



The foundation of an equitable and sustainable future can be found in the home and neighborhood.

Housing quality, stability, affordability and location affect community goals, economic well-being, health outcomes, educational attainment, and environmental sustainability



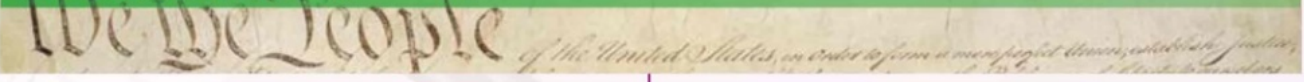
There are no silos in the four walls of the home

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INDEPENDENT AGENCIES AND GOVERNMENT CORPORATIONS

AMTRAK

COMMERCIAL INTELLIGENCE AGENCY

FDIC

ENVIRONMENTAL PROTECTION AGENCY

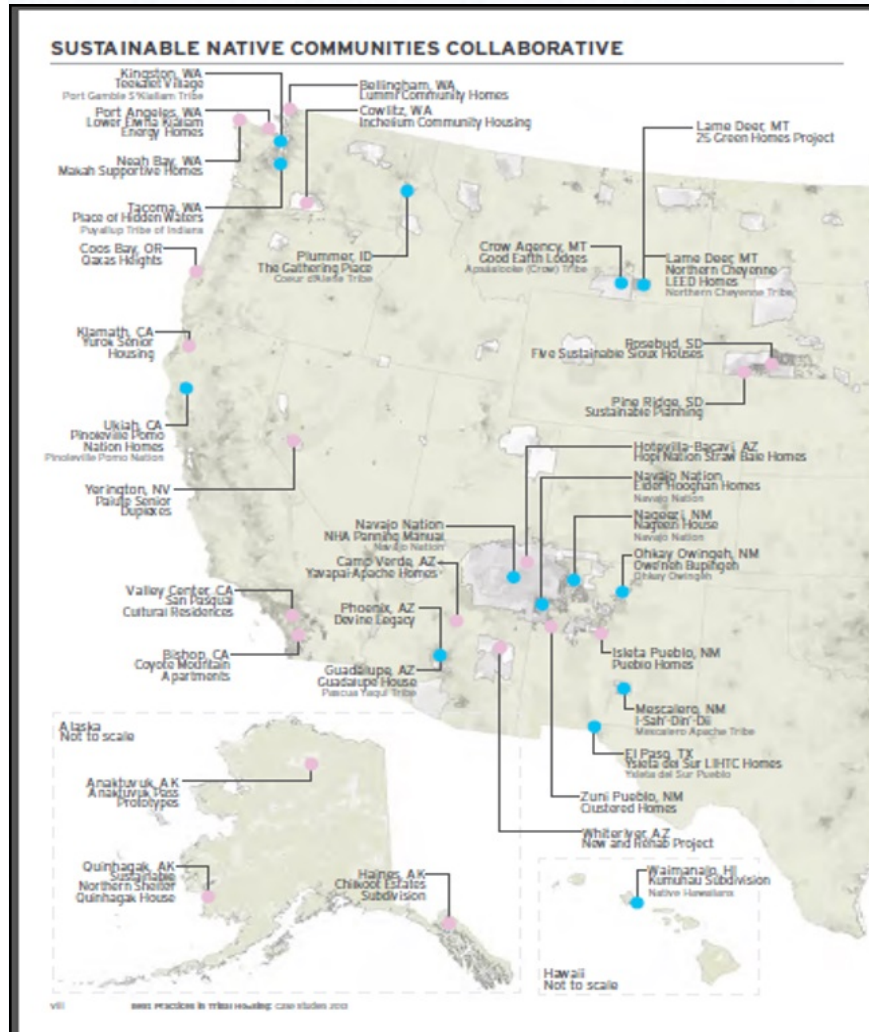
OSHA

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BEST PRACTICES IN TRIBAL HOUSING: CASE STUDIES 2013



**A REPORT BY THE SUSTAINABLE
NATIVE COMMUNITIES
COLLABORATIVE,
AN INITIATIVE OF ENTERPRISE
COMMUNITY PARTNERS**

Released: October 2014

Posted: November 18, 2014

Case Studies 2013 was made possible through the support of the U.S. Department of Housing and Urban Development Office of Policy Development and Research (PD&R),

THE REPORT HIGHLIGHTS 17 PROJECTS THROUGHOUT THE U.S. EACH PROJECT FEATURES ASPECTS OF SUSTAINABLE CONSTRUCTION WITHIN NATIVE AMERICAN SETTINGS.

Collaboration can lead to new housing that is :

- healthier
- energy-efficient,
- climatically appropriate ,
- exhibits strong cultural and historic tribal design elements
- cost effective

BREAKDOWN OF THE PROJECTS REVIEWED:

347 HOMES 38% MULTIFAMILY
56% HOMEOWNERSHIP 44% SINGLE FAMILY
44% RENTAL 18% DEMONSTRATION PROJECT
40% TRAINING IMPLEMENTED PROGRAMS
25% LOW INCOME HOUSING TAX CREDITS
38% TRAINING EMPLOYMENT PROGRAMS
\$142 AVERAGE COST PER SF



Best Practices Highlighted:

- Design
- Site
- Innovation
- Culture
- Green
- Impact

Thoughtful planning can sustain cultural heritage and natural habitat



I-Sah'-Din'-Dii Housing Project at Mescalero, New Mexico exhibits a low-impact design that maintains a rural feel but places the homes closer together to reduce infrastructure costs and protect the natural habitat. The project is located in a high altitude ponderosa forest in.

Development Partners: HUD, The New Mexico Mortgage Finance Authority, The Bureau of Indian Affairs, the Indian Health Services and the Mescalero Apache Housing Authority

CORE PROJECT EMPHASES:



Passive
Solar



Envelope



Natural
Ventilation



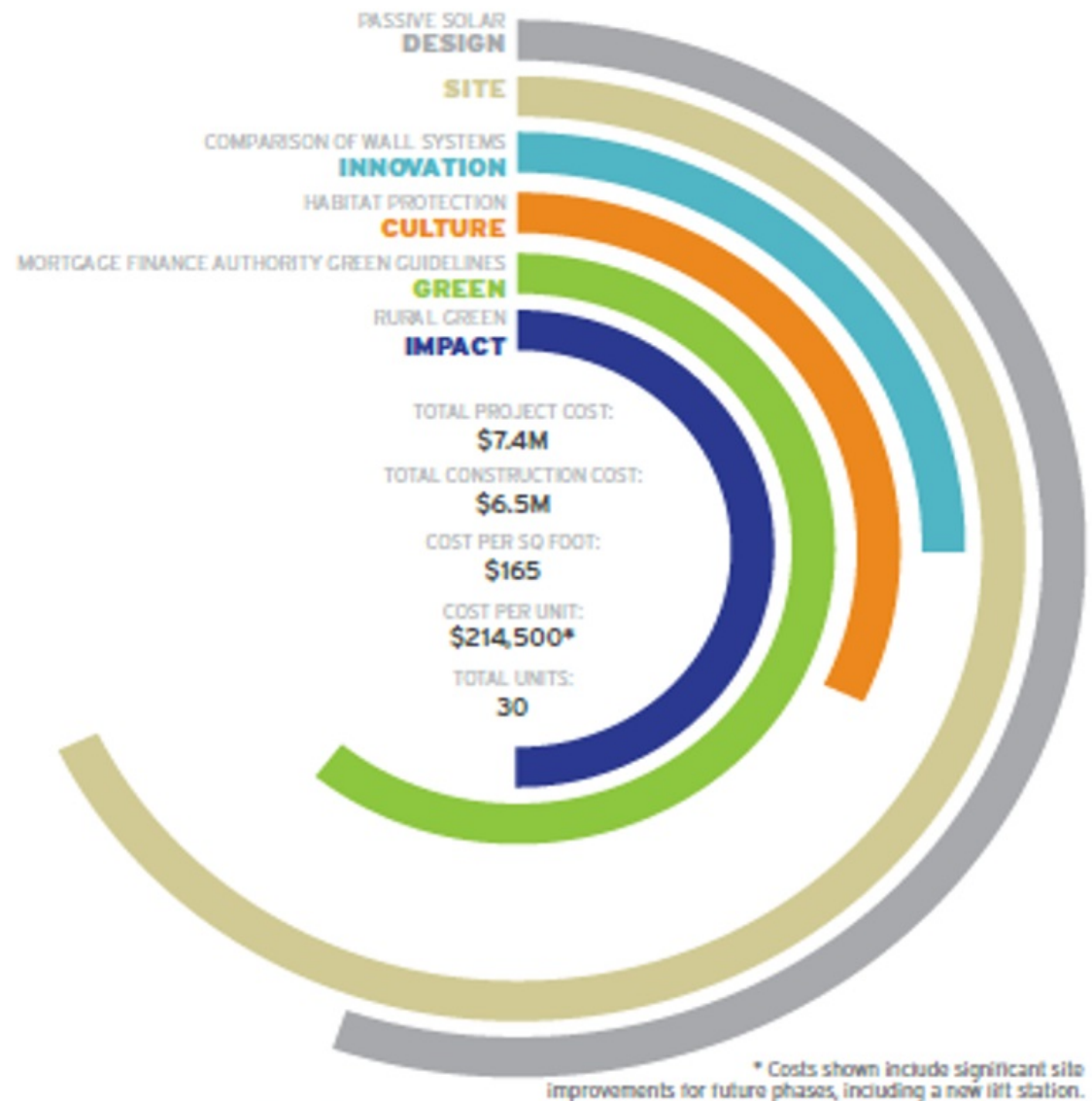
Habitat

LESSONS LEARNED

- A rural atmosphere can be maintained through thoughtful site planning.
- Good design can help reduce construction and energy costs.
- Engaging all project partners at the outset of a project enhances collaborative performance.
- Structural insulated panels (SIPs) for wall construction are a cost-effective, green alternate to wood stud wall construction.

BEST PRACTICES

- The site plan was developed using low-impact development principles. For example, compact housing allowed for significant protection of adjacent habitat.
- Construction followed the New Mexico Mortgage Finance Authority Green Guidelines.
- All of the homes are oriented for passive solar, with large windows and appropriately sized overhangs on the south.



Homes purposely have no carpets (for health reasons) low-volatile paints, Structural Insulated Panels, Energy Star Appliances , passive ventilation, R-26 Wall insulation and R-40 roof insulation low-flow water fixtures, rain barrels to capture roof water are some of the project's features.





Photo: Richard Neill

CORE PROJECT EMPHASES:



LESSONS LEARNED

- The material and human resources for developing climate-appropriate new housing exist on the Crow Indian Reservation.
- In the future the community would prefer site and unit planning based on Crow traditions, such as positioning buildings in a circle.
- Critical partnerships can help to realize local capacity.

BEST PRACTICES

- Affordable housing can both help to alleviate homelessness and provide a pathway to skills building and tribal employment.
- Passive solar orientation and design, combined with compressed earth block construction, provides excellent passive heating during harsh Montana winters.
- Each home has space for large family gatherings.

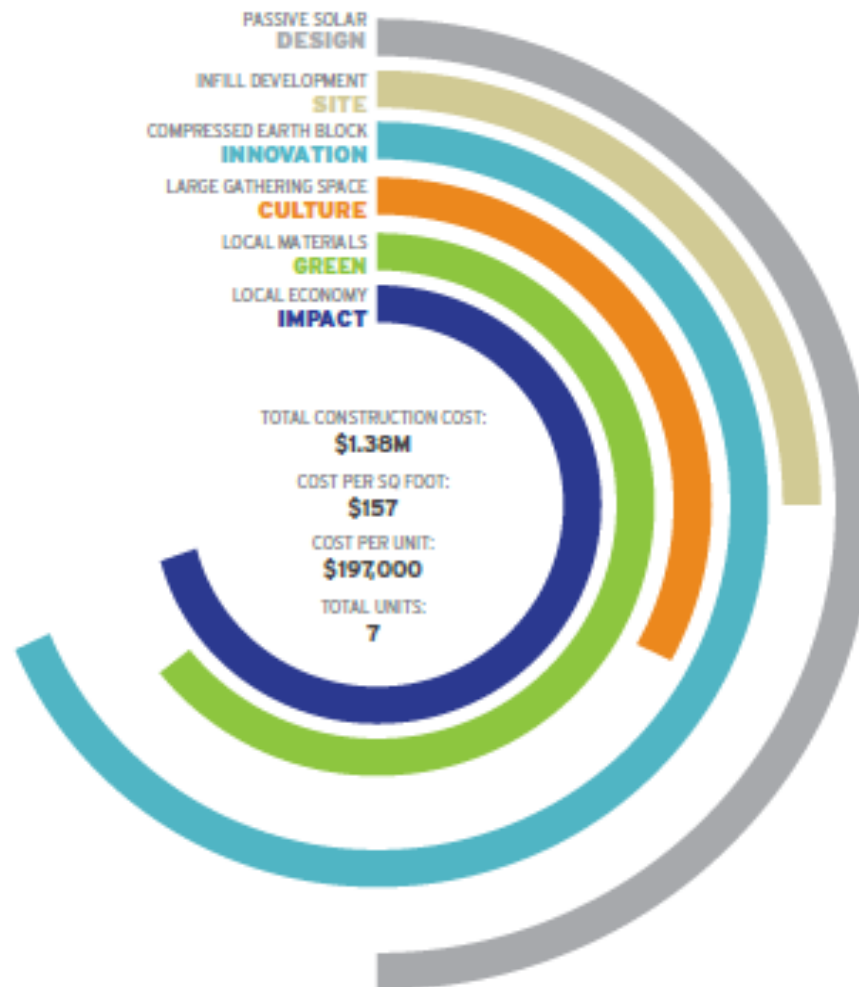
Good Earth Lodges

APS`AA
 LOOKE
 (Crow) Tribe

South
 Central MT

Temp range
 from -40 to
 +110

The project
 utilizes
 compressed
 earth
 blocks,
 made from
 materials
 found on the
 reservation





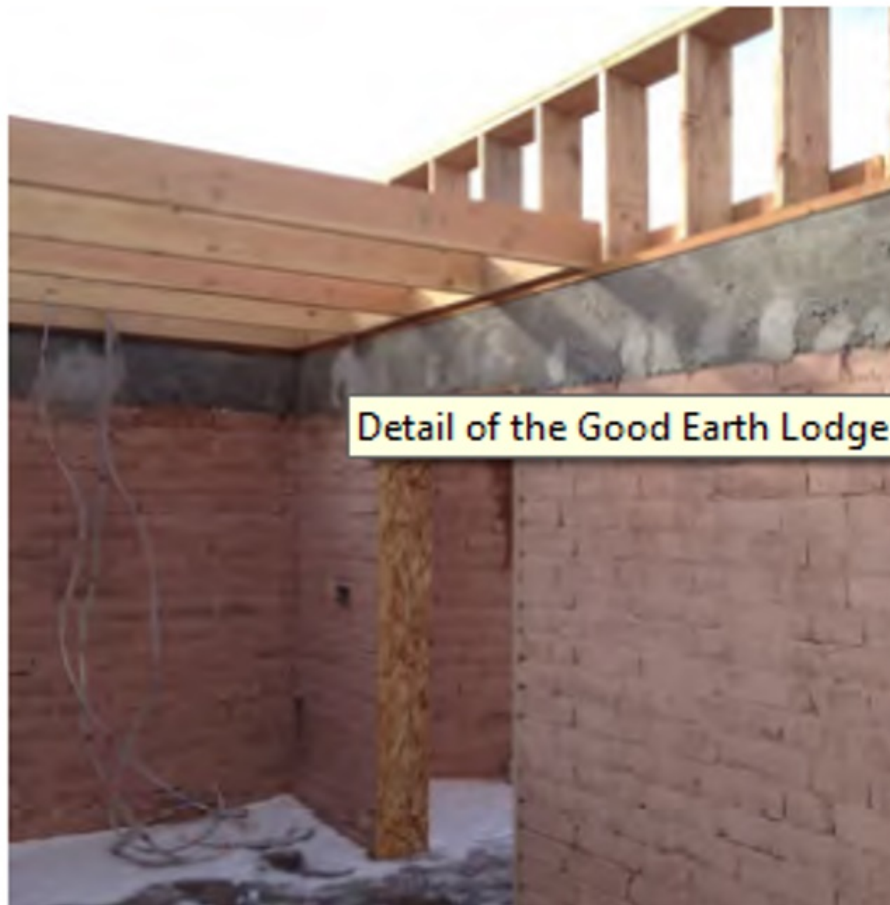
The Good Earth Lodges project has three objectives: to determine if the raw materials needed for compressed earth blocks could be found on the Crow Indian Reservation, if the blocks could with stand Montana's extreme climate, and if a tribal workforce could be put in place to carry out the program.



The Good Earth Lodges project explores the potential for sovereign nations to produce their own building materials and use their own labor to create more sustainable, locally based economies. The project also provides lessons about the challenges of achieving locally produced, locally sourced, and locally built houses.

“ The Crow people believe that they have three mothers. The first is the woman who gives birth to the child. The last is Mother Earth, who the people go back to when they die. And then the home, the lodge is our mother, it protects us as we are being raised, coming up in this world.

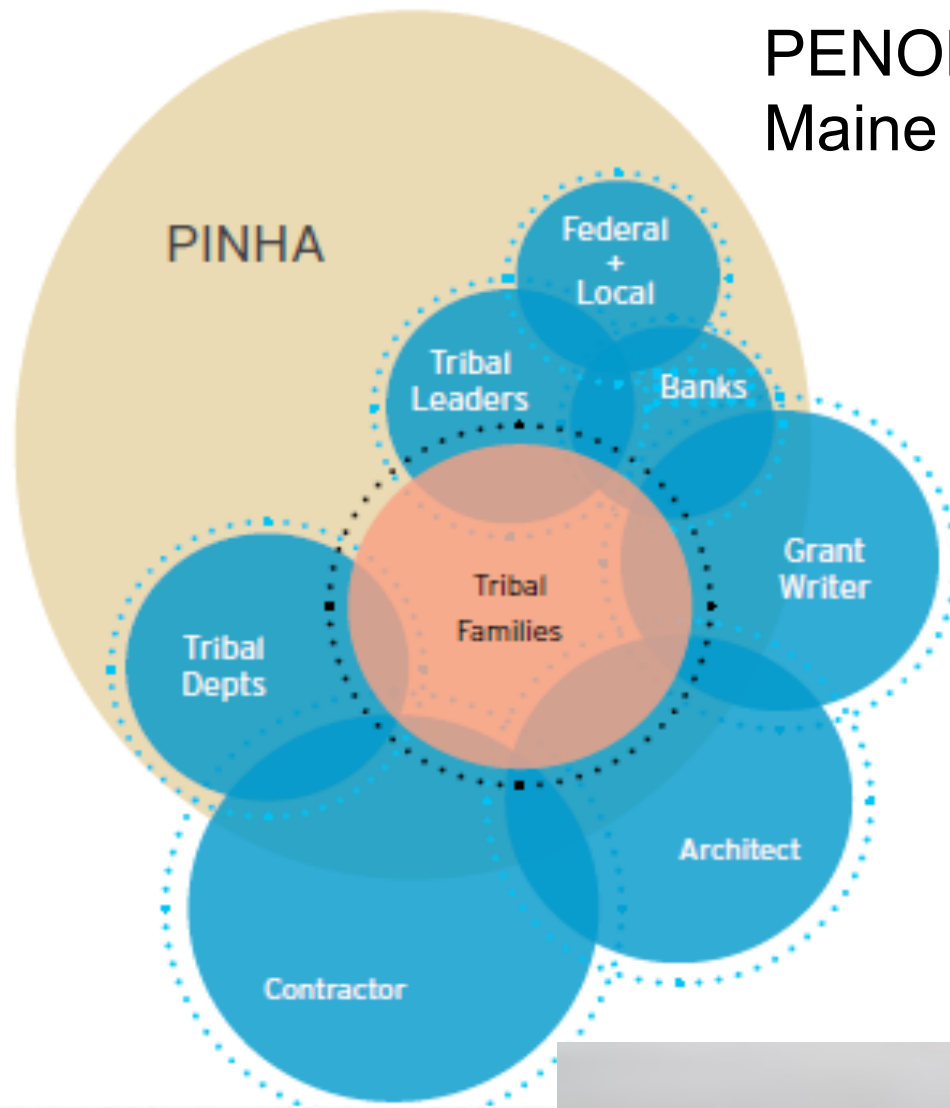
- Cedric Black Eagle



Detail of the Good Earth Lodge structure



PENOBSCOT LEED HOMES - Maine



Through collaboration with local lenders and the U.S. government, the Penobscot Indian Nation Housing Authority (PINHA) built 12 Leadership in Energy and Environmental Design (LEED) Gold single-family homes in an area in Maine. The project features a nature path, native plants, a boardwalk network connecting to community facilities, sweat lodges, and a ceremonial multi-use space.

Tribal members led the project, chose the team, and helped determine home designs and cultural features.



Individuals, families and communities working in partnership with government and private enterprises can resolve some of the pressing needs facing residents of rural mountainous areas. It takes time, resources but most of all – communication and understanding.



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