SUBMITTED BY Ecosystemic Solutions, LLC

Sustainable Desert Home Design: A Modular, Off-Grid Solution

Ecosystemic Solutions

Off-Grid Living in the American Southwest

CLIENT NAME: Homesteader Steve
DATE ISSUED: May 3rd 2023

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Green & Offgrid

OBJECTIVES

Ecosystemic Solutions proposes a partially prefabricated desert home suitable for off-grid living in the American Southwest. The design should incorporate renewable energy technologies, recycled materials, and efficient systems integration strategies to create a sustainable, comfortable, and livable space that is both resilient and adaptable to the arid desert environment.



Create a design that can be easily transported and assembled on-site in a desert environment.

Minimize the environmental impact of the construction process.

Incorporate renewable energy technologies, recycled materials and sustainable building practices.

Long-lasting durability and modularity to meet current and future inhabitant needs.

"Renewable Living. Sustainable Futures. Collaborative Results"

Designing for...



- Transparency in material sourcing
- Self-sufficiency
- Ecological Harmony
- Residential LEED certification
- Kinder, customizable homes



PROJECT PHASES

01

PHASE I:
Feasibility Study

Determining the technical, economic, and environmental viability of the design concepts.

02

PHASE II:
Virtual Refinement

Testing for material durability, energy efficiency, water usage and other factors using state-of-art digital building information modelling and digitl twin technology

03

PHASE III:
Construction and Deployment

Presenting the house plans and bundled technologies to our clients and providing references to certified green building construction companies.

PHASE I

PHASE TITLE GOES HERE

Feasibility study

To implement this project, Ecosystemic Solutions will first conduct a feasibility study to determine the technical, economic, and environmental viability of the design. The study will include an analysis of the materials, technologies, and systems required for the design as well as an assessment of the cost and benefits of the project and close collaboration with the client.



INCLUDED IN THIS ENGAGEMENT

- Market research report
- Client advising
- Preliminary Design Concepts, preliminary cost analysis, preliminary schedule, and technical and environmental assessment.

PHASE 02

Virtual Refinement

Once the feasibility study is completed, Ecosystemic Solutions will develop a digital twin of the modular design. The digital twin will be tested for durability, energy efficiency, water efficiency, and other factors. Based on the results of the testing, the design will be refined and optimized.

INCLUDED IN THIS ENGAGEMENT

- Sketches and CAD models
- Energy modeling
- Virtual reality walkthrough
- Materials selection
- Final cost analysis and schedule.

PHASE 03

Construction and deployment

After the design is finalized, Ecosystemic Solutions will work with local contractors to assemble and install the home. Regular site visits and quality control checks to ensure that the construction process is proceeding according to plan. The integrated food production system will be installed and tested to ensure it meets the requirements for self-sufficiency. Lastly post-construction monitoring and inhabitant feedback will ensure that the home is operating as expected and that any necessary adjustments are made.

INCLUDED IN THIS ENGAGEMENT

- Detailed architectural and engineering drawings
- Final bill of materials
- Quality control checks
- Site visits
- Post-construction monitoring

ESTIMATED PROJECT DURATION

The project duration shall be subject to adjustment based on any changes in scope, schedule, or other factors that may arise during the course of the project

ESTIMATED PROJECT COMPLETION DATE
Jan 3, 2025

If the project is not completed within 30 days of the Estimated Project Completion Date due to client delays in providing feedback, assets, approvals, content, direction, and so forth, we reserve the right to discuss and submit a change order to accommodate unforeseen expenses due to the unplanned extension of the project.

PHASE	TIMELINE
Phase I: Feasibility Study	2 months
Phase II: Virtual Refinement	6 months
Phase III: Construction and Deployment	12 months
TOTAL ESTIMATED PROJECT DURATION	20 months

ESTIMATED PROJECT BUDGET

The estimated project budget is subject to change based on unforeseen circumstances or additional requirements that may arise during the course of the project. Any changes to the budget will be communicated promptly and transparently to all stakeholders involved. Based on the scope detailed in this document, this project budget reflects a final price commitment from our agency.

PHASE	BUDGET
Phase I: Feasibility Study	$32,000
Phase II: Virtual Refinement (excluding Virtual Reality walkthrough)	$48,000
Phase III: Construction and Deployment	$64,000
TOTAL PROJECT BUDGET	$144,000

RELATED OPTIONAL SERVICES	BUDGET
Additional Multiparty Consultation Meetings	$1,500
Expanded Research Services Bundle	$2,000
Virtual Reality Walkthrough	$5,000



NEXT STEPS

STATEMENT OF WORK (SOW)

We would be delighted to work with you to satisfy your off-grid living needs. Each engagement with Ecosystemic Solutions includes a detailed statement of work which defines our services in detail. The statement of work will act as a formal agreement between both our agency and you, as our client. Each statement of work will include:

- A clear and concise description of the project scope, including deliverables and timelines
- A breakdown of our services and the corresponding fees
- An estimated project duration and any milestones or deadlines
- A list of assumptions and dependencies
- A description of the project management approach and communication plan
- A statement of responsibilities for both parties



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THANK YOU

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