

CALIFORNIA SENIOR HOUSING DESIGN COMPETITION

PUEBLO BAHIA

Planning: The Pueblo Bahia utilizes the existing terraces of Parcels A and B to site nineteen detached senior housing units. Seven units are sited on the lower half of the Bahia Drive Parcel (Parcel A), and twelve units are placed on Misty Road Parcel (Parcel B). The terraces on the upper half of the Bahia Drive parcel are utilized for gardens, "food forest", and "permaculture" for use by the residents and neighbors of Pueblo Bahia. These gardens will produce fruits, vegetables, and herbs. Other fruit trees will be planted at various locations in the development also.

At the Misty Road Parcel, (Parcel B), Misty Court is extended in a south-west direction, to climb the hillside to provide access to the existing terraces that have previously been established. The placement of the road extension also preserves as much of the terraces as possible for the development of the units, access, parking, gardens, and the units themselves. Driveways off of Misty Court provide access to the five terraces and the units that have been sited on those terraces.

The remaining portions of the two parcels have been left as open space. At the Bahia Drive Parcel, accessible paths will be cut in the hillside to allow public access from the bottom of the parcel up to the top of the parcel. This will allow residents the opportunity to walk up the paths from their houses to the gardens at the top of the site. All of the paths will be less than 5%.

Design: In concept, the dwelling units of Pueblo Bahia are conceived as simple rectangular pavilions, oriented for optimum solar access, light, views, privacy, and security. They are open to the south for solar access and light, and to the east for distant views. The units come in four basic sizes: Extra Small, Small, Medium and Large, (XS, S, M, & L). All of the units are conceived as being twenty feet wide, with the length of the units varying depending on the size, 24, 32, and 48 feet in length for the XS, S, & M units respectively. The two "L" units are designed as two twenty by thirty foot pavilions joined together to form a larger unit. (Due to area limitations, one of the pavilions is actually 18.5' x 30'). For the L-1245 unit, the two pavilions are placed parallel to one another and slip past each other, to form on one side, an entry yard and approach, and on the opposite, private side, a courtyard accessed by the living area and master bedroom. In the L-1238 unit, the pavilions are placed perpendicular to one another, but also form a courtyard for the living areas and master bedroom.

All of the units feature nine foot high ceilings, and a sloped ceiling with north oriented clerestory windows accentuates the living areas. All of the units have elements that are common to all to help facilitate standardization, and economy of building.

Energy Goal: Homes that produce as much energy as they consume.

Passive Solar Energy strategies: The long axis of the units are oriented generally in an east-west direction, to take advantage optimum solar orientation. Open to the south for sun, and to the East for views. Closed with small openings on the West and North. A generous overhang on the South side will keep units shaded and cool in the summer, yet allow for solar heat gain in December and winter months. The concrete floor will store heat in the winter, and be cool in the summer.

Active Solar Energy Strategies: Solar Photovoltaics (PVs) and Solar Hot Water are utilized. The sloped roof portion of the roof will house panels for solar electricity generation and for domestic hot water use. The units will utilize the SunCache System to generate domestic hot water. The solar PVs will generate enough electricity to provide for a "net-zero" energy balance.

Principal Structure and Enclosure: STRUCTURAL INSULATED PANELS (SIPs)
The Exterior Walls/Structure will be 6" thick SIPs, which have an R-24 R-value. The roofs will be 12" thick SIPs with R-45 R-value. Advantages of SIPs: Stronger than conventional framing, better whole wall R-value, factory fabrication, less waste, complies with the Energy Star program, faster construction erection, straighter walls, saves on heating and cooling costs, reduced HVAC sizes, improves indoor air quality. Up to 23 points can be earned toward LEED ratings.

HVAC: Heat-Recovery Ventilator

Principal Finishes:
Main exterior walls: Cement board with elastomeric finish.
Exterior accent walls: Composite wood panels with natural wood veneer.
Floors: Concrete.
Interior walls/ceiling: Gypsum board.
Windows: Vinyl Insulated glazing units with low-e glass

Sustainable/ LEED Concepts:
Using infill sites that have previously been graded.
Rain water collection with storage under south facing patio decks.
Passive solar principles for heating and cooling.
Energy Generation by Solar PV and Solar Hot Water.
Drought tolerant landscaping.
Better insulation values of walls and roof through use of Structural Insulated Panels.
Better indoor air quality.
Access to daylight and views.

California Senior Housing: Pueblo Bahia
Marin

UNIFORMAT II SUMMARY 23,626 GSF :

SECTION	%	TOTAL	\$ / SF
10 FOUNDATIONS	15%	779,658	33
20 BASEMENT CONSTRUCTION	0%	-	-
A SUBSTRUCTURE	15%	779,658	33
10 SUPERSTRUCTURE	17%	897,788	38
20 EXTERIOR CLOSURE	23%	1,181,300	50
30 ROOFING	9%	472,520	20
B SHELL	49%	2,551,608	108
10 INTERIOR CONSTRUCTION	13%	661,528	28
20 STAIRS	0%	-	-
30 INTERIOR FINISHES	7%	354,390	15
C INTERIORS	20%	1,015,918	43
10 CONVEYING	0%	-	-
20 PLUMBING	5%	236,260	10
30 HVAC	5%	283,512	12
40 FIRE PROTECTION	0%	-	-
50 ELECTRICAL	6%	330,764	14
D SERVICES	16%	850,536	36
DIRECT COST		5,197,720	220
Overhead and Profit	9%	467,795	20
BUILDING ESTIMATE TOTAL	9-Dec	5,665,515	240
Additive Items			
1 Premium for PV System		400,000	17
2 Premium for passive hot water heating		32,000	1
BUILDING ESTIMATE TOTAL with Additive Items		6,097,515	258

SITWORK	
10 SITE PREPARATION	350,000
20 SITE IMPROVEMENTS	1,500,000
30 MECHANICAL UTILITIES	600,000
40 ELECTRICAL UTILITIES	250,000
50 OTHER SITE CONSTRUCTION	-
SITWORK ESTIMATE TOTAL	2,700,000
GRAND TOTAL BUILDING AND SITE Dec 09 \$	8,797,515



COMMUNITY & PARCEL SITE PLANS
1" = 50'

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California Senior Housing: Pueblo Bahia
UNIT SUMMARY

Model	Type	Ftr. Area (SF)	Quantity	(QxSF)
XS-480 (Units 7a, 16a, 18a, 19a)	Studio	480	4	1920
S-655 (Units 7, 9a, 11a, 13, 14)	Studio	655	5	3275
S-655-M (Units 2a, 4a, 5, 8a)	Studio	655	4	2620
M-960 (Units 6, 8, 9, 10, 11, 12, 15, 17)	1-BR	960	8	7680
M-960-M (Units 16, 18)	1-BR	960	2	1920
L1-1245 (Units 1, 3, 19)	2-BR	1245	3	3735
L2-1238 (Units 2, 4)	2-BR	1238	2	2476
TOTAL:			28	23,626 s.f.

Parking:
Total parking spaces required: 30
Total parking spaces provided: 33
(1) parking space/unit = 28, plus (5) visitor parking spaces.



PLAN: 1/16" = 1'-0"



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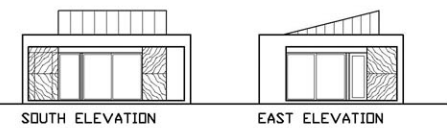


PLAN: 1/16" = 1'-0"



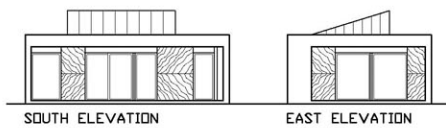
MODEL L2-1238

Units: 2, 4



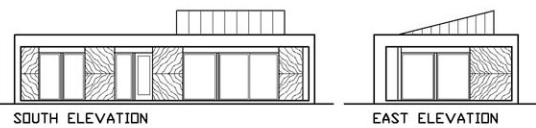
MODEL XS-480

Units: 7a, 19a, 16a, 18a



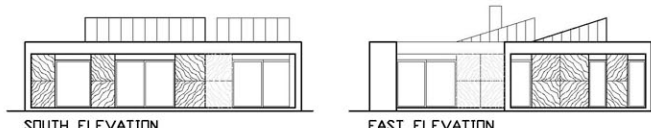
MODEL S-655

Units: 5, 9a, 11a, 13, 14



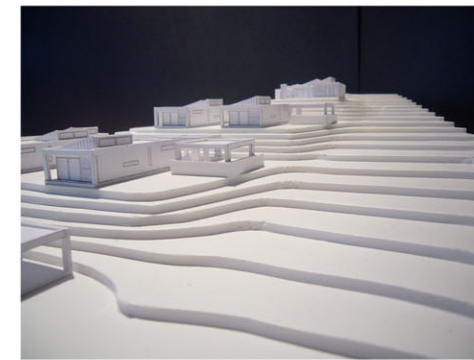
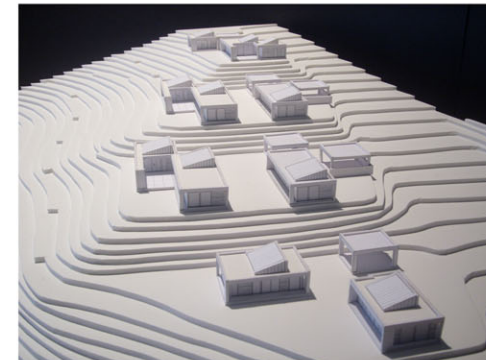
MODEL M-960

Units: 6, 8, 9, 10, 11, 12, 15, 17

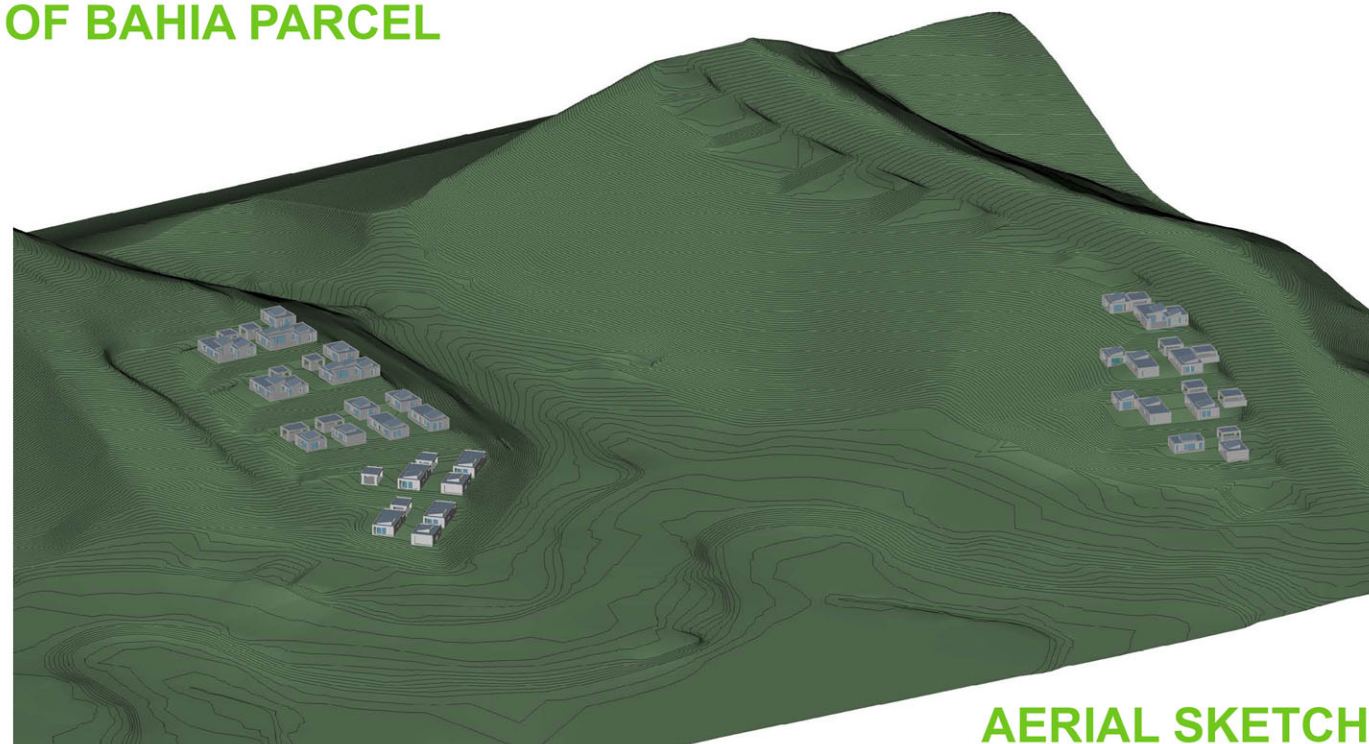


MODEL L1-1245

Units: 1, 3, 19



VIEWS OF BAHIA PARCEL



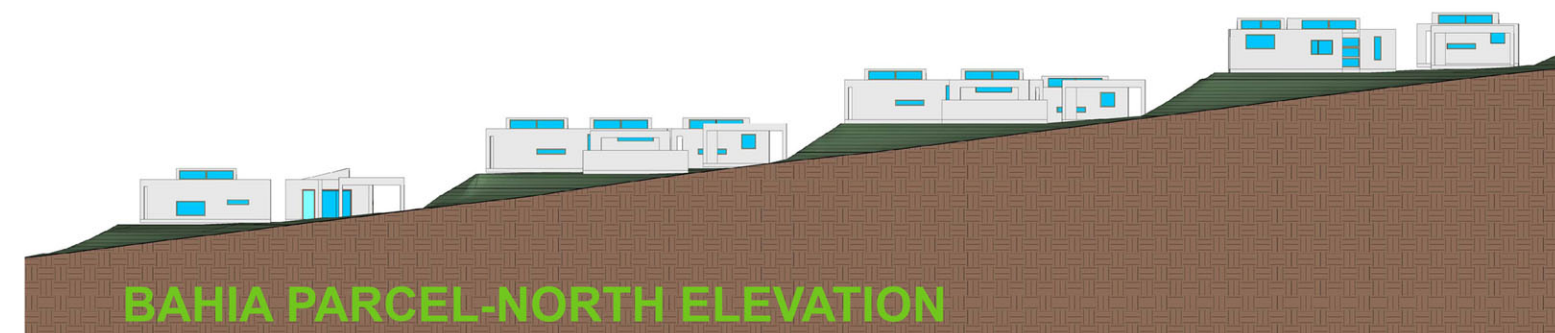
AERIAL SKETCH



EAST SECTION-ELEVATION OF BAHIA PARCEL



MISTY PARCEL-SOUTH ELEVATION



BAHIA PARCEL-NORTH ELEVATION