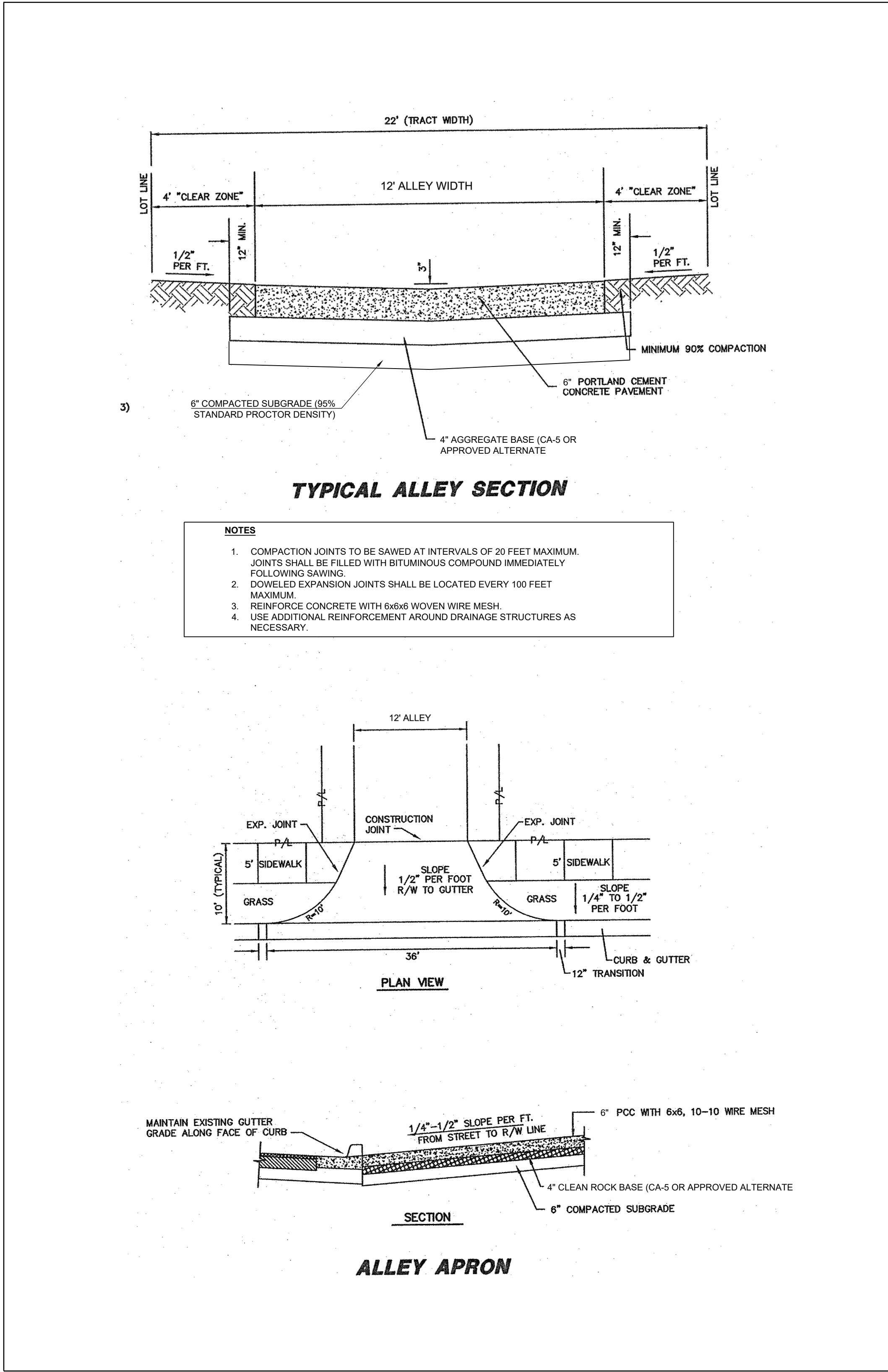
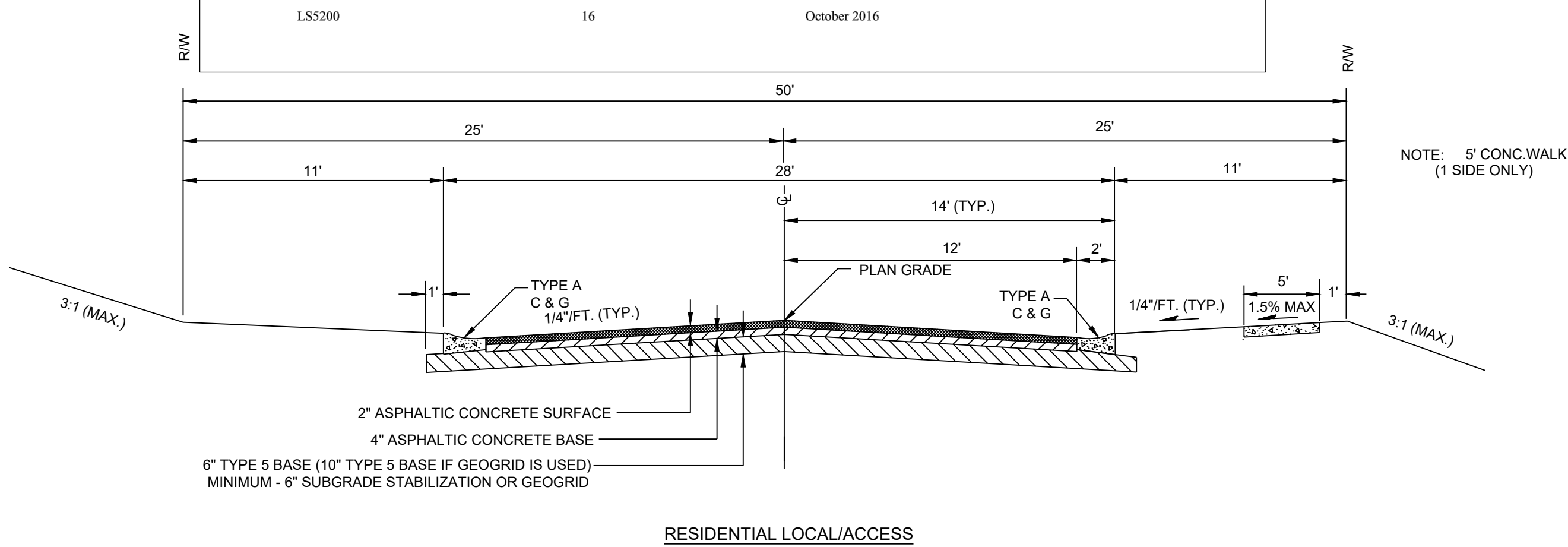


TABLE LS-2: MINIMUM ASPHALT PAVEMENT THICKNESSES						
Street Classification	Pavement Option	AC Surface (in.)	AC Base (in.)	MoDOT Type 5 Base (in.)	Geogrid(1)	Chemical Subgrade Stabilization(2) (in.)
Residential Local/Access	A	2	4	6	--	6
	B	2	4	10	Geogrid	--
Residential Collector	A	2	5.5	6	--	9
	B	2	5.5	12	Geogrid	--
Commercial Industrial Local/Collector	A	2	7.5	6	--	9
	B	2	7.5	12	Geogrid	--

TABLE LS-3: MINIMUM PCC PAVEMENT THICKNESSES			
Street Classification	PCC (in.)	Aggregate Base (in.)	Subgrade Stabilization ⁽¹⁾ (in.)
Residential Local/Access	6	4	--
Residential Collector	6	4	6
Commercial Industrial Local/Collector	8	4	9

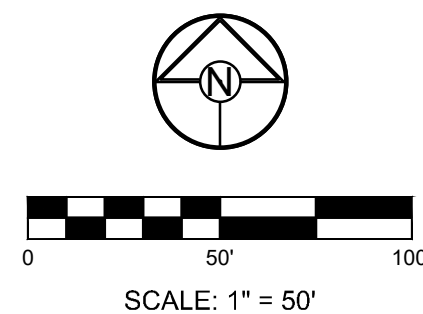
(1) Subgrade Stabilization and 4" aggregate base may be replaced by approved geogrid and 6" of aggregate base



REVISION DATE	DESCRIPTION
1. 6-26-19	CITY COMMENTS
2. 7-30-19	CITY COMMENTS
3. 8-1-19	CITY COMMENTS
4. 8-1-19	CITY COMMENTS
5. 8-1-19	CITY COMMENTS
6. 8-1-19	CITY COMMENTS
7. 8-1-19	CITY COMMENTS
8. 8-1-19	CITY COMMENTS

DRAWN BY:	BAL
CHECKED BY:	MAB
DATE PREPARED:	4-15-19
PROJ. NUMBER:	19-002

DETAIL SHEET



PERGOLA PARK 4TH PLAT
STREET, STORMWATER, MASTER DRAINAGE
PLAN AND EROSION AND SEDIMENT
CONTROL
- LEE'S SUMMIT, MISSOURI

REVISION	DATE	DESCRIPTION
1	6-26-19	CITY COMMENTS
2	7-30-19	CITY COMMENTS
3		
4		
5		
6		
7		
8		
9		

STREET SIGN
PLAN

