

**OWNER**  
CITY OF OFALLON  
100 NORTH MAIN STREET  
OFALLON, MO 63366  
636.379.5590

**PROJECT TEAM**  
CIVIL ENGINEER  
PREMIER DESIGN GROUP  
100 MIDLAND PARK DRIVE  
WENTZVILLE, MO 63385  
314.925.7444

MAINTENANCE CONSULTANT  
HDR ENGINEERING, INC.  
17725 KATY FREEWAY SUITE 102  
HOUSTON, TX 77094  
816.360.2700

STRUCTURAL ENGINEER  
METTEMAYER ENGINEERING  
2225 W CHESTERFIELD BLVD., SUITE 300  
SPRINGFIELD, MO 65807  
417.890.8002

MEP ENGINEER  
HENDERSON ENGINEERS, INC.  
8345 LENEAXA DR., #300  
LENEAXA, MO 66214  
913.742.5000

100 YEAR 20 MINUTE STORM EVENT

LINE#	LINEID	INVERT	LINELENGTH	LINE SIZE	N-VALUE	INVERT	INVERT	LINE SLOPE	GRND/RTM/ELEV UP	GRND/RTM/ELEV DN	DEPTH	HGL UP	HGL DN	RM-HW	DEFL-ANGLE	VELOCITY	VELOCITY DN	J-LOSS COEFF	ENERGY LOSS	MINOR LOSS	KNOWN Q	FLOW RATE	OCAPTURED	CAPACITY FULL	GIBBS	BYPASS	BYPASS DEPTH	BYPASS SPREAD	INVERT
41	104-103	104	10.19	36	0.013	493.98	493.94	0.39	498.48	503.50	3.00	499.26	499.21	-1.50	0.00	6.81	0.72	1.00	0.033	0.72	48.14	48.14	48.14	41.79	0.00	---	---	---	100
40	103-102	103	15.00	36	0.013	493.94	493.89	0.33	503.50	503.50	3.00	498.85	498.77	4.29	-60.06	6.81	0.72	0.90	0.078	0.36	0.00	48.14	48.14	0.00	38.50	0.00	n/a	n/a	0
39	102-101A	102	361.05	36	0.013	493.69	492.61	0.30	503.50	514.80	3.00	498.13	494.24	4.73	0.00	6.81	0.72	0.89	1.882	0.64	0.00	48.14	---	---	36.48	---	---	---	---
38	101A-101	101A	223.19	36	0.013	492.14	491.74	0.30	514.80	505.65	3.00	496.14	494.97	18.56	-36.79	6.81	0.72	0.15	1.163	0.11	0.00	48.14	---	---	36.54	---	---	---	---
37	101-100	101	72.51	36	0.013	491.54	491.32	0.30	505.65	494.74	2.96	494.50	494.13	10.68	127.43	7.00	0.76	0.65	0.336	0.47	0.00	48.14	---	---	36.74	---	---	---	---
36	13-12	13	69.03	18	0.012	495.16	494.06	1.59	502.12	499.21	0.21**	495.71	494.37	6.75	0.00	1.19	0.07	1.00z	0.000	n/a	0.32	0.32	0.32	14.36	0.00	0.03	0.03	0.90	95
35	601A-601	601A	79.25	12	0.013	497.59	496.00	2.01	509.21	503.82	0.24**	497.88	496.21	11.33	33.24	4.04	0.10	1.00z	0.000	n/a	0.48	0.48	0.42	5.04	0.06	0.04	1.82	87	
34	602-601	602	65.82	18	0.013	502.56	497.97	7.01	503.83	503.82	0.31**	502.92	498.14	0.91	-0.07	7.30	0.13	1.00z	0.000	0.13	0.95	0.95	0.95	27.79	0.00	---	---	---	100
33	601-600	601	37.95	18	0.013	494.74	493.98	2.00	503.82	502.88	0.49**	495.24	494.47	8.58	47.63	3.44	0.18	0.90z	0.000	n/a	0.31	1.74	0.59	14.86	0.02	0.02	1.13	94	
32	600-12	600	6.52	18	0.013	493.78	493.65	1.99	499.21	500.34	0.49**	494.47	494.22	4.74	-60.92	5.41	0.27	0.94z	0.000	n/a	1.14	3.31	---	14.83	---	---	---	---	
31	12-11	12	114.38	36	0.013	493.65	492.11	1.35	500.34	502.88	0.57**	494.22	492.53	6.12	6.92	5.44	0.20	1.34z	0.000	0.26	0.00	3.31	0.02	77.39	0.00	n/a	n/a	100	
30	700A-700	700A	43.31	12	0.013	499.50	498.63	2.01	504.47	504.95	0.42**	499.92	498.94	4.55	-90.48	5.03	0.16	1.00z	0.000	n/a	1.02	1.02	1.05	5.05	0.61	0.10	4.87	63	
29	702-701	702	33.50	12	0.013	499.50	498.83	2.00	505.24	505.24	0.50**	500.00	499.19	5.24	-86.81	5.51	0.20	1.00z	0.000	n/a	1.42	1.42	1.08	5.04	0.64	0.10	4.96	63	
28	701-700	701	23.95	18	0.013	498.63	498.15	2.00	505.24	504.95	0.55**	499.18	498.63	6.06	55.14	4.45	0.21	1.50z	0.000	n/a	0.73	2.15	0.64	14.87	0.22	0.07	3.33	74	
27	700-11	700	79.96	18	0.013	497.95	496.35	2.00	504.95	502.88	0.68**	498.63	496.82	6.32	55.51	6.68	0.26	1.00z	0.000	n/a	0.00	3.17	---	14.85	---	---	---	---	
26	11-10	11	96.41	36	0.013	488.59	487.72	0.88	502.88	498.22	0.80**	489.39	488.37	13.50	165.23	5.72	0.29	0.85z	0.000	n/a	0.00	6.48	---	62.44	---	---	---	---	
25	22-21	22	33.54	24	0.015	504.36	503.63	2.18	505.13	505.98	1.49**	505.85	505.14	-0.72	-3.60	6.78	0.73	1.00z	0.000	n/a	17.22	17.22	17.22	28.92	0.00	---	---	---	100
24	21-20	21	10.42	24	0.015	503.63	503.48	1.44	505.98	504.21	1.51**	505.14	504.77	0.84	-178.68	8.17	0.74	0.90z	0.000	0.37	0.29	17.51	0.34	23.52	0.01	0.03	0.67	97	
23	02-01	02	34.57	18	0.013	508.65	507.37	3.70	515.35	509.17	1.50	502.05	500.97	-28.41	-1.26	10.49	1.71	1.00z	0.000	1.71	18.54	18.54	---	20.21	---	---	---	---	
22	01-503	01	7.73	18	0.013	507.37	507.08	3.75	509.17	513.02	1.50	500.72	500.48	-31.80	-37.56	10.49	1.71	1.00z	0.000	0.26	0.00	18.54	---	20.34	---	---	---	---	
21	503-502	503	216.72	30	0.013	506.78	500.82	2.75	513.02	507.07	2.50	507.81	502.42	-27.46	1.73	13.17	2.70	0.99	3.287	2.67	46.11	46.65	46.11	48.01	0.00	n/a	n/a	100	
20	502-501	502	274.69	30	0.013	500.82	493.07	2.75	507.07	505.10	2.50	501.81	503.89	-25.35	28.06	13.45	2.81	0.90	7.120	1.41	1.37	46.92	1.57	47.99	0.00	n/a	n/a	100	
19	501-500	501	73.02	30	0.013	493.07	490.86	2.75	505.10	497.97	2.50	501.47	519.78	-18.79	-43.80	13.45	2.81	0.79	1.893	2.23	0.00	46.92	0.00	48.05	0.00	n/a	n/a	100	
18	500-06	500	11.04	30	0.015	490.81	490.25	2.35	497.97	492.88	2.50	514.20	515.77	-21.81	0.00	14.21	3.14	1.14	0.425	3.58	0.00	49.72	3.70	54.54	0.00	n/a	n/a	100	
17	06-05	06	219.61	30	0.015	490.25	485.02	2.38	492.88	490.09	2.50	515.30	506.85	-22.89	-142.91	14.21	3.14	0.15	8.402	0.47	0.00	49.72	---	54.85	---	---	---	---	
16	401-400	401	33.50	15	0.013	504.00	503.33	2.00	509.75	509.75	1.25	505.41	505.41	4.34	-81.06	0.50	0.00	1.00z	0.000	0.00	0.62	0.42	0.49	9.13	0.13	0.05	2.71	79	
15	400-201	400	167.31	18	0.013	503.13	501.46	1.00	509.75	512.58	1.50	505.39	505.34	4.34	-98.94	0.95	0.01	1.49	0.042	0.02	1.05	1.67	0.74	10.49	0.31	0.08	3.76	71	
14	208-207	208	283.81	18	0.013	508.75	505.91	1.00	515.44	515.79	1.50	514.22	513.84	1.14	0.00	2.19	0.07	1.00z	0.000	0.36	0.07	3.87	3.87	10.50	0.00	n/a	n/a	100	
13	207-206	207	143.84	18	0.013	505.71	504.27	1.00	515.79	514.86	1.50	513.73	513.17	1.95	-71.69	3.71	0.21	0.90z	0.000	0.11	2.69	6.56	2.69	10.51	0.00	n/a	n/a	100	
12	206-205	206	201.15	18	0.013	504.07	502.06	1.00	514.86	514.39	1.50	512.47	510.70	1.69	-51.69	5.58	0.48	1.44	1.774	0.70	3.30	9.86	3.30	10.50	0.00	n/a	n/a	100	
11	205-204	205	105.41	18	0.013	501.86	500.81	1.00	514.39	515.54	1.50	509.41	507.39	3.69	27.13	8.22	1.05	1.23	2.016	1.29	4.66	14.52	4.66	10.48	0.00	n/a	n/a	100	
10	204B-204A	204B	232.50	24	0.013	508.00	505.68	1.00	514.58	514.91	1.24	509.24	508.69	4.91	0.00	3.43	0.18	1.00z	0.794	0.43	10.77	10.77	10.77	22.59	0.00	n/a	n/a	100	
9	204A-204	204A	132.50	24	0.013	505.48	504.16	1.00	514.91	515.54	2.00	508.39	507.39	6.22	-94.25	6.25	0.61	0.90z	0.999	0.30	8.87	19.64	8.87	22.58	0.00	n/a	n/a	100	
8	204-203	204	165.40	36	0.013	500.61	498.95	1.00	515.54	514.65	3.00	507.03	506.59	8.15	6.25	4.83	0.36	1.00z	0.434	0.36	0.00	34.61	---	66.81	---	---	---	---	
7	302-301	302	147.46	12	0.013	509.00	507.52	1.00	516.02	513.88	0.37**	509.37	508.66	6.65	75.02	1.76	0.14	1.00z	0.000	n/a	0.77	0.77	0.77	3.57	0.00	n/a	n/a	100	
6	301-300	301	267.50	15	0.013	507.52	504.65	1.00	513.88	514.57	0.74**	508.06	505.71	5.82	4.44	3.08	0.31	1.46z	0.000	n/a	2.64	3.41	2.64	6.45	0.00	n/a	n/a	100	
5	300-201	300	132.31	18	0.013	504.65	503.13	1.00	514.57	512.58	1.16	503.61	503.34	8.86	4.44	2.88	0.13	0.90z	0.000	0.09	1.67	5.08	1.67	10.49	0.00	n/a	n/a	100	
4	203A-203	203A	52.21	18	0.013	509.50	508.46	2.00	514.72	514.65	0.49**	509.90	508.74																