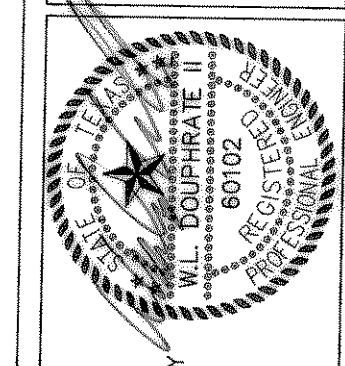


MODIFIED RATIONAL METHOD DETENTION BASIN DESIGN			
POND #4			
PRESENT CONDITIONS			
Q = CIA	DEV	UNDEV	
AREA =	0.39 acres	1.01 acres	
C =	0.35	0.35	
T =	20 minutes	20 minutes	
i 100 =	8.3 in/hr	8.3 in/hr	
Q100 =	1.13 maximum release rate	2.93 maximum release rate	
FUTURE CONDITIONS			
C =	0.8	C =	0.8
T =	10	T =	20
i 100 =	9.8 10 min	i 100 =	8.3 20 min
Q100 =	3.06	Q100 =	2.69
C =	0.8	C =	0.8
T =	30	T =	40
i 100 =	7.1 30 min	i 100 =	5.9 40 min
Q100 =	2.22	Q100 =	1.84
C =	0.8	C =	0.8
T =	50	T =	60
i 100 =	5 50 min	i 100 =	4.5 60 min
Q100 =	1.56	Q100 =	1.40
C =	0.8	C =	0.8
T =	70	T =	80
i 100 =	4 70 min	i 100 =	3.7 80 min
Q100 =	1.25	Q100 =	1.15
C =	0.8	C =	0.8
T =	90	T =	90
i 100 =	3.4 90 min	i 100 =	3.4 90 min
Q100 =	1.06	Q100 =	1.06
EXISTING CONDITIONS			
C =	0.35	C =	0.35
T =	10	T =	20
i 100 =	9.8 10 min	i 100 =	8.3 20 min
Q100 =	3.46	Q100 =	2.93
C =	0.35	C =	0.35
T =	30	T =	40
i 100 =	7.1 30 min	i 100 =	5.9 40 min
Q100 =	2.51	Q100 =	2.09
C =	0.35	C =	0.35
T =	50	T =	60
i 100 =	5 50 min	i 100 =	4.5 60 min
Q100 =	1.77	Q100 =	1.59
C =	0.35	C =	0.35
T =	70	T =	80
i 100 =	4 70 min	i 100 =	3.7 80 min
Q100 =	1.41	Q100 =	1.31
C =	0.35	C =	0.35
T =	90	T =	90
i 100 =	3.4 90 min	i 100 =	3.4 90 min
Q100 =	1.20	Q100 =	1.20
inflow =	T*Q*60		
outflow =	0.5*(T+Td)*Q*60	Td=DESIGN TIME=10	
10 min storm	inflow =	CFS	REQUIRED STORAGE CF
	outflow =	3913	1473
20 min storm	inflow =	6628	2968
	outflow =	3660	
30 min storm	inflow =	8505	3625
	outflow =	4880	
40 min storm	inflow =	9423	3323
	outflow =	6101	
50 min storm	inflow =	9983	2862
	outflow =	7321	
60 min storm	inflow =	10781	2240
	outflow =	8541	
70 min storm	inflow =	11180	1420
	outflow =	9761	
80 min storm	inflow =	11819	838
	outflow =	10981	
90 min storm	inflow =	12218	18
	outflow =	12201	



THE SEAL APPEARING ON THIS DOCUMENT WAS AUTHORIZED BY W.L. DOUPHRATE II, TEXAS, P.E. NO. 60102 ON 8/16/04

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STORM CALCULATIONS
 JUSTIN ROAD PROFESSIONAL PARK
 CITY OF ROCKWALL, TEXAS
 COUNTY OF ROCKWALL

REVISION
 W.L.D.
 CHECKED
 A.W.
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 2/01
 DATE
 0028STM2
 PROJECT