

SOUTHERN COASTAL BACK YARD

June 2009

SAMPLE PLANT LEGEND

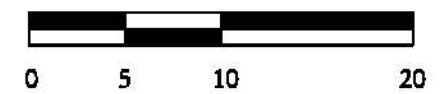
SYMBOL	BOTANICAL NAME	COMMON NAME
LARGE TREES		
	<i>Leptospermum laevigatum</i>	Australian Tea Tree
	<i>Quercus tomentella</i>	Island Oak
SMALL TREES		
	<i>Aloe barberae</i>	Tree Aloe
	<i>Arbutus unedo 'Elfin King'</i>	Dwarf Strawberry Tree
	<i>Dracaena draco</i>	Dragon Tree
LARGE SHRUBS		
	<i>Protea obtusifolia</i>	Limestone Sugarbush
	<i>Carpenteria californica</i>	Anemone
	<i>Helianthemum nummularium</i>	Sunrose
	<i>Encopelartos altensteinii</i>	Prickly Cycad
MEDIUM SHRUBS		
	<i>Agave a. 'Nova'</i>	Blue Fox Tail Agave
	<i>Ribes viburnifolium**</i>	Catalina Currant
SMALL SHRUBS & PERENNIALS		
	<i>Carex parea</i>	Sedge
	<i>Agave dasylirioides</i>	Dasylirion Agave
	<i>Euphorbia dulcis**</i>	NCN
	<i>Dudleya brittonii</i>	Dudleya
GROUNDCOVER RECREATIONAL/ACTIVE		
	<i>Carex praegracilis*</i>	Sedge*
	Turf*	NCN*
GROUNDCOVER SOCIAL/PASSIVE		
	<i>Arctostaphylos 'Emerald Carpet'</i>	Emerald Carpet
	<i>Dudleya hassei</i>	Catalina Island Live-Forever
	<i>Dymondia margaretae*</i>	Silver Carpet*
	<i>Senecio mandraliscae</i>	NCN
HARDSCAPE		
	Pavers	Mulch or DG
	Stepping Stones	Pea Gravel
	Bench	Sand-set Brick

* Can tolerate light traffic
** Can tolerate shade

SUNSET ZONES - 22, 23, 24



NORTH



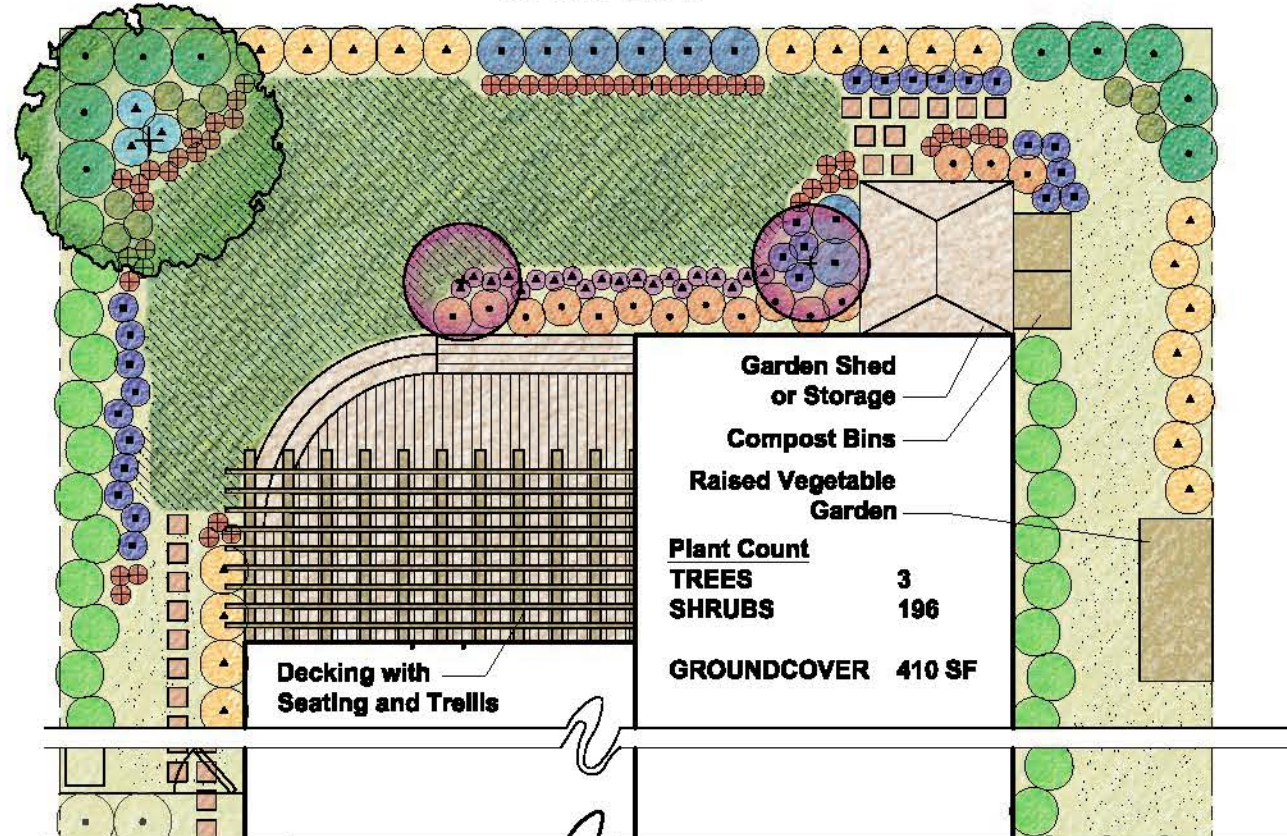
1" = 10'-0"

Note: For additional information regarding design and installation, please see back yard template and CUWCC's Water Smart Landscape Checklist at www.cuwcc.org.
Funded by the U.S. Bureau of Reclamation, Lower Colorado Region, Southern California Office.

"TYPICAL" SIZED LOT HOUSE

NORTH FACING REAR GARDEN, TYPICAL

60'x80' LOT

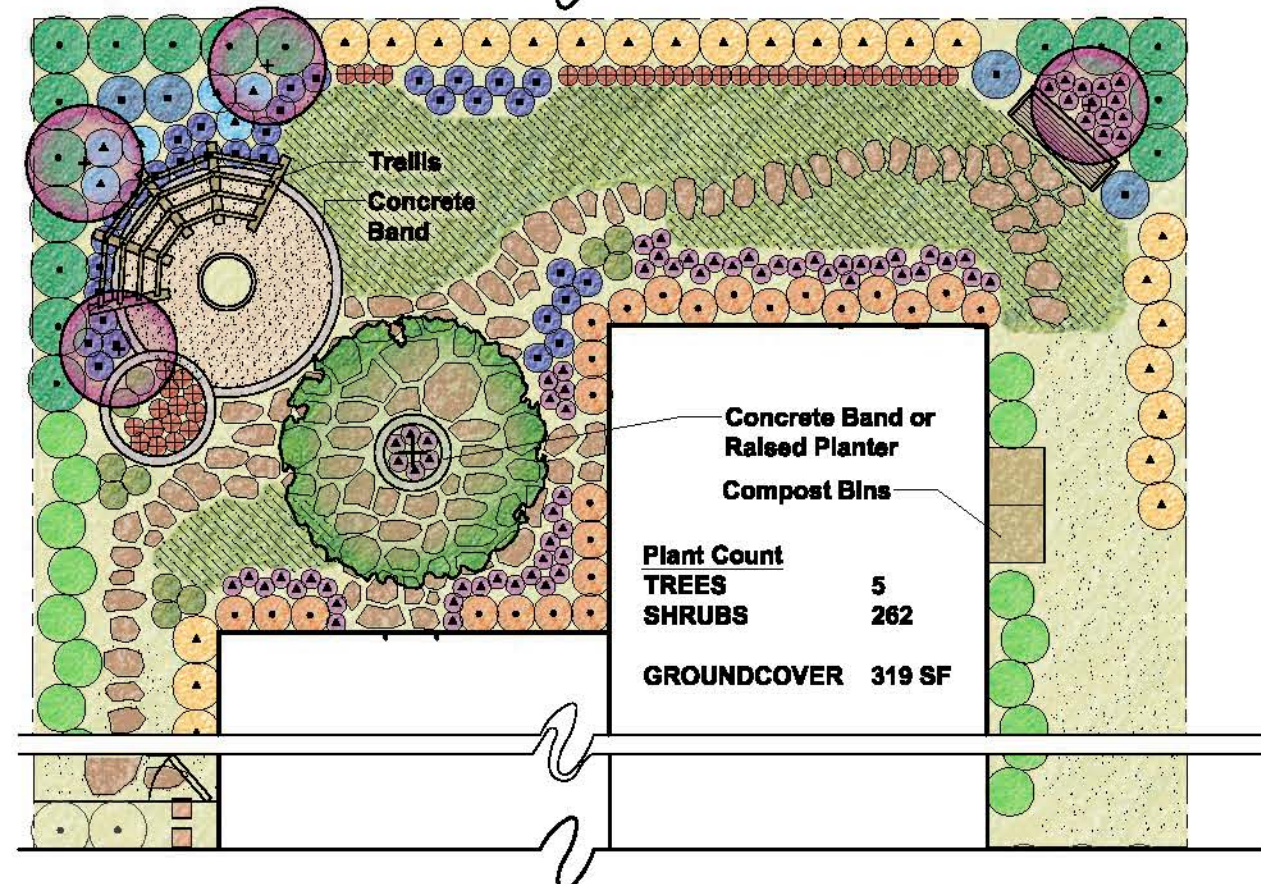


Garden Shed or Storage
Compost Bins
Raised Vegetable Garden
Plant Count
TREES 3
SHRUBS 196
GROUNDCOVER 410 SF

Decking with Seating and Trellis

RECREATION/ACTIVE

SOCIAL/PASSIVE

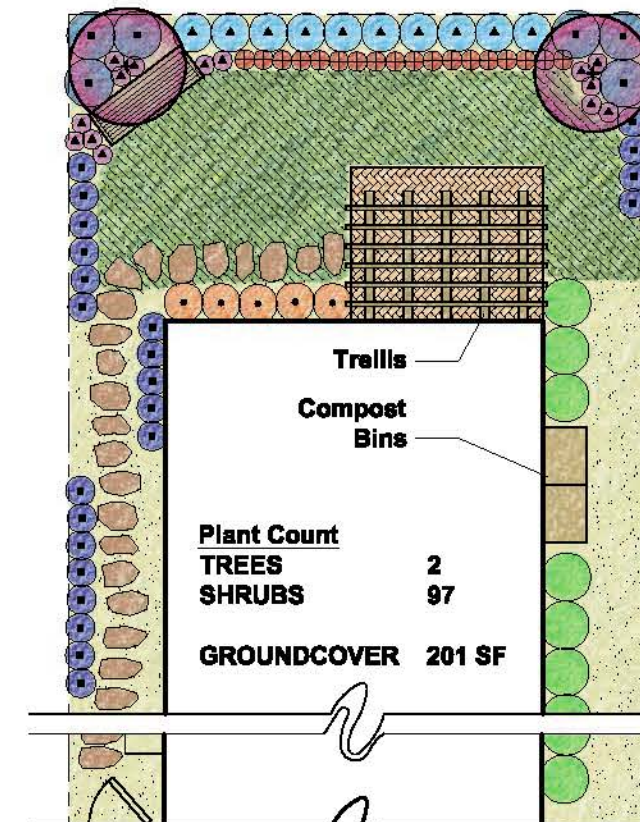


Concrete Band or Raised Planter
Compost Bins
Plant Count
TREES 5
SHRUBS 262
GROUNDCOVER 319 SF

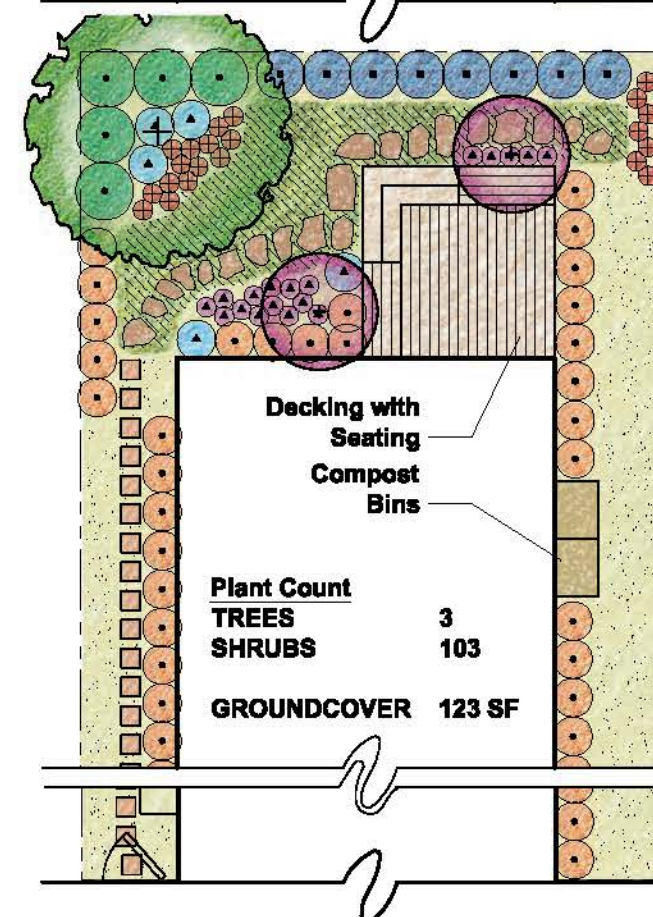
ZERO-LOT LINE HOUSE

NORTH FACING REAR GARDEN, TYPICAL

30'x80' LOT



Trellis
Compost Bins
Plant Count
TREES 2
SHRUBS 97
GROUNDCOVER 201 SF



Decking with Seating
Compost Bins
Plant Count
TREES 3
SHRUBS 103
GROUNDCOVER 123 SF

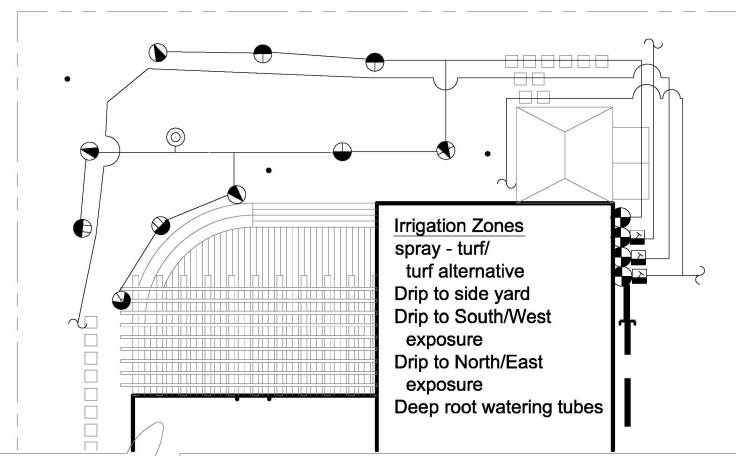


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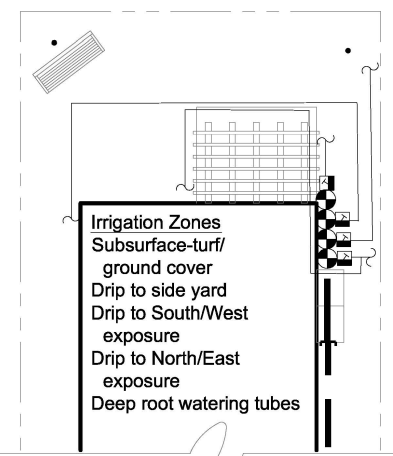
RECREATION/ACTIVE

"TYPICAL" SIZED LOT HOUSE NORTH FACING REAR GARDEN, TYPICAL

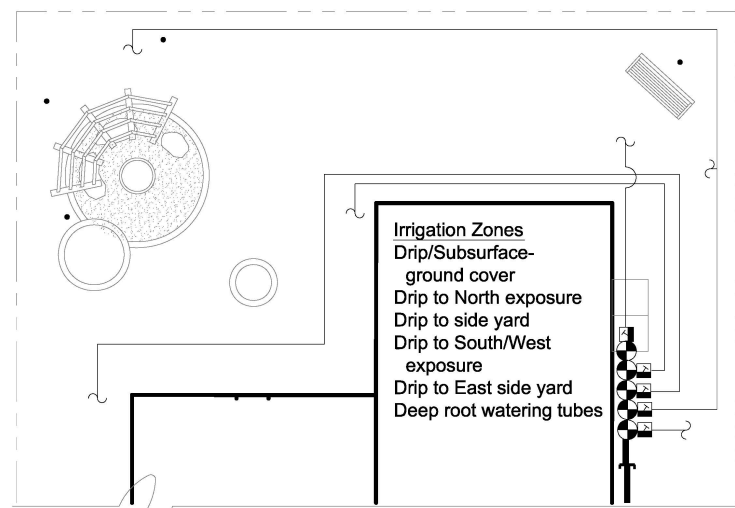


Refer to front yard templates for front yard examples

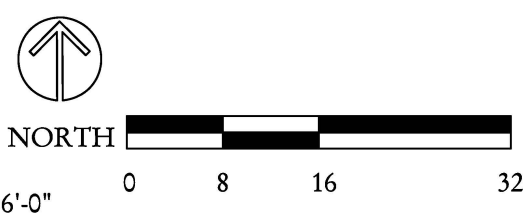
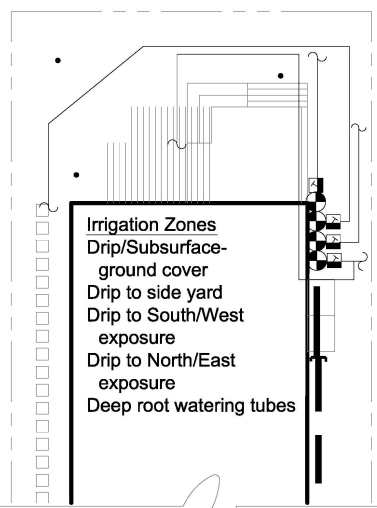
ZERO-LOT LINE HOUSE NORTH FACING REAR GARDEN, TYPICAL



SOCIAL/PASSIVE



Refer to front yard templates for front yard examples



	Existing irrigation main stub-out-1"	-Connect to stubout, station wires and common in valve box	
	Remote Control Valves	-Below grade in valve box with 2 cu feet of gravel below	
	Drip control assembly	-120 mesh filter and 40 psi regulator where psi is excessive	
	Flush valve/air relief valve	-Manual ball valve and air relief valve as required	
	6" Spray heads (12" from fence)	-Matched precip with check valves-12H,T,Q,ADJ	-12' radius
	6" Spray heads (12" from fence)	-Matched precip with check valves-10H,T,Q	-10' radius
	6" Spray heads (12" from fence)	-Matched precip with check valves-8F,H,T,Q	-8' radius
	6" Spray heads (12" from fence)	-Matched precip with check valves-15SST,EST	-3' X 10'
	Deep root watering tube	-Use 1 GPM bubbler as alternate to hand watering	
	Irrigation main-1"	-1120/Schedule 40 PVC pipe	-18" cover
	Irrigation lateral	-1120/Class 200 PVC pipe	-12" cover
	Electrical conduit-1"	-1120/SCHEDULE 40 PVC PIPE	-24" cover
	Sleeving-3"	-1120/Schedule 40 PVC pipe	-24" cover
	To drip irrigation	-Point source or multi-outlet emitters	-6" cover
	Inline subsurface drip-1/2"	-LDPE with inline emitters 12" on center	-4" cover

Typical Lot -Recreation	Estimated Water Use- Santa Barbara	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Valves	SQ FT													
Spray Turf	440	8	217	521	850	1,371	1,398	1,398	1,398	1,234	910	362	101	9,767
Spray Turf alternative	440	5	124	298	486	783	799	799	799	705	520	207	58	5,581
Drip GC	1160	7	190	458	747	1,204	1,229	1,229	1,229	1,084	800	318	89	8,583
TOTAL with Turf	1600	15	407	979	1,597	2,575	2,627	2,627	2,627	2,318	1,710	887	249	18,350
TOTAL with Turf alternative	1600	12	314	755	1,232	1,988	2,027	2,027	2,027	1,789	1,320	1,205	338	14,164

Estimated water use with turf 18,350 gal/yr; MAWA = 28,329 gal/yr; projected water use = 65% with turf

Estimated water use with turf alternative 14,164 gal/yr; MAWA = 28,329 gal/yr; projected water use = 50% with turf alternative

Zero Lot - Recreation	Estimated Water Use- Santa Barbara	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Valves	SQ FT													
Subsurface Drip Turf	220	3	84	203	330	533	544	544	544	480	354	141	39	3,798
Subsurface Turf alternative	220	2	48	116	189	305	311	311	311	274	202	80	23	2,170
Drip shrubs	500	3	82	197	322	519	530	530	530	467	345	137	38	3,700
TOTAL with Turf	720	6	166	400	652	1,052	1,073	1,073	1,073	947	699	358	100	7,498
TOTAL with Turf alternative	720	5	130	313	511	824	840	840	840	741	547	495	139	5,870

Estimated water use with turf 7,498 gal/yr; MAWA = 12,748 gal/yr; projected water use = 59% of MAWA with turf

Estimated water use with turf alternative 5,870 gal/yr; MAWA = 12,748 gal/yr; projected water use = 46% with turf alternative

Typical Lot - Social	Estimated Water Use- Santa Barbara	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Valves	SQ FT													
Drip Ground Cover	800	5	131	316	515	831	847	847	847	748	552	219	61	5,919
Drip shrubs	800	5	131	316	515	831	847	847	847	748	552	219	61	5,919
TOTAL with Turf	1600	10	262	631	1,030	1,661	1,695	1,695	1,695	1,495	1,103	439	123	11,839

Estimated water use 11,839 gal/yr; MAWA = 28,329 gal/yr; projected water use = 42% of MAWA

Zero Lot - Social	Estimated Water Use- Santa Barbara	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	ANN GAL
Valves	SQ FT													
Drip GC	130	1	21	51	84	135	138	138	138	121	90	36	10	962
Drip shrubs	590	4	97	233	380	613	625	625	625	551	407	162	45	4,366
TOTAL	720	5	118	284	464	748	763	763	763	673	496	197	55	5,327

Estimated water use 5,327 gal/yr; MAWA = 12,748 gal/yr; projected water use = 42% of MAWA

PRECIP = Precipitation Rate is the application rate of irrigation in inches per hour
 Assumed precip: Spray heads - 1.8, Drip - .4, subsurface drip - 1.1, Deep root watering -8
 MAWA = Maximum Annual Water Allotment (in gallons and based upon 70% of area historical annual ET)
 ETo=Reference evapotranspiration is the quantity of water evaporated from the soil and transpired by the planting and is measured in inches per month.
 ANN GAL = Annual gallons
 RUNTIME = Total amount of minutes required for planting root depth in native soil
 CYC = Total number of repeat cycles required for native soil
 CYC TIME = Rounded minutes of each cycle to be repeated by "CYC allowing infiltration monthly number = number of times/month to apply runtime (refer to example below)
 BASE SCHEDULE for established plant material with historical weather data (10 year average) and assumed precip. Note, if low precipitation heads or mini rotors are used in lieu of conventional spray heads, then the base run times will need to be extended to provide water down to the planting root zones.
 SPRAY HEAD: Spray head with one of the following: standard matched precipitation spray nozzles-1.8"/hr, low precipitation nozzles - 1"/hr, or mini rotor nozzles-0.4"/hr
 During establishment period, root depth is shallower, thus requiring more frequent irrigation with shorter run times, stretching out the frequency and extending the total runtimes as the planting matures and roots penetrate into native soil conditions over a 3-5 year span. Establishment irrigation frequency depends upon the time of year initial planting takes place.

Monthly example:
 The number under the month indicates the number of times that zone needs to be irrigated during that month. For fractions of runtimes per month, multiply the # of CYC by the decimal (example: drip/ground cover requires .6 runtimes per month of March = .6 X 7(# of CYC)= 4 cycles of 23 minutes each (CYC). This would equate to 92 minutes total runtime one time during the month of March.

Backyards: Refer to backyard design templates for both social and recreation layout ideas.
 Note: Some plants respond better to overhead spray while many others do better with drip. The irrigation design will need not only to take into consideration plant preferences, but also runoff and potential blockage where the planting grows in front of the spray heads. Drip and spray are both shown on the templates to show differences in system costs and projected water use.
 Also see front yard templates.