

DESIGN CONSIDERATIONS:

- 1) The clients will use this home as a vacation home throughout the year.
- 2) The foundation and 1st level exterior walls of the home will be constructed of ICFs, providing strength and excellent insulation. The clerestory wall and roof systems will be stick frame with spray foam insulation and horizontal wood plank siding.
- 3) The roof will be metal, with rain gutters installed and plumbed to a cistern so rainwater can be used for domestic use and irrigation. A gray water system will be plumbed to augment irrigation.
- 4) There will be windows on the south side of the home to provide ventilation, good daylighting and passive solar heating in the winter. The "bay windows" in the family room will extend the living space and provide extra sun for heating and plants. A block wall on the north side of the family room/kitch will store heat from the clerestory windows and distribute it to the living areas at night. The block wall between the family room and master bedroom will stabilize interior temperatures in both rooms.
- 5) Windows on the north and east sides of the building will provide daylighting, ventilation and views. The garage will be located on the west side of the home to insulate the home from the heat of the summer afternoon sun.
- 6) A loft on the 2nd level of the east side of the home will provide warm, bright sitting area year round with great views to the north, east and south.
- 7) A solar thermal system will provide domestic hot water and the solar collectors will be mounted on the south garage roof. A wood stove or fireplace in the family room/ kitchen area coupled with the passive solar elements of the home will be used for space heating with electric baseboard heaters for back-up.
- 8) A solar PV system will provide electricity for the home. The PV modules will be mounted on poles on the north side of the home and will be manually adjusted for seasonal sun angles.

Rocker "L" Passive Solar, Off-Grid Mountain Home

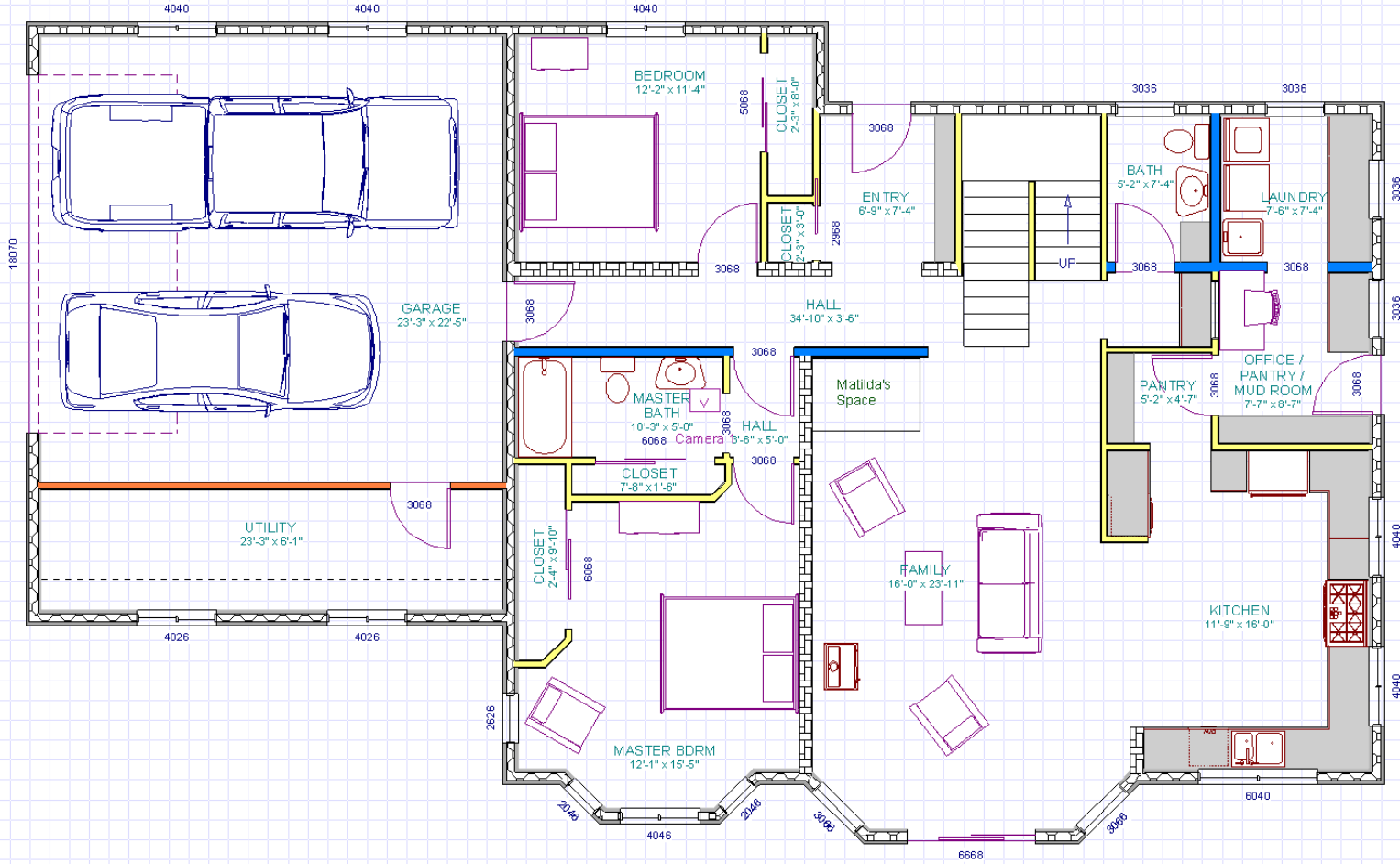
Conceptual Drawings

1st Level: 1518 sqft
2nd Level: 359 sqft

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Total Conditioned: 1877 sqft

Front Porch 210 sqft
Garage & Utility: 669 sqft

APPROX DESIGN TOTAL: 3242 sqft



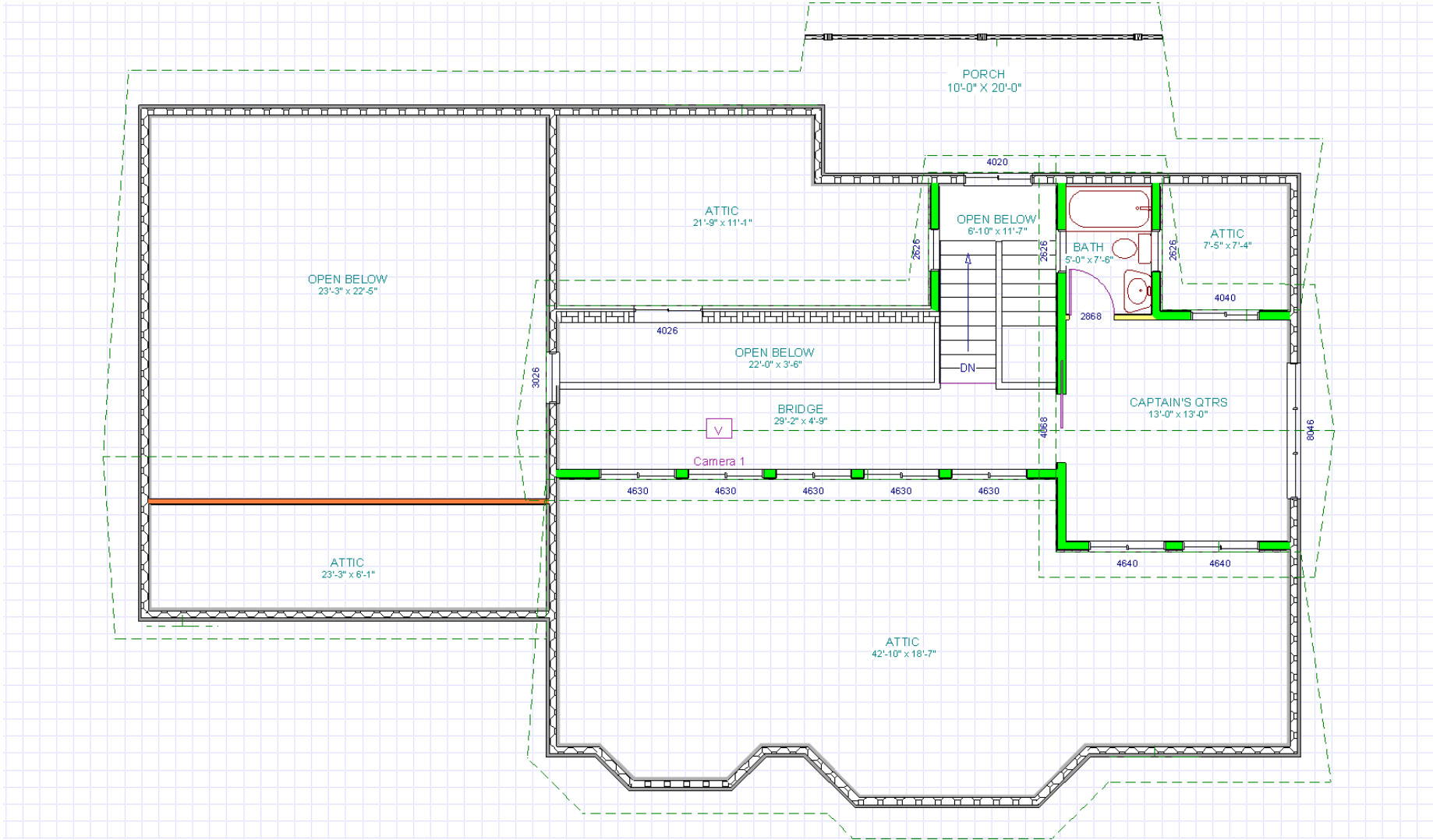
Sheet Title:
1st Level Floor Plan

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2





Sheet Title:
South Elevation

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Sheet
4

Rocker "L" Passive Solar, Off-Grid Home
Red Lake, AZ
North of Williams, AZ about a mile east of State Route 64

Project: AD10-01
Designer: Thed Johnson
Date: 4/26/10

SolarTerra
7709 West Painted Rock Trail, Williams, AZ 86046



Sheet Title:
North Elevation

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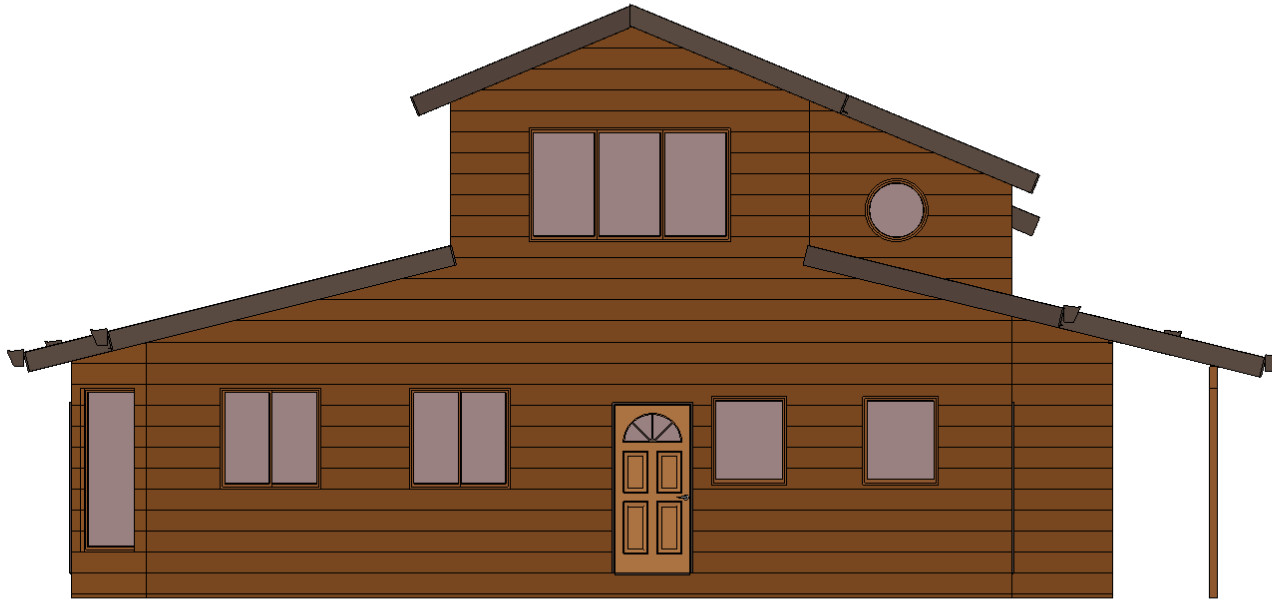
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Sheet
5

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Sheet Title:
East Elevation

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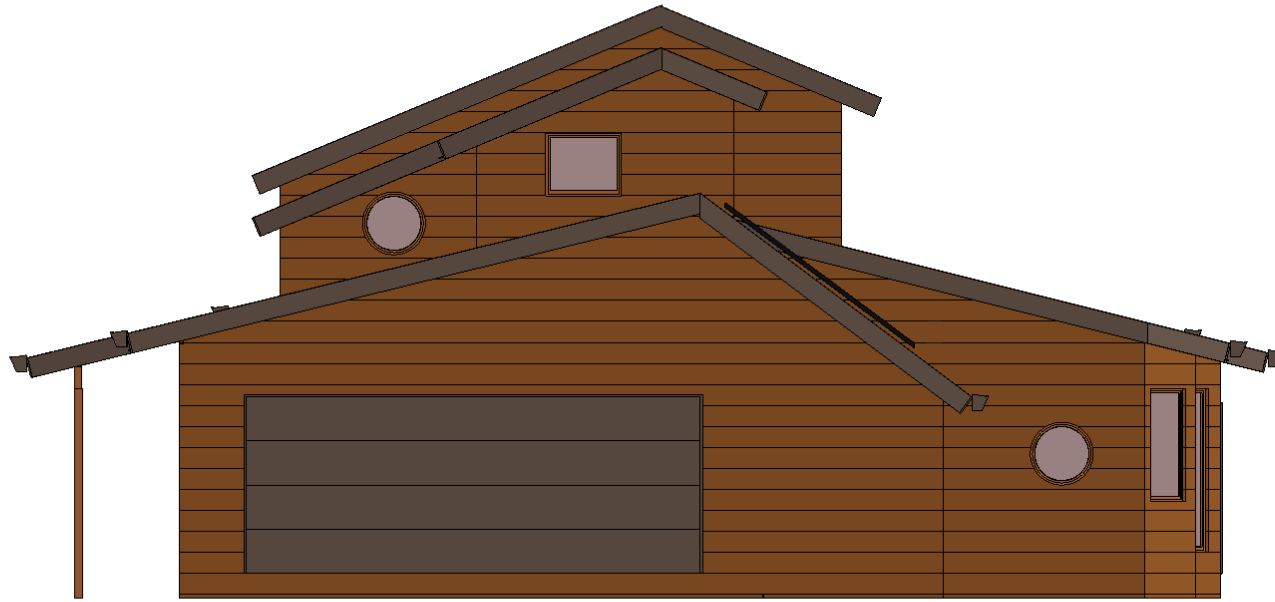
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Sheet
6

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Sheet Title:
West Elevation

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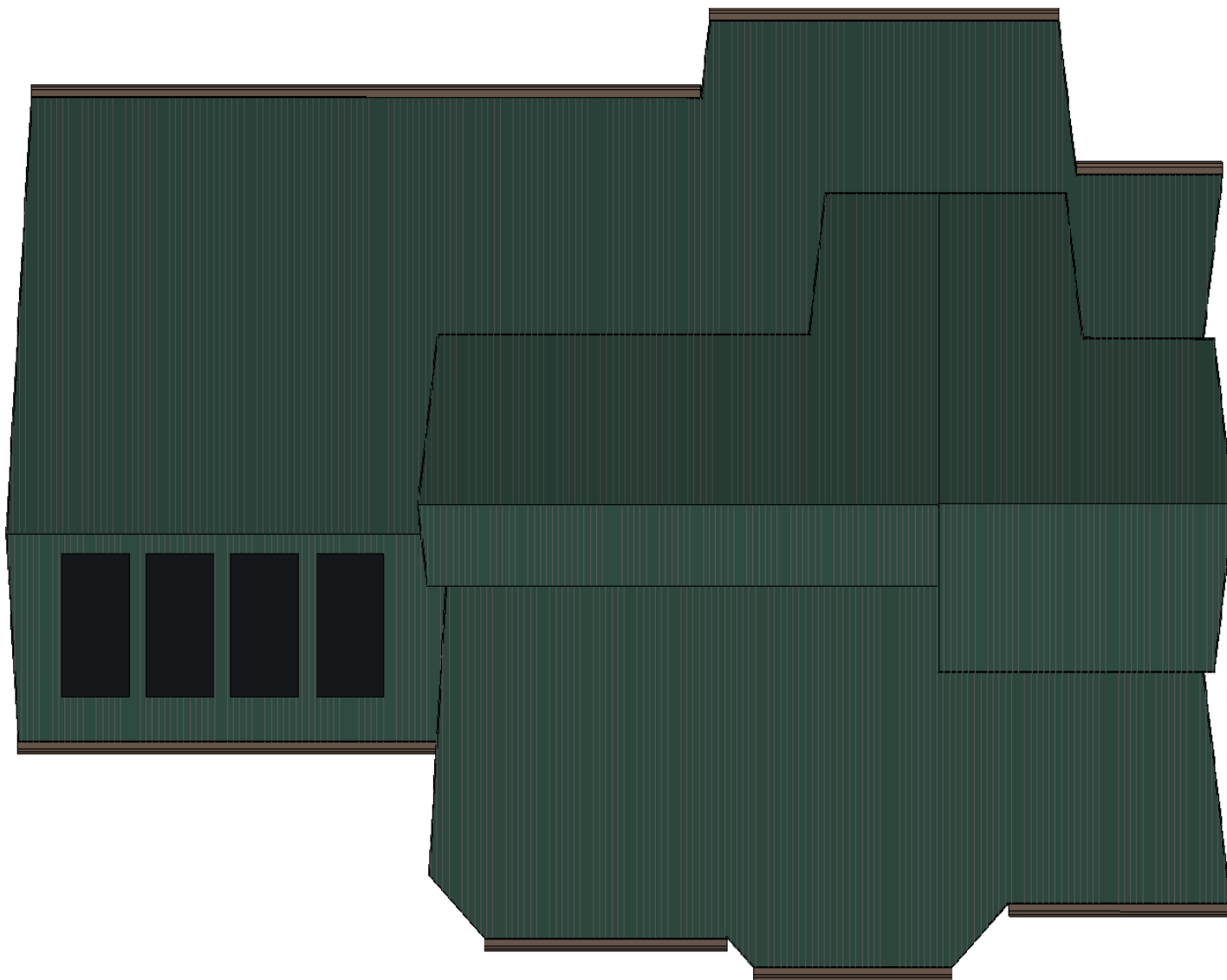
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Sheet
7

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Sheet Title:
Overhead View

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8

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