

RICKI ROSE
DETENTION POND CALCULATIONS
 AREA = 2.15 ACRES
 Pre-development Q = (0.35)(8.3)(2.15) = 6.25 cfs
 Developed Q = (0.90)(9.8)(2.15) = 18.96 cfs
 Released without detention = 2.20
 Allowed release from pond = 4.05

CHECK VARIOUS STORMS:
 10 MIN I = 9.8 Q = (0.90)(9.8)(1.90) = 16.76
 15 MIN I = 9.0 Q = (0.90)(9.0)(1.90) = 15.39
 20 MIN I = 8.3 Q = (0.90)(8.3)(1.90) = 14.19
 30 MIN I = 6.9 Q = (0.90)(6.9)(1.90) = 11.80
 40 MIN I = 5.8 Q = (0.90)(5.8)(1.90) = 9.92
 50 MIN I = 5.0 Q = (0.90)(5.0)(1.90) = 8.55
 60 MIN I = 4.5 Q = (0.90)(4.5)(1.90) = 7.695
 70 MIN I = 4.0 Q = (0.90)(4.0)(1.90) = 6.84
 80 MIN I = 3.7 Q = (0.90)(3.7)(1.90) = 6.33
 90 MIN I = 3.5 Q = (0.90)(3.5)(1.90) = 5.99
 100 MIN I = 3.0 Q = (0.90)(3.0)(1.90) = 5.13

INFLOW / OUTFLOW CALCULATIONS:
 10 MIN INFLOW (10)(16.76)(60) = 10054.80 CF
 OUTFLOW (0.5)(20)(4.05)(60) = 2427.45CF
 7627.45CF

20 MIN INFLOW (20)(14.19)(60) = 17028 CF
 OUTFLOW (0.5)(30)(4.05)(60) = 3645 CF
 13383 CF

15 MIN INFLOW (20)(15.39)(60) = 13851 CF
 OUTFLOW (0.5)(30)(4.05)(60) = 3034.31 CF
 10816.69 CF

30 MIN INFLOW (30)(11.80)(60) = 21238.2 CF
 OUTFLOW (0.5)(40)(4.05)(60) = 4854.9 CF
 16383.3 CF

40 MIN INFLOW (40)(9.92)(60) = 23803.2 CF
 OUTFLOW (0.5)(50)(4.05)(60) = 6068.625 CF
 17734.58 CF

50 MIN INFLOW (50)(8.55)(60) = 25650 CF
 OUTFLOW (0.5)(60)(4.05)(60) = 7282.35 CF
 18367.65 CF

60 MIN INFLOW (60)(7.695)(60) = 27702 CF
 OUTFLOW (0.5)(70)(4.05)(60) = 8496.075 CF
 19205.93 CF

70 MIN INFLOW (70)(6.84)(60) = 28728 CF
 OUTFLOW (0.5)(80)(4.05)(60) = 9709.8 CF
 19018.2 CF

80 MIN INFLOW (80)(6.327)(60) = 30369.6 CF
 OUTFLOW (0.5)(90)(4.05)(60) = 10923.53 CF
 19446.08 CF

90 MIN INFLOW (90)(5.985)(60) = 32319 CF
 OUTFLOW (0.5)(100)(4.05)(60) = 12137.25 CF
 20181.75 CF

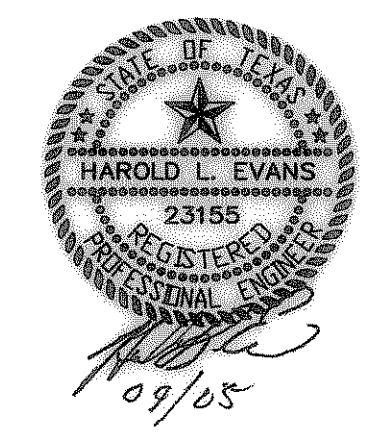
100 MIN INFLOW (100)(5.13)(60) = 30780 CF
 OUTFLOW (0.5)(110)(4.05)(60) = 13350.98 CF
 17429.03 CF

DETENTION REQUIRED = 20,181.75 CF RELEASE RATE 4.05 CFS

DRAINAGE TABLE					
AREA	ACRES	C	TC	I ₁₀₀	Q ₁₀₀
1	1.90	0.90	10	9.8	16.76
2	0.25	0.90	10	9.8	2.20

100 YEAR VOLUME POND 1 = 14,053.07 C.F.
 100 YEAR VOLUME POND 2 = 6,128.68 C.F.
 20,181.75 C.F.

AS BUILT



REVISION	1/17/05	HAROLD L. EVANS CONSULTING ENGINEER P.O. BOX 570356 - 75370 DALLAS, TEXAS 75228, (214) 328-8133	DATE	SCALE	DESIGN	DRAWN
REVISION	1/27/05		1" = 30'	H.L.E.	AC	
REVISION	2/15/05		1" = 6'			
REVISION DESCRIPTION			DATE	SCALE	DESIGN	DRAWN
0405SDR1			1/17/05	1" = 30'	H.L.E.	AC

PROPOSED DRAINAGE CHILDRENS PARK II STEGER TOWNE CROSSING, PHASE II CITY OF ROCKWALL		SHEET NO. 5 7 JOB NO. 0406S
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