

Flood-Proof Prototype and House 1

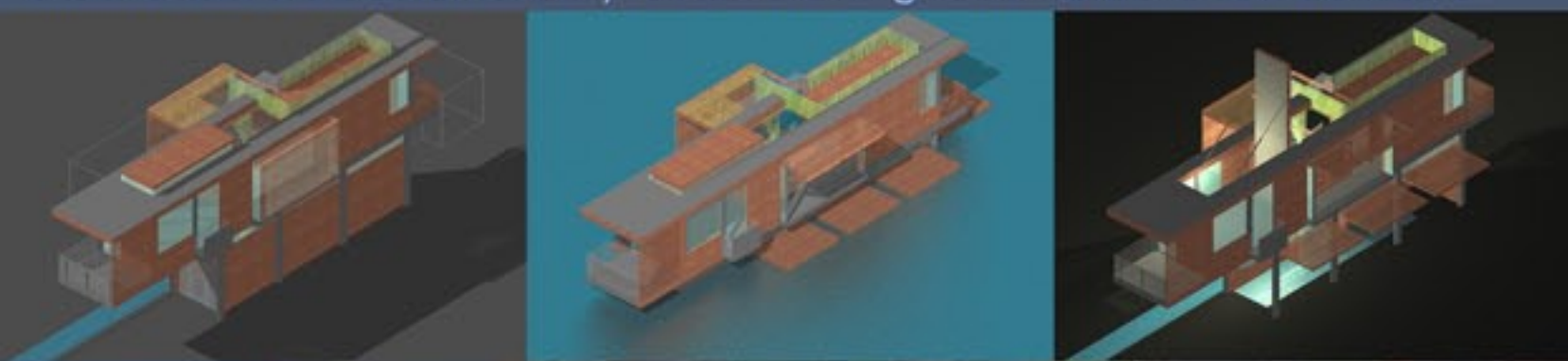
21st Century Plug-In



Prototype

- Applicable to local and global sites, coastal and estuary
- Protecting shorelines by adapting to water level changes and concentrating construction in built areas

Ground floor walls automatically retract allowing flood waters to flow beneath.



Area of implementation
Inhabited Bay Area flood zones



Flood-Proof House 1

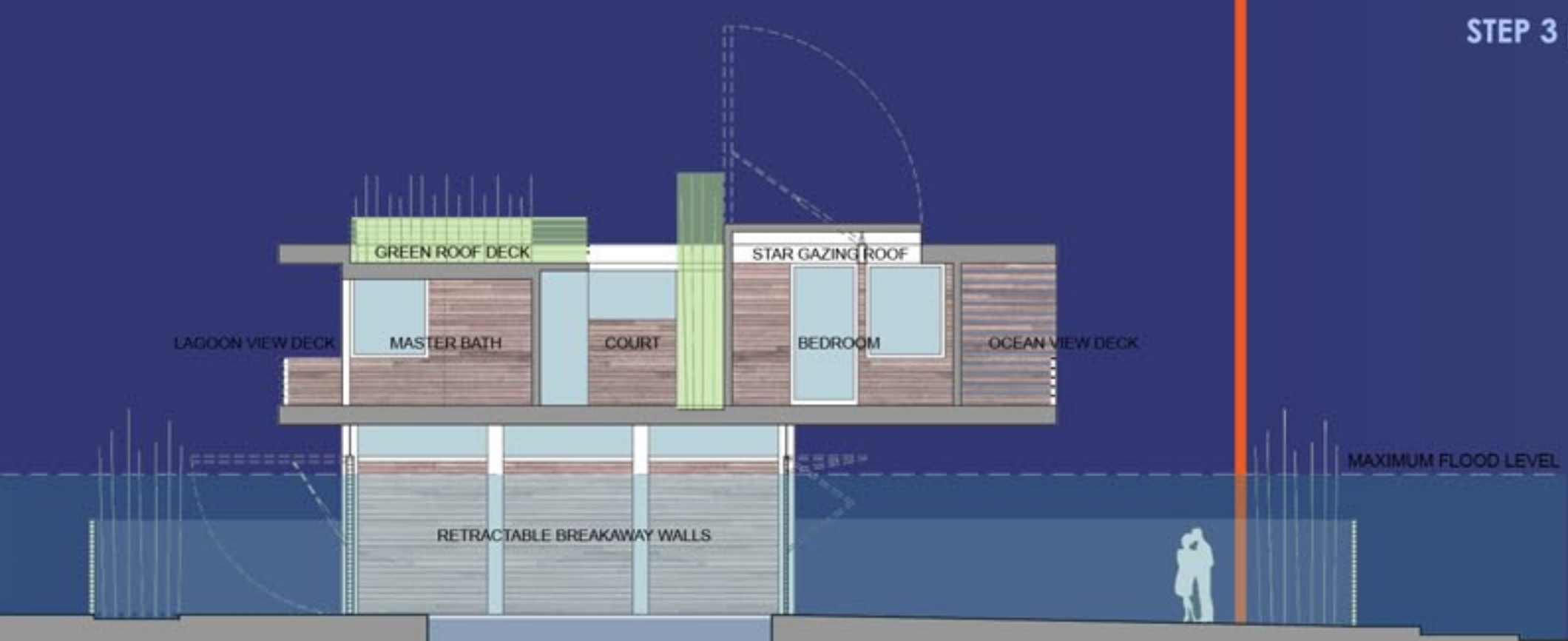
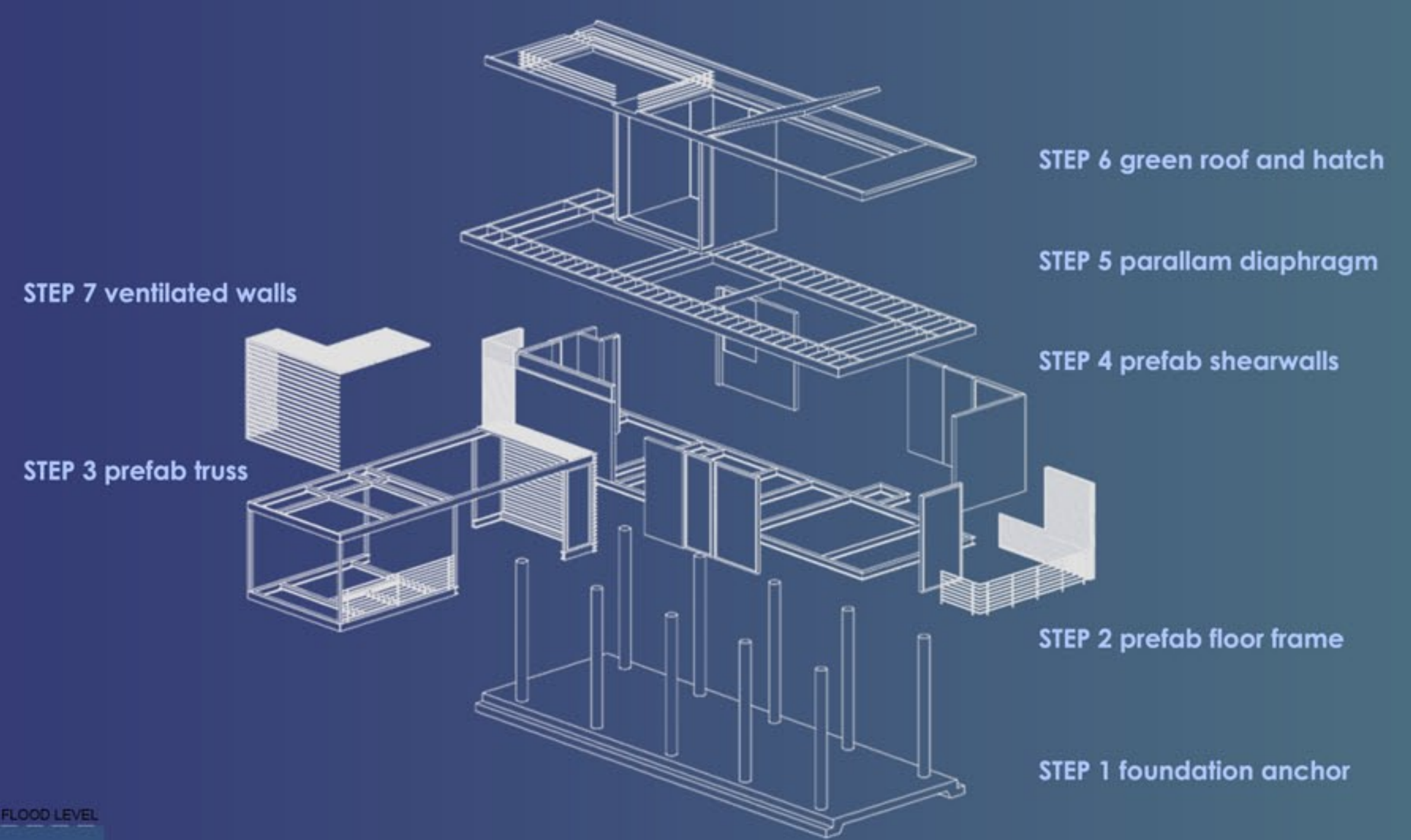
Project completion: January 2009

Project Summary

- A built prototype for global flood zones: a building that remains intact after a storm-driven flood, sea level increase, levee failure, or tsunami.
- Ground floor bi-fold walls automatically retract allowing waves to roll beneath, while the cantilevered steel frame above hovers over water level. For future sea level increases, bi-folds can be left in open position as docks for boat access.
- A sustainable prefab kit of parts, including new panelized walls, lightweight steel frames, and rainscreens, is usable for buildings of different shapes and sizes.
- Cantilevered central truss provides an architectural "plug" that can connect as a bridge or stair to existing buildings for the sensitive densification of urbanized areas.
- Marin County awarded Platinum construction for innovations in sustainable design, including a foundation anchor that uses thirty percent less materials than current flood-resistant buildings.

ASSEMBLY DIAGRAM

Ground floor column height can be determined by the 100-year flood elevation.



SECTION

