



**DRAINAGE PLAN NOTES:**

1. DRAIN PIPE & FITTINGS WITHIN PROPERTY LINE SHALL BE POLYVINYL CHLORIDE PLASTIC PIPE, MEETING CLASS 100 C-900 PVC.
2. ELEVATIONS SHOWN ARE M.S.L.
3. FIELD VERIFY ALL ELEVATIONS AND DRAINAGE SYSTEM PLACEMENT PRIOR TO START OF WORK.

PROJECT: **The Chill Pad**  
DRAINAGE RUN OFF CALCULATIONS - MODIFIED RATIONAL METHOD

PRIOR DEVELOPMENT 10 Year Frequency			
Q = CIA			
Watertight Surfaces	c(1) =	0.9	0 sqft = 0.000 Acres
Gravel Surface	c(2) =	0.25	0 sqft = 0.000 Acres
Green Space	c(3) =	0.35	16,249.00 sqft = 0.373 Acres
Summary	c =	0.35	16249 sqft = 0.373 Acres

Duration (D) = Time of concentration (TC)  
TC =  $.7038(L^{.3917})(c^{.4-1.1309})(S^{.4-1.985})$   
where L = 198 Runoff length ft Elev diff 0.5  
c = 0.35 Runoff coeff  
S = 0.2525 Percent Slope  
therefore TC = D 84.08 minutes  
and from Rainfall Intensity Table I = 3.60 in/hr

Q = 0.457 cfs RUNOFF LINE% 0.388 cfs

POST DEVELOPMENT 10 Year Frequency			
Q = CIA			
Watertight Surfaces	c(1) =	0.9	1620 sqft = 0.037 Acres
Gravel Surface	c(2) =	0.25	1647 sqft = 0.036 Acres
Green Space	c(3) =	0.35	12982 sqft = 0.298
Summary	c =	0.39	16249 sqft = 0.373 Acres

D = Time of concentration (TC)  
TC =  $.7038(L^{.3917})(c^{.4-1.1309})(S^{.4-1.985})$   
where L = 50 Runoff length ft Elev diff 0.75  
c = 0.39 Runoff coeff  
S = 1.5000 Percent Slope  
therefore TC = D 8.61 minutes or in/hr  
and from Rainfall Intensity Table I = 3.60 in/hr

Q = 0.515 cfs

RESULTS			
DETENTION REQUIRED	0.127cfs		
TWO HOUR DETENTION	913.7cuft		
DETENTION DIMENSIONS	WIDTH 83feet		
	LENGTH 127feet		
	DEPTH 0.06feet		

DISCHARGE END AREA CALCULATIONS			
where Q is allowable run off			
Allowable run off	Q =	0.388 cfs	
Friction loss factor	c =	0.98coefficient	
Acceleration	g =	32.2ft/sec	
Height above invert	if H =	3.00feet	
End area	A =	0.03sqft	

REQUIRED CONDUIT = 4" inch diameter  
USE 4 inch orifice

**DAMMON**  
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DATE: 07-26-2012  
JOB No: 2148  
DRAWN BY: DPD  
CHECKED BY: DPD

THE CHILL PAD  
617 JEFFERSON TERRACE  
NEW PERRIS, CA  
70560

REVISIONS

NO.	DATE	DESCRIPTION

DRAINAGE PLAN

SHEET No: 00 OF 00

C-2