

# Lumber Yard Brewing CO.

Award Certification level: Intermediate

Owners: Winnie and Evan Hanseth

Architect: Smith Architects, Inc.

Builder: Loven Contracting, Inc.

## Featuring

- Low flow toilets
- Pesticide and Herbicide free
- Low flow faucets
- Complete reclaimed water irrigation system
- 100% Xeroscape
- Maximal use of passive solar heating
- Smart wiring system installed for lighting control and telecommunications
- 100% of building materials are local/regional, recycled, salvaged, or rapidly renewable
- Zero VOC paints



- Strong day lighting strategy implemented
- Formaldehyde-free fiberglass insulation and cabinets

# Lumber Yard Brewing CO.

High efficiency hydronic water heater



Recycled stainless steel grain hopper

# Highlands Fire Station #23

## Featuring

- Solar Water Heater
  - Dual Control Toilet
  - Energy Star Appliances
  - Passive Solar heat gain
  - Smart Wiring system
- Installed
- 100% zero VOC
- Materials used
- Urea free
  - Formaldehyde-free fiberglass insulation
  - Complete Greywater irrigation system
  - Day-lighting strategy implemented

Award certification Level: Advanced Plus

Architect: LEA Architects, LLC

Builders: Kinney Construction Services



# Highlands Fire Station #23



Motion sensor  
ceiling light  
switch



Dual Flush Fixture



Motion sensor  
wall switch

Recycled Rubber Flooring



# Grand Canyon Fire Fighting Facility

## Featuring

- All Energy Star Appliances
- Zero herbicides/Pesticides used on site
- Passive heating form rood waste heat
- Rainwater collection system with on site distribution
- Complete grey water system
- 100% Xeriscape

Award certification Level: Advanced Plus

Designer: LEA Architects, LLC

Builder: FCI Contractors, Inc.



# Grand Canyon Fire Fighting Facility

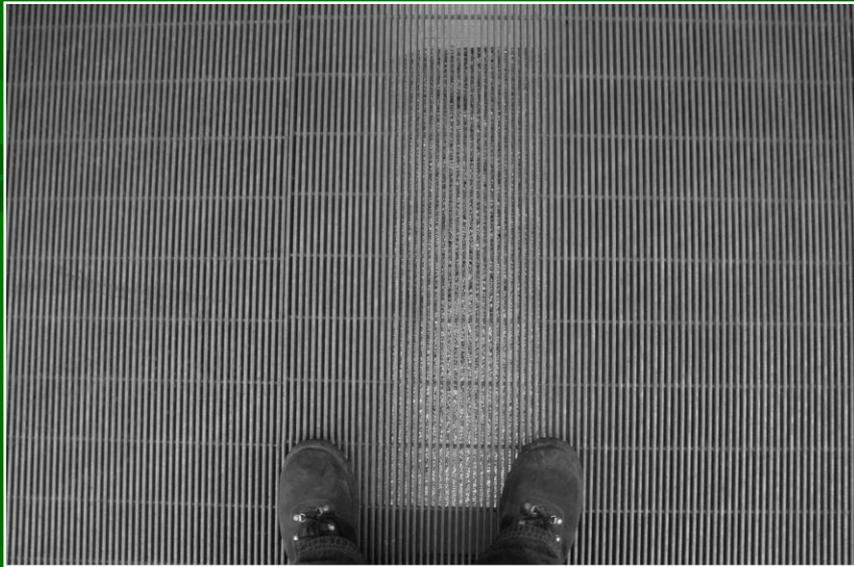


Polished concrete

Natural local stone mass wall



# Grand Canyon Fire Fighting Facility



Outdoor deck made of metal grid:  
rainwater drips through onto ground

Beam end brackets



# Grand Canyon Fire Fighting Facility



West side Elevation



Southwest side Elevation

# Garrison Residence

Level of Certification: Intermediate

Architect: Catherine Garrison Architect  
Inc.

Builder: Homes Building Construction  
LLC

Energy Consultant: E3 Energy, Inc

## Showcasing

- Low Flow Toilets
- All FSC certified tropical woods
- Energy Star rated appliances
- Complete rainwater catchment and greywater irrigation system
- Complete Xeriscape landscaping
- Zero VOC paints
- Meets ADA requirements



# Garrison Residence

Outdoor Radiant driveway melting system for effortless aged living



Sierra Pacific Windows with SFI certified wood framing

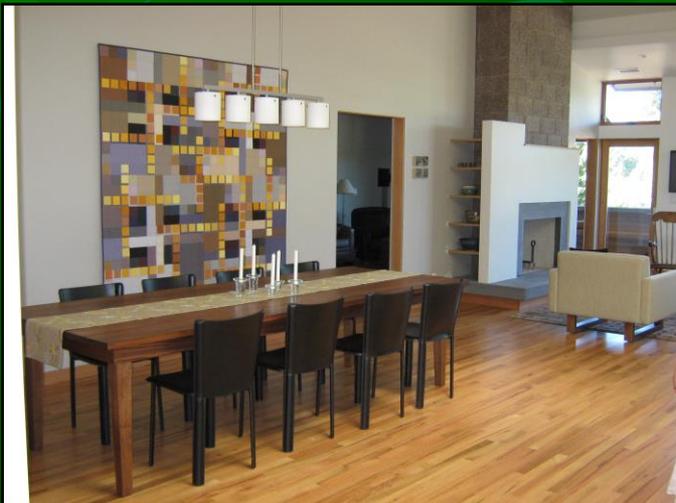
# Garrison Residence



Upper level walkway



Kitchen and Dining/living room



# Bothands Vicker's Park Duplex



Mid-Construction



Interior U-shape kitchen

# Bothands Vicker's Park Duplex

Award Certification Level: Advanced

Owner: Bothands, Inc.

Architect: PWM Architecture

Builder: AHC Homes, LLC

Energy Consultant: ReGroup Performance Contracting, LLC

Featuring

- Zero Pesticides/Herbicides used on site
- Rainwater Collection system with on site distribution
- 100% Xeriscape
- Passive Clothes drying system
- At least 75% of Interior Light fixtures are CFL's
- R-41 Wall insulation
- R-49 Ceiling insulation
- Day-lighting strategy implemented
- Urea free Formaldehyde-free fiberglass insulation



# Jones-Glofelty Residence

***Award Certification Level:*** Intermediate

***Designers:*** Marie Jones & Marvin Glotfelty

***Architect:*** Anthony Brown & Tom Hahn  
ECOSA Design Studio

***Builder:*** Dan Miller, Cornville

## ***Features***

- Over 90% of external pedestrian surfaces are constructed of permeable materials
- No chemical pesticides/herbicides used on site
- Used of outdoor livable area
- Energy star appliances
- Rain water harvesting storage system for use on site and distribution to vegetation
- Plumbing drainage capability
- Smart wiring system
- At least 75% of interior light fixtures are CFL's or Energy star certified
- Use of zero VOC materials
- Day lighting strategy implemented
- Durable metal roofing finish
- Use of Salvaged shipping containers
- FSC Certified wood products



# Jones-Glofelty Residence



Mid-Construction of shipping containers

# Jones-Glofelty Residence



Natural lighting through filon



R-30 Natural Cotton Insulation



Foam insulation

Mid-Construction Interior Insulation

# Ulm Residence

Level of Certification: Intermediate

Owners: Mark and Jill Ulm

Architect: Chris Alexander, Alexander Studio, LLC

Builders: Harmony Builders, Inc.

Energy Consultant: E3 Energy, Inc.

## Featuring

- All dual flush toilets
- Located with ¼ mile of open recreation space
- Walkway/driveway/patio constructed of permeable material
- No chemical herbicides/pesticides used on site
- All Energy Star appliances
- Rain water collection system with on-site distribution to vegetation
- Two-pipe drain system for future greywater recovery system



- Landscape requires no irrigation
- Passive solar design for 50% of heating demand
- Passive clothes drying system
- Implemented ventilation strategy

# Ulm Residence



Mid  
construction



Excess  
construction  
wood stored  
for future  
firewood



Hydronic manifold

# Ulm Residence

Certification Day



North elevation



Southwest elevation



# Leonard Residence

Award Certification Level: Intermediate

Owners: Nat and Barb Leonard

Designer: SolarTerra Design LLC

Builder: Stilley-Tulloss Design Build Group • Passive Radon Ventilation System

Energy Consultant: E3 Energy, Inc.

- Urea free Formaldehyde-free fiberglass insulation

- Integrated Day-lighting strategy

- All Energy Star appliances

## Featuring

- Passive Solar Design
- 10KWH/Day Solar PV System
- Solar Space Heating
- Solar Domestic Hot Water
- Rainwater Catchment
- Integral wall system used for envelope walls
- Low-Flow faucets and showerheads
- Rain water collection/storage/treatment for onsite distribution/use



# Leonard Residence



ICF block wall



R-10 insulation for hydronic heat



Mid-  
construction



# Leonard Residence



Water  
storage  
tanks



North elevation

Northwest elevation



South elevation

# Scott Residence

Award Certification level: Advanced

Owner: Ann and Michael Scott

Architect: Architectural and Environmental Associates, Inc.

Builder: Hope Construction



## Featuring

- Zero Pesticides/Herbicides used on site
- Rain water collection and storage system with on-site distribution
- 100% Xeriscape
- Passive Solar implemented
- Solar water heater
- R-30 Wall Insulation
- Designed for Cross ventilation
- Passive Radon Ventilation



# Scott Residence

Solar thermal heating



Innovative Filtration system  
for rain water catchment



PV  
inverter



# Scott Residence



North elevation

Solar thermal panels



South elevation



# Stonewood Caretaker Shop

Design Certification level: Advanced

Owner: Marilyn Hanna,

Caretakers: Leancy and Nancy Rupert

Builder: Construction Management Associates, Inc

Architect: Living Systems Architecture and Design

Energy Consultant: Heliocentric

## Featuring

- Recycled/salvaged/rapidly renewable materials; lights, doors, chicken coop with windows
- Solar water heating system installed
- R-24 wall assembly
- Passive Solar Design with proper overhang on South facing glass
- Solar Photovoltaic panel system supplies 75% of energy
- Rain water collection system installed with collection storage and treatment



- Day-lighting strategy implemented
- Ventilation Strategy implemented for outdoor air exchange
- Composting system installed in yard
- Use of durable finishes: Steel roof, Stucco, Pavers, concrete soffits
- Use of regional materials

# Stonewood Caretaker Shop



Exposed Beam Interior  
Framing



R-20 sealing garage  
door

# Policastro Residence



## Featuring

- Day-lighting strategy implemented
- Use of recycled and regional materials such as Cinder block, recyclable roof siding
- Implemented ventilation strategy
- Dimmer switches with at least 75% of CFL's in use
- 2x 6 Cellulose with spray foam insulation
- Ceiling insulation rated R-52, 12" foam
- Included outdoor living space
- All Energy Star appliances

*Design Certification level:* Intermediate  
*Owners:* William and Theresa Policastro  
*Builder:* Joseph and William Policastro  
*Engineer:* SE Consultants, Inc.

# Poliscastro Residence

Durable finishes: Natural stone, split face concrete block, steel siding



Design aesthetic: Natural light exposure, accessible views with privacy



# City of Flagstaff Izabel Land Trust Homes

Award Certification level: Intermediate

Architect: Shapes and Forms, Architects, Inc.

Builder: Loven Contracting, Inc.

Energy Consultant: E3 Energy, Inc.

*A partnership with City of Flagstaff and Bothands, Inc*

## Featuring

- Energy Star Furnace, water heater, washer and dryer
  - Programmable/set-back heating system thermostat
  - 100% of toilets are 1.28 gpf low-flow
  - Located within a quarter mile of Urban trails, public transportation, and open recreation areas
  - Located within a half mile of shopping services
  - No chemical herbicides used on site
- Awarded for small scale house: 1,200-1,350 sq. with up to 4 bedrooms and 2 bath, and one car garage
  - Xeriscape with outside irrigation drain
  - Day-lighting strategy implemented
  - Formaldehyde free fiberglass insulation used in building envelope
  - Raised heel trusses with R-38 ceiling insulation



# Protiva Residential Remodel

Award Certification level: Advanced

Owner: Barb Protiva

Builder: Spillman Custom Homes, Inc.

Featuring

- Urea-free Formaldehyde-free fiberglass insulation
- Programmable set-back thermostat
- No chemical herbicides used on site
- All Energy Star appliances
- Rainwater collection and storage system for on site use and vegetation distribution
- Greywater irrigation system installed
- Pre-wiring or plumbing for easy installation of future renewable energy systems: wiring for solar thermal
- Electric dryer is retrofitted for gas dryer stub out
- Non-load bearing walls between living spaces removed to create an open floor plan



Before



Mid-construction

# Local LEED Projects



# Museum of Northern Arizona Easton Collection Center



- 17,283 Sq. Ft.
- LEED Platinum Building
- Masonry & Steel Construction
- Living green – sloped roof
- Hydronic in-floor heating and cooling
- Photovoltaic panels

# Distance Learning Center

## Northern Arizona University



- 24,812 Sq. Ft.
- Reclaimed water
- Two Green Screen living walls
- Controlled day lighting
- Natural cotton fiber insulation
- Water efficient
- Active chilled beam

# Applied Research & Development Building Northern Arizona University



- 160 kilowatt photovoltaic system
- Back-up heating system using solar thermal panels
- Sunlight providing more than 75% of the lighting for occupied spaces
- Automated shade controls
- Reduction of energy needs by 40%



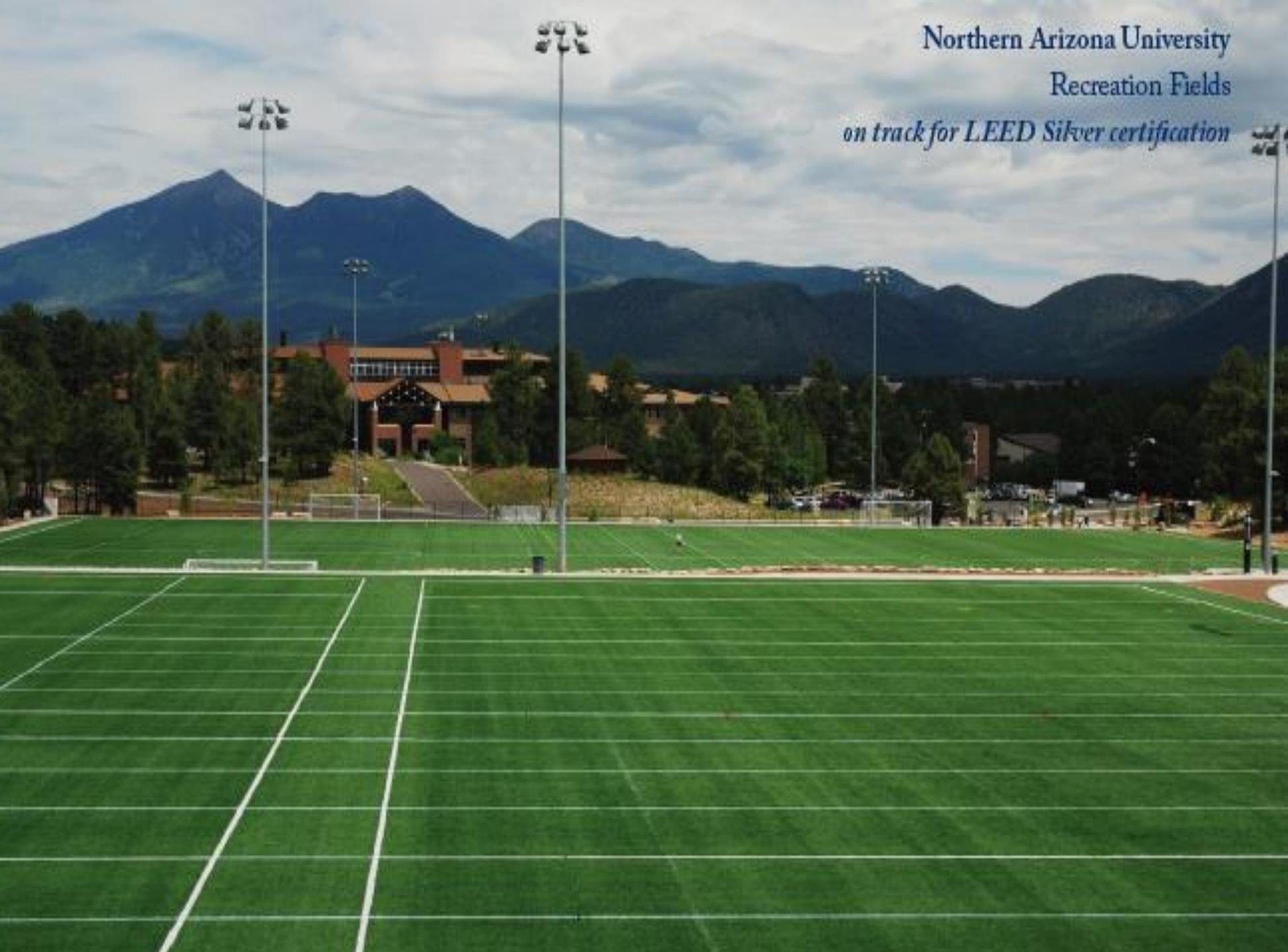
# Ramsey Residence

## 1<sup>st</sup> LEED for Homes in AZ



- LEED Platinum
- Passive solar design with structurally insulated panels.
- Grid tied photovoltaic solar system
- solar hot water system  
Rainwater catchment and grey water systems.
- Native landscaping with minimal disturbance of existing natural systems.

Northern Arizona University  
Recreation Fields  
*on track for LEED Silver certification*



Northern Arizona University  
Health and Learning Center  
*on track for LEED Gold certification*



# Drury Inn and Suites: USGBC LEED Silver



- Constructed with Insulated Concrete Form (ICF's)
- “Ecological Elevator” fully operable vegetable oil-one of the first in the state
- Compact Fluorecent lights throughout the Hotel
- Solar Thermal Hot Water System
- Reclaimed water for toilets
- Sidewalks and roof surface have high reflectivity levels directing sunlight away to reduce the “heat island effect”