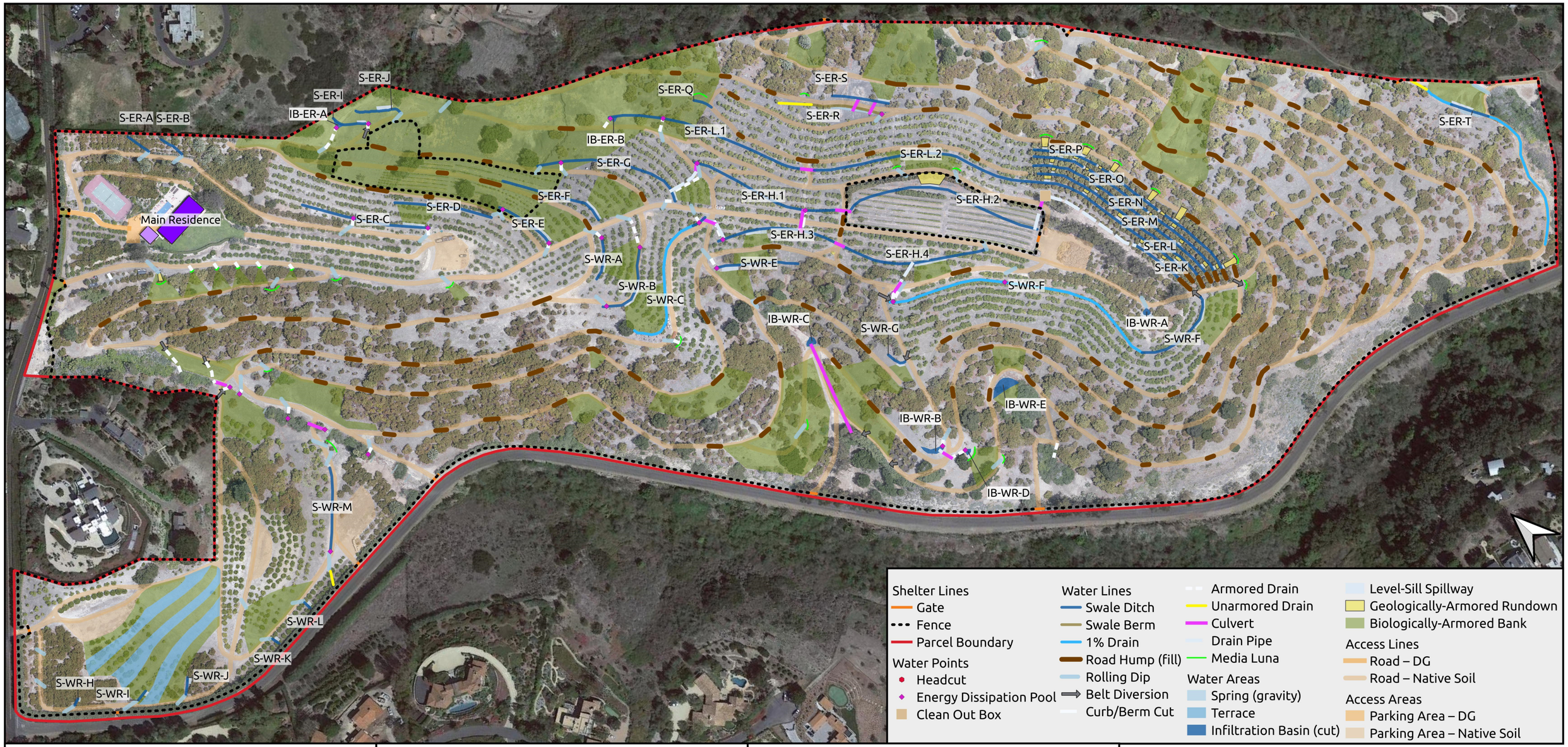
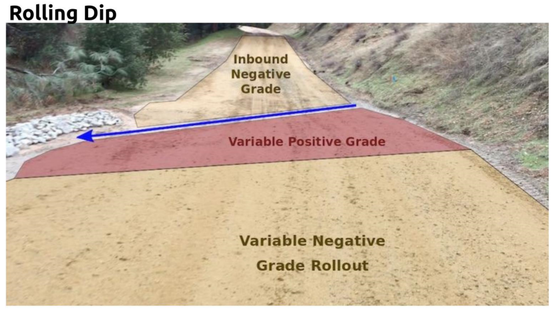


Swale / 1% Drain

Rolling Dip



Energy Dissipation Pool (Culvert Outlet)

Armored Level-Sill Spillway

Armored Drain

Notes

-Total system bank-full capacity: 194,000 gal
-Total system bank-full infiltration rate: 387,801 gal/min
-Total system annual infiltration capacity: 12 - 26 million gallons per average rain year

See element-specific dimensions, bank-full capacity, and infiltration rates on "Water Feature Information" sheet

0 250 500 ft

Date: July 1, 2022

Proposed Water Harvesting and Drainage System Design Map

[redacted]
Santa Barbara, CA 93108

7TH GENERATION DESIGN

Swales

Element Name	Length (ft)	Width (ft)	Depth (ft from sill)	Feature Volume (gallons)	Bank Full Infiltration Rate (gal/min)	Bank Full Infiltration Rate (gal/hr)	Design Notes
S-ER-A	61	2	1	942	2,257	135,420	Small swale, hand dug
S-ER-B	62	2	1	957	2,295	137,700	Small swale, hand dug
S-ER-C	311	2	1	4,677	11,499	689,966	
S-ER-D	235	2	1	3,550	8,710	522,628	Pitched at .5% or less towards double rolling dip to de-water road below
S-ER-E	147	2	1	2,227	5,438	326,255	
S-ER-F	256	2	1	3,858	9,473	568,385	
S-ER-G	369	2	1	5,549	13,657	819,417	
S-ER-H.1	367	2.5	1.25	8,617	15,987	959,225	
S-ER-H.2	487	2.5	1.25	11,422	21,222	1,273,292	Pattern drainage from northern portion of future arena/etc into swale.
S-ER-H.3	293	2.5	1.25	6,884	12,755	765,320	
S-ER-H.4	355	2.5	1.25	8,340	15,470	928,224	
S-ER-I	92	4	1.5	4,213	5,148	308,895	
S-ER-J	115	4	1.5	5,212	6,390	383,372	
S-ER-K	134	4	0.5	2,017	5,378	322,669	Swale w/ spillway here, discharges into Chilean avos, utilize mounding w/in to spread water out w/ intentional armored overflows b/w rows if necessary
S-ER-L	448	2	1	6,728	16,575	994,518	Shallow swale formed amidst the Chilean avo mounds as long as it can go. Repeat similar discharge pattern as one above all the way through Chilean block.
S-ER-L.1	485	2	1	7,289	17,964	1,077,842	
S-ER-L.2	520	2	1	7,813	19,259	1,155,565	
S-ER-M	469	4	0.5	7,023	18,778	1,126,667	Can be broken up into segments if necessary, berm heights and fall will dictate
S-ER-N	503	4	0.5	7,529	20,131	1,207,871	
S-ER-O	120	4	0.5	1,807	4,816	288,939	
S-ER-O	167	4	0.5	2,503	6,679	400,716	
S-ER-O	203	4	0.5	3,049	8,140	488,397	
S-ER-P	154	4	0.5	2,306	6,152	369,144	
S-ER-P	162	4	0.5	2,438	6,504	390,253	
S-ER-P	193	4	0.5	2,897	7,734	464,049	
S-ER-Q	46	2	1	715	1,696	101,755	
S-ER-R	171	2	1	2,592	6,341	380,481	Repair berm, extend slightly on ends, shape properly, mulch and plant
S-ER-S	136	2	1	2,070	5,048	302,875	
S-ER-T	366	2	1	5,503	13,545	812,687	
S-ER-T	93	2	1	1,421	3,442	206,490	
S-ER-T	70	2	1	1,079	2,596	155,753	
S-WR-A	103	2	1	1,573	3,818	229,061	
S-WR-B	202	2	1	3,053	7,480	448,828	Swale ditch follows existing level access road, wide enough to maintain vehicle access through swale bottom - good test location for road swale functionality given less severe slope?
S-WR-C	355	1	2	5,436	16,115	966,911	Off contour 1% sloping towards ridge
S-WR-C	36	2	1	563	1,320	79,172	Transition from 1% drain to level swale ditch to let water settle before transition through monk and into culvert
S-WR-E	199	2	1	3,002	7,354	441,267	
S-WR-F	223	2	1	3,365	8,253	495,167	Proposed pitch at .25-.5% if any
S-WR-F	672	1	2	10,172	30,471	1,828,257	Proposed pitch at .25-.5% if any
S-WR-G	48	2	1	742	1,763	105,761	Accepts discharge from belt diversion
S-WR-H	17	2	1	288	638	38,257	
S-WR-I	28	2	1	449	1,037	62,210	
S-WR-J	40	2	1	633	1,494	89,618	
S-WR-K	19	2	1	318	712	42,750	
S-WR-L	19	2	1	315	706	42,360	
S-WR-M	201	2	1	3,038	7,445	446,697	Last chance swale before flat area, will help reduce puddling, will discharge at northernmost end to the low area where it can cross the road and exit into the existing drainage.

Infiltration Basins

Element Name	Area (ft2)	Depth (ft from sill)	Feature Volume (gallons)	Bank Full Infiltration Rate (gal/min)	Bank Full Infiltration Rate (gal/hr)	Design Notes
IB-ER-A	221	1.5	2,547	1,912	114,750	
IB-ER-B	162	1.5	1,885	1,415	84,882	
IB-WR-A	235	1.5	2,704	1,876	112,540	
IB-WR-B	609	1.5	6,900	4,673	280,389	
IB-WR-C	383	1.5	4,365	2,842	170,503	Decommission neighboring road, vertical culvert inlet, clean up basin entry edge, vegetate
IB-WR-D	144	1.5	1,683	1,232	73,942	Overflow down ridge through contour plantings to road spillway below
IB-WR-E	1,420	1.5	16,000	9,615	576,928	Retrofit as perennial bioswale/wetland habitat zone that can handle seasonly influxes

Date: July 1, 2022

Proposed Water Harvesting and Drainage System
Water Feature Information

[redacted]
Santa Barbara, CA 93108

7TH GENERATION DESIGN