PICKETT RAY & SILVER

Civil Engineers
Planners
Land Surveyors

333 Mid Rivers Mall Dr.
St. Peters, MO 63376

397-1211

PROJECT NAME Deer Creek Crossing
PROJECT #/JOB ORDER # 95080A
DATE 9/25/98
DESIGNER K. Daniels
PAGE 1 OF

STORMWATER DETENTION CALCULATIONS
15 yr/20 min

① TOTAL AREA OF SITE = 46.0 Ac @ 1.7 = 78.20 CFS
OFFSITE AREA TO SITE = 30.87 Ac (BATES VILLAGE) @ 2.64 = 81.50 CFS

TOTAL 76.87 Ac

25 yr 106.26 CFS TOTAL site 100.63 BATES
100 yr 135.70 CFS TOTAL site 128.73 BATES

② AREA TO BASIN

		15 yr	25 yr	100 yr
OFFSITE RESIDENTIAL	2.09 Ac @ 2.64 =	5.52 CFS	6.81	8.72
ONSITE COMMERCIAL	18.67 Ac @ 3.85 =	48.78 CFS	60.18	77.03
EX BASIN (BATES VILLAGE)	30.87 @ 2.64 =	81.50 CFS	100.69	128.73

TOTAL = 135.80 CFS = 8148. CFM
25 yr 167.05 CFS 10,023.
100 yr 214.58 CFS 12,875

③ BYPASS

17.76 Ac @ 3.85 = 68.38 CFS
25 yr 84.36 CFS
100 yr 107.98 CFS

④ ALLOWABLE RELEASE

78.20 − 68.38 = 9.82 CFS
25 yr 106.28 − 89.36 = 21.92 CFS
100 yr 135.70 − 107.98 = 27.72 CFS

⑤ DETAINABLE AMOUNT

136.93 − 9.82 = 127.11 = 7,626 CFM 15 yr
25 yr 169.04 − 21.92 = 147.12 CFS = 8,827 CFM 25 yr
100 yr 216.28 − 27.72 = 188.156 CFS = 11,313 CFM 100 yr

DEER CREEK CROSSING 11-12-98 SUBMITTAL DATE: 11-12-98

ELEVATION	AREA	VOLUME	CUM. VOLUME
498.00	614		
		32907	32907
500.00	32293		
		84536	117443
502.00	52243		
		111173	228616
504.00	58930		
		62625	291241
505.00	66320		

```
*******************************************
*                                         *
*  RECTANGULAR ORIFICE                    *
*   7 in W X 14 in H   ELEV= 497.9        *
*                                         *
*  Outlet Pipe -  50 ft - 30 in pipe      *
*  UFL= 497.9  LFL= 494.79   n= .013      *
*                                         *
*  Overflow Structure -  Standpipe        *
*  DIAM= 42 in   STANDPIPE ELEV= 504      *
*                                         *
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15yr2

DEER CREEK CROSSING 11-12-98 SUBMITTAL DATE: 11-12-98

MIN	INFLOW	STORAGE	OUTFLOW	NET DET.	ELEV.
1	407.40	407.40	2.88	404.52	498.02
2	814.80	1219.32	4.00	1215.32	498.07
3	1222.20	2437.52	6.60	2430.92	498.15
4	1629.60	4060.52	11.22	4049.30	498.25
5	2037.00	6086.30	18.53	6067.77	498.37
6	2444.40	8512.17	29.21	8482.96	498.52
7	2851.80	11334.76	43.95	11290.81	498.69
8	3259.20	14550.01	63.44	14486.57	498.88
9	3666.60	18153.17	88.35	18064.82	499.10
10	4074.00	22138.82	156.70	21982.12	499.34
11	4481.40	26463.52	184.58	26278.94	499.60
12	4888.80	31167.74	210.96	30956.78	499.88
13	5296.20	36252.98	236.35	36016.63	500.07
14	5703.60	41720.23	252.07	41468.16	500.20
15	6111.00	47579.16	262.09	47317.07	500.34
16	6518.40	53835.47	272.43	53563.04	500.49
17	6925.80	60488.84	283.06	60205.78	500.65
18	7333.20	67539.00	293.95	67245.04	500.81
19	7740.60	74985.65	305.05	74680.60	500.99
20	8148.00	82828.60	316.37	82512.23	501.17
21	7740.60	90252.84	327.86	89924.98	501.35
22	7333.20	97258.18	338.37	96919.80	501.51
23	6925.80	103845.60	348.01	103497.60	501.67
24	6518.40	110016.00	356.83	109659.20	501.82
25	6111.00	115770.20	364.90	115405.30	501.95
26	5703.60	121108.90	372.27	120736.60	502.06
27	5296.20	126032.80	377.99	125654.80	502.15
28	4888.80	130543.60	382.64	130161.00	502.23

32	3259.20	144470.70	396.98	144073.70	502.48
33	2851.80	14692[illegible]50	399.56	[illegible]6526.00	502.52
34	2444.40	148970.40	401.76	148568.60	502.56
35	2037.00	150605.60	403.59	150202.00	502.59
36	1629.60	151831.60	405.04	151426.60	502.61
37	1222.20	152648.80	406.12	152242.60	502.63
38	814.80	153057.40	406.85	152650.60	502.63
39	407.40	153058.00	407.21	152650.80	502.63
40	0.00	152650.80	407.21	152243.60	502.63
41	0.00	152243.60	406.85	151836.80	502.62

PEAK OUTFLOW= 6.79 CFS AT 40 MINUTES

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*****************************************
*                                       *
*  RECTANGULAR ORIFICE                  *
*   7 in W X 14 in H   ELEV= 497.9      *
*                                       *
*  Outlet Pipe -  50 ft - 30 in pipe    *
*  UFL= 497.9  LFL= 494.79   n= .013    *
*                                       *
*  Overflow Structure -  Standpipe      *
*  DIAM= 42 in   STANDPIPE ELEV= 504    *
*                                       *
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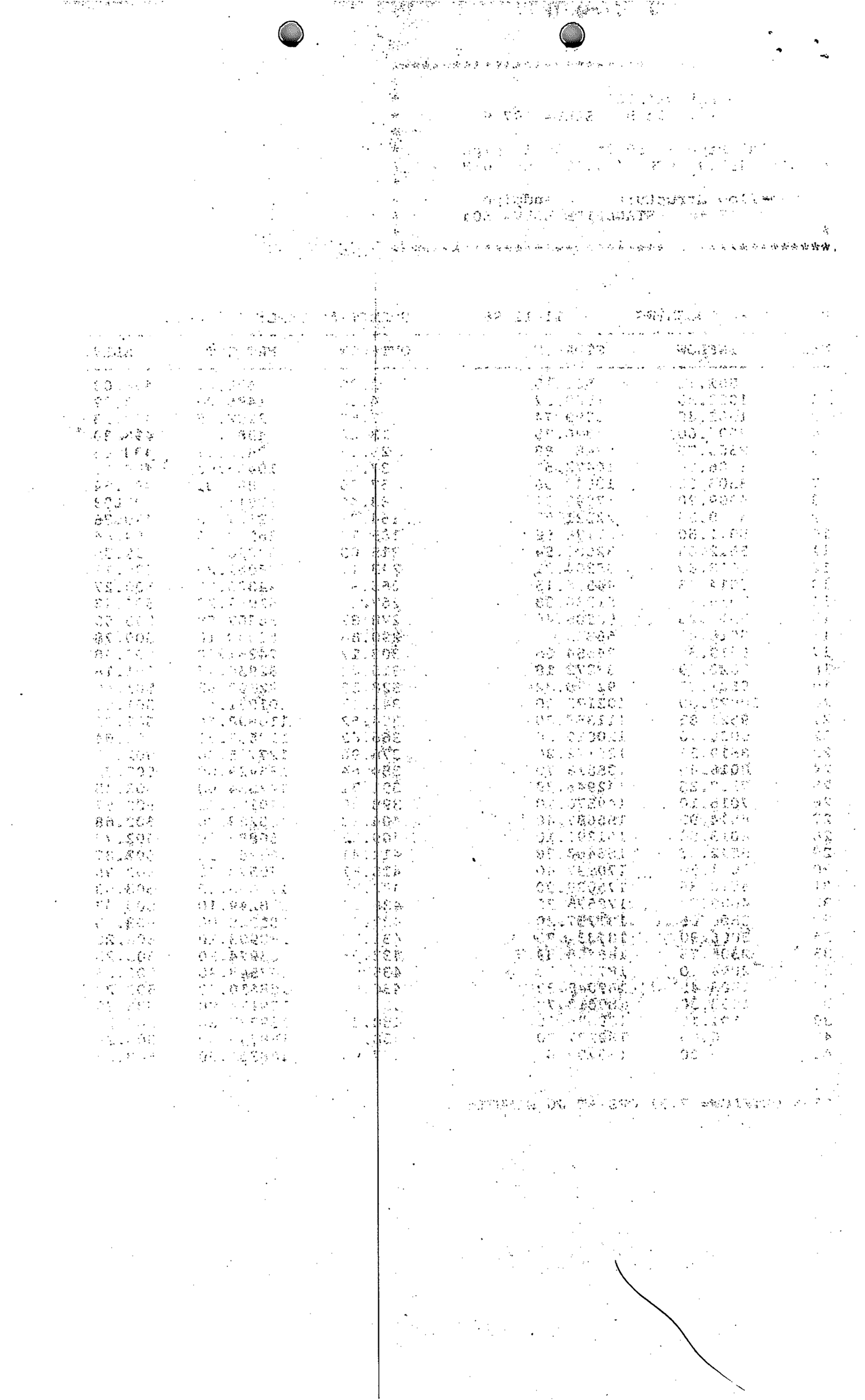
25YR

DEER CREEK CROSSING 11-12-98 SUBMITTAL DATE: 11-12-98

MIN	INFLOW	STORAGE	OUTFLOW	NET DET.	ELEV.
1	501.15	501.15	2.88	498.27	498.03
2	1002.30	1500.57	4.28	1496.29	498.09
3	1503.45	2999.74	7.59	2992.15	498.18
4	2004.60	4996.75	13.62	4983.13	498.30
5	2505.75	7488.88	23.27	7465.61	498.45
6	3006.90	10472.51	37.50	10435.01	498.63
7	3508.05	13943.06	57.25	13885.81	498.84
8	4009.20	17895.01	83.46	17811.56	499.08
9	4510.35	22321.91	154.73	22167.18	499.35
10	5011.50	27178.68	185.79	26992.89	499.64
11	5512.65	32505.54	215.03	32290.51	499.96
12	6013.80	38304.31	243.11	38061.20	500.12
13	6514.95	44576.15	255.87	44320.28	500.27
14	7016.10	51336.38	267.18	51069.20	500.43
15	7517.25	58586.45	278.87	58307.58	500.60
16	8018.40	66325.98	290.88	66035.10	500.78
17	8519.55	74554.65	303.17	74251.48	500.98
18	9020.70	83272.18	315.72	82956.46	501.18
19	9521.85	92478.32	328.50	92149.82	501.40
20	10023.00	102172.80	341.47	101831.40	501.63
21	9521.85	111353.20	354.62	110998.60	501.85
22	9020.70	120019.30	366.63	119652.70	502.04
23	8519.55	128172.20	376.96	127795.30	502.19
24	8018.40	135813.70	384.64	135429.00	502.32
25	7517.25	142946.30	391.71	142554.60	502.45
26	7016.10	149570.70	398.20	149172.50	502.57
27	6514.95	155687.40	404.12	155283.30	502.68
28	6013.80	161297.10	409.52	160887.60	502.78
29	5512.65	166400.30	414.41	165985.90	502.87
30	5011.50	170997.40	418.81	170578.50	502.96
31	4510.35	175088.90	422.73	174666.10	503.03
32	4009.20	178675.30	426.19	178249.10	503.09
33	3508.05	181757.20	429.20	181328.00	503.15
34	3006.90	184334.90	431.78	183903.10	503.20
35	2505.75	186408.80	433.91	185974.90	503.23
36	2004.60	187979.50	435.63	187543.90	503.26
37	1503.45	189047.30	436.92	188610.40	503.28
38	1002.30	189612.70	437.80	189174.90	503.29
39	501.15	189676.10	438.26	189237.80	503.29
40	0.00	189237.80	438.31	188799.50	503.28
41	0.00	188799.50	437.95	188361.50	503.28

PEAK OUTFLOW= 7.31 CFS AT 40 MINUTES



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*                                       *
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*  UFL= 497.9  LFL= 494.79   n= .013    *
*                                       *
*  Overflow Structure -  Standpipe      *
*  DIAM= 42 in   STANDPIPE ELEV= 504    *
*                                       *
*****************************************
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100YR

DEER CREEK CROSSING 11-12-98 SUBMITTAL DATE: 11-12-98

MIN	INFLOW	STORAGE	OUTFLOW	NET DET.	ELEV.
1	643.75	643.75	2.88	640.87	498.04
2	1287.50	1928.37	4.71	1923.66	498.12
3	1931.25	3854.91	9.19	3845.72	498.23
4	2575.00	6420.72	17.55	6403.18	498.39
5	3218.75	9621.93	31.13	9590.80	498.58
6	3862.50	13453.30	51.36	13401.94	498.81
7	4506.25	17908.19	79.59	17828.60	499.08
8	5150.00	22978.60	154.87	22823.74	499.39
9	5793.75	28617.49	190.03	28427.46	499.73
10	6437.50	34864.96	222.98	34641.98	500.04
11	7081.25	41723.23	249.48	41473.76	500.20
12	7725.00	49198.76	262.10	48936.66	500.38
13	8368.75	57305.41	275.23	57030.18	500.57
14	9012.50	66042.68	288.79	65753.88	500.78
15	9656.25	75410.13	302.73	75107.40	501.00
16	10300.00	85407.40	317.00	85090.40	501.23
17	10943.75	96034.16	331.55	95702.60	501.49
18	11587.50	107290.10	346.35	106943.80	501.75
19	12231.25	119175.00	361.37	118813.60	502.02
20	12875.00	131688.60	376.16	131312.50	502.25
21	12231.25	143543.70	387.92	143155.80	502.46
22	11587.50	154743.30	398.74	154344.60	502.66
23	10943.75	165288.30	408.70	164879.60	502.85
24	10300.00	175179.60	417.86	174761.80	503.03
25	9656.25	184418.00	426.27	183991.70	503.20
26	9012.50	193004.20	433.99	192570.20	503.35
27	8368.75	200939.00	441.03	200498.00	503.49
28	7725.00	208223.00	447.45	207775.50	503.63
29	7081.25	214856.80	453.26	214403.50	503.74
30	6437.50	220841.00	458.48	220382.50	503.85
31	5793.75	226176.30	463.14	225713.10	503.95
32	5150.00	230863.10	467.26	230395.90	504.03
33	4506.25	234902.10	479.23	234422.90	504.09
34	3862.50	238285.40	523.70	237761.70	504.15
35	3218.75	240980.50	575.80	240404.70	504.19
36	2575.00	242979.70	626.46	242353.20	504.22
37	1931.25	244284.50	666.21	243618.20	504.24
38	1287.50	244905.70	693.54	244212.20	504.25
39	643.75	244855.90	706.78	244149.10	504.25
40	0.00	244149.10	705.36	243443.80	504.24

PEAK OUTFLOW= 11.78 CFS AT 39 MINUTES

PICKETT RAY & SILVER
333 MID RIVERS MALL DR.
ST. PETERS,MO 63376
PHONE 314-397-1211

95080 DEER CREEK HYDRAULIC DATA 11-12-1998 12:15:31

LINE UPPER	LINE LOWER	LEN	SIZE	MANNING'S N	UPPER FLOW LN	LOWER FLOW LN	F.L. GRADE	UPPER ST ELEV	LOWER ST ELEV	DP TO HY GR	UPPER HY ELEV	LOWER HY ELEV	HYDR. GRADE	FRICT. HEAD	VELOC. FT/SEC	V^2/2g FEET	V^2/2g V HEAD	TURN LOSS	AREA ACRES	P.I.	QUANT CFS	T.Q.	P. CAP CFS
CI2-2	FE2-1	27	24	.013	498.58	498.50	.0029	506.10	500.50	3.26	502.67	502.63	.0006	0.02	1.72	0.05	0.02	0.00	0.61	3.8	2.3	5.4	12.3
CI2-3	CI2-2	363	21	.013	499.67	498.58	.0030	504.50	506.10	1.66	502.84	502.68	.0004	0.13	1.26	0.02	0.02	0.02	0.79	3.8	3.0	3.0	8.7
DCI2-11	FE2-10	42	30	.013	490.65	489.80	.0200	502.00	492.30	7.96	493.60	492.30	.0158	0.67	10.51	1.72	0.63	0.00	1.54	3.8	5.9	51.6	58.0
CI2-12	DCI2-11	56	30	.013	491.76	490.65	.0199	502.89	502.00	7.62	494.60	494.04	.0100	0.56	8.36	1.09	0.00	0.44	1.02	3.8	3.9	41.0	57.9
CI2-13	CI2-12	127	27	.013	494.30	491.76	.0200	503.50	502.89	5.71	497.44	495.27	.0144	1.83	9.33	1.35	0.35	0.67	1.32	3.8	5.1	37.1	43.8
GI2-14	CI2-13	67	27	.013	495.65	494.30	.0200	503.36	503.50	4.44	498.51	497.79	.0107	0.72	8.06	1.01	0.00	0.35	1.20	3.8	4.6	32.0	43.8
GI2-15	GI2-14	131	24	.013	498.26	495.65	.0200	504.28	503.36	3.35	500.84	498.92	.0147	1.92	8.73	1.18	0.00	0.41	1.17	3.8	4.5	27.4	32.0
GI2-16	GI2-15	121	21	.013	500.68	498.26	.0200	506.80	504.28	2.78	503.96	500.93	.0209	2.52	9.52	1.41	0.51	0.09	1.20	3.8	4.6	22.9	22.4
DGI2-17	GI2-16	121	21	.013	503.10	500.68	.0200	509.50	506.80	3.59	505.90	504.02	.0133	1.61	7.60	0.90	0.26	0.05	1.82	3.8	7.0	18.3	22.4
GI2-17A	DGI2-17	60	18	.013	504.31	503.10	.0200	511.60	509.50	4.87	506.73	505.91	.0115	0.70	6.38	0.63	0.12	0.02	1.10	3.8	4.2	11.3	14.9
GI2-18	GI2-17A	60	15	.013	505.50	504.31	.0199	512.50	511.60	4.90	507.60	506.73	.0119	0.71	5.74	0.51	0.16	0.00	0.86	3.8	3.3	7.0	9.1
GI2-19	GI2-18	120	12	.013	507.90	505.50	.0200	514.35	512.50	5.08	509.27	507.60	.0110	1.32	4.75	0.35	0.35	0.00	0.97	3.8	3.7	3.7	5.0
DCI2-5	FE2-4	92	60	.013															0.87	3.8			
					498.40	498.17	.0025	505.3	503.17	1.56	503.45	503.17	.0025	0.23	6.64	0.69	0.05	0.00	0.56	2.6	4.8	130.4	130.2
DCI2-5A	DCI2-5	341	60	.013															2.92	3.8			
					499.25	498.40	.0025	509.4	505.3	4.87	504.53	503.74	.0023	0.79	6.40	0.64	0.00	0.29	0.08	2.6	11.5	125.6	130.0
DCI28	DCI2-5A	297	48	.013															1.19	2.6			
					502.84	500.60	.0075	509.62	509.4	1.96	507.60	504.53	.0063	1.87	9.08	1.28	1.20	0.00	30.87	2.6	84.6	114.1	124.7
DCI2-6	DCI28	33	48	.013	502.92	502.84	.0024	509.3	509.62	1.16	507.67	507.66	.0004	0.01	2.35	0.09	0.00	0.06	2.20	3.8	8.5	29.5	70.8
DCI2-7	DCI2-6	330	24	.013															1.25	3.8			
					507.20	502.92	.0130	516.70	509.3	5.64	511.06	508.14	.0086	2.85	6.69	0.70	0.07	0.47	0.30	2.6	5.6	21.0	25.8
CI2-8	DCI2-7	405	21	.013	512.06	507.20	.0120	518.70	516.70	3.25	515.43	511.06	.0093	3.77	6.36	0.63	0.60	0.00	3.68	3.8	14.2	15.3	17.4
AI2-9	CI2-8	47	12	.013	517.67	512.06	.1201	533.50	518.70	15.63	517.87	515.45	.0010	0.05	1.45	0.03	0.03	0.02	0.43	2.6	1.1	1.1	12.3
GI2-21	DCI2-7	108	12	.013	511.53	507.20	.0400	518.80	516.70	7.18	511.62	511.06	.0000	0.00	0.15	0.00	0.00	0.00	0.03	3.8	0.1	0.1	7.1
CI2-20	DCI2-11	216	12	.013	497.13	494.97	.0100	503.50	502.00	3.36	500.14	495.97	.0168	3.63	5.88	0.54	0.54	0.38	1.20	3.8	4.6	4.6	3.6

PICKETT RAY & SILVER

Civil Engineers
Planners
Land Surveyors

333 Mid Rivers Mall Dr.
St. Peters, MO 63376

397-1211

PROJECT NAME Deer Creek Crossing
PROJECT #/JOB ORDER # 95080A
DATE 9/25/98
DESIGNER K. Daniels
PAGE 1 OF

Stormwater Detention Calculations
15yr/20min

(1) Total Area of site = 46.0 Ac @ 1.7 = 78.20 CFS
Offsite Area to Site = 30.87 Ac (Bates Village) @ 2.64 = 81.50 CFS

Total 76.87 Ac 25yr 106.26 CFS Total site 100.63 Bates
100yr 135.70 CFS Total site 128.73 Bates

(2) Area to Basin

		15yr	25yr	100yr
Offsite Residential	2.09 Ac @ 2.64 =	5.52 CFS	6.81	8.72
Onsite Commiercial	12.67 Ac @ 3.85 =	48.78 CFS	60.18	77.03
Ex Basin (Bates Village)	30.87 @ 2.64 =	81.50 CFS	100.69	128.73

Total = 135.80 CFS = 8148. CFM
25yr 167.05 CFS 10,023.
100yr 214.58 CFS 12,875

(3) Bypass

17.76 Ac @ 3.85 = 68.38 CFS

25yr 84.36 CFS
100yr 107.98 CFS

(4) Allowable Release

78.20 − 68.38 = 9.82 CFS
25yr 106.28 − 89.36 = 21.92 CFS
100yr 135.70 − 107.98 = 27.72 CFS

(5) Detainable Amount

136.93 − 9.82 = 127.11 = 7,626 CFM 15yr
25yr 169.04 − 21.92 = 147.12 CFS = 8,827 CFM 25yr
100yr 216.28 − 27.72 = 188.56 CFS = 11,313 CFM 100yr

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502.00	52243		
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		62625	291241
505.00	66320		

```
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*   7 in W X 14 in H   ELEV= 497.9        *
*                                         *
*  Outlet Pipe -  50 ft - 30 in pipe      *
*  UFL= 497.9  LFL= 494.79   n= .013      *
*                                         *
*  Overflow Structure -  Standpipe        *
*  DIAM= 42 in   STANDPIPE ELEV= 504      *
*                                         *
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```

15 yr 12.

DEER CREEK CROSSING 11-12-98 SUBMITTAL DATE: 11-12-98

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1	407.40	407.40	2.88	404.52	498.02
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3	1222.20	2437.52	6.60	2430.92	498.15
4	1629.60	4060.52	11.22	4049.30	498.25
5	2037.00	6086.30	18.53	6067.77	498.37
6	2444.40	8512.17	29.21	8482.96	498.52
7	2851.80	11334.76	43.95	11290.81	498.69
8	3259.20	14550.01	63.44	14486.57	498.88
9	3666.60	18153.17	88.35	18064.82	499.10
10	4074.00	22138.82	156.70	21982.12	499.34
11	4481.40	26463.52	184.58	26278.94	499.60
12	4888.80	31167.74	210.96	30956.78	499.88
13	5296.20	36252.98	236.35	36016.63	500.07
14	5703.60	41720.23	252.07	41468.16	500.20
15	6111.00	47579.16	262.09	47317.07	500.34
16	6518.40	53835.47	272.43	53563.04	500.49
17	6925.80	60488.84	283.06	60205.78	500.65
18	7333.20	67539.00	293.95	67245.04	500.81
19	7740.60	74985.65	305.05	74680.60	500.99
20	8148.00	82828.60	316.37	82512.23	501.17
21	7740.60	90252.84	327.86	89924.98	501.35
22	7333.20	97258.18	338.37	96919.80	501.51
23	6925.80	103845.60	348.01	103497.60	501.67
24	6518.40	110016.00	356.83	109659.20	501.82
25	6111.00	115770.20	364.90	115405.30	501.95
26	5703.60	121108.90	372.27	120736.60	502.06
27	5296.20	126032.80	377.99	125654.80	502.15
28	4888.80	130543.60	382.64	130161.00	502.23

32	3259.20	144470.70	396.98	144073.70	502.48
33	2851.80	14697[illegible]50	399.56	[illegible]46526.00	502.52
34	2444.40	14897[illegible].40	401.76	148568.60	502.56
35	2037.00	150605.60	403.59	150202.00	502.59
36	1629.60	151831.60	405.04	151426.60	502.61
37	1222.20	152648.80	406.12	152242.60	502.63
38	814.80	153057.40	406.85	152650.60	502.63
39	407.40	153058.00	407.21	152650.80	502.63
40	0.00	152650.80	407.21	152243.60	502.63
41	0.00	152243.60	406.85	151836.80	502.62

PEAK OUTFLOW= 6.79 CFS AT 40 MINUTES

```
*****************************************
*                                       *
*  RECTANGULAR ORIFICE                  *
*   7 in W X 14 in H   ELEV= 497.9      *
*                                       *
*  Outlet Pipe -  50 ft - 30 in pipe    *
*  UFL= 497.9  LFL= 494.79   n= .013    *
*                                       *
*  Overflow Structure -  Standpipe      *
*  DIAM= 42 in   STANDPIPE ELEV= 504    *
*                                       *
*****************************************
```

25YR

DEER CREEK CROSSING 11-12-98 SUBMITTAL DATE: 11-12-98

MIN	INFLOW	STORAGE	OUTFLOW	NET DET.	ELEV.
1	501.15	501.15	2.88	498.27	498.03
2	1002.30	1500.57	4.28	1496.29	498.09
3	1503.45	2999.74	7.59	2992.15	498.18
4	2004.60	4996.75	13.62	4983.13	498.30
5	2505.75	7488.88	23.27	7465.61	498.45
6	3006.90	10472.51	37.50	10435.01	498.63
7	3508.05	13943.06	57.25	13885.81	498.84
8	4009.20	17895.01	83.46	17811.56	499.08
9	4510.35	22321.91	154.73	22167.18	499.35
10	5011.50	27178.68	185.79	26992.89	499.64
11	5512.65	32505.54	215.03	32290.51	499.96
12	6013.80	38304.31	243.11	38061.20	500.12
13	6514.95	44576.15	255.87	44320.28	500.27
14	7016.10	51336.38	267.18	51069.20	500.43
15	7517.25	58586.45	278.87	58307.58	500.60
16	8018.40	66325.98	290.88	66035.10	500.78
17	8519.55	74554.65	303.17	74251.48	500.98
18	9020.70	83272.18	315.72	82956.46	501.18
19	9521.85	92478.32	328.50	92149.82	501.40
20	10023.00	102172.80	341.47	101831.40	501.63
21	9521.85	111353.20	354.62	110998.60	501.85
22	9020.70	120019.30	366.63	119652.70	502.04
23	8519.55	128172.20	376.96	127795.30	502.19
24	8018.40	135813.70	384.64	135429.00	502.32
25	7517.25	142946.30	391.71	142554.60	502.45
26	7016.10	149570.70	398.20	149172.50	502.57
27	6514.95	155687.40	404.12	155283.30	502.68
28	6013.80	161297.10	409.52	160887.60	502.78
29	5512.65	166400.30	414.41	165985.90	502.87
30	5011.50	170997.40	418.81	170578.50	502.96
31	4510.35	175088.90	422.73	174666.10	503.03
32	4009.20	178675.30	426.19	178249.10	503.09
33	3508.05	181757.20	429.20	181328.00	503.15
34	3006.90	184334.90	431.78	183903.10	503.20
35	2505.75	186408.80	433.91	185974.90	503.23
36	2004.60	187979.50	435.63	187543.90	503.26
37	1503.45	189047.30	436.92	188610.40	503.28
38	1002.30	189612.70	437.80	189174.90	503.29
39	501.15	189676.10	438.26	189237.80	503.29
40	0.00	189237.80	438.31	188799.50	503.28
41	0.00	188799.50	437.95	188361.50	503.28

PEAK OUTFLOW= 7.31 CFS AT 40 MINUTES

```
*****************************************
*                                       *
*  RECTANGULAR ORIFICE                  *
*   7 in W X 14 in H   ELEV= 497.9      *
*                                       *
*  Outlet Pipe -  50 ft - 30 in pipe    *
*  UFL= 497.9  LFL= 494.79   n= .013    *
*                                       *
*  Overflow Structure -  Standpipe      *
*  DIAM= 42 in   STANDPIPE ELEV= 504    *
*                                       *
*****************************************
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100YR

DEER CREEK CROSSING 11-12-98 SUBMITTAL DATE: 11-12-98

MIN	INFLOW	STORAGE	OUTFLOW	NET DET.	ELEV.
1	643.75	643.75	2.88	640.87	498.04
2	1287.50	1928.37	4.71	1923.66	498.12
3	1931.25	3854.91	9.19	3845.72	498.23
4	2575.00	6420.72	17.55	6403.18	498.39
5	3218.75	9621.93	31.13	9590.80	498.58
6	3862.50	13453.30	51.36	13401.94	498.81
7	4506.25	17908.19	79.59	17828.60	499.08
8	5150.00	22978.60	154.87	22823.74	499.39
9	5793.75	28617.49	190.03	28427.46	499.73
10	6437.50	34864.96	222.98	34641.98	500.04
11	7081.25	41723.23	249.48	41473.76	500.20
12	7725.00	49198.76	262.10	48936.66	500.38
13	8368.75	57305.41	275.23	57030.18	500.57
14	9012.50	66042.68	288.79	65753.88	500.78
15	9656.25	75410.13	302.73	75107.40	501.00
16	10300.00	85407.40	317.00	85090.40	501.23
17	10943.75	96034.16	331.55	95702.60	501.49
18	11587.50	107290.10	346.35	106943.80	501.75
19	12231.25	119175.00	361.37	118813.60	502.02
20	12875.00	131688.60	376.16	131312.50	502.25
21	12231.25	143543.70	387.92	143155.80	502.46
22	11587.50	154743.30	398.74	154344.60	502.66
23	10943.75	165288.30	408.70	164879.60	502.85
24	10300.00	175179.60	417.86	174761.80	503.03
25	9656.25	184418.00	426.27	183991.70	503.20
26	9012.50	193004.20	433.99	192570.20	503.35
27	8368.75	200939.00	441.03	200498.00	503.49
28	7725.00	208223.00	447.45	207775.50	503.63
29	7081.25	214856.80	453.26	214403.50	503.74
30	6437.50	220841.00	458.48	220382.50	503.85
31	5793.75	226176.30	463.14	225713.10	503.95
32	5150.00	230863.10	467.26	230395.90	504.03
33	4506.25	234902.10	479.23	234422.90	504.09
34	3862.50	238285.40	523.70	237761.70	504.15
35	3218.75	240980.50	575.80	240404.70	504.19
36	2575.00	242979.70	626.46	242353.20	504.22
37	1931.25	244284.50	666.21	243618.20	504.24
38	1287.50	244905.70	693.54	244212.20	504.25
39	643.75	244855.90	706.78	244149.10	504.25
40	0.00	244149.10	705.36	243443.80	504.24

PEAK OUTFLOW= 11.78 CFS AT 39 MINUTES

PICKETT RAY & SILVER
333 MID RIVERS MALL DR.
ST. PETERS,MO 63376
PHONE 314-397-1211

95080 DEER CREEK — HYDRAULIC DATA — 11-12-1998 12:15:31

LINE UPPER	LINE LOWER	LEN	SIZE	MANNING'S N	UPPER FLOW LN	LOWER FLOW LN	F.L. GRADE	UPPER ST ELEV	LOWER ST ELEV	DP TO HY GR	UPPER HY ELEV	LOWER HY ELEV	HYDR. GRADE	FRICT. HEAD	VELOC. FT/SEC	V^2/2g FEET	V^2/2g V HEAD	TURN LOSS	AREA ACRES	P.I.	QUANT CFS	T.Q.	P. CAP CFS
CI2-2	FE2-1	27	24	.013	498.58	498.50	.0029	506.10	500.50	3.26	502.67	502.63	.0006	0.02	1.72	0.05	0.02	0.00	0.61	3.8	2.3	5.4	12.3
CI2-3	CI2-2	363	21	.013	499.67	498.58	.0030	504.50	506.10	1.66	502.84	502.68	.0004	0.13	1.26	0.02	0.02	0.02	0.79	3.8	3.0	3.0	8.7
DCI2-11	FE2-10	42	30	.013	490.65	489.80	.0200	502.00	492.30	7.96	493.60	492.30	.0158	0.67	10.51	1.72	0.63	0.00	1.54	3.8	5.9	51.6	58.0
CI2-12	DCI2-11	56	30	.013	491.76	490.65	.0199	502.89	502.00	7.62	494.60	494.04	.0100	0.56	8.36	1.09	0.00	0.44	1.02	3.8	3.9	41.0	57.9
CI2-13	CI2-12	127	27	.013	494.30	491.76	.0200	503.50	502.89	5.71	497.44	495.27	.0144	1.83	9.33	1.35	0.35	0.67	1.32	3.8	5.1	37.1	43.8
GI2-14	CI2-13	67	27	.013	495.65	494.30	.0200	503.36	503.50	4.44	498.51	497.79	.0107	0.72	8.06	1.01	0.00	0.35	1.20	3.8	4.6	32.0	43.8
GI2-15	GI2-14	131	24	.013	498.26	495.65	.0200	504.28	503.36	3.35	500.84	498.92	.0147	1.92	8.73	1.18	0.00	0.41	1.17	3.8	4.5	27.4	32.0
GI2-16	GI2-15	121	21	.013	500.68	498.26	.0200	506.80	504.28	2.78	503.96	500.93	.0209	2.52	9.52	1.41	0.51	0.09	1.20	3.8	4.6	22.9	22.4
DGI2-17	GI2-16	121	21	.013	503.10	500.68	.0200	509.50	506.80	3.59	505.90	504.02	.0133	1.61	7.60	0.90	0.26	0.05	1.82	3.8	7.0	18.3	22.4
GI2-17A	DGI2-17	60	18	.013	504.31	503.10	.0200	511.60	509.50	4.87	506.73	505.91	.0115	0.70	6.38	0.63	0.12	0.02	1.10	3.8	4.2	11.3	14.9
GI2-18	GI2-17A	60	15	.013	505.50	504.31	.0199	512.50	511.60	4.90	507.60	506.73	.0119	0.71	5.74	0.51	0.16	0.00	0.86	3.8	3.3	7.0	9.1
GI2-19	GI2-18	120	12	.013	507.90	505.50	.0200	514.35	512.50	5.08	509.27	507.60	.0110	1.32	4.75	0.35	0.35	0.00	0.97	3.8	3.7	3.7	5.0
DCI2-5	FE2-4	92	60	.013	498.40	498.17	.0025	505.3	503.17	1.56	503.45	503.17	.0025	0.23	6.64	0.69	0.05	0.00	0.87 0.56	3.8 2.6	4.8	130.4	130.2
DCI2-5A	DCI2-5	341	60	.013	499.25	498.40	.0025	509.4	505.3	4.87	504.53	503.74	.0023	0.79	6.40	0.64	0.00	0.29	2.92 0.08	3.8 2.6	11.5	125.6	130.0
DCI28	DCI2-5A	297	48	.013	502.84	500.60	.0075	509.62	509.4	1.96	507.60	504.53	.0063	1.87	9.08	1.28	1.20	0.00	1.19 30.87	2.6 2.6	84.6	114.1	124.7
DCI2-6	DCI28	33	48	.013	502.92	502.84	.0024	509.3	509.62	1.16	507.67	507.66	.0004	0.01	2.35	0.09	0.00	0.06	2.20	3.8	8.5	29.5	70.8
DCI2-7	DCI2-6	330	24	.013	507.20	502.92	.0130	516.70	509.3	5.64	511.06	508.14	.0086	2.85	6.69	0.70	0.07	0.47	1.25 0.30	3.8 2.6	5.6	21.0	25.8
CI2-8	DCI2-7	405	21	.013	512.06	507.20	.0120	518.70	516.70	3.25	515.43	511.06	.0093	3.77	6.36	0.63	0.60	0.00	3.68	3.8	14.2	15.3	17.4
AI2-9	CI2-8	47	12	.013	517.67	512.06	.1201	533.50	518.70	15.63	517.87	515.45	.0010	0.05	1.45	0.03	0.03	0.02	0.43	2.6	1.1	1.1	12.3
GI2-21	DCI2-7	108	12	.013	511.53	507.20	.0400	518.80	516.70	7.18	511.62	511.06	.0000	0.00	0.15	0.00	0.00	0.00	0.03	3.8	0.1	0.1	7.1
CI2-20	DCI2-11	216	12	.013	497.13	494.97	.0100	503.50	502.00	3.36	500.14	495.97	.0168	3.63	5.88	0.54	0.54	0.38	1.20	3.8	4.6	4.6	3.6

PICKETT RAY & SILVER
Civil Engineers
Planners
Land Surveyors
333 Mid Rivers Mall Dr.
St. Peters, MO 63376
397-1211

PROJECT NAME Deer Creek Crossing
PROJECT #/JOB ORDER # 95080A
DATE 9/25/98
DESIGNER K. Daniels
PAGE 1 OF

STORMWATER DETENTION CALCULATIONS
15yr/20min

Pre-developed

① TOTAL AREA OF SITE = 96.0 Ac @ 1.7 = 78.20 CFS
OFFSITE AREA TO SITE = 30.87 Ac (BATES VILLAGE) @ 2.64 = 81.50 CFS
TOTAL 76.87 Ac ?, 25yr 106.26 CFS TOTAL site 100.63 BATES
100yr 135.70 CFS TOTAL site 128.73 BATES

Post-developed

② AREA TO BASIN

		15yr	25yr	100yr
OFFSITE RESIDENTIAL	2.09 Ac @ 2.64 =	5.52 CFS	6.81	8.72
ONSITE COMMERCIAL	18.67 Ac @ 3.85 =	48.78 CFS	60.18	77.03
EX BASIN (BATES VILLAGE)	30.87 @ 2.64 =	81.50 CFS	100.69	128.73

TOTAL = 135.80 CFS = 8148. CFM
25yr 167.05 CFS 10,023.
100yr 214.58 CFS 12,875

check ok conservative

③ BYPASS
17.76 Ac @ 3.85 = 68.38 CFS
25yr 84.36 CFS
100yr 107.98 CFS

④ ALLOWABLE RELEASE
78.20 − 68.38 = 9.82 CFS
25yr 106.28 − 89.36 = 21.92 CFS
100yr 135.70 − 107.98 = 27.72 CFS

⑤ DETAINABLE AMOUNT
136.93 − 9.82 = 127.11 = 7,626 CFM 15yr
25yr 169.04 − 21.92 = 147.12 CFS = 8,827 CFM 25yr
100yr 216.28 − 27.72 = 188.56 CFS = 11,313 CFM 100yr

DEER CREEK CROSSING 11-12-98 SUBMITTAL DATE: 11-12-98

ELEVATION	AREA	VOLUME	CUM. VOLUME
498.00	614		
		32907	32907
500.00	32293		
		84536	117443
502.00	52243		
		111173	228616
504.00	58930		
		62625	291241
505.00	66320		

```
*******************************************
*                                         *
*  RECTANGULAR ORIFICE                    *
*   7 in W X 14 in H   ELEV= 497.9        *
*                                         *
*  Outlet Pipe -  50 ft - 30 in pipe      *
*  UFL= 497.9  LFL= 494.79   n= .013      *
*                                         *
*  Overflow Structure -  Standpipe        *
*  DIAM= 42 in   STANDPIPE ELEV= 504      *
*                                         *
*******************************************
```

15 yr2.

DEER CREEK CROSSING 11-12-98 SUBMITTAL DATE: 11-12-98

MIN	INFLOW	STORAGE	OUTFLOW	NET DET.	ELEV.
1	407.40	407.40	2.88	404.52	498.02
2	814.80	1219.32	4.00	1215.32	498.07
3	1222.20	2437.52	6.60	2430.92	498.15
4	1629.60	4060.52	11.22	4049.30	498.25
5	2037.00	6086.30	18.53	6067.77	498.37
6	2444.40	8512.17	29.21	8482.96	498.52
7	2851.80	11334.76	43.95	11290.81	498.69
8	3259.20	14550.01	63.44	14486.57	498.88
9	3666.60	18153.17	88.35	18064.82	499.10
10	4074.00	22138.82	156.70	21982.12	499.34
11	4481.40	26463.52	184.58	26278.94	499.60
12	4888.80	31167.74	210.96	30956.78	499.88
13	5296.20	36252.98	236.35	36016.63	500.07
14	5703.60	41720.23	252.07	41468.16	500.20
15	6111.00	47579.16	262.09	47317.07	500.34
16	6518.40	53835.47	272.43	53563.04	500.49
17	6925.80	60488.84	283.06	60205.78	500.65
18	7333.20	67539.00	293.95	67245.04	500.81
19	7740.60	74985.65	305.05	74680.60	500.99
20	8148.00	82828.60	316.37	82512.23	501.17
21	7740.60	90252.84	327.86	89924.98	501.35
22	7333.20	97258.18	338.37	96919.80	501.51
23	6925.80	103845.60	348.01	103497.60	501.67
24	6518.40	110016.00	356.83	109659.20	501.82
25	6111.00	115770.20	364.90	115405.30	501.95
26	5703.60	121108.90	372.27	120736.60	502.06
27	5296.20	126032.80	377.99	125654.80	502.15
28	4888.80	130543.50	382.64	130161.00	502.23

32	3259.20	144470.70	396.98	144073.70	502.48
33	2851.80	14692[illegible]50	399.56	146526.00	502.52
34	2444.40	148970.40	401.76	148568.60	502.56
35	2037.00	150605.60	403.59	150202.00	502.59
36	1629.60	151831.60	405.04	151426.60	502.61
37	1222.20	152648.80	406.12	152242.60	502.63
38	814.80	153057.40	406.85	152650.60	502.63
39	407.40	153058.00	407.21	152650.80	502.63
40	0.00	152650.80	407.21	152243.60	502.63
41	0.00	152243.60	406.85	151836.80	502.62

PEAK OUTFLOW= 6.79 CFS AT 40 MINUTES

```
*****************************************
*                                       *
*  RECTANGULAR ORIFICE                  *
*   7 in W X 14 in H   ELEV= 497.9      *
*                                       *
*  Outlet Pipe -  50 ft - 30 in pipe    *
*  UFL= 497.9  LFL= 494.79   n= .013    *
*                                       *
*  Overflow Structure -  Standpipe      *
*  DIAM= 42 in   STANDPIPE ELEV= 504    *
*                                       *
*****************************************
```

25YR

DEER CREEK CROSSING 11-12-98 SUBMITTAL DATE: 11-12-98

MIN	INFLOW	STORAGE	OUTFLOW	NET DET.	ELEV.
1	501.15	501.15	2.88	498.27	498.03
2	1002.30	1500.57	4.28	1496.29	498.09
3	1503.45	2999.74	7.59	2992.15	498.18
4	2004.60	4996.75	13.62	4983.13	498.30
5	2505.75	7488.88	23.27	7465.61	498.45
6	3006.90	10472.51	37.50	10435.01	498.63
7	3508.05	13943.06	57.25	13885.81	498.84
8	4009.20	17895.01	83.46	17811.56	499.08
9	4510.35	22321.91	154.73	22167.18	499.35
10	5011.50	27178.68	185.79	26992.89	499.64
11	5512.65	32505.54	215.03	32290.51	499.96
12	6013.80	38304.31	243.11	38061.20	500.12
13	6514.95	44576.15	255.87	44320.28	500.27
14	7016.10	51336.38	267.18	51069.20	500.43
15	7517.25	58586.45	278.87	58307.58	500.60
16	8018.40	66325.98	290.88	66035.10	500.78
17	8519.55	74554.65	303.17	74251.48	500.98
18	9020.70	83272.18	315.72	82956.46	501.18
19	9521.85	92478.32	328.50	92149.82	501.40
20	10023.00	102172.80	341.47	101831.40	501.63
21	9521.85	111353.20	354.62	110998.60	501.85
22	9020.70	120019.30	366.63	119652.70	502.04
23	8519.55	128172.20	376.96	127795.30	502.19
24	8018.40	135813.70	384.64	135429.00	502.32
25	7517.25	142946.30	391.71	142554.60	502.45
26	7016.10	149570.70	398.20	149172.50	502.57
27	6514.95	155687.40	404.12	155283.30	502.68
28	6013.80	161297.10	409.52	160887.60	502.78
29	5512.65	166400.30	414.41	165985.90	502.87
30	5011.50	170997.40	418.81	170578.50	502.96
31	4510.35	175088.90	422.73	174666.10	503.03
32	4009.20	178675.30	426.19	178249.10	503.09
33	3508.05	181757.20	429.20	181328.00	503.15
34	3006.90	184334.90	431.78	183903.10	503.20
35	2505.75	186408.80	433.91	185974.90	503.23
36	2004.60	187979.50	435.63	187543.90	503.26
37	1503.45	189047.30	436.92	188610.40	503.28
38	1002.30	189612.70	437.80	189174.90	503.29
39	501.15	189676.10	438.26	189237.80	503.29
40	0.00	189237.80	438.31	188799.50	503.28
41	0.00	188799.50	437.95	188361.50	503.28

PEAK OUTFLOW= 7.31 CFS AT 40 MINUTES

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*****************************************
*                                       *
*  RECTANGULAR ORIFICE                  *
*   7 in W X 14 in H   ELEV= 497.9      *
*                                       *
*  Outlet Pipe -  50 ft - 30 in pipe    *
*  UFL= 497.9  LFL= 494.79   n= .013    *
*                                       *
*  Overflow Structure -  Standpipe      *
*  DIAM= 42 in   STANDPIPE ELEV= 504    *
*                                       *
*****************************************
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100YR

DEER CREEK CROSSING 11-12-98 SUBMITTAL DATE: 11-12-98

MIN	INFLOW	STORAGE	OUTFLOW	NET DET.	ELEV.
1	643.75	643.75	2.88	640.87	498.04
2	1287.50	1928.37	4.71	1923.66	498.12
3	1931.25	3854.91	9.19	3845.72	498.23
4	2575.00	6420.72	17.55	6403.18	498.39
5	3218.75	9621.93	31.13	9590.80	498.58
6	3862.50	13453.30	51.36	13401.94	498.81
7	4506.25	17908.19	79.59	17828.60	499.08
8	5150.00	22978.60	154.87	22823.74	499.39
9	5793.75	28617.49	190.03	28427.46	499.73
10	6437.50	34864.96	222.98	34641.98	500.04
11	7081.25	41723.23	249.48	41473.76	500.20
12	7725.00	49198.76	262.10	48936.66	500.38
13	8368.75	57305.41	275.23	57030.18	500.57
14	9012.50	66042.68	288.79	65753.88	500.78
15	9656.25	75410.13	302.73	75107.40	501.00
16	10300.00	85407.40	317.00	85090.40	501.23
17	10943.75	96034.16	331.55	95702.60	501.49
18	11587.50	107290.10	346.35	106943.80	501.75
19	12231.25	119175.00	361.37	118813.60	502.02
20	12875.00	131688.60	376.16	131312.50	502.25
21	12231.25	143543.70	387.92	143155.80	502.46
22	11587.50	154743.30	398.74	154344.60	502.66
23	10943.75	165288.30	408.70	164879.60	502.85
24	10300.00	175179.60	417.86	174761.80	503.03
25	9656.25	184418.00	426.27	183991.70	503.20
26	9012.50	193004.20	433.99	192570.20	503.35
27	8368.75	200939.00	441.03	200498.00	503.49
28	7725.00	208223.00	447.45	207775.50	503.63
29	7081.25	214856.80	453.26	214403.50	503.74
30	6437.50	220841.00	458.48	220382.50	503.85
31	5793.75	226176.30	463.14	225713.10	503.95
32	5150.00	230863.10	467.26	230395.90	504.03
33	4506.25	234902.10	479.23	234422.90	504.09
34	3862.50	238285.40	523.70	237761.70	504.15
35	3218.75	240980.50	575.80	240404.70	504.19
36	2575.00	242979.70	626.46	242353.20	504.22
37	1931.25	244284.50	666.21	243618.20	504.24
38	1287.50	244905.70	693.54	244212.20	504.25
39	643.75	244855.90	706.78	244149.10	504.25
40	0.00	244149.10	705.36	243443.80	504.24

PEAK OUTFLOW= 11.78 CFS AT 39 MINUTES

PICKETT RAY & SILVER
333 MID RIVERS MALL DR.
ST. PETERS,MO 63376
PHONE 314-397-1211

95080 DEER CREEK — HYDRAULIC DATA — 11-12-1998 12:15:31

LINE UPPER	LINE LOWER	LEN	SIZE	MANNING'S N	UPPER FLOW LN	LOWER FLOW LN	F.L. GRADE	UPPER ST ELEV	LOWER ST ELEV	DP TO HY GR	UPPER HY ELEV	LOWER HY ELEV	HYDR. GRADE	FRICT. HEAD	VELOC. FT/SEC	V^2/2g FEET	V^2/2g V HEAD	TURN LOSS	AREA ACRES	P.I.	QUANT CFS	T.Q. CFS	P. CAP CFS
CI2-2	FE2-1	27	24	.013	498.58	498.50	.0029	506.10	500.50	3.26	502.67	502.63	.0006	0.02	1.72	0.05	0.02	0.00	0.61	3.8	2.3	5.4	12.3
CI2-3	CI2-2	363	21	.013	499.67	498.58	.0030	504.50	506.10	1.66	502.84	502.68	.0004	0.13	1.26	0.02	0.02	0.02	0.79	3.8	3.0	3.0	8.7
DCI2-11	FE2-10	42	30	.013	490.65	489.80	.0200	502.00	492.30	7.96	493.60	492.30	.0158	0.67	10.51	1.72	0.63	0.00	1.54	3.8	5.9	51.6	58.0
CI2-12	DCI2-11	56	30	.013	491.76	490.65	.0199	502.89	502.00	7.62	494.60	494.04	.0100	0.56	8.36	1.09	0.00	0.44	1.02	3.8	3.9	41.0	57.9
CI2-13	CI2-12	127	27	.013	494.30	491.76	.0200	503.50	502.89	5.71	497.44	495.27	.0144	1.83	9.33	1.35	0.35	0.67	1.32	3.8	5.1	37.1	43.8
GI2-14	CI2-13	67	27	.013	495.65	494.30	.0200	503.36	503.50	4.44	498.51	497.79	.0107	0.72	8.06	1.01	0.00	0.35	1.20	3.8	4.6	32.0	43.8
GI2-15	GI2-14	131	24	.013	498.26	495.65	.0200	504.28	503.36	3.35	500.84	498.92	.0147	1.92	8.73	1.18	0.00	0.41	1.17	3.8	4.5	27.4	32.0
GI2-16	GI2-15	121	21	.013	500.68	498.26	.0200	506.80	504.28	2.78	503.96	500.93	.0209	2.52	9.52	1.41	0.51	0.09	1.20	3.8	4.6	22.9	22.4
DGI2-17	GI2-16	121	21	.013	503.10	500.68	.0200	509.50	506.80	3.59	505.90	504.02	.0133	1.61	7.60	0.90	0.26	0.05	1.82	3.8	7.0	18.3	22.4
GI2-17A	DGI2-17	60	18	.013	504.31	503.10	.0200	511.60	509.50	4.87	506.73	505.91	.0115	0.70	6.38	0.63	0.12	0.02	1.10	3.8	4.2	11.3	14.9
GI2-18	GI2-17A	60	15	.013	505.50	504.31	.0199	512.50	511.60	4.90	507.60	506.73	.0119	0.71	5.74	0.51	0.16	0.00	0.86	3.8	3.3	7.0	9.1
GI2-19	GI2-18	120	12	.013	507.90	505.50	.0200	514.35	512.50	5.08	509.27	507.60	.0110	1.32	4.75	0.35	0.35	0.00	0.97	3.8	3.7	3.7	5.0
DCI2-5	FE2-4	92	60	.013															0.87	3.8			
					498.40	498.17	.0025	505.3	503.17	1.56	503.45	503.17	.0025	0.23	6.64	0.69	0.05	0.00	0.56	2.6	4.8	130.4	130.2
DCI2-5A	DCI2-5	341	60	.013															2.92	3.8			
					499.25	498.40	.0025	509.4	505.3	4.87	504.53	503.74	.0023	0.79	6.40	0.64	0.00	0.29	0.08	2.6	11.5	125.6	130.0
DCI28	DCI2-5A	297	48	.013															1.19	2.6			
					502.84	500.60	.0075	509.62	509.4	1.96	507.60	504.53	.0063	1.87	9.08	1.28	1.20	0.00	30.87	2.6	84.6	114.1	124.7
DCI2-6	DCI28	33	48	.013	502.92	502.84	.0024	509.3	509.62	1.16	507.67	507.66	.0004	0.01	2.35	0.09	0.00	0.06	2.20	3.8	8.5	29.5	70.8
DCI2-7	DCI2-6	330	24	.013															1.25	3.8			
					507.20	502.92	.0130	516.70	509.3	5.64	511.06	508.14	.0086	2.85	6.69	0.70	0.07	0.47	0.30	2.6	5.6	21.0	25.8
CI2-8	DCI2-7	405	21	.013	512.06	507.20	.0120	518.70	516.70	3.25	515.43	511.06	.0093	3.77	6.36	0.63	0.60	0.00	3.68	3.8	14.2	15.3	17.4
AI2-9	CI2-8	47	12	.013	517.67	512.06	.1201	533.50	518.70	15.63	517.87	515.45	.0010	0.05	1.45	0.03	0.03	0.02	0.43	2.6	1.1	1.1	12.3
GI2-21	DCI2-7	108	12	.013	511.53	507.20	.0400	518.80	516.70	7.18	511.62	511.06	.0000	0.00	0.15	0.00	0.00	0.00	0.03	3.8	0.1	0.1	7.1
CI2-20	DCI2-11	216	12	.013	497.13	494.97	.0100	503.50	502.00	3.36	500.14	495.97	.0168	3.63	5.88	0.54	0.54	0.38	1.20	3.8	4.6	4.6	3.6