What is a Silver State Certified Sustainable Home?

A Silver State Sustainable Home (S3H) is designed and built to be environmentally sustainable. It is a green home that uses less energy, water and natural resources, creates less waste and is healthier for the people living inside compared to a standard home. A Silver State Sustainable certified home provides greater durability and lower maintenance costs. It is energy efficient and much more. It is also a high performing home in these other key areas: water use, materials and resource use, indoor air quality and site development. Homes are built to last decades and the operation and maintenance costs of a Silver State certified home will cost less than the standard home for its lifetime.

Key Features

- Voluntary Option
- Comprehensive and Credible
- Rigorous Yet Attainable
- Benefits Developers, Tenants / Occupants, Community
- Designed for Affordable Housing Developers in Nevada

For more information about S3H Contact **Barbara Collins, ERH West**, or **Brenda Hungerford, All Phase Inspections**, the Division Energy Consultants, at bcollins@erhwest.com and brenda@allphaseinspections.com with any questions.

Construction Types

Single-family Homes (including townhomes) Low-rise Multifamily (1-3 story buildings) Mid-rise Multifamily (4 -5 story buildings)

Certification Levels

Tier 1 – Mandatory Measures plus 15 points, minimum 12 from Resource Efficiency and Site Development

Tier 2 – Meet Tier 1 requirements plus 25 points from any category

Tier 3 – Meet Tier 1 requirements plus 50 points from any category

Plan Review Mandatory Measure

Plan Review	Building plans are reviewed and analyzed pre-construction to
	verify compliance with requirements. Design team meets with
	certifier to discuss plans and path to certification.

Operations and Maintenance Manual Mandatory Measure

Operations and Maintenance Manual	A manual which covers operation and maintenance of
	equipment and building systems shall be provided to the building owner or property management.

Energy Efficiency Mandatory Measures

Energy Performance Modeling	Energy modeling using nationally approved building energy
	use simulation software is done on each unique dwelling type
	based on type, size and location in a project, using worst case

	orientation building for energy use. Minimum performance
	shall meet Energy Star Homes v3.1
Mechanical Equipment	
HVAC System Sizing	ACCA Manual J/S or equivalent required
Return Air Balancing System	In dwelling units with ≥ 2 bedrooms, pressure difference with bedroom door closed and air handler running is ≤ 3 pascals
Air source heat pump	Climate Zone 3 \geq 15 SEER; 8.5 HSPF Climate Zone 5 \geq 14.5 SEER; 8.5 HSPF
Conventional Forced Air Furnace, Natural gas / propane	Climate Zone 3 \geq 90 AFUE Climate Zone 5 \geq 92 AFUE
Split System Central A/C	Climate Zone 3 \geq 15 SEER Climate Zone 5 \geq 14.5 SEER
Thermostatic Expansion Valves	Required
Thermostat	Programmable
HVAC System Location	HVAC air handler and duct distribution systems located within the thermal and air barrier boundary
HVAC System Leakage	 ≤ 4 cfm or less/100 sq ft living space leakage to outside ≤ 8 cfm or less/100 sq ft living space total leakage
Combination Space Heating/Water Heater	≥ 80% Recovery Efficiency ; 0.67 Energy Factor
Water Heater Only	Residential Tank, Natural gas / propane ≥ 0.67 Energy Factor Tank Electric ≥ 2.2 Energy Factor Commercial Tank, Natural gas / propane ≥ 84% Thermal Efficiency Electric ≥ 2.2 Energy Factor
Spot Ventilation and Mechanical Fresh Air Ventilation System	Ventilation equipment shall be Energy Star, high efficiency, low sone.
Plumbing Fixtures	
Showerheads	Use ≤ 2.0 gallons per minute
Faucets	Use ≤ 1.5 gallons per minute
Building Envelope	
Insulation Levels	Minimum required insulation levels for attics/ceilings, walls, band joists, floors over unconditioned space and slab foundations, must be equal to or greater than IECC code Foam board sheathing on exterior walls required: Climate Zone 3 \geq R-4 Climate Zone 5 \geq R-5
Air Sealing and Insulation Installation Inspections	Pre-drywall inspections of air sealing and insulation installation required. Insulation installation must achieve RESNET Grade 1 (QII in CA)

Air Infiltration	Building envelope shall be pressure tested with blower door at finish and meet code requirement
Windows	Climate Zone 3 \leq U-value 0.30 ; SHGC 0.25
	Climate Zone 5 \leq U-value 0.27 ; SHGC Any
Lights and Appliances	
Lighting	100% of interior light fixtures shall be Energy Star qualified
	LEDs or equivalent
Appliances	These appliances, if installed, shall be Energy Star:
	Refrigerator, Dishwasher, Clothes Washer, Clothes Dryer
Ceiling fans	Shall have high efficiency motors with minimum performance
	of 100 cfm/watt at medium speed. Light kits shall be LED
On-Site Renewable Energy Ready	
Solar Energy Ready	When renewable energy is not installed in project
	construction, design and build the project so that it will
	readily accommodate the installation of solar photovoltaic
	panels. Project must meet one of the following
	1. DOE Zero Energy Ready Home PV-Ready Checklist
	2. CalGreen, Section 110.10.b Requirements for Solar Ready
	Buildings
	Required with Renewable Power Contracts.

Points

Renewable Energy	
Renewable Energy Installation	Design and install solar photovoltaic energy to meet portion
4 points per 5% of project's annual	of energy demand for project.
electrical energy demand.	
Renewable Energy Installation / On-	Design and install solar photovoltaic energy to meet portion
site battery energy storage system	of energy demand for project with a battery energy storage
installation.	system
5 points per 5% annual electrical	
energy demand.	
All Electric Construction	All equipment used in the building is electric
18 points	
Renewable Power Contract	Provide at least 10% of the project's total energy
10% =1 point, 20% = 2 points	consumption through renewable energy sources by
30% = 3 points, 40% = 4 points	contracting to purchase green power for at least two years
Energy Performance Improvement	Energy Performance Improvement over IECC 2018,
Path	cannot be used with Prescriptive Improvements.
1% = 1 point	
Prescriptive Improvements	
Air Infiltration	Maximum ACH/50
2 points	Climate Zone $3 \leq 3$
	Climate Zone 5 \leq 4
Energy Recovery Ventilator	Install Energy Recovery Ventilator to provide mechanical
2 points	ventilation

Whole Building Lighting	All exterior area lighting, high efficacy
2 points	
Air Source Heat Pump	Install air source heat pump that exceeds mandatory
1 SEER increase = 1 point each	efficiency specification
Mini-Split heat pump	Install air source mini-split heat pump that exceeds
1 SEER increase = 1 point each	mandatory efficiency specification
Heat Pump Water Heater	Install Energy Star qualified heat pump water heater
4 points	
Tankless Water Heater	Install Energy Star qualified tankless water heater with
2 points	recirculating pump
Conventional Forced Air Furnace,	Climate Zone 3 ≥ 92 AFUE
Natural gas / propane	Climate Zone 5 ≥ 96 AFUE
1 point	

Water Efficiency Mandatory Measures

Plumbing Fixtures	
Toilets	WaterSense; use ≤ 1.28 gallons per flush
Showerheads	Use ≤ 2.0 gallons per minute
Faucets	Use ≤ 1.5 gallons per minute
Appliances	
Dishwashers & Clothes Washers	Dishwashers and clothes washers must be Energy Star

Points

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WaterSense hot water distribution	Design and install water system that meets the WaterSense
2 points	volume limit for hot water distribution.
Xeriscaping	75% of landscape is xeriscaped
2 points	
Drip Irrigation	Drip or subsurface irrigation systems is installed for all
2 points	landscape areas requiring irrigation
Limit Turf	Total turf area in landscape ≤ 20%
2 points	
Mulch	\geq 2 inches of air and water permeable mulch is installed over
2 points	all no-turf vegetation areas. weed barriers must be air and
	water permeable.
Irrigation Controller	Install a WaterSense irrigation controller
2 points	

Indoor Air Quality Mandatory Measures

Mechanical Ventilation	Meet ASHRAE Standard 62.2 Ventilation for Acceptable
	Indoor Air Quality. Continuous mechanical ventilation shall be

	provided, bath and kitchen intermittent exhaust shall be provided.
Combustion Appliances inside conditioned space	Power vented or direct-power vented unit. No natural draft combustion appliances in conditioned space.
Radon Mitigation	In EPA Zone 1 areas, passive radon-resistant features below the slab and a vertical vent pipe with junction box within 10 feet of an electrical outlet shall be installed.
Interior wall paint	Low Volatile Organic Compound (VOC) paint shall be used for interior walls. Paint shall comply with VOC limits in Table 1 of the CARB Suggested Control Measure for Architectural Coatings.

Points

HVAC System Protection	Ducts covered during construction, with tape, plastic,
1 point	sheetmetal or other methods from rough-in to finish.
High MERV air filter	Install MERV 13 or higher air filter in HVAC, adequate air flow
13 = 1 points	design details in plans.
16 = 2 points	
Low VOC Insulation	Thermal Insulation installed meets low VOC defined in
2 point	Collaborative for High Performance Schools (CHPS) Low-
	emitting Materials List or equivalent.
Low VOC kitchen and bath cabinets	Kitchen and bath cabinets meet CARB Composite Wood Air
3 points	Toxic Contaminant Measure Standard or equivalent.
Hard Surface Flooring Systems	Hard surface flooring meets one of the following:
3 points	1.Products certified under UL GREENGUARD Gold
	2. Certification under the Resilient Floor Covering Institute
	(RFCI) FloorScore program.
Low VOC carpet, cushion and adhesive	Carpet, carpet cushion and carpet adhesives shall meet the
2 points	testing and product requirements of one of the following:
	1. Carpet and Rug Institute's Green Label Plus Program
	2. California Department of Public Health, "Standard Method
	for the Testing and Evaluation of Volatile Organic Chemical
	Emissions from Indoor Sources Using Environmental
	Chambers," Version 1.1, February 2010 (also known as
	Specification 01350).
	3. NSF/ANSI 140 at the Gold level
	 Scientific Certifications Systems Indoor Advantage[™] Gold. Carpet cushion installed in the building interior shall meet the
	requirements of the Carpet and Rug Institute's Green Label
	program.
Composite Wood Products	Composite Wood Products Hardwood plywood, particleboard
3 points	and medium density fiberboard composite wood products
5 points	used on the interior or exterior of the building shall meet the
	requirements for formaldehyde as specified in the CARB Air
	Toxics Control Measure for Composite Wood
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Moisture Content of Building Materials	Building materials with visible signs of water damage not be
1 point	installed. Wall and floor framing not be enclosed when the
	framing members exceed 19% moisture content
No Smoking Policy	Agreement to establish a no-smoking policy for project
3 points	(including all indoor common areas, units, and
	balconies/patios) and within 25 feet of buildings and include a
	non-smoking clause in the lease for each household.

Resource Efficiency – No Mandatory Measures

Points

Construction Waste Management	Non-hazardous construction waste is recycled:
60% = 1 point	Recycle 60% of three items below
75% = 2 points	Recycle 75% of three items below
	Cardboard, concrete, wood, drywall, ashphalt and metals.
Recycling Station for Occupants	Provide readily accessible station/dumpster on site for
2 points	recycling, must include paper, cardboard, glass, plastics (#1
	#7), and metals.
Recycle Bins	Recycle bins adjacent to other waste receptacles in common
2 points	areas and walkways.
Building Materials With Recycled	Use materials with 25% recycled content value for a minimum
Content	of 75% of the total value of the building component, based on
2 points per component	estimated cost of materials on the project.
	Insulation
	Framing
	Sheathing
	Flooring
	Roofing
	Siding
	Concrete (may use fly ash or slag for recycled content)
Sustainably Harvested Wood	All wood in the building must be certified by the Forest
2 points	Stewardship Council, or equivalent.

Site Development – No Mandatory Measures

Points

Walkability	The site (or designated center of scattered-site projects) is
2 points	within ½ mile from 3 - 5 or more of the following: grocery,
	pharmacy, bank, school, day care, parks, community centers,
	medical facilities, library, place of worship, post office (day
	care facilities not applicable for Senior Housing projects)
Infill Site	The project is on an infill site with existing infrastructure such
2 points	as roads, water and sewer connections, etc. and site
	boundary is adjacent to existing development on at least one
	side

Wellness/Exam Room	Provide a room for tenants to see medical professionals for
1 point	routine wellness service and exams
Shuttle Bus Service	Provide shuttle service to occupants a minimum of 1 day per
2 points	week for transportation to appointments and shopping
Transit Access	Project is located within 1/2 mile of existing or planned transit
2 points	service
Outdoor Amenity	Picnic area equipped with, for each 100 units, a minimum of
2 points	three charcoal or gas barbeque units and one 6' picnic table
	with benches and shade tree/structure, on separate concrete
	slabs no less than 200 square feet evenly distributed
	throughout the project
Computer/Study Room	Computer/study room with full Internet access that is a
1 point	minimum of 100 square feet and is equipped with at least one
	computer for every 20 units. (meet QAP requirements)
Recreation Areas	Install two recreation areas from the following: Shuffle Board,
2 points	Horseshoe Pits, Sand Volleyball Court, Pool Table, Piano, or
	Dog Park (meet QAP requirements)
Electric Vehicle (EV) Charging	Install Level 2 electric vehicle supply equipment (EVSE) in EV
2 points / station	designated parking space
Electric Vehicle (EV) Charging with	Install Level 2 electric vehicle supply equipment (EVSE) in EV
Renewable Power	designated parking space. Charger energy supplied by
4 points / station	renewable energy source.
Electric Vehicle Charger Ready	Install EV charging infrastructure in designated EV parking
1 point / space	space
Heat Island Mitigation	Install reflective paving with a Solar Reflectance Index (SRI) of at least
3 points	29
Tree Canopy	Exceed local jurisdiction code requirements for tree canopy
1 point each additional 10% increase	
Light Pollution Reduction	Reduce light pollution by using full cutoff exterior lighting and
2 points	using downlighting only