“Promoting and advancing the development of healthy, durable, and sustainable shelter for Alaskans and other Circumpolar people.”
CCHRC History

The Beginning
- AHFC
- Fannie Mae
- AK Home builders

The Development
- Collaborations
- Research

The Expansion
- RTF
- Partnerships
- Demonstration
- Increasing our network
Our Facility

• 15,000-square-foot facility designed to LEED Platinum.

• Two active research labs.

• The structure is an on-going research experiment with constant monitoring by over 1,200 sensors.

• Less expensive to build than conventional commercial space.

• Uses 53% of the energy of similarly-sized conventional commercial space.
Goals

1. Identify issues critical to creating shelter and related infrastructure for Circumpolar people
2. Develop projects to address these issues and initiate solutions
3. Expand partnerships within the circumpolar north
4. Assure long term viability of the organization through a diversified funding base
5. Stimulate local business enterprises
6. Promote our findings
Organization

Research
Product Testing
Design & Consulting
Outreach & Education
Research Programs

Building Envelopes & Materials

Energy & Mechanical Systems

Policy & Program Development
Product Testing Lab

Product Testing Goals
- Product Performance
- Product Durability

Types of Tests
1. Publicly-funded testing
2. Fee-based testing for product certification
Design & Consulting

Sustainable Design
  - Sustainable Northern Shelter
  - Cold Climate Housing Design Review
  - Energy Modeling
  - Affordable Housing Designs
Creativity of the North

People of the North are creative, skillful . . . and artistic

- First pioneers who came across the Bering Straits
- Newer pioneers, the immigrants who moved West and then came North
  - Alaska are leaders in innovation
Indigenous Wisdom
21st Century Technology
Innovative Combinations
Design Challenges

• 16,000 HDD
• Electricity $.60/kWh
• Heating Oil $8/gallon
• 1,400 gallons/yr.
• New conventional house is $750,000.
• Context-appropriate housing.

Construction Outcomes

• Final cost: $175,000.
• Modeled 127 gallons/yr.
• Completed in four weeks.
• First new house to be constructed in Anaktuvuk Pass in 10 years.
Other SNS Activity

- Newtok - Evacuation Center 35% DAR complete.

- Point Lay - SNS process and preliminary design.

- Quinahagak - team building and design underway.

- Shaktoolik, Unalakleet, North Slope, Mertarvik, Minto, Fort Yukon, Tanacross, potential work pending.

- Continue to form partnerships to work with communities throughout Alaska to address housing challenges.
Alaska Solutions, Global Sustainability

Shelter, food, water, and stewardship of resources are of global concern.

Alaskan rural communities face the challenges of tomorrow, today.

The solutions we apply here can be a model for the rest of the nation and the world.
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