FAMILY FRIENDLY
- 2-bedroom option for family, or separate office
- Laundry area
- Storage included via closets and reasonable kitchen capacity
- Space accommodates full sized appliances, and includes dishwasher
- Ability to have accessible shared outdoor space for any age occupant by creating a courtyard with main house, or by creating a private fenced yard with windows for view only from ADU.

UNIVERSAL DESIGN/ACCESSIBILITY
- Designed for complete wheelchair accessibility with side by side laundry option
- Ability to install wheelchair accessible appliances, cabinetry, and future expandable kitchen
- Pantry/kitchen area with dining table rather than fixed island allows for circulation flexibility
- Designed for aging in place with accommodation for future mobility aids, such as a roll-in shower
- No-step entrance and exterior porch side allow for an area of accessible approach for small grade changes.
- Accessible operable window control

FULLY ACCESSIBLE ONE BEDROOM

FULLY ACCESSIBLE TWO BEDROOM

AN ADU DESIGN FOR LIFE IN TUCSON

DESERT CASITA

PROJECT DESCRIPTION
The Desert Casita is 804 sq ft. With 964 sq ft 2 bedroom option. The design serves various individuals, families, aging in place, and those who need a fully accessible home. It's designed for people to bring the things of their lives and stay a while. Using commonly available materials and methods, the compact systems work together to provide resource savings that benefit cost. Additionally, design for sustainability fills the spaces with daylight while providing shade from the harshest sun and circulating air through operable windows. The casita roof was also designed to provide solar PV potential from any angle and allow water harvesting to lift after use. It can fit in a corner against minimum setbacks and use an optional additional entrance. The project reflects the versatility to integrate with the main dwelling or provide privacy, all while balancing the needs of both households.

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BUILDING SECTION

DESIGNED FOR CONSTRUCTABILITY

- Efficient use of materials
- Common construction methods and commonly available materials/systems
- Partially prefab elements in the form of roof trusses that provide built-in space for insulation and system components
- Compact plumbing design
- Ductless mini-split heat pump (VRF) HVAC system

CONTEXTUAL FLEXIBILITY

- Low roof height at two elevations to meet minimum setbacks at rear and side yard
- Ability to achieve privacy, shading, daylight and access on multiple sites
- One and two bedroom options to fit most lot sizes
- Ability to form an outdoor space in conjunction with the main house or complete the rectangle of the ADU with fencing or vegetation for a private yard
- Optional door for alternate access for privacy or varying site circulation
- The footprint may help to preserve existing mature vegetation depending on site space availability
- Planting of small trees and native shrubs can bolster shading for exterior yard spaces and windows

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Incorporating solar orientation and flexibility:
- Panels perpendicular to the roof slope for varying orientations.
- Deep overhangs or multilevel shading for large glass areas in living areas and bedrooms.

Sustainable and green features:
- Roof shape conducive to rainwater collection with outlets and flexible cistern placement.
- Gray water outlet near exterior wall for gray water collection.
- Clothes washer near exterior wall for gray water outlet.
- Exhaust fans for ventilation and air circulation.
- Daylighting for all spaces without roof penetrations.
- Heat pump water heater specified to use less electricity, but standard water heater also possible.
- Interiors include basic healthy materials to maintain good indoor air quality.
- Solar PV flexibility with different roof face orientations.
- Efficient electric HVAC system in the form of ductless VRF electric heat pump.
- Interiors include basic healthy materials to maintain good indoor air quality.

ADU Design for Life in Tucson:
- Desert Casita
- Includes two bedroom options:
  - Natural ventilation and air circulation
  - Additional sustainability features

3D Floor Plan
- Compact plumbing
- Rainwater harvesting
- Gray water outlet
- Interiors include basic healthy materials to maintain good indoor air quality.
- Solar PV flexibility with different roof face orientations.
- Efficient electric HVAC system in the form of ductless VRF electric heat pump.