

Fact sheet

shelter resorts

DESIGN CONCEPT

A flexible design grammar has been prepared which defines living / sleeping unit sizing and arrangement. The design grammar establishes an interface protocol around which an open kit-of-parts has been designed. The kit-of-parts can be used to create small units or larger luxurious quarters, simply by connecting different sections according to the interface protocol. In addition, new sections can be designed and added to the kit-of-parts library as the need arises. The arrangement of individual units into nodes and splines suggest areas for larger public spaces and service areas.

MATERIALS

The predominant materials used in this design are lightweight and conducive to portability. Minimal structural framing, including the foldable base, consist of anodized aluminum. Floor panels are plywood with carpet, or hardwood. Each unit has a nylon mesh inner inclosure. The outer weather barrier is thin treated nylon in warmer climates and insulated "blankets" in colder climates.

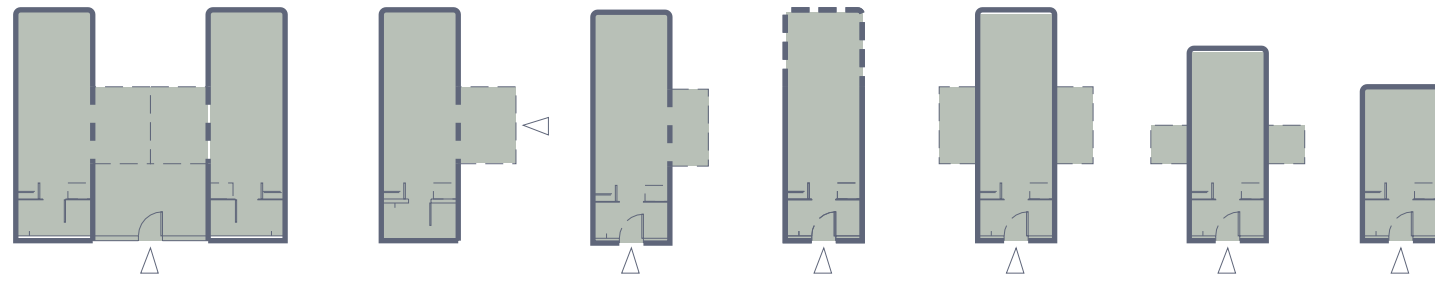
FLOOR AREAS

This system is mainly based on a 2' x 2' grid with emphasis placed on the economical 4' x 8' module. A full working resort has not been designed, however an attempt has been made to conceive of the pieces required for many types of space. In this design study, unit floor areas range from 160sf to 688sf, but the open system allows for creative additions.

CEILING HEIGHTS

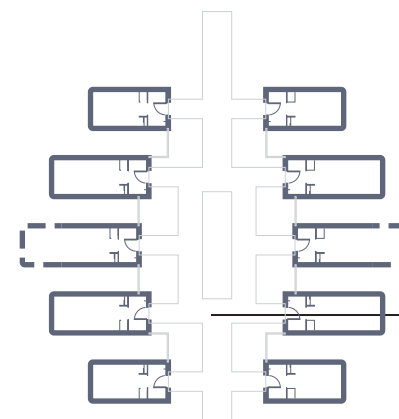
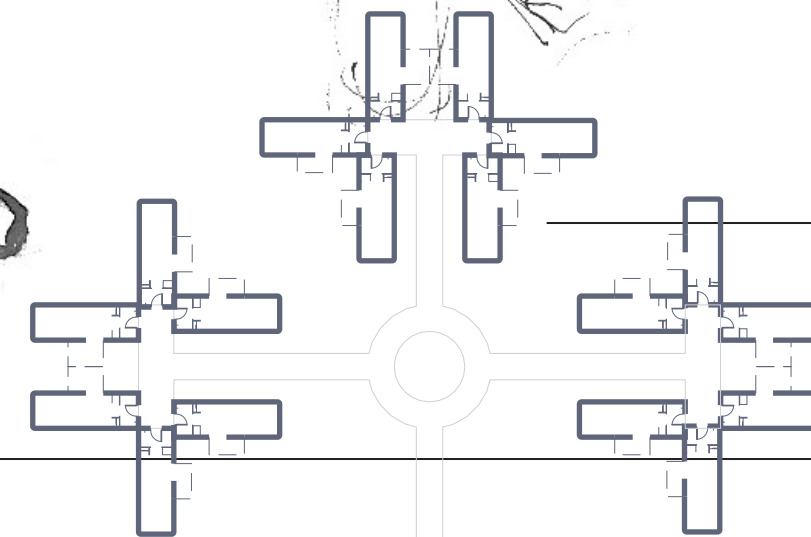
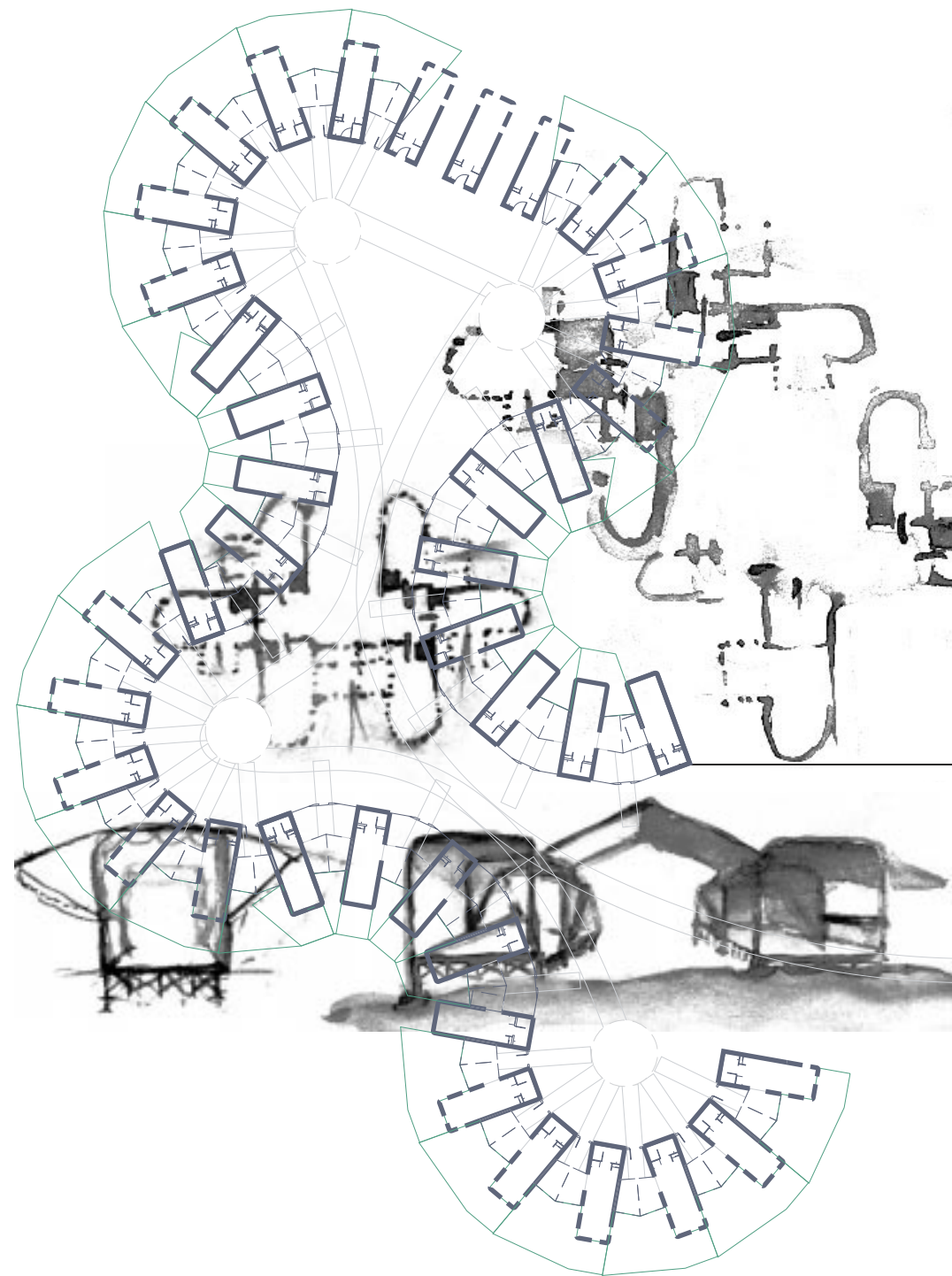
The standard unit ceiling height is eight feet, but add-on sections can be designed for higher ceilings, lofts, and multi-story spaces.

Shelter Resorts :a Community of Tents



Flexibility

shelter resorts



INDIVIDUAL UNITS

Units are self-contained for single placement or for multiple groupings. Units can be grouped in daisy nodes, square courts, cluster nodes, and lazy splines.

DAISY NODES

Units can be arranged with service and entry courts back-to-back for creation of public spaces.

SQUARE COURTS

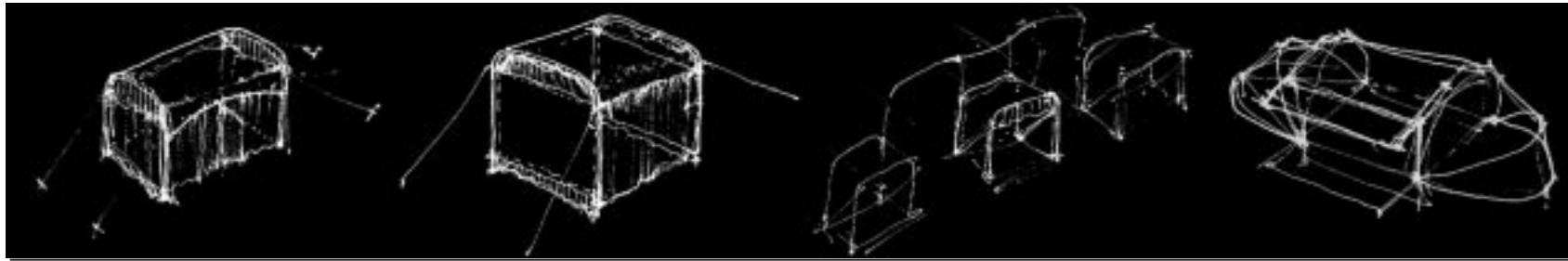
Orthogonal placement can create areas of special activity such as meeting spaces or group identity.

LAZY SPLINES

Spline layout can follow natural contours, ridges, shorelines, and can be arranged to take advantage of premium views or climatic orientation. Circulation can be facilitated by corridor sections which zip together and adjust to various degrees of skew. The spline layout encourages groupings of individual units in a way that encloses public spaces such as meeting areas, restaurants, and service areas.

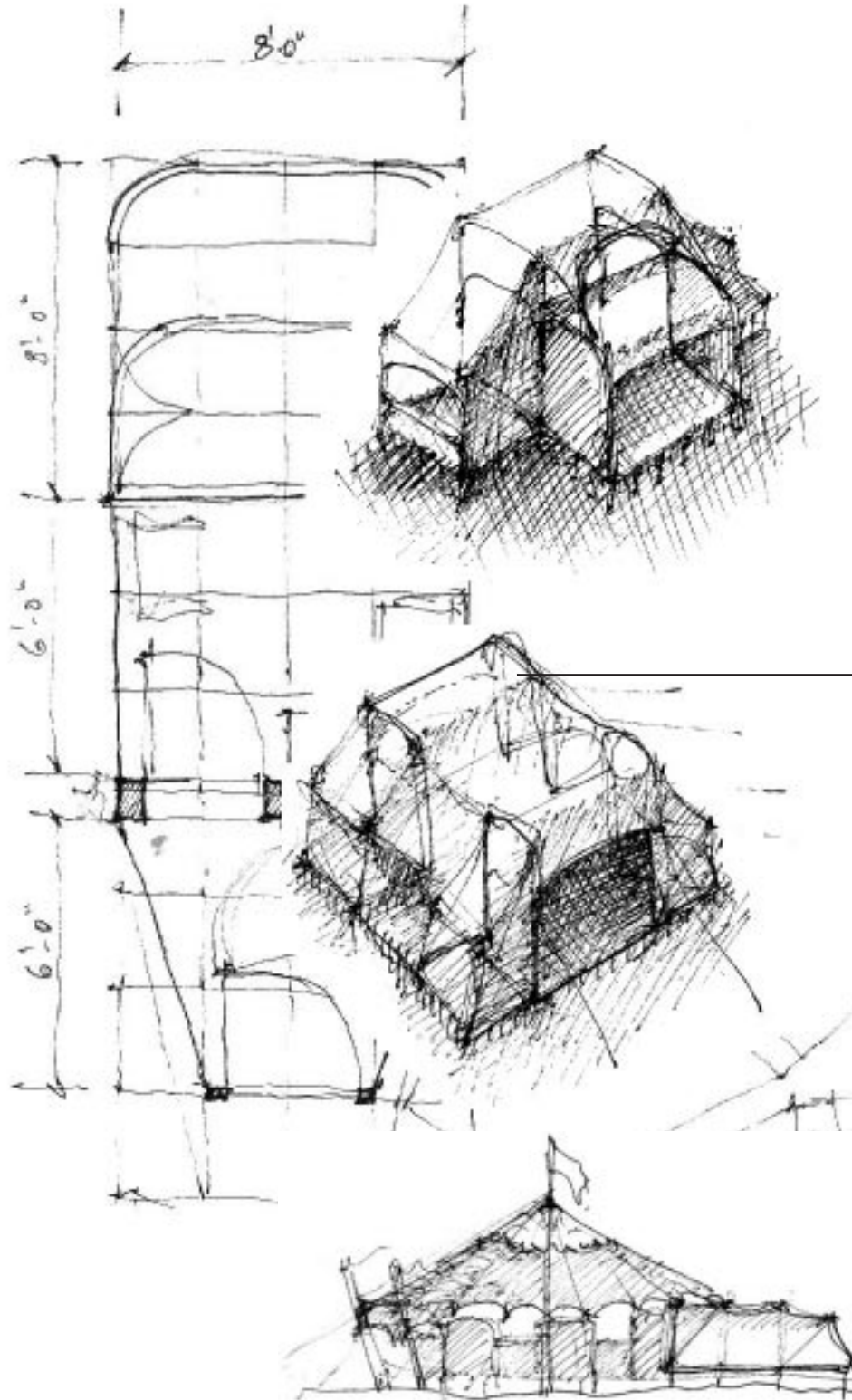
CLUSTER NODES

Units can be clustered together in various orthogonal arrangements.



Hospitality

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ACCESS

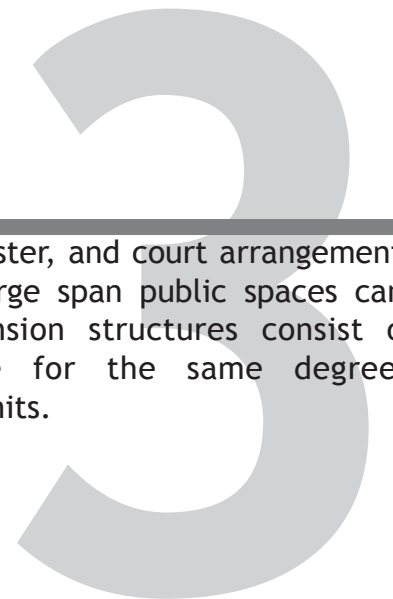
Circulation and service access can be nested to the back of the units, which are single loaded in a variety of flexible configurations.

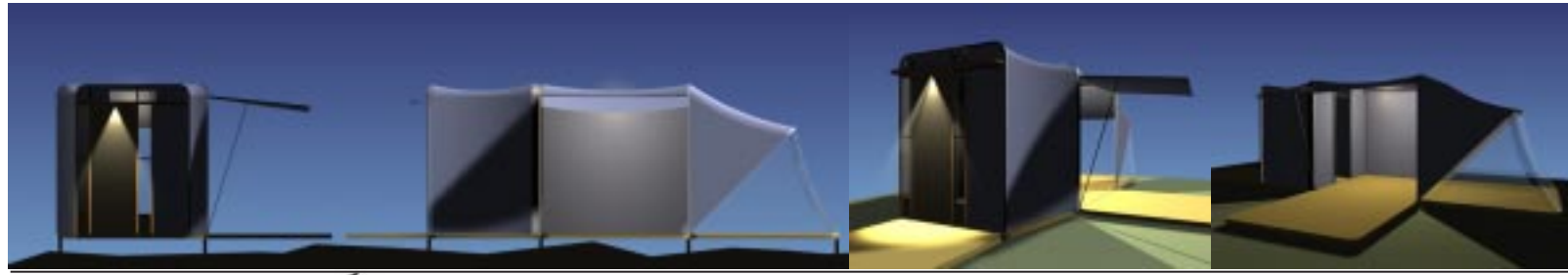
SERVICE SPACES

Using the same modular system used in the individual units, service areas such as cafeterias, conference rooms, assembly rooms, lobbies, storage, and utility spaces can be provided.

PUBLIC SPACES

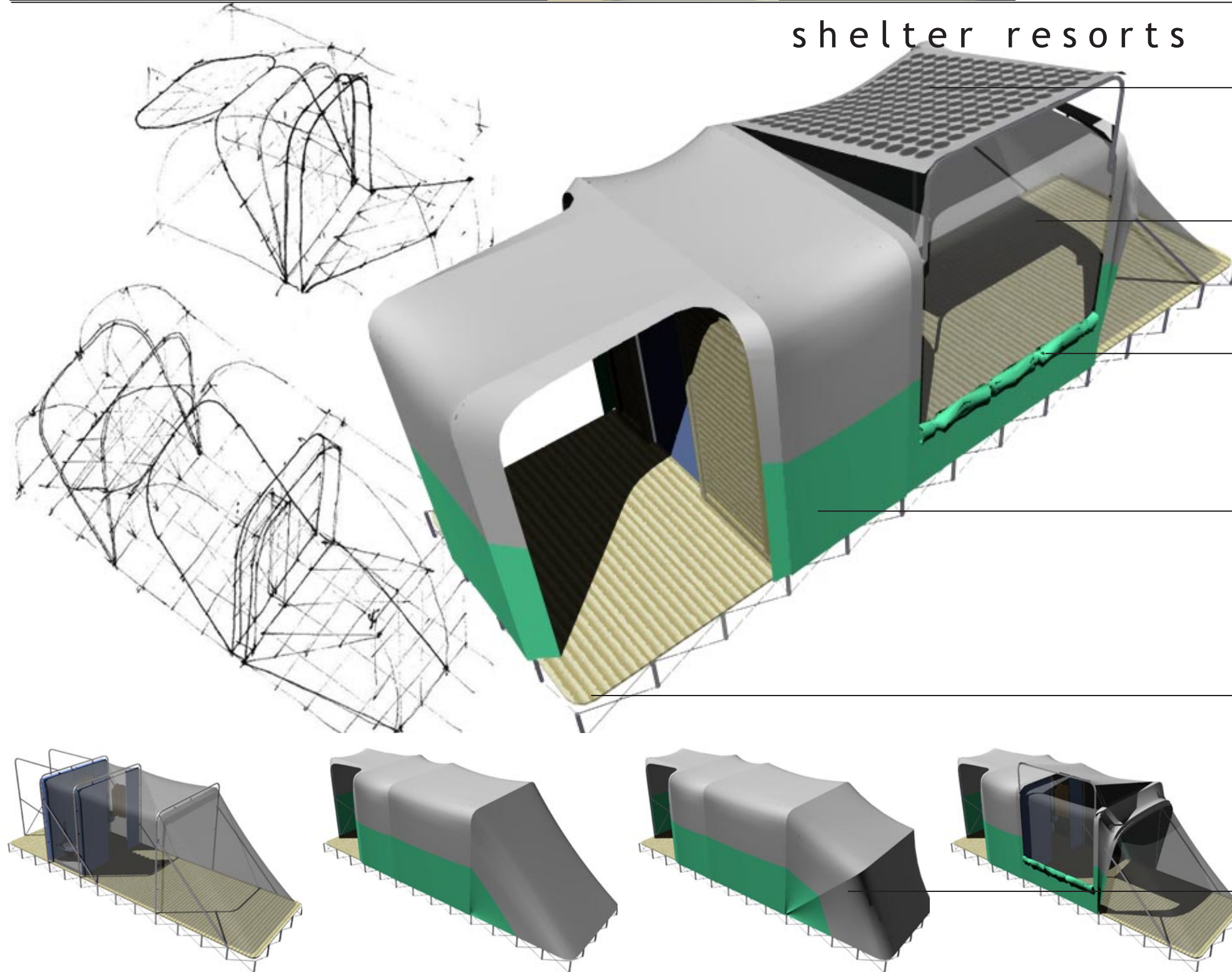
In spline, daisy, cluster, and court arrangements of individual units, large span public spaces can be enclosed. The tension structures consist of a minimal structure for the same degree of portability as the units.





Practicality

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PHOTOVOLTAICS: ELECTRICAL POWER

Photovoltaic cells can be integrated with the wall and roof membranes.

MESH INNER ENCLOSURE

The inner walls and ceilings consist of a fine mesh which prevents insects from entering. The mesh allows air to flow freely through the unit.

FLEXIBLE OPENINGS

Modular system allows flexibility and creativity in real-time adaptation to environmental conditions. Openings can be created to take advantage of views, cool breezes, sunlight, and openness.

OUTER ENCLOSURE

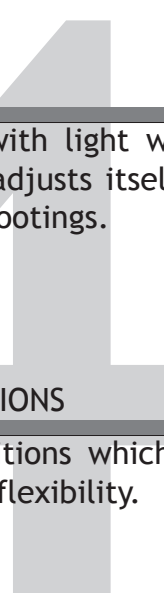
Systematic exterior wall and roof membranes zip together in sections to allow easy removal or installation. The membranes can consist of thin material in tropical areas or thickly insulated panels in frigid climates.

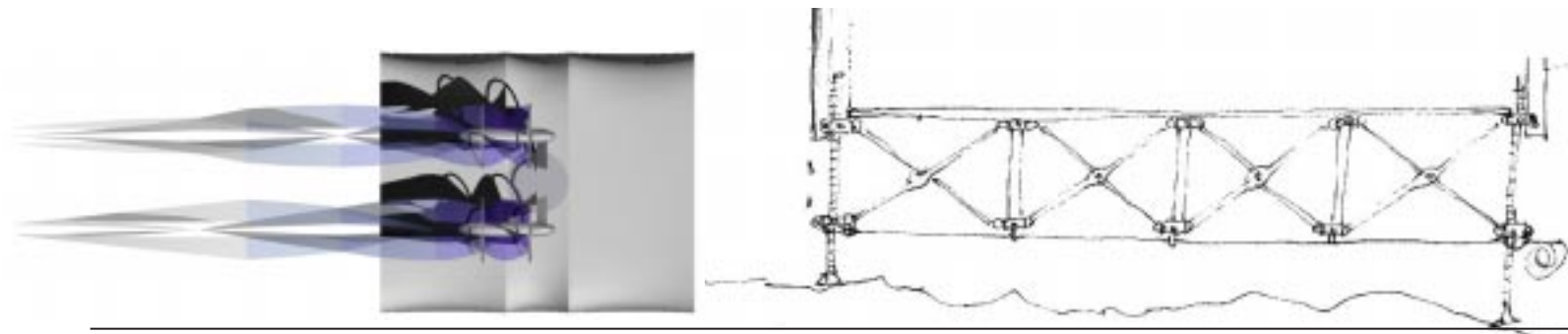
PORTABLE HARD FLOOR

A folding truss system combined with light wood panels provide a hard floor which adjusts itself to the landscape without the need of footings.

KIT-OF-PARTS: A VARIETY OF CONDITIONS

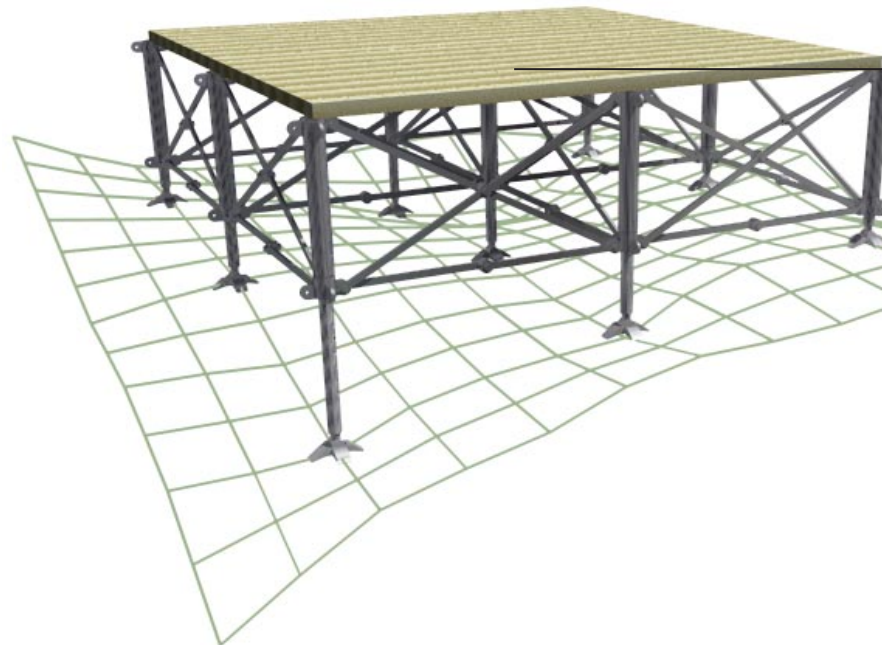
A large selection of possible conditions which fit into the system allow for maximum flexibility.





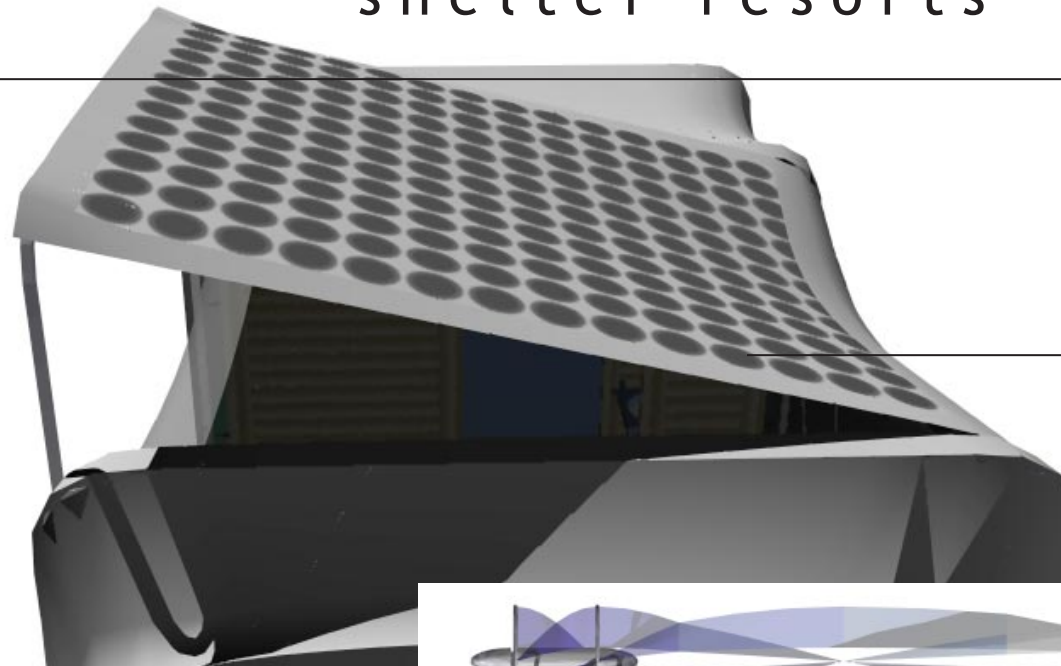
Sustainability

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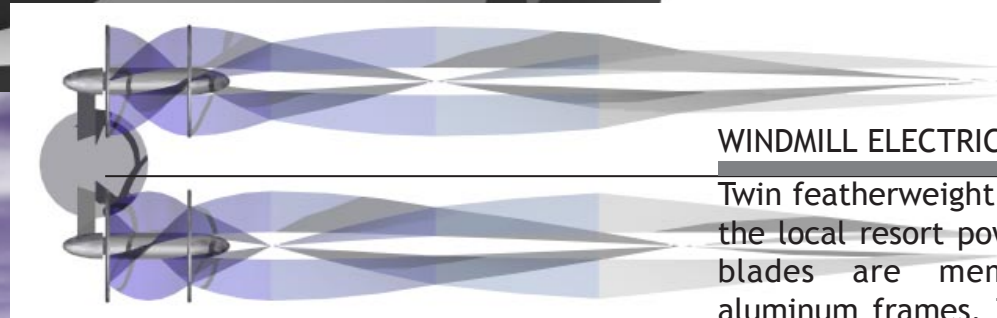
TERRAIN-SENSITIVE BASE

The modular base is form-fitting on moderately sloped terrain. The base system requires no digging or construction, but can be assembled and disassembled leaving minimal traces on the site.



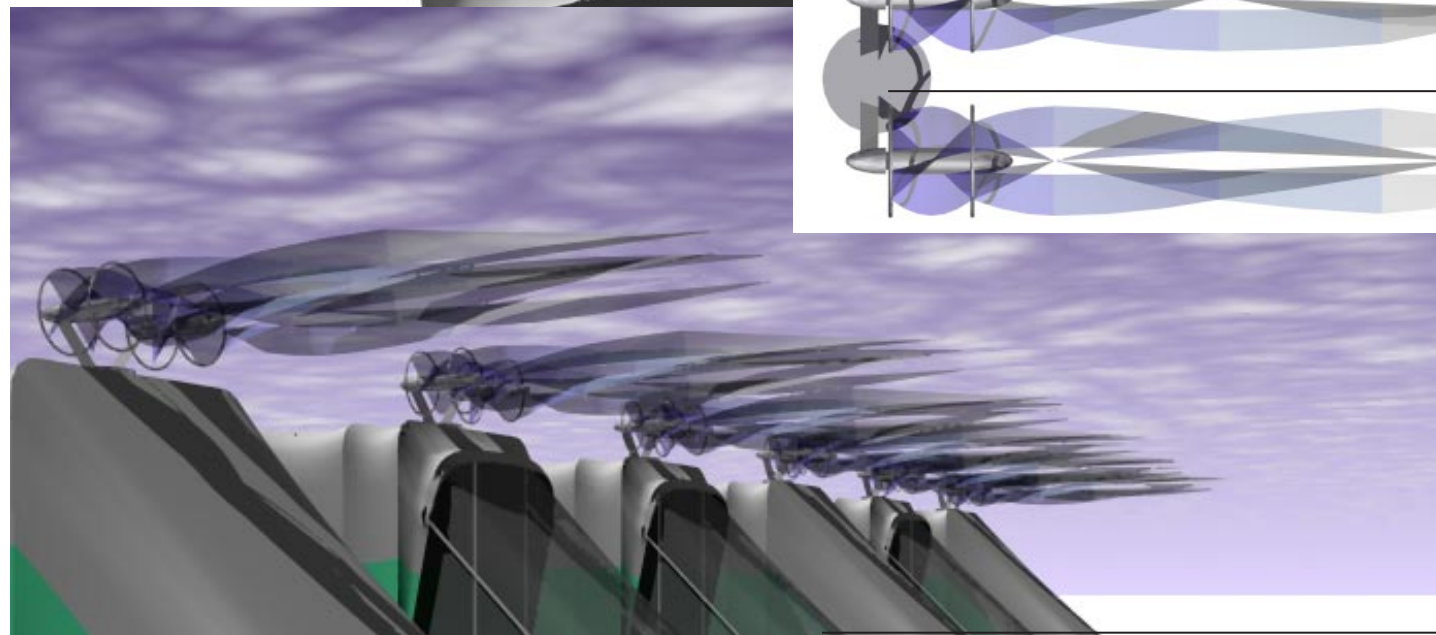
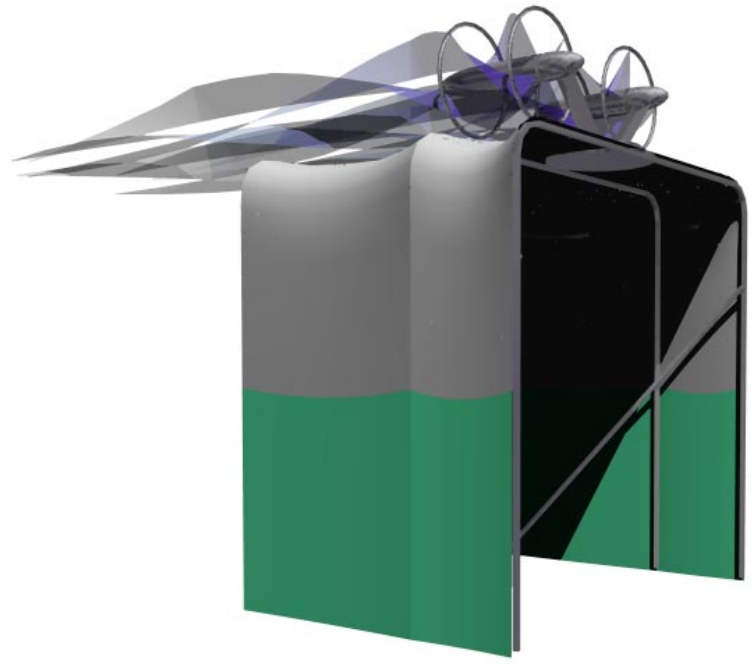
PHOTOVOLTAIC ELECTRICAL GENERATION

Photovoltaic cells integrated with membrane walls and roof contribute to the local resort power grid. This lessens the need for fossil fuels.



WINDMILL ELECTRICAL GENERATION

Twin featherweight wind turbines can contribute to the local resort power grid in windy climates. The blades are membranes stretched between aluminum frames. The blade membranes continue in a tail which directs the mount to spin in the direction the wind is blowing. The tails act as long banners and can be multi-colored or be printed with graphics or logos.



TEMPORARY STRUCTURES

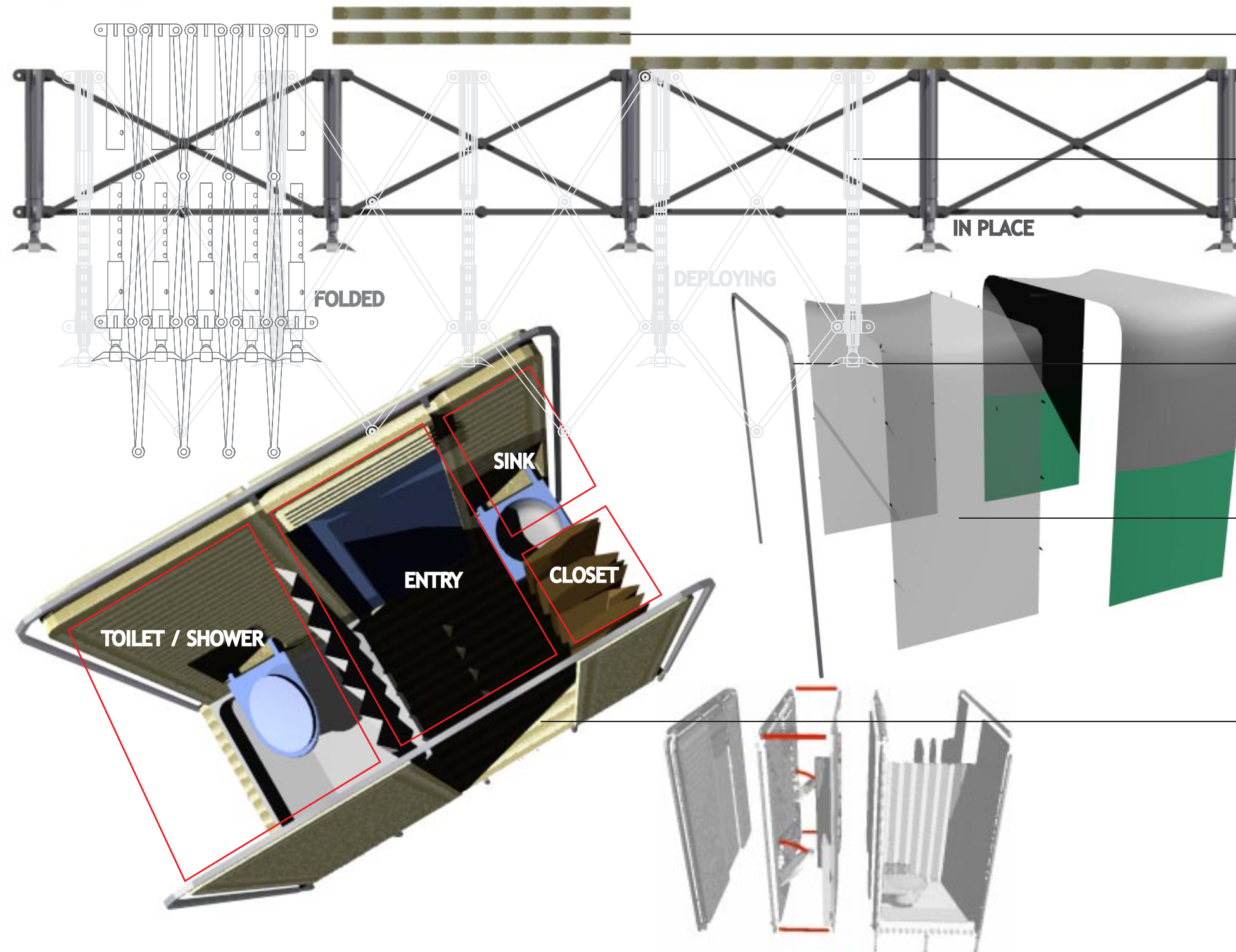
The existence of the resort is fleeting. When the various sections and components have been unzipped, folded, and taken away, all that remains are barely perceivable impressions or indentations in the soil.





Portability

shelter resorts



FLOOR MODULE

2' x 8' wood panels make up the basic floor module. The panels can be hardwood or have another material applied to the face.

DEPLOYABLE BASE

The base structure is on a two foot grid, with a standard size being 4' x 8'. When deployed, the base is twelve inches thick, with height added by adjustable legs as required above the natural grade. In its stored condition, the base folds up into approximately 1.5' x 3' x 1' package.

LIGHTWEIGHT FRAME

Structural member consist of dark anodized aluminum frame sections, with a standard size being 8' wide by 8' high. The frame sections can be broken down into three smaller pieces.

INNER & OUTER WALLS

The mesh inner fabric and outer weather barrier consist of simple rectangular sheets of material. The sheets have zippers along each side and simple straps or hardware for connecting to the frame. A typical size would be four feet wide. The wall material easily folds into manageable packages.

MODULAR CORE

In the storage condition, the core measures approximately 8' x 8' x 6". When deployed, the core becomes an entryway, closet, sink, and toilet / shower. Between two lightweight wood partitions, the sink and toilet with knock-out bowls fold up into the wall, a collapsable curtain deploys, and a drain pan falls into place. Water and sewer run under the base and connect to other units and the overall resort complex via rubber hoses.