

OVERVIEW

Rather than dispersing the housing component throughout both Parcels, we propose an approach based upon each Parcel's respective advantages and limitations and a critique of the Competition Brief's assumptions.

Parcel A is much better suited for affordable senior housing in that its most buildable portions are conveniently located directly adjacent to Bahia Drive. Concentrating housing on the existing terraces of this parcel minimizes site work, paving and other expensive infrastructure. Most importantly, it creates a more intensive, walkable, liveable and neighborly development.

Parcel B is land-locked and would require extensive infrastructural work for housing development as well as considerable grading and paving to provide suitable vehicular access for residential use -- not to mention emergency services.

Accordingly, we propose accommodating all of the allowed housing units on Parcel A and preserving Parcel B for small-scale organic agricultural and shared/community garden uses.

BUNGALOWS, PARKING ORCHARDS & GRAYWATER

The housing typology consists of "Bungalows" that are compact in plan (24 ft x 28 ft) and efficiently designed -- all according to Universal Design principles. They are organized in courtyard-like groupings, accessed by an internal network of shared walkways.

These Bungalow groupings alternate with "Parking Orchards", each sited carefully upon the existing graded terraces and using the existing curb cuts. Access between the parking areas and dwellings is either by stair, a new sidewalk along Bahia Drive or by six strategically located wheelchair platform lifts housed within "Towers" capped with trellises. The Parking Orchards efficiently contain all the required parking and trash/recycling areas in close proximity to the dwellings, covered by a continuous canopy of fruit trees.

Graywater from the dwellings is directed and filtered through a specially designed landscape of "constructed wetlands" within the common areas flanking the walkways, continuing by gravity via branch lines and infiltration basins to provide subterranean irrigation for the fruit trees at the Parking Orchards.

At mid-parcel there is a centrally located Café & Convenience Store intended to serve the entire Bahia community.

VIEWS, PASSIVE SOLAR DESIGN, RAINWATER CATCHMENT & VEGETABLE GARDENS

The 29 living units (19 primary residences + 10 accessory dwellings) are accommodated within 9 one-story and 10 two-story structures.

Each living unit is oriented for passive solar benefit and every primary residence is sited to take advantage of the views.

Every unit has either an outdoor deck or patio and is provided with its own south-facing garden plot -- a minimum of 50 square feet; which is sufficient for a year-round vegetable garden for 2 persons.

All units will have their own compost bin and each building is fitted with an individualized rainwater catchment system with economical rain barrels at the downspouts that store harvested water for irrigation purposes.

ACCESSIBILITY, ADAPTABILITY & AGING-IN-PLACE

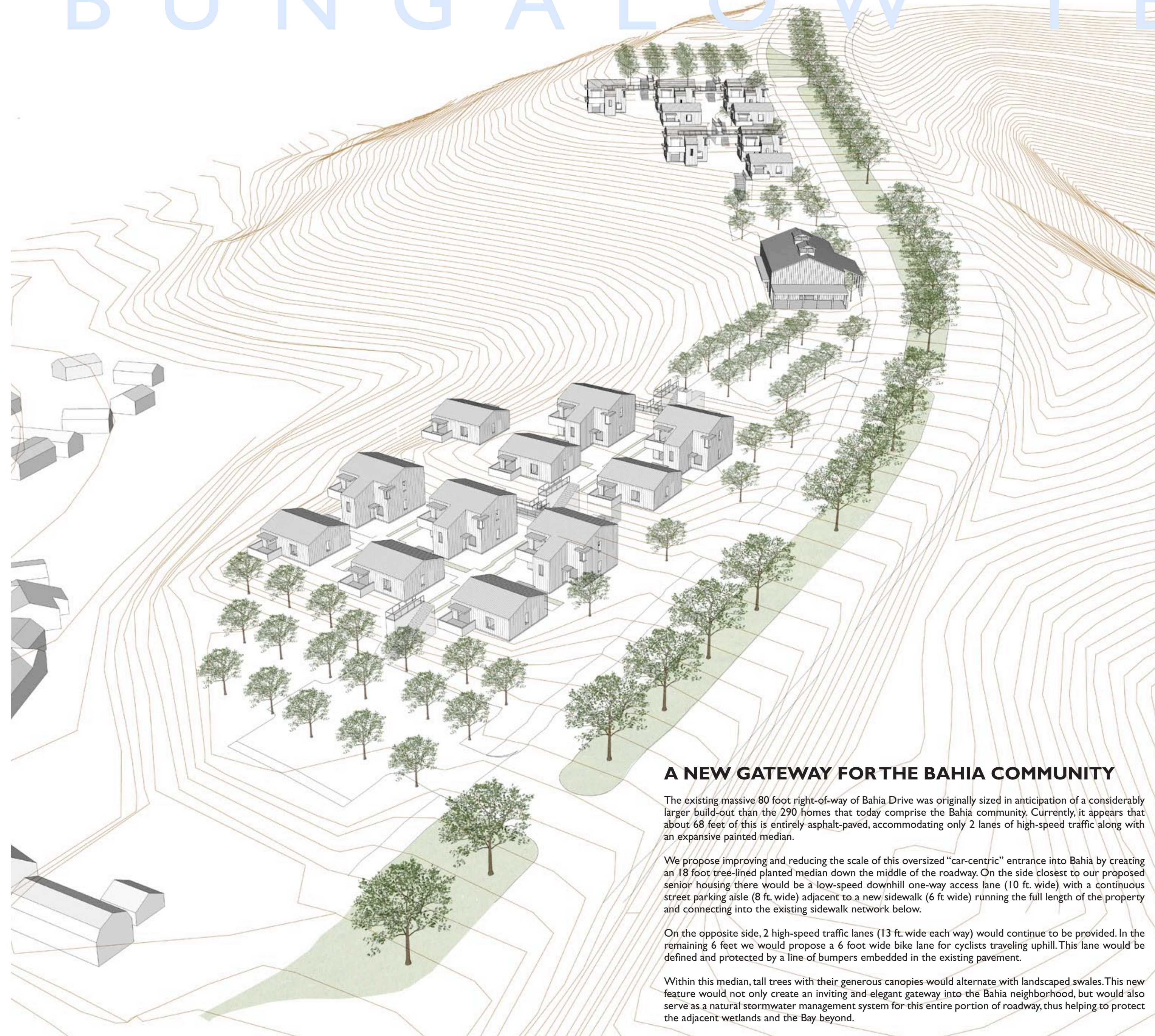
The one-story Bungalows are all 1-Bed/1-Bath homes with 672 SF of interior area. The two-story Bungalows (with enclosed stairwell connecting the floors) are a total of 1440 SF and have highly adaptable floor plans. Their siting takes advantage of the existing terrace contours to make each story fully accessible from grade.

Due to their flexible layout, with just the close of a pocket door, the 2-story structures can easily be inhabited as either two 1-Bed/1-Bath dwellings, as a single 2-Bed/2-Bath home with a generous rec room, home office or art studio, or as a 2-Bed/1-Bath home with a separately accessed Studio unit of 490 SF. This easy and inherent flexibility is key in the provision of "aging-in-place" housing for seniors.

AFFORDABILITY

Overall, this comprehensive "affordable-by-design" strategy will make the homes less expensive to build and, therefore less expensive to buy.

Their compact form will require less energy to operate and their simple and robust building systems and reasonable size will be easier to maintain.



AERIAL VIEW LOOKING SOUTH

A NEW GATEWAY FOR THE BAHIA COMMUNITY

The existing massive 80 foot right-of-way of Bahia Drive was originally sized in anticipation of a considerably larger build-out than the 290 homes that today comprise the Bahia community. Currently, it appears that about 68 feet of this is entirely asphalt-paved, accommodating only 2 lanes of high-speed traffic along with an expansive painted median.

We propose improving and reducing the scale of this oversized "car-centric" entrance into Bahia by creating an 18 foot tree-lined planted median down the middle of the roadway. On the side closest to our proposed senior housing there would be a low-speed downhill one-way access lane (10 ft. wide) with a continuous street parking aisle (8 ft. wide) adjacent to a new sidewalk (6 ft wide) running the full length of the property and connecting into the existing sidewalk network below.

On the opposite side, 2 high-speed traffic lanes (13 ft. wide each way) would continue to be provided. In the remaining 6 feet we would propose a 6 foot wide bike lane for cyclists traveling uphill. This lane would be defined and protected by a line of bumpers embedded in the existing pavement.

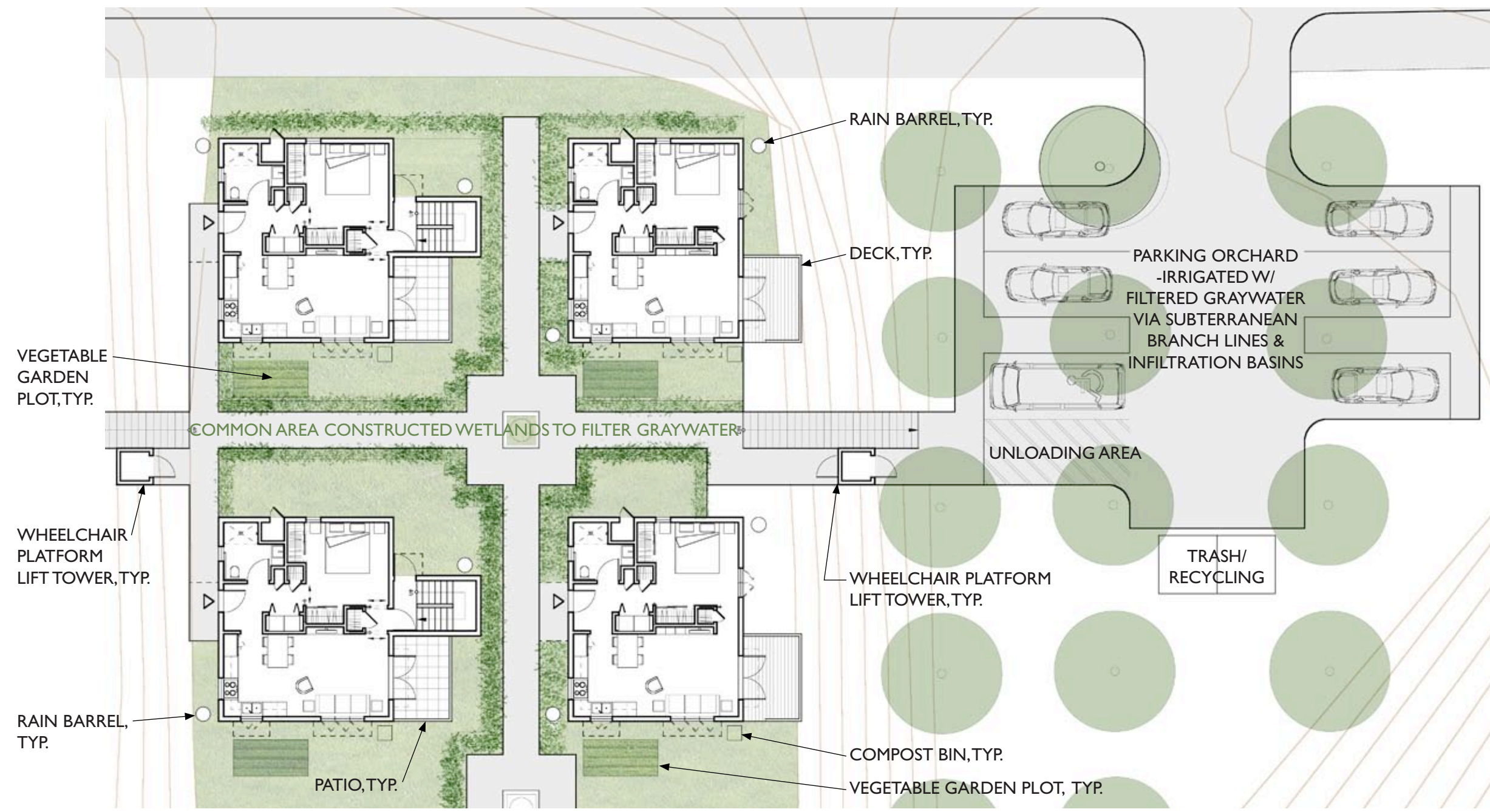
Within this median, tall trees with their generous canopies would alternate with landscaped swales. This new feature would not only create an inviting and elegant gateway into the Bahia neighborhood, but would also serve as a natural stormwater management system for this entire portion of roadway, thus helping to protect the adjacent wetlands and the Bay beyond.



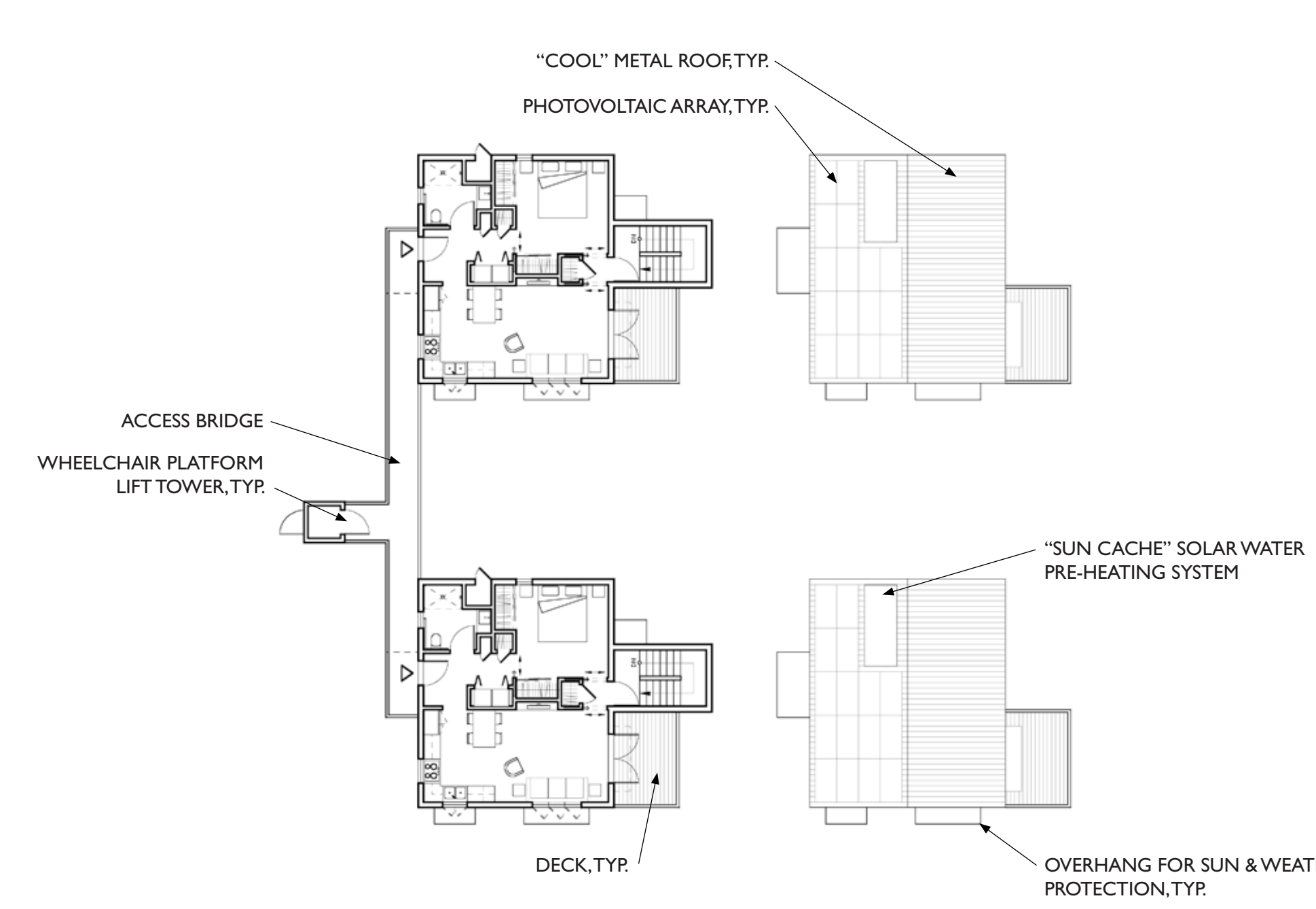
VIEW WITHIN COURTYARD



VIEW FROM BAHIA DRIVE



LOWER LEVEL PLAN - TYPICAL BUNGALOW GROUPING 1/16" = 1'-0"



UPPER LEVEL PLAN



DETAIL OF BUNGALOW GROUPING

PROJECT DATA

DWELLINGS			
(9)	ONE-STORY BUNGALOWS - Contains (1) Primary Dwelling (1 Bed/1 Bath)	@ 672 SF each	= 6048 SF
(10)	TWO-STORY BUNGALOWS - Contains (1) Primary Dwelling (Size can vary from 1 Bed/1 Bath to 2 Bed/1 or 2 Bath) - Contains (1) Accessory Dwelling (Size can vary from Studio to 1 Bed/1 Bath)	@ 1440 SF each	= 14400 SF
(19)	TOTAL DWELLING UNITS - With (10) Accessory Dwelling Units		= 20448 SF
COMMERCIAL			
(1)	CAFÉ & CONVENIENCE STORE	@ 2000 SF	= 2000 SF
PARKING			
(19)	PRIMARY DWELLING SPACES		
(10)	ACCESSORY DWELLING SPACES		
(4)	GUEST SPACES		
(33)	TOTAL SPACES - 4 of these spaces are van-accessible stalls with adjacent 8 ft. unloading areas.		

MATERIALS, SYSTEMS & NET-ZERO ENERGY GOALS

Compact form and 4-foot modular dimensions lend themselves to the efficient use of standard building materials allowing the buildings to be economically constructed using normative materials and either advanced 2x6 framing techniques, SIPs, SCIPs and other panelized systems, or off-site modular construction approaches.

The Bungalows are slab-on-grade with integrally-colored fly ash concrete floor surfaces, fiber-cement "board & batten" siding and "cool" metal roofs. They have high-performance, foam-insulated, wall and roof assemblies and foam-insulated fiberglass window and door systems with ultra high-performance glazing.

The south-facing slope of each building accommodates a net-metering photovoltaic array and "SunCache" solar-water preheating system. Space heating is provided by an in-floor radiant hydronic system, powered by a tankless water heater that also supplies all domestic hot water needs.

These systems combined with principles of compact form and sensible passive solar design, will allow us to address the project's LEED and net-zero energy goals.

CONCEPTUAL COST ESTIMATE

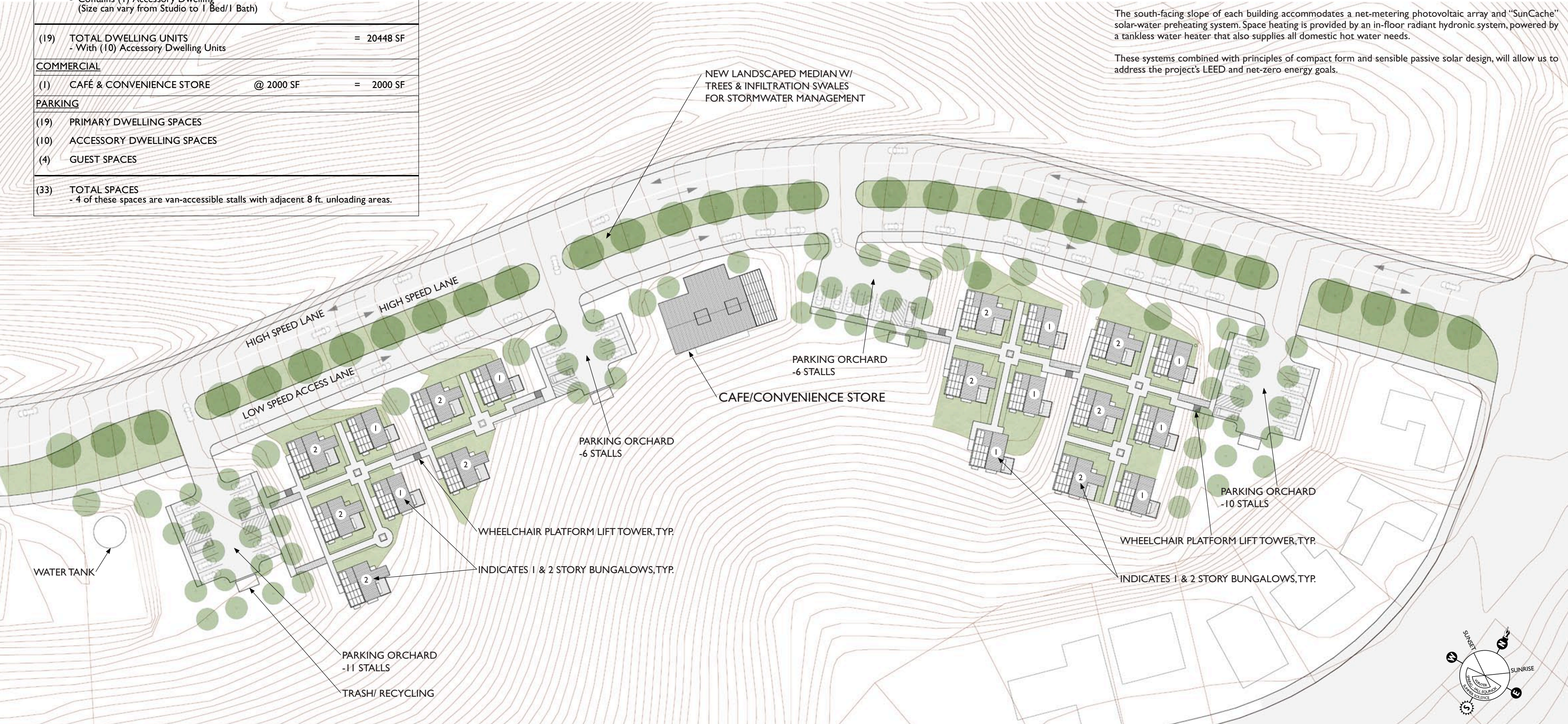
GENERAL CONDITIONS	\$	160,000
SUPERVISION & PROJECT MANAGEMENT 10 month Construction Schedule	\$	120,000
TEMPORARY FACILITIES Temporary Utilities Sanitary Facilities	\$	10,000
CONSTRUCTION AIDS Scaffolding Erosion & Sediment Controls Clean-up	\$	30,000
SITING WORK	\$	489,200
SITE PREPARATION & EXCAVATION	\$	54,000
SITE UTILITIES Sewer, Water, Electrical, Gas, Telephone & Cable 15000 Gallon Potable Water Storage Tank & Pump	\$	230,000
PAVING Sidewalk Concrete Shared Pathways Permeable Paving Materials "Parking Orchard" Parking Areas White Gravel / Decomposed Granite; high albedo > 0.6+	\$	76,450
LANDSCAPING & IRRIGATION Graywater Systems at each Bungalow Grouping "Connected Wetlands" Filtration Plantings Branch lines and infiltration basins Fruit Trees at "Parking Orchard" Regionally-Appropriate/Native/Drought Tolerant Plantings High-Efficiency Drip Irrigation System	\$	123,750
RAINFALL HARVESTING SYSTEMS (2) Individual 130 gallon vertical water tank serving each roof	\$	5,000
CONCRETE	\$	194,250
SLABS-ON-GRADE WITH SHALLOW EDGE FOUNDATIONS 4 inch Slab-on-Grade; Recycled Flyash/Slag Concrete Mix Serves as Finish Flooring typical at 1st (Ground) Floor conditions Contains embedded hydronic radiant heating system	\$	194,250
WOOD & PLASTICS	\$	1,383,790
ROUGH CARPENTRY & HARDWARE FSC-Certified or Engineered Lumber Pre-Cut or Shop-Fabricated Panelized Systems Exterior Decks - recycled plastic/composite wood Exterior Railings	\$	928,000
FINISH CARPENTRY Minimal Interior Trimwork Stair Treads and Handrails	\$	116,000
KITCHEN & BATHROOM CABINETRY & COUNTERS KraftMaid "Passport" Universal Design Series Swanstone Sinks and Counters	\$	339,790
THERMAL & MOISTURE PROTECTION	\$	483,200
INSULATION Spray Insulated Foam Cavity Insulation R20 at Walls (w/ Insulated Sheathing, total assembly = R25) R42 at Roof 1 inch Insulated Wall Sheathing (R5) Perimeter Slab Insulation (R20)	\$	339,300
METAL ROOFING & SHEETMETAL Standing Seam Panelized Roofing AEP Span "Zip-Rib" or equal Zincalume w/ "Cool Roofing" Paint Finish Matching Gutters & Downspouts	\$	143,900
DOORS & WINDOWS	\$	366,125
INTERIOR DOORS, FRAMES & HARDWARE (40) Masonte "Safe-N-Sound Emerald" Series Wheat Straw Cores	\$	92,800
EXTERIOR DOORS & WINDOWS Serious Windows 1125 Series or equal High-Performance Foam-Insulated Fiberglass Sash & Frames System U Value = 0.09 or better (Low-E Glazing U.O.N.)	\$	273,325
FINISHES	\$	702,313
FIBER CEMENT SIDING HardiePanel Vertical Panel Siding w/ Applied Battens	\$	294,350
GYPSUM BOARD 5/8 inch	\$	187,543
CONCRETE FLOORING (2nd Floor only) Serves as Finish Flooring typical at 2nd Floor conditions Recycled Flyash/Slag Concrete Mix 2 inch topping slab Contains embedded hydronic radiant heating system	\$	31,920

SPECIALTIES	\$	23,200
BATH ACCESSORIES & GRAB/TOWEL BARS	\$	14,500
SIGNAGE	\$	5,800
MALBOXES	\$	2,900
EQUIPMENT	\$	150,800
KITCHEN APPLIANCES & INSTALLATION Energy Star Appliances 11 cft. Conover Refrigerator Range (Induction) Microwave/Hood Dishwasher	\$	116,000
CLOTHES WASHER/DRYER & INSTALLATION Energy Star Combo Washer & Dryer Unit	\$	34,800
CONVEYING SYSTEMS	\$	180,000
VERTICAL WHEELCHAIR PLATFORM LIFT TOWERS 6 National Wheelchair or ThyssenKrupp Units 2 to 3 stop models (maximum vertical travel = 14 ft.) Installed complete in "Tower" enclosures	\$	180,000
MECHANICAL	\$	504,177
PLUMBING FIXTURES & FITTINGS Swanstone Pre-Fab Tub & Surround Toilets 1.1 GPF Showersheads 1.75 GPM Bath Faucets 1.5 GPM Kitchen Faucets 2.0 GPM	\$	89,465
HIGH-EFFICIENCY WATERHEATERS "Rinnai" Tankless Unit, Natural Gas	\$	28,500
HYDRONIC RADIANT HEATING SYSTEMS "Rinnai" Unit powered by tankless water heater and solar water preheating system	\$	114,305
SOLAR WATER PRE-HEATING SYSTEMS Harpis Energy "SunCache" System (Davis Energy Group)	\$	66,500
PLUMBING ROUGH-IN & CONNECTION Additionally provide rough-in for future solar waterheating system	\$	205,407
ELECTRICAL	\$	516,018
LIGHT FIXTURES & LAMPING Energy Star Advanced Lighting Package at all Units High-Efficiency Lighting on sensor at all exterior/common areas (Outdoor fixtures direct light downward to mitigate light pollution)	\$	18,750
PHOTOVOLTAIC SYSTEMS (18) Arrays of (16) 185 watt panels (16) 185 watt panels = 3 kW each (2.5 kW CEC) Net Metering Attach directly to Metal Roof ribs using S-5 clips (No roof penetrations or additional armature required)	\$	280,000
ELECTRICAL ROUGH-IN & CONNECTION Additionally provide rough-in for future net-metering PV system	\$	217,268
SUBTOTAL	\$	5,153,073
GENERAL CONTRACTOR PROFIT, OVERHEAD & CONTINGENCY 10%	\$	515,307
TOTAL	\$	5,668,380

TOTAL INTERIOR /INHABITABLE AREA =	20448 SF
OVERALL PROJECT COST PER SQUARE FOOT =	\$ 277 per SF

NOTES:

- CAFÉ / CONVENIENCE STORE (2000 SF)
Provide allowance of \$250K.
- PARCEL B MINIMUM INFRASTRUCTURE FOR SMALL-SCALE ORGANIC FARMING & COMMUNITY GARDENS
Provide allowance of \$200K for the following scope:
a. Minimum required grading for gravel-paved access road.
b. Electrical power drop from utility grid.
c. Well, solar-powered pump, reverse osmosis filtering system & water storage tank
d. Primary irrigation distribution system



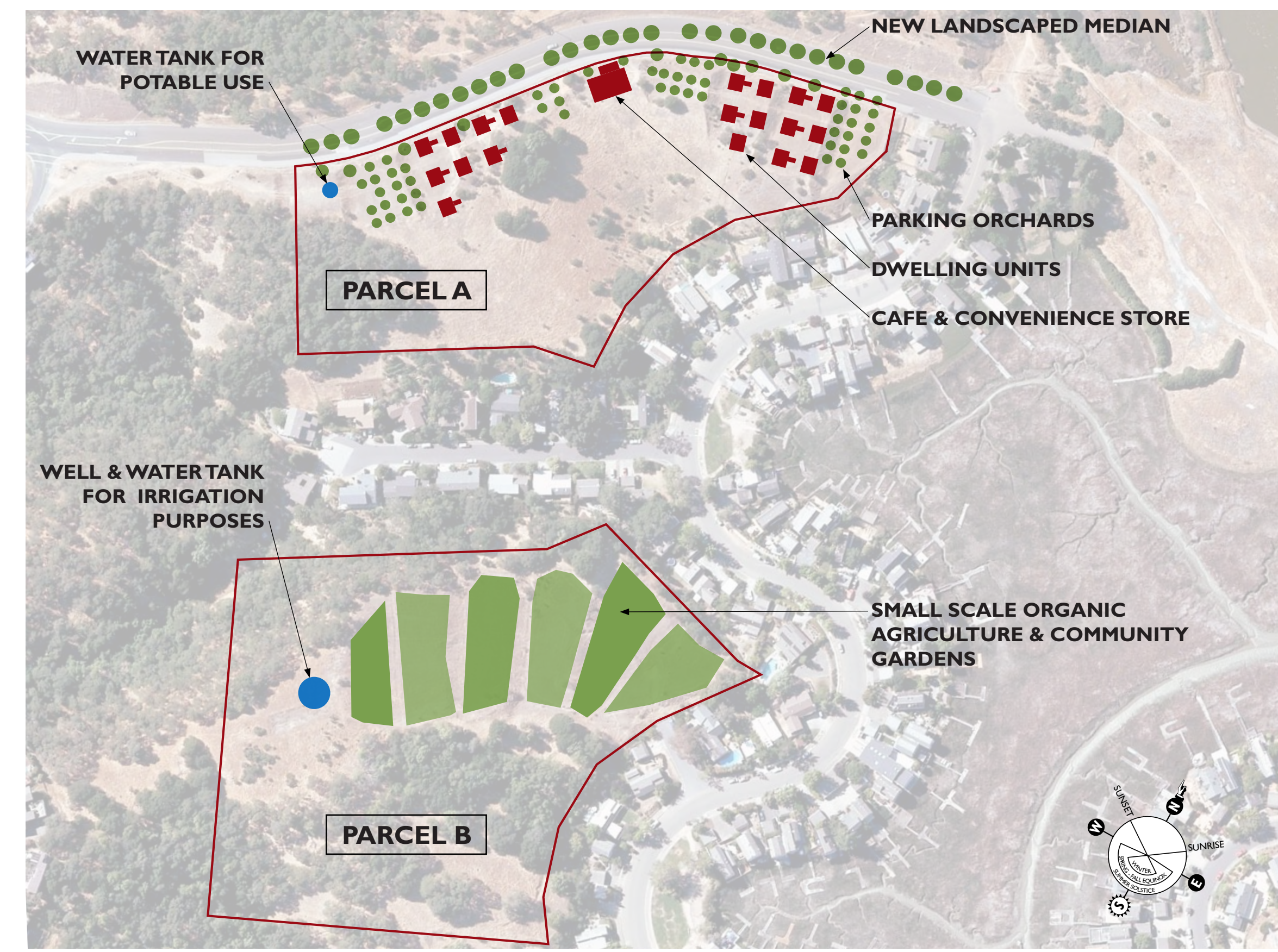
PARCEL PLAN 1" = 50'-0"



LONGITUDINAL SECTION 1" = 50'-0"



ELEVATION ALONG BAHIA DRIVE 1" = 50'-0"



COMMUNITY PLAN