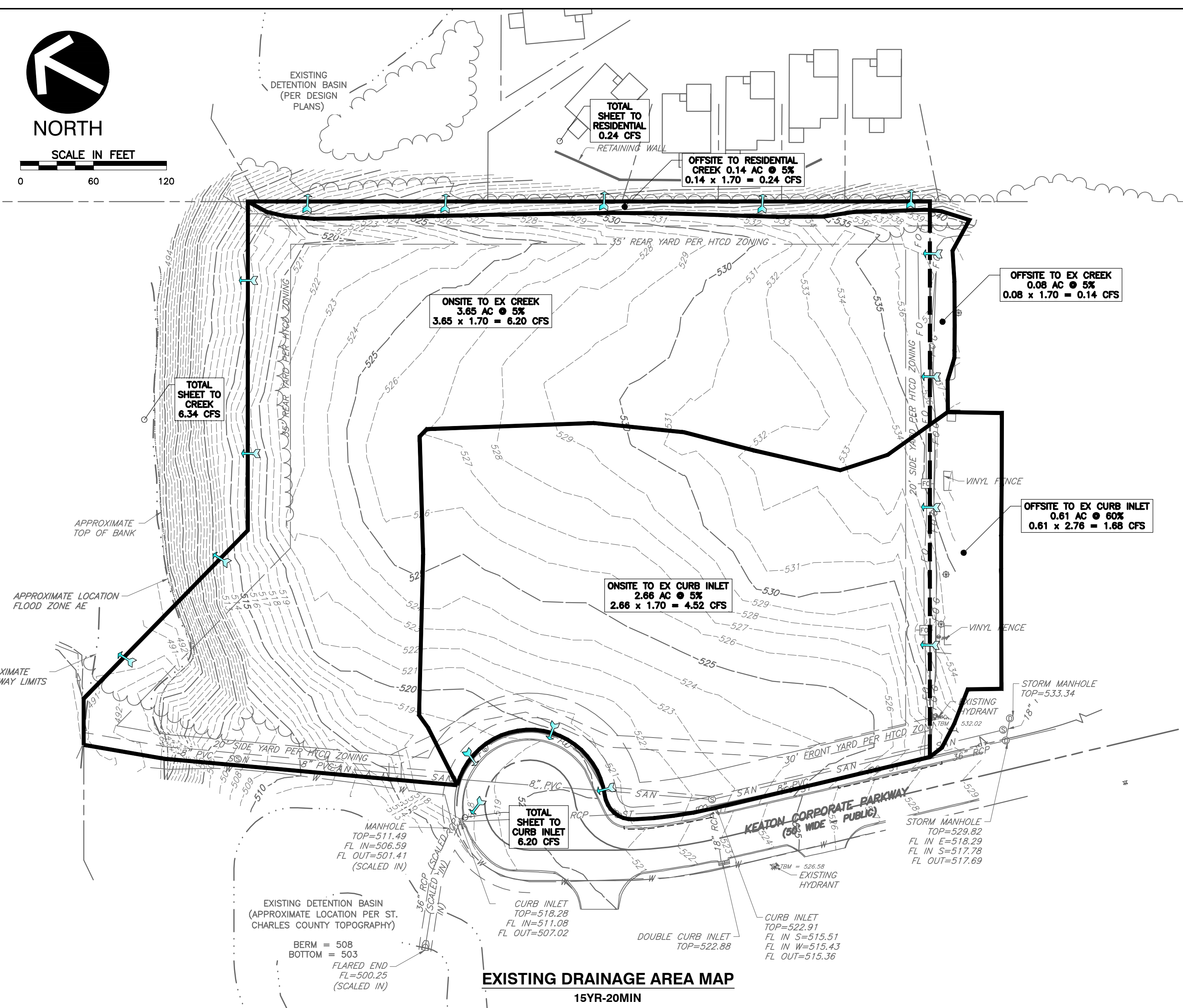
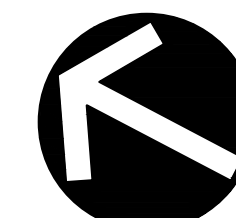


NORTH

SCALE IN FEET
0 60 120

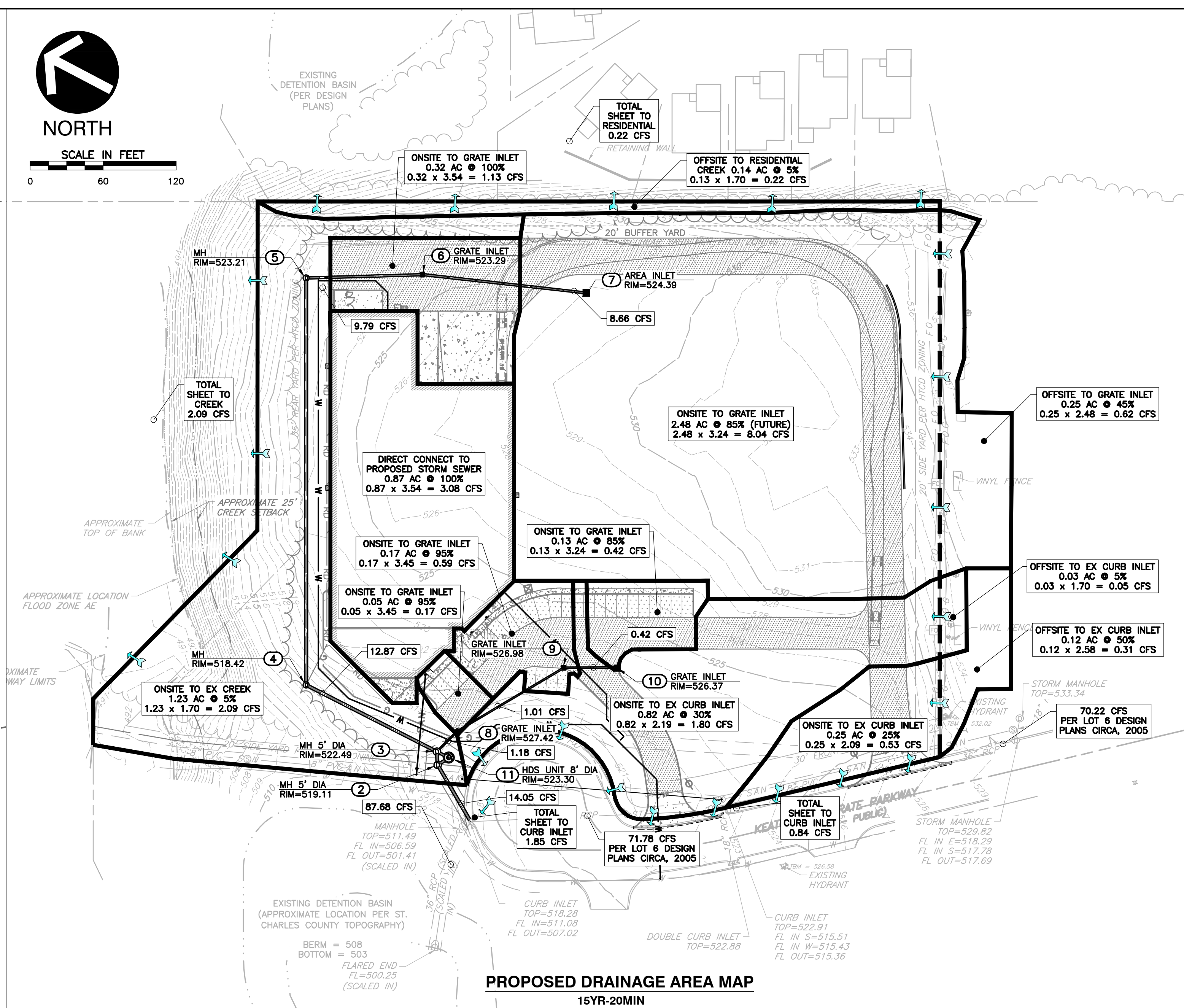


EXISTING DRAINAGE AREA MAP
15YR-20MIN



NORTH

SCALE IN FEET
0 60 120



PROPOSED DRAINAGE AREA MAP
15YR-20MIN

Line No.	Line ID	Line Length (ft)	Line Size (in)	Line Slope (%)	Defl Ang (Deg)	Invert Up (ft)	Invert Dn (ft)	Gnd/Rim El Up (ft)	Gnd/Rim El Dn (ft)	HGL Up (ft)	HGL Dn (ft)	Rim-Hw (ft)	Flow Rate (cfs)	Capac Full (cfs)	Vel Dn (ft/s)	Energy Loss (ft)	Minor Loss (ft)	n-val Pipe
1	EX FE TO EX MH	60.786	36	1.91	-18.912	501.41	500.25	508.12	502.52	504.24	503.25	4.88	87.68	92.13	12.41	0.980	n/a	0.013
2	EX MH TO 1	50.126	36	0.86	15.264	507.02	506.59	518.28	509.12	510.46	509.59	5.81	87.68	61.77	12.41	0.867	2.01	0.013
3	1 to 2	53.731	24	1.00	-54.287	510.49	509.95	519.11	518.28	512.67	512.47	6.28	14.05	22.67	4.47	0.207	0.16	0.013
4	2 to 3	11.024	24	1.00	26.664	512.05	511.94	522.49	519.11	513.40	513.08	9.09	14.05	22.59	7.58	0.000	n/a	0.013
5	3 to 8	23.712	12	8.56	48.563	519.52	517.49	527.42	522.49	519.98	517.72	7.44	1.18	10.42	8.79	0.000	0.05	0.013
6	8 to 9	101.833	12	1.00	14.236	520.74	519.72	526.98	527.42	521.16	520.08	5.82	1.01	3.56	3.90	0.000	0.09	0.013
7	9 to 10	43.110	12	1.00	30.230	521.37	520.94	526.37	526.98	521.64	521.17	4.73	0.42	3.56	3.04	0.000	0.10	0.013
8	3 to 4	120.552	24	1.00	-59.400	512.32	511.11	518.42	522.49	513.65	513.40	4.29	12.87	22.66	4.10	0.514	0.47	0.013
9	4 to 5	334.333	24	1.27	62.963	516.78	512.52	523.21	518.42	517.90	514.13	5.31	9.79	25.53	3.62	0.000	n/a	0.013
10	5 to 6	95.426	18	1.00	88.336	517.93	516.98	523.29	523.21	519.14	518.13	4.15	9.79	10.48	6.74	0.000	0.11	0.013
11	6 to 7	135.639	18	1.00	8.013	519.49	518.13	524.39	523.29	520.63	519.17	3.76	8.66	10.52	6.64	0.000	n/a	0.013
12	2 to 11	10.914	24	1.01	86.869	510.80	510.69	523.30	519.11	515.58	515.54	7.41	14.05	22.71	4.47	0.042	0.31	0.013
13	11 to 3	11.004	24	1.00	-119.606	510.91	510.80	522.49	523.30	515.94	515.89	6.24	14.05	22.62	4.47	0.042	0.31	0.013

15YR-20MIN STORM SEWER HYDRAULICS
(RIM MINUS HIGHWATER DEPTH = RIM-HW = FREEBOARD)

DIFFERENTIAL RUNOFF CALCULATION (15-YEAR/20-MINUTE)				
IMPROVEMENT AREA		AREA (SF)	AREA (AC)	
TOTAL SITE AREA		281,033	6.45	
EXISTING RUNOFF (BACK TO GRASS)		AREA (SF)	AREA (AC)	PI
PERVIOUS		281,033	6.45	1.70
IMPERVIOUS		0	0.00	3.54
TOTAL		281,033	6.45	10.97
PROPOSED RUNOFF		AREA (SF)	AREA (AC)	PI
PERVIOUS		181,435	4.17	1.70
BLDG		37,101	0.85	3.54
PAVEMENT		62,497	1.43	3.54
TOTAL		281,033	6.45	15.17
FUTURE RUNOFF (TOTAL)		AREA (SF)	AREA (AC)	PI
PERVIOUS		102,928	2.36	1.70
BLDG		84,280	1.93	3.54
PAVEMENT		93,825	2.15	3.54
TOTAL		281,033	6.45	18.49
DIFFERENTIAL RUNOFF				
PROPOSED	EXISTING	DIFFERENTIAL (CFS)	FUTURE	FUTURE DIFFERENTIAL (CFS)
15.17	10.97	4.21	18.49	7.52

Line No.	Line ID	Line Length (ft)	Line Size (in)	Line Slope (%)	Defl Ang (Deg)	Invert Up (ft)	Invert Dn (ft)	Gnd/Rim El Up (ft)	Gnd/Rim El Dn (ft)	HGL Up (ft)	HGL Dn (ft)	Rim-Hw (ft)	Flow Rate (cfs)	Capac Full (cfs)	Vel Dn (ft/s)	Energy Loss (ft)	Minor Loss (ft)	n-val Pipe	
1	EX FE TO EX MH	60.786	36	1.91	-18.912	501.41	500.25	508.12	502.52	505.17	503.25	2.60	118.38	92.13	16.75	1.916	1.35	0.013	
2	EX MH TO 1	50.126	36	0.86	15.264	507.02	506.59	518.28	509.12	511.17	509.59	3.45	118.38	61.77	16.75	1.580	3.66	0.013	
3	1 to 2	53.731	24	1.00	-54.287	510.49	509.95	519.11	518.28	515.21	514.83	3.61	18.98	22.67	6.04	0.378	0.28	0.013	
4	2 to 3	11.024	24	1.00	26.664	512.05	511.94	522.49	519.11	515.57	515.50	6.42	18.98	22.59	6.04	0.078	0.50	0.013	
5	3 to 8	23.712	12	8.56	48.563	519.52	517.49	527.42	522.49	522.49	520.06	517.76	7.36	1.80	10.42	9.00	0.000	0.06	0.013
6	8 to 9	101.833	12	1.00	14.236	520.74	519.72	526.98	527.42	521.23	520.15	5.75	1.37	3.56	4.24	0.000	n/a	0.013	
7	9 to 10	43.110	12	1.00	30.230	521.37	520.94	526.37	526.98	521.68	521.23	4.69	0.57	3.56	2.95	0.000	0.11	0.013	
8	3 to 4	120.552	24	1.00	-59.400	512.32	511.11	518.42	522.49	516.79	516.07	1.20	17.38	22.66	5.53	0.712	0.43	0.013	
9	4 to 5	334.333	24	1.27	62.963	516.78	512.52	523.21	518.42	518.31	517.22	4.49	13.22	25.53	4.21	1.225	0.41	0.013	
10	5 to 6	95.426	18	1.00	88.336	517.93	516.98	523.29	523.21	520.23	518.72	2.91	13.22	10.48	7.48	1.513	0.15	0.013	
11	6 to 7	135.639	18	1.00	8.013	519.49	518.13	524.39	523.29	522.06	520.38	1.65	11.69	10.52	6.62	1.081	0.68	0.013	
12	2 to 11	10.914	24	1.01	86.869	510.80	510.69	523.30	519.11	515.62	515.54	7.12	18.97	22.71	6.04	0.677	0.57	0.013	
13	11 to 3	11.004	24	1.00	-119.606	510.91	510.80	522.49	523.30	516.28	516.18	5.66	18.97	22.62	6.04	0.077	0.57	0.013	

100YR-20MIN STORM SEWER HYDRAULICS
(RIM MINUS HIGHWATER DEPTH = RIM-HW = FREEBOARD)

NOTES:
1. REFER TO SHEET C001 FOR GENERAL NOTES AND ABBREVIATIONS.
2. CONTRACTOR SHALL REFER TO OTHER PLANS WITHIN THIS CONSTRUCTION SET FOR OTHER PERTINENT INFORMATION. IT IS NOT THE ENGINEER'S INTENT THAT ANY SINGLE PLAN SHEET IN THIS SET OF DOCUMENTS FULLY DEPICT ALL WORK ASSOCIATED WITH THIS PROJECT.



MISSOURI ONE CALL SYSTEM
811 or 1-800-344-7483
https://www.mo1call.com

SOURCE ONE SOLUTIONS
CONSTRUCTION PLAN
PART OF ADJUSTED LOT 6 OF A
BOUNDARY ADJUSTMENT PLAT THREE
KEATON CORPORATE PARK PLAT THREE
AND THE JAMES KNAUTH TRACT,
ACCORDING TO THE PLAT THEREOF,
RECORDED IN PLAT BOOK 45, PAGE 352,
WITHIN U.S. SURVEY 1669, TOWNSHIP 46
NORTH, RANGE 3 EAST, CITY OF
O'FALLON, ST. CHARLES COUNTY,
MISSOURI

**Civil & Environmental
Consultants, Inc.**
3000 Little Hills Expressway, Suite 102
St. Charles, MO 63301
314-656-4566 - 866-250-3679
www.cecinco.com

JAMES R. PIPER, JR.
PE-2012006797
10/31/2023
JAMES R. PIPER, JR. PE
#PE-2012006797
PROFESSIONAL CIVIL ENGINEER
HAND SIGNATURE ON FILE

DRAWN BY:	JRP
CHECKED BY:	DRK
APPROVED BY:	DRK
PROJECT NO:	381-945

Developer / Owner Information
SOURCE ONE SOLUTIONS
c/o KEYSTONE CONSTRUCTION CO.
633 Spirit Valley Central Drive
Chesterfield, MO 63005

STORMWATER MANAGEMENT

P+Z No. 23-00786
Approval Date 08/03/2023
Permit No.
Page No.
C400
09 OF 18