

RANGER CABINS - PROTECT OUR NATIONAL PARKS

In the world we live in where human occupation creates a substantial transformation towards the natural environment, some locations across the globe are organized in the form of national parks to help protect and conserve them. The parks are managed with the help of park rangers*- a versatile job that consists of duties such as park enforcement and maintenance, emergency response, education, research, and many more. However, today the number of park rangers in the world are dropping in contrast to their dire need, especially in developing and transition countries. In addition some on site living remains in poor conditions as some were created in the late 20th century.

The Ranger Cabins serve as a modular, sustainable, and cost-efficient solution to on-site park ranger housing with consideration of limiting site disruption during its construction phase. The modular pieces divided by the conventional pallet are able to be brought to the site and assembled using small tools and vehicles. Thus, the structures are able to be constructed in locations that cannot be reached with larger vehicles. The Ranger Cabins are designed to house a single park ranger family or a small group of park rangers.

*The term park ranger is commonly used in the United States and may be called differently in other locations.

Proposed site locations are "extreme conditions" of various parks, showing the amount of flexibility and viability of the project design in any location.



Forest



Desert



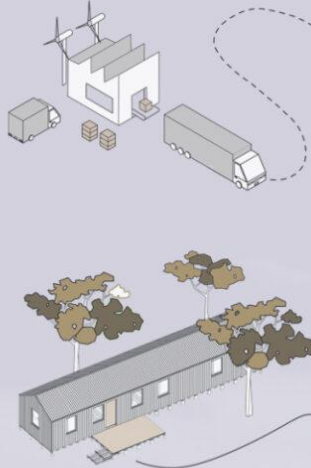
Mountain



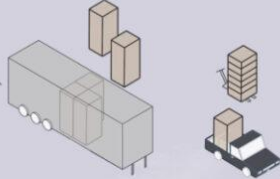
TRANSPORTATION AND ASSEMBLY

The transportation and assembly of the modular system moves from the fabrication factory to the natural park site in an orderly fashion.

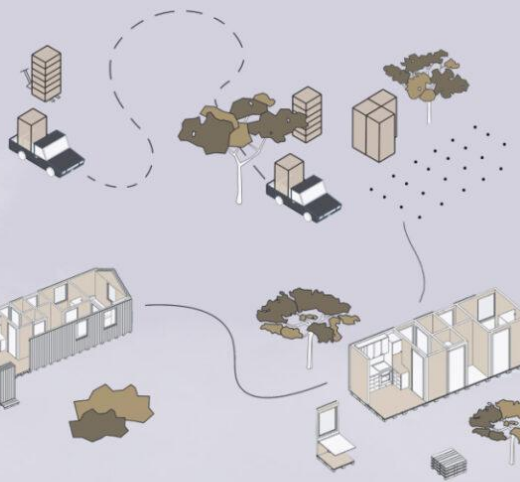
1 Prefabricated units are created at a nearby location and then transported.



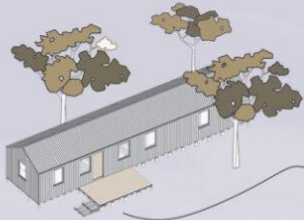
2 The shipping container left near the park site stores parts as smaller trucks transfer individual units to the site.



3 Site-friendly pile foundation are laid on the site as units reach the site.



6 Project completion.



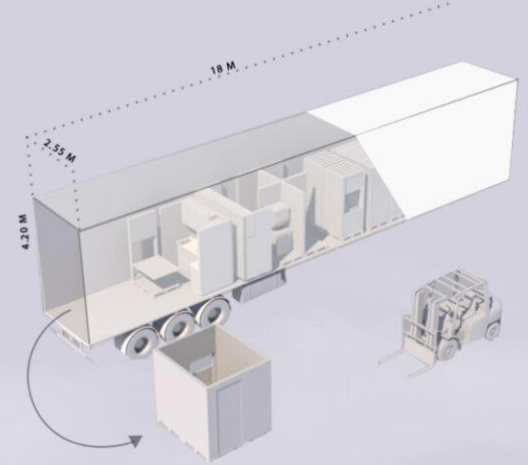
5 Other modular pieces (floor, wall, roof) are added on to the building unit.



4 The water units (mechanical, bathroom, kitchen) are installed.



Inside the Shipping Container...

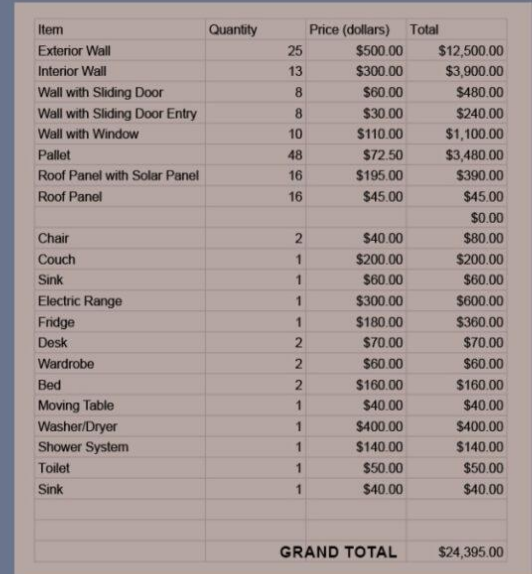


The entire cabin assembly can be fit inside the back of a freight truck. The module units are arranged in order of what is needed for assembly.

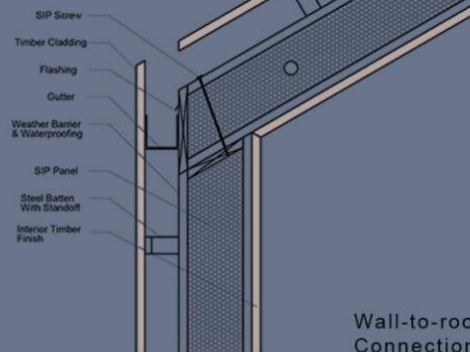


Each modular piece can be moved by 1-2 people.

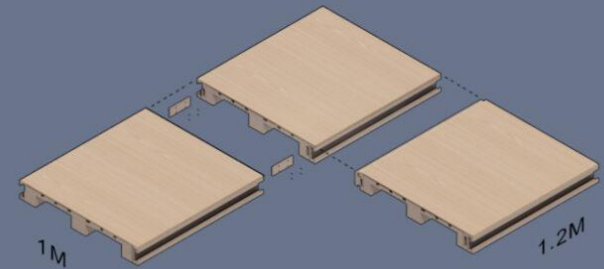
Every wall, roof, and floor panel have structural properties that make this modular unit both stable and efficient. The use of SIP panels also offers a cost efficient and sustainable solution to the cabins.



Exploded Axonometric



Wall-to-roof Connection



Pallet Floor Connection

LAYOUT AND OCCUPATION

The Ranger Cabin utilizes a rectangular layout, which allows the pallet units to effectively and efficiently combine together to create spaces. Several program such as the office space and the mud room are designed to serve the life and work of a typical Park Ranger.

