ACTIVE / PASSIVE HOUSE

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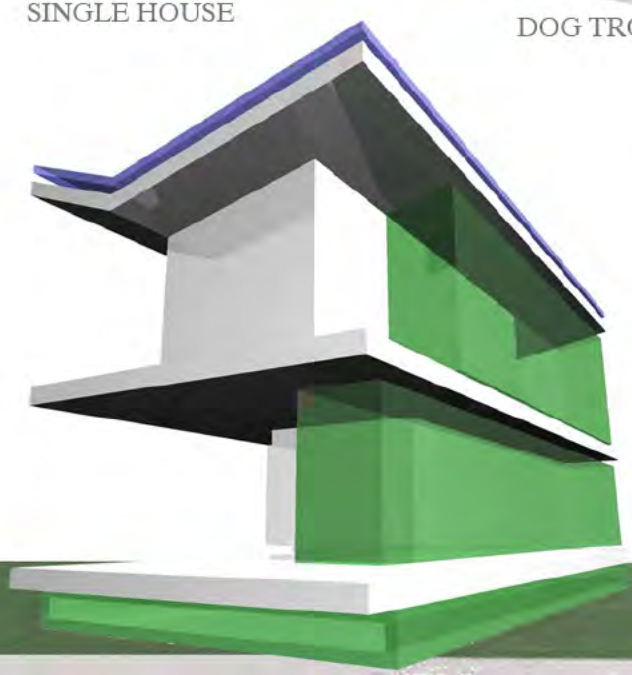
The Active Passive House is derived from a multitude of uniquely Floridian case studies that are infused together creating a hybrid solution that addresses the powerful climate and unique conditions of the Sunshine State. The design consists of a modular prefabricated glue-lam framing system wrapped in pre-cut structural insulated panels and shaded by an inverted recycled metal roof, angled for maximum solar exposure, which captures rainwater and stores it in a grey water cistern. The long narrow separated building envelope and expansive covered porch (derived from the Shotgun, Cracker, Dog Trot, and Single House typologies) provide passive cross ventilation and abundant natural light, furthermore it is ideal for Florida's hot humid climate. An operable north facing impact-resistant low-e glazing system expands the space onto the porch making the modest house feel larger while connecting the residents with the natural environment. An expansive P.V. array on the roof absorbs the harsh sun and provides energy for the house and an electric car/scooter recharging station. A Solar-thermal water heating system on the roof provides hot water and an underground Geo-thermal system fuels the HVAC system. The exterior structural frame allows for the complete adaptability of the interior space providing options for a multitude of spatial configurations for the modern lifestyle.

SHOTGUN

CRACKER BOX

SINGLE HOUSE

DOG TROT



NORTH ELEVATION

NORTH FACADE

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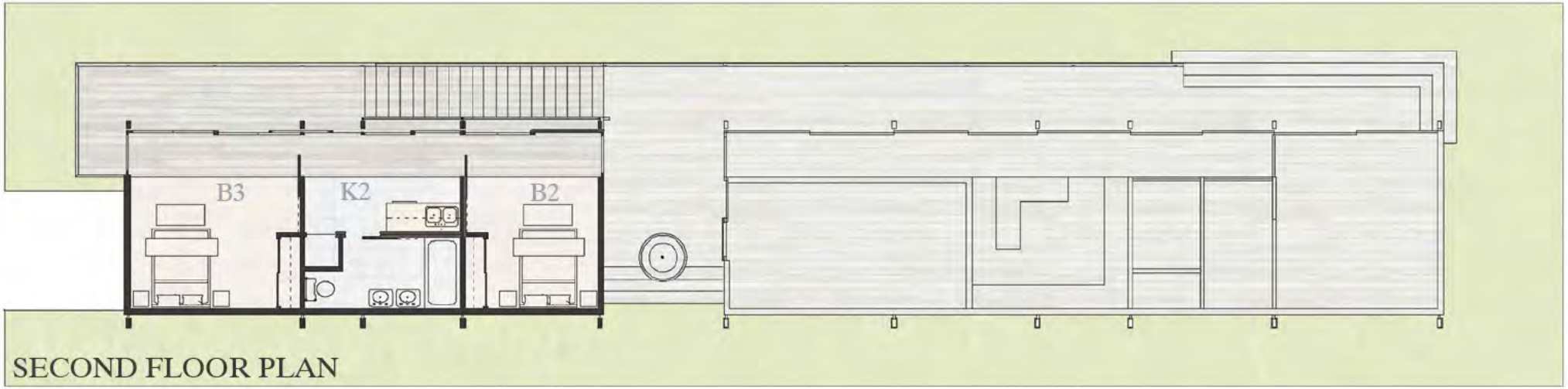
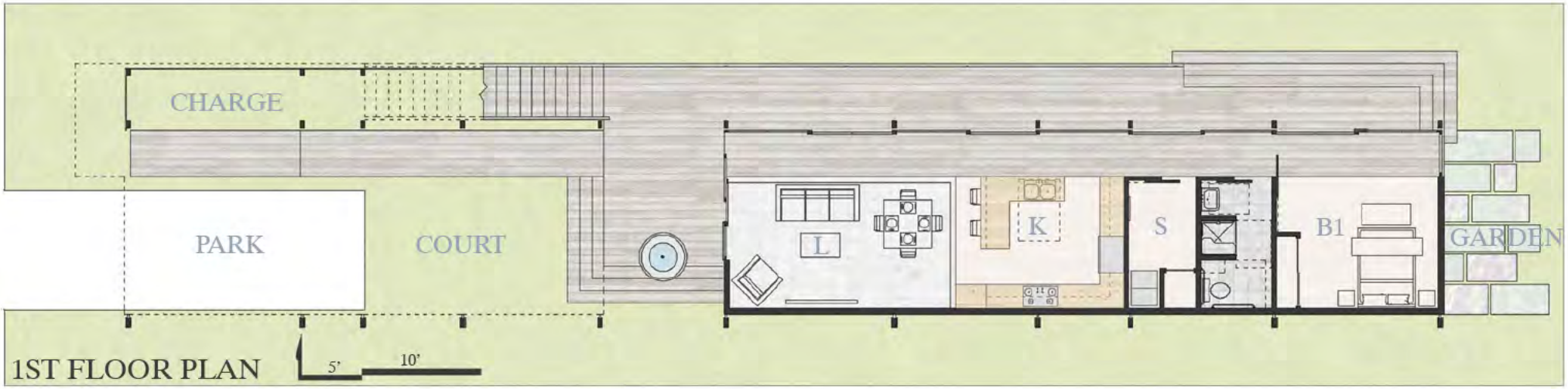
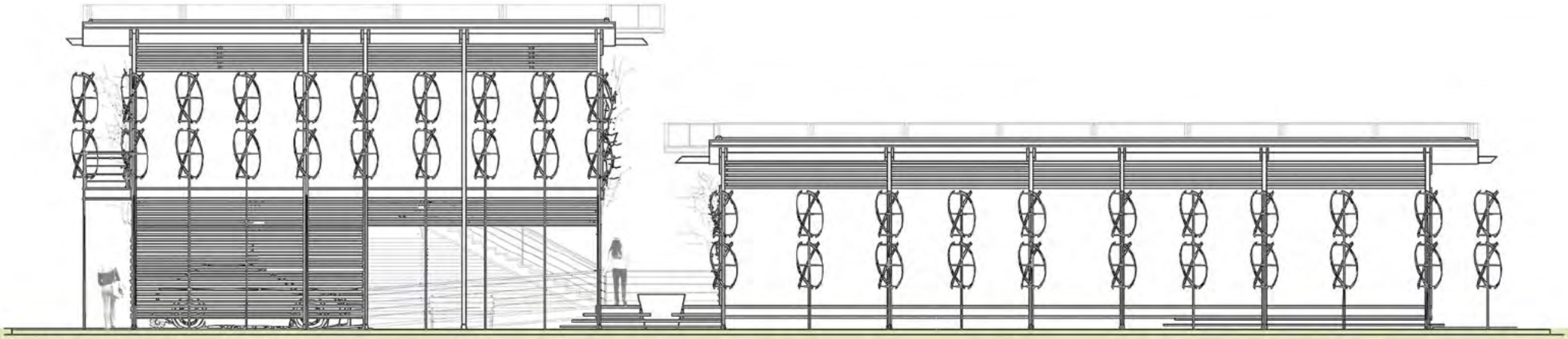


SECOND FLOOR PLAN



1ST FLOOR PLAN



SOUTH ELEVATION

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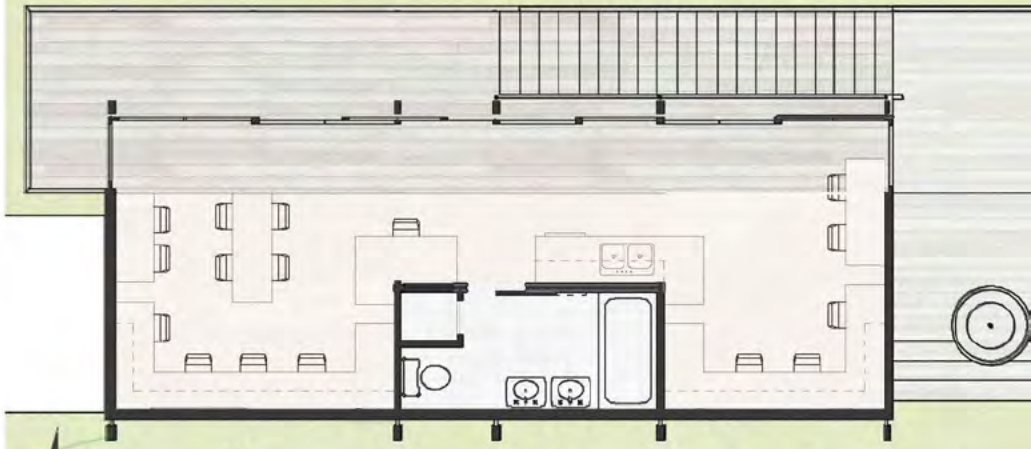
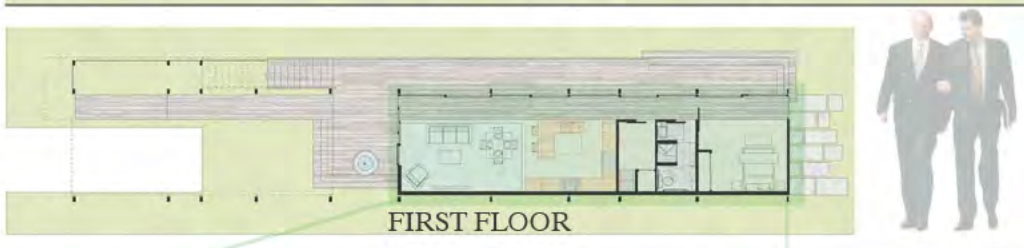
LIVE-IN NURSE OPTION



HOME OFFICE OPTION

SECOND FLOOR



FIRST FLOOR

100% A.D.A. ACCESABLE 1ST FLOOR

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SECTION PERSPECTIVE : LOOKING SOUTH WEST

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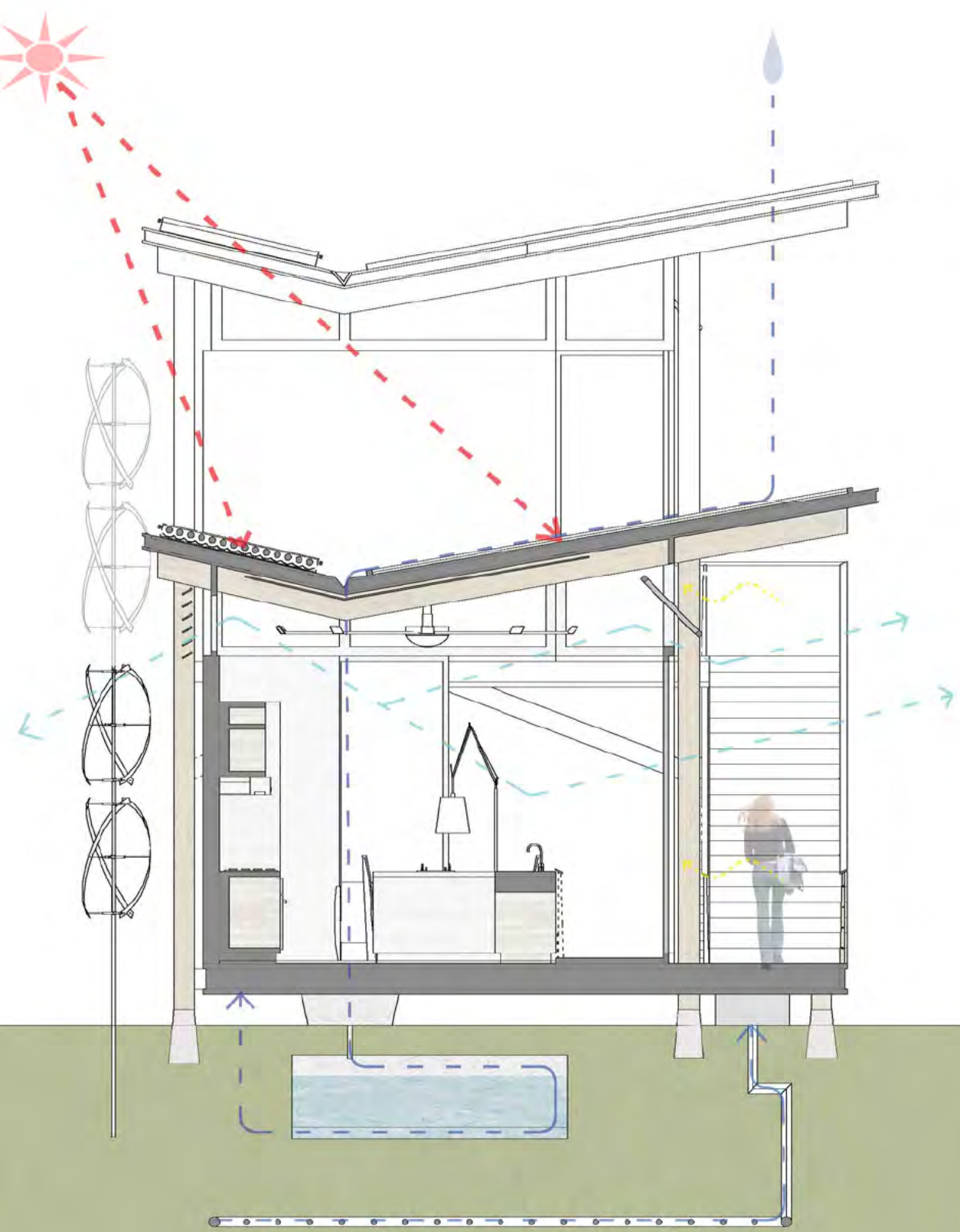


LEED PLATINUM RANKING

LEED FOR HOMES

PLATINUM 121/90

Innovation and Design 8/11

Location and Linkages 7/10

Sustainable Sites 20/22

Water Efficiancy 15/15

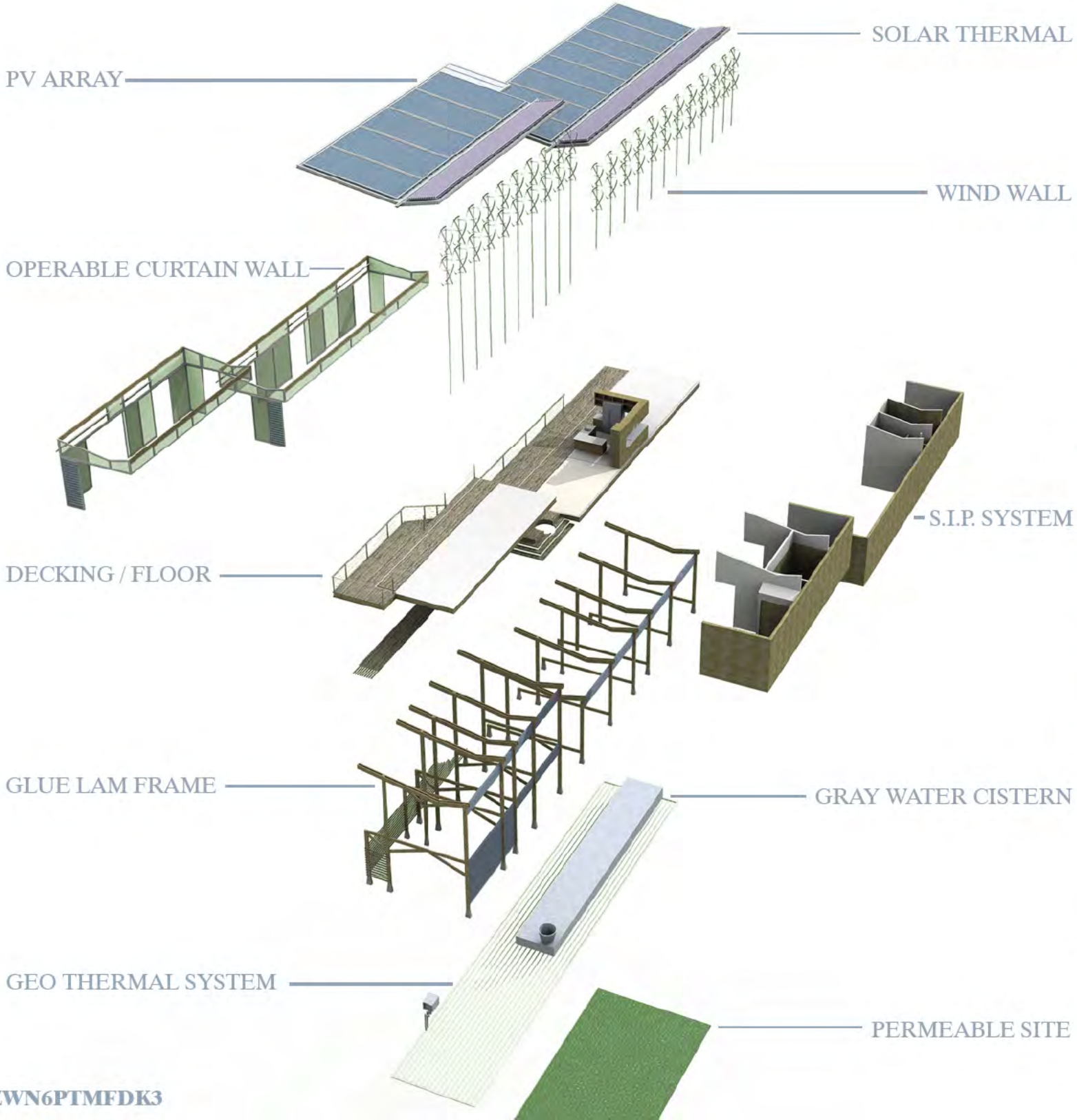
Energy and Atmosphere 35/38

Materials Resources 15/16

Ind. Environmental Quality 20/21

Awareness and Education 1/3

PV / SOLAR-THERMAL
RAINWATER / GRAY WATER CISTERN
CROSS VENTILATION
DIFFUSE NORTH LIGHT
GEO-THERMAL HVAC



Total 105 000 / 1500 sq ft = $70 /sq ft

Shell 66 500 total

F.S.C. Glue lam beams /columns 15 000
F.S.C. Floor framing 7 000
Sips 10 000
Glazing 20 000
Roof/ framing/ insulation 14 500

Systems 27 000 total

Geo-Thermal Hvac 10 000
Electrical 10 000
Plumbing 5 000
Cistern 2 000

Interior fixture 11 500 total

Finishes 3 000
Cabinetry/Appliances 8 500

(Optional) Active technology 17 000

Pv 12 000
Wind 5 000

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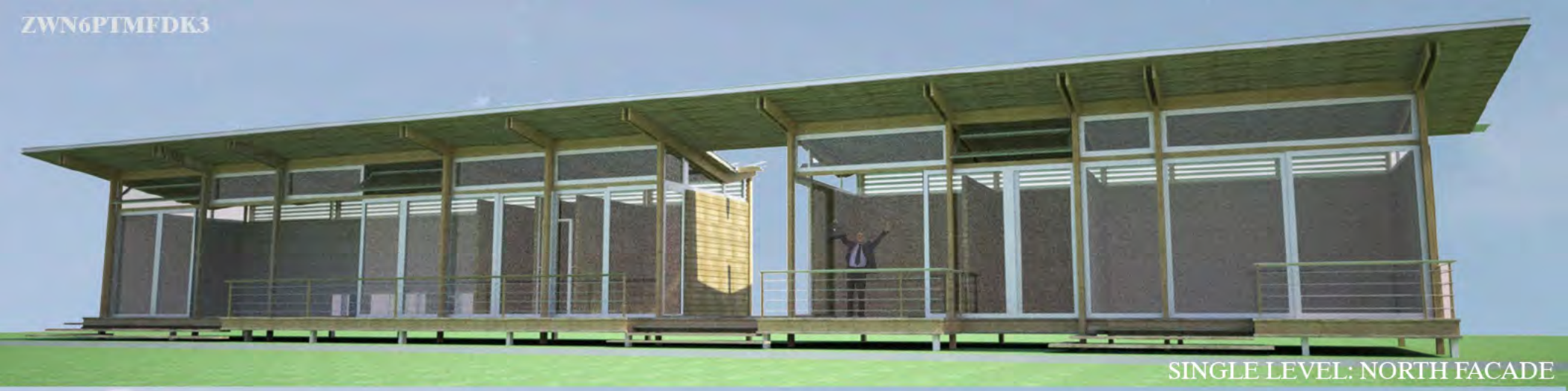

SINGLE LEVEL: NORTH FACADE

ADAPTABILITY: SINGLE LEVEL / SPLIT LEVEL

SPLIT LEVEL: SOUTH/WEST FACADE

ADAPTABILITY : NEIGHBORHOOD INTEGRATION

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INERIOR PERSPECTIVES

LIVING / KITCHEN VIEW

COURTYARD VIEW

PORCH VIEW

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