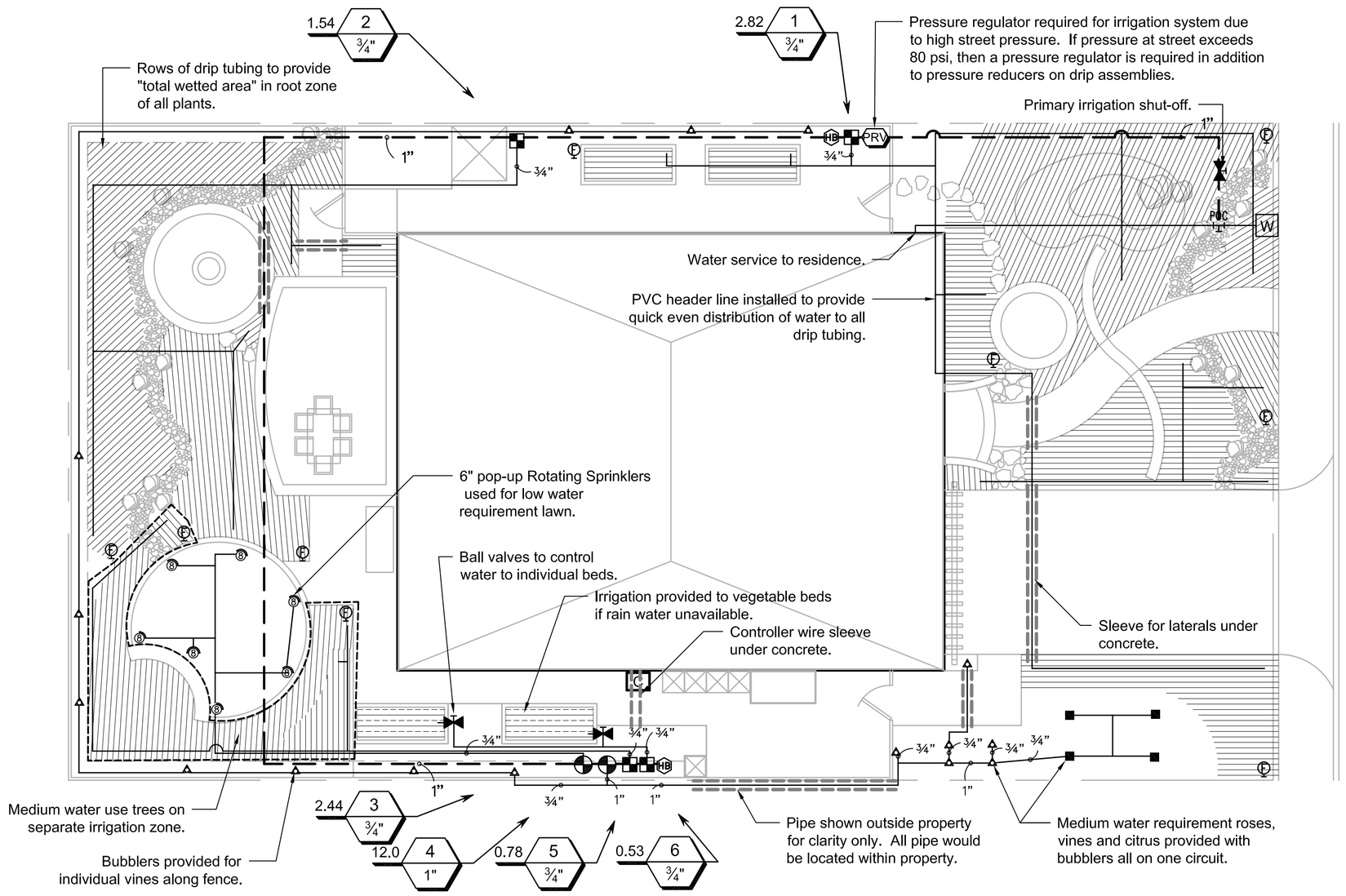


IRRIGATION PLAN

1/8" = 1'-0"

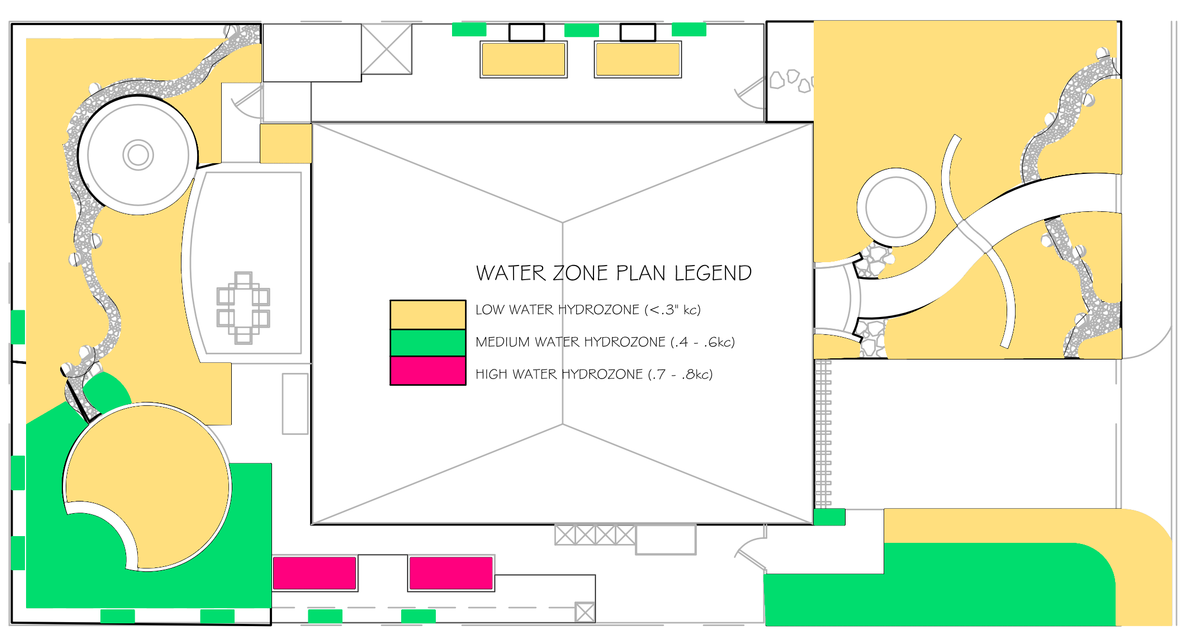
IRRIGATION SCHEDULE

SYMBOL	MANUFACTURER/MODEL	QTY	ARC	PSI	GPM	RADIUS
	Hunter INST-06-CV 8` radius	1	180	25	0.38	8'
	Hunter INST-06-CV 8` radius	2	90	25	0.19	8'
	Hunter INST-06-CV 8` radius	4	120	25	0.29	8'
	Rain Bird 1806-SAM-PRS-1400 Flood	16	360	30	0.25	1'
	Rain Bird 1806-SAM-PRS-1400 Flood	4	360	30	2.00	1'

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Rain Bird XACZ-075-PRF Drip Control Kit, 3/4" Low Flow Anti-Siphon Valve, 3/4" pressure regulating RBY Filter, and 30psi pressure regulator, for above grade installation.
	Flush Valve
	Area to Receive Dripline Netafim TLCV4-18-18 Landscape Dripperline with 0.4gph emitters at 18" o.c. with check valve, pressure compensation, 14.7psi min. to 50psi max. Dripperline laterals spaced at 18" apart, with emitters offset for triangular pattern.
	Area to Receive Dripline Netafim TLCV6-12-12 Landscape Dripperline with 0.6gph emitters at 12" o.c. with check valve, pressure compensation, 14.7psi min. to 50psi max. Dripperline laterals spaced at 12" apart, with emitters offset for triangular pattern.

SYMBOL	MANUFACTURER/MODEL/DESCRIPTION
	Rain Bird ASVF Electric Remote Control Valve, with Atmospheric Backflow Preventer
	Champion B-402 Garden Valve Install on riser staked to 4x4 redwood post.
	KBI LT-5 PVC Scheule 80 Ball Valve, Slip X Slip
C	Rain Bird ESP-SMT4 with (1) ESP-SM3 7 station, wall mount, outdoor controller with tipping bucket rain sensor
PRV	Wilkins 500 HLR Series Pressure Reducing Valve
POC 1"	Point of Connection 1" Tie in at water service line.
	Irrigation Lateral Line: PVC Schedule 40
	Irrigation Mainline: PVC Class 315 SDR 13.5
	Pipe Sleeve: PVC Schedule 40 Typical pipe sleeve for irrigation pipe. Pipe sleeve size shall allow for irrigation piping and their related couplings to easily slide through sleeving material. Extend sleeves 18 inches beyond edges of paving or construction.

Valve Callout
- Valve Number
- Valve Flow
- Valve Size



WATER ZONE PLAN

3/16" = 1'-0"

Pet Friendly Water Wise Garden

Water Budget Calculations

Maximum Applied Water Allowance (MAWA)

MAWA = (Eto)(0.62)(0.7xLA)

46.6 x 0.62 x 0.7 x 2939

29 2057 **59440** Gallons per Year

MAWA **79** Units (100cf) per Year

Estimated Total Water Use (ETWU)

ETWU = [(Eto)(0.62)(PFxHA)]/IE

Hydrozone 1	55.1 x 0.62 x 0.3 x 175	= 2242	
Rotating Sprinklers	0.8		
Hydrozone 2	55.1 x 0.62 x 0.6 x 336	= 7652	
Med. Req. Drip	0.9		
Hydrozone 3	55.1 x 0.62 x 0.3 x 1389	= 15817	
Low Req. Drip	0.9		
Hydrozone 4	55.1 x 0.62 x 0.6 x 394	= 10095	
Bubblers	0.8		
Irrigated Landscape	2294	**35806**	Gallons per Year
	ETWU	**48**	Units (100cf) per Year

Maximum Allowable Water Use 59440

Total Estimated Water Use 35806

Difference 23633

60% Of Allowance

Assumes Eto of 55.1 inches (CIMIS Zone 9 South Coast Marine to Desert Transition)

Where: Eto = Evapotranspiration in inches per year

0.62 = Conversion factor to gallons per square foot

0.7 = ET adjustment factor (plant factor x irrigation efficiency)

LA = Landscaped Area

PF = Average plant factor for each hydrozone (WUCOLS)

HA = Hydrozone area in square feet

IE = Irrigation efficiency of irrigation method used in hydrozone

NOTES:
1. All irrigation shown is diagrammatic only. All pipe and drip tubing would be laid in planter areas.
2. Vegetable garden was not zoned or scheduled as planting requirements would vary depending on planting.
3. Irrigation schedules are for reference purposes only. Actual schedule would be based on performance observations of run-off, local weather conditions and plant health/stress and would be regulated by Controller Weather Sensor system.
4. All pvc pipe to be sch. 40 with mainline buried 18" and laterals buried 12".

Establishment Schedule / Post-Establishment Schedule

		Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
	Weekly Eto	0.48	0.62	0.90	1.13	1.31	1.47	1.65	1.52	1.27	0.90	0.60	0.41
Hydrozone 1 (Station 3) PF=0.3	Adj. Eto	0.14	0.19	0.27	0.34	0.39	0.44	0.50	0.45	0.38	0.27	0.18	0.12
Rotating Sprinklers 0.6 Inches per Week		0.16	0.21	0.31	0.39	0.45	0.50	0.56	0.52	0.43	0.31	0.20	0.14
Days On 6	Days On	1	1	2	2	3	3	3	3	3	2	1	1
Cycles 2	Cycles	1	1	1	1	1	1	1	1	1	1	1	1
Runtime 4 Minutes	Runtime	10	13	9	12	9	10	11	10	9	9	12	8
	Min./Wk	10	13	18	23	27	30	34	31	26	18	12	8
Hydrozone 2 (Station 5) PF=0.6	Adj. Eto	0.29	0.37	0.54	0.68	0.79	0.88	0.99	0.91	0.76	0.54	0.36	0.25
Drip Med. 1.1 Inches per Week		1.07	1.38	1.99	2.52	2.91	3.26	3.67	3.37	2.81	1.99	1.33	0.92
Days On 6	Days On	2	2	2	2	3	3	3	3	3	2	2	2
Cycles 1	Cycles	1	2	2	2	2	3	3	3	2	2	2	1
Runtime 42 Minutes	Runtime	32	21	30	38	29	22	24	22	28	30	20	28
	Min./Wk	64	83	119	151	175	196	220	202	169	119	80	55
Hydrozone 3 (Stations 1, 2) PF=0.3	Adj. Eto	0.14	0.19	0.27	0.34	0.39	0.44	0.50	0.45	0.38	0.27	0.18	0.12
Drip Low 0.6 Inches per Week		0.54	0.69	1.00	1.26	1.45	1.63	1.84	1.68	1.41	1.00	0.67	0.46
Days On 6	Days On	2	2	2	3	3	3	3	3	3	2	2	2
Cycles 1	Cycles	1	1	1	1	1	1	1	1	1	1	1	1
Runtime 20 Minutes	Runtime	16	21	30	25	29	33	37	34	28	30	20	14
	Min./Wk	32	41	60	76	87	98	110	101	84	60	40	28
Hydrozone 4 (Station 4) PF=0.6	Adj. Eto	0.29	0.37	0.54	0.68	0.79	0.88	0.99	0.91	0.76	0.54	0.36	0.25
Bubblers 1.1 Inches per Week		0.12	0.16	0.22	0.28	0.33	0.37	0.41	0.38	0.32	0.22	0.15	0.10
Days On 6	Days On	2	2	3	3	3	3	3	3	3	2	2	2
Cycles 1	Cycles	1	2	2	2	2	2	2	2	2	2	2	1
Runtime 5 Minutes	Runtime	4	2	2	3	3	4	4	4	3	3	2	3
	Min./Wk	7	9	13	17	20	22	25	23	19	13	9	6

REGISTERED ARCHITECT 2164 MARIAN MARUM STATE OF CALIFORNIA
EXP. 11/30/10

MARUM PARTNERSHIP
LANDSCAPE ARCHITECTURE - URBAN DESIGN - PLANNING
4010 GOLDFINCH STREET
SAN DIEGO, CA 92103
PHONE: 619-992-9533

PET FRIENDLY WATER SMART GARDEN

JOB
DATE 6-9-2010
REVISIONS

CALIFORNIA LANDSCAPE TECHNOLOGIES
landscape architecture irrigation design
970 Woodlake Drive
Cardiff by the Sea
California 92007
760.942.9320

IRRIGATION PLAN

L-2