

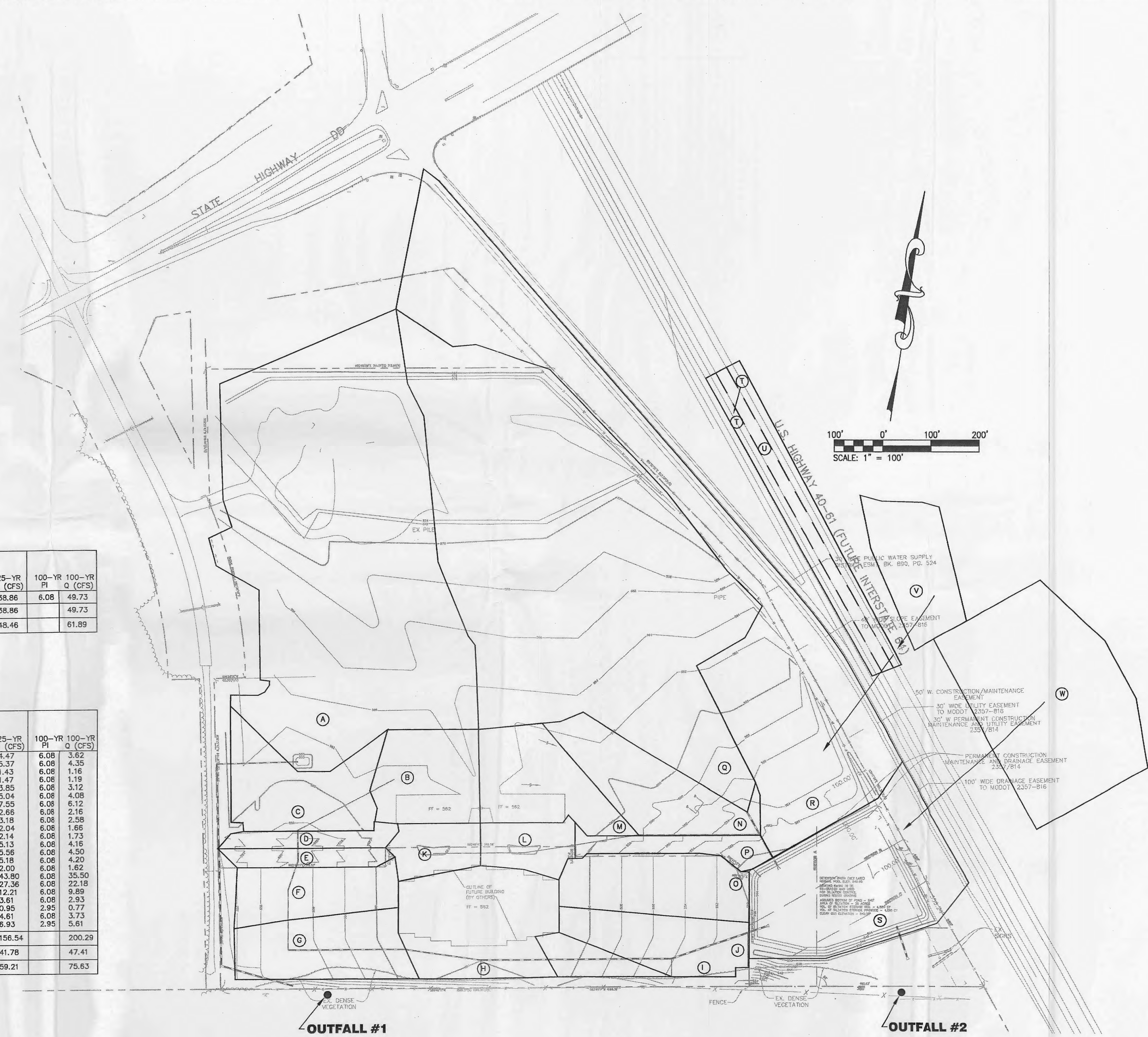
DATE: Apr 20, 2005 - 11:07am  
DRAWING: S:\DBE\Jobs\2003\03-309\103\_03-309\103\_03-309.dwg

**OUTFALL #1  
(BYPASS)**

DRAINAGE AREA CALCULATIONS									
DA#	AREA (AC)	2-YR PI	2-YR Q (CFS)	15-YR PI	15-YR Q (CFS)	25-YR PI	25-YR Q (CFS)	100-YR PI	100-YR Q (CFS)
A	8.18	2.39	19.55	3.85	31.49	4.75	38.86	6.08	49.73
PROPOSED TOTAL			19.55		31.49		38.86		49.73
EXISTING TOTAL			24.13		39.23		48.46		61.89

**OUTFALL #2**

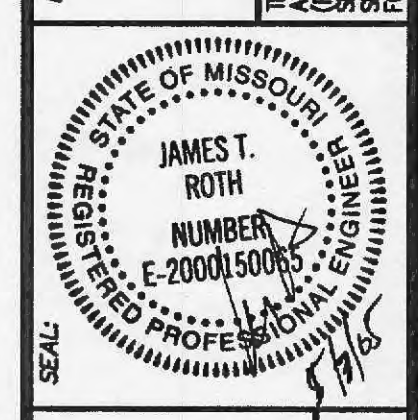
DRAINAGE AREA CALCULATIONS									
DA#	AREA (AC)	2-YR PI	2-YR Q (CFS)	15-YR PI	15-YR Q (CFS)	25-YR PI	25-YR Q (CFS)	100-YR PI	100-YR Q (CFS)
B	0.94	2.39	2.25	3.85	3.62	4.75	4.47	6.08	3.62
C	1.13	2.39	2.70	3.85	4.35	4.75	5.37	6.08	4.35
D	0.30	2.39	0.72	3.85	1.16	4.75	1.43	6.08	1.16
E	0.31	2.39	0.74	3.85	1.19	4.75	1.47	6.08	1.19
F	0.81	2.39	1.94	3.85	3.12	4.75	3.85	6.08	3.12
G	1.06	2.39	2.53	3.85	4.08	4.75	5.04	6.08	4.08
H	1.59	2.39	3.80	3.85	6.12	4.75	7.55	6.08	6.12
I	0.56	2.39	1.34	3.85	2.16	4.75	2.66	6.08	2.16
J	0.67	2.39	1.60	3.85	2.58	4.75	3.18	6.08	2.58
K	0.43	2.39	1.03	3.85	1.66	4.75	2.04	6.08	1.66
L	0.45	2.39	1.08	3.85	1.73	4.75	2.14	6.08	1.73
M	1.08	2.39	2.58	3.85	4.16	4.75	5.13	6.08	4.16
N	1.17	2.39	2.80	3.85	4.50	4.75	5.56	6.08	4.50
O	1.09	2.39	2.61	3.85	4.20	4.75	5.18	6.08	4.20
P	0.42	2.39	1.00	3.85	1.62	4.75	2.00	6.08	1.62
Q	9.22	2.39	22.04	3.85	35.50	4.75	43.80	6.08	35.50
R	5.76	2.39	13.77	3.85	22.18	4.75	27.36	6.08	22.18
S	2.57	2.39	6.14	3.85	9.89	4.75	12.21	6.08	9.89
T	0.76	2.39	1.92	3.85	2.93	4.75	3.61	6.08	2.93
U	0.41	1.15	0.47	1.87	0.77	2.31	0.95	2.95	0.77
V	0.97	2.39	2.32	3.85	3.73	4.75	4.61	6.08	3.73
W	3.0	1.15	3.45	1.87	5.61	2.31	6.93	2.95	5.61
PROPOSED TOTAL			78.73		126.86		156.54		200.29
AFTER DETENTION			28.92		37.51		41.78		47.41
EXISTING TOTAL			29.50		47.94		59.21		75.63



REVISIONS		
DATE	BY	REVISION
07/24/04	A	ISSUE NO. 2
12/22/04	A	COLE AND ASSOCIATES
12/28/04	A	BUCKET CREEK COMMENTS
1/7/05	A	CITY OF OTTALON COMMENTS
1/28/05	A	BUCKET CREEK COMMENTS
2/1/05	A	BUCKET CREEK COMMENTS
2/1/05	A	UTAH - PERMANENT CONSTRUCTION
2/1/05	A	CITY OF OTTALON COMMENTS
2/12/05	A	BUCKET CREEK COMMENTS

DEVELOPER/OWNER:  
WINGHAVEN LAND INVESTORS, L.L.C.  
C/O MC EAGLE DEVELOPMENT COMPANY  
1001 BOARDWALK SPRINGS PLACE  
OTTALON, MO 63366  
(636) 561-9300

THE PROFESSIONAL ENGINEER'S SEAL AND SIGNATURE SHALL BE PLACED IN THE SPACE PROVIDED HEREON. THIS SEAL AND SIGNATURE SHALL BE VALID ONLY IF THE ENGINEER HAS ASSUMED RESPONSIBILITY FOR THE DESIGN AND CONSTRUCTION OF THE PROJECT AND IS A MEMBER IN GOOD STANDING OF THE MISSOURI BOARD OF PROFESSIONAL ENGINEERS. ANY OTHER SEAL OR SIGNATURE IS UNLAWFUL AND VOID. THIS SEAL AND SIGNATURE SHALL BE VALID ONLY IF THE ENGINEER HAS ASSUMED RESPONSIBILITY FOR THE DESIGN AND CONSTRUCTION OF THE PROJECT AND IS A MEMBER IN GOOD STANDING OF THE MISSOURI BOARD OF PROFESSIONAL ENGINEERS. ANY OTHER SEAL OR SIGNATURE IS UNLAWFUL AND VOID.



**CALEDONIA**  
HIGHWAY 40/61 AND WINGHAVEN  
OTTALON, MO 63366

**FINAL DRAINAGE AREA MAP**

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DESIGNED BY: PMH  
DRAWN BY: PMH  
CHECKED BY: KER/JTR  
DATE: 10/11/04  
Job Number: 03-309  
Sheet Number: C17.0