HUG Campus

Hunt Utilities Group and
Happy Dancing Turtle

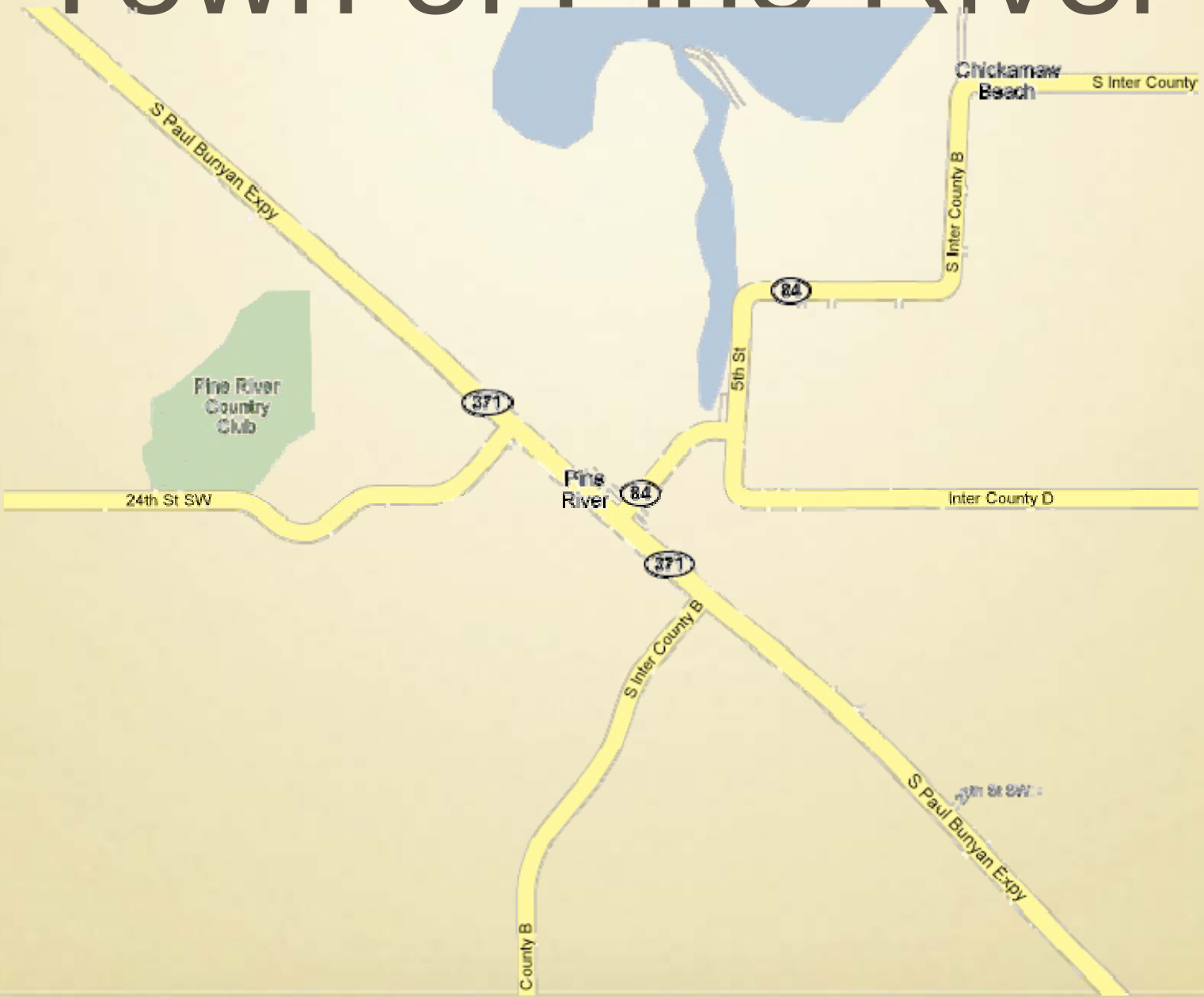
Greener by Design

CASS COUNTY

CASS COUNTY

- Progressive building codes
- Desire for change
- Open to experimentation

Town of Pine River



Town of Pine River

- A balance of permanent and seasonal residents
- Concerned about affordable living
- Want to preserve their simple up-north lifestyle
- Appreciation of traditional ways of living enhanced by new technologies.

HUG Campus

Hunt Utilities Group

- Research campus promoting renewable energy and ecologically-sound sustainable living
  - All buildings are self-heating and cooling
  - All buildings oriented for optimum solar exposure
  - All buildings have extensive monitoring (HUGnet)
  - All buildings have greenhouses to supplement utilities, food sources, and wonderful aesthetics
- PermaCulture is used as a guiding principle in design and to help build a sustainable community

HAPPY DANCING TURTLE

HAPPY DANCING TURTLE

- Happy Dancing Turtle provides outreach and education by offering a hands-on model of sustainable living
- Builds with local, recycled, and natural materials
- Provides learning opportunities for all ages and interest levels
- Visit, tour, practice, and stay in an environment where learning to live sustainably is easy and comfortable

Campus by Design History:

- 2003: Paul & Lynn Hunt present their vision
- 2003: 4500 square foot straw bale building is enclosed
- 2004: Paul & Lynn move to campus
- 2006: new solar heated machine shop, office and greenhouse facility begins
- 2006: Permaculture installation around Old Main begins
- 2006 Happy Dancing Turtle embarks on Phase IIa
- 2006 RREAL installs experimental Solar on HDT trailer

Phase IIA

- **Happy Dancing Turtle** design and build ‘Live-in Labs’
- Mini Village with an educational focus
- Hands-on training and experiences

Paul & Lynn Hunt

Old Main

South facing – Solar and Shade

Heat Storage + In-floor Heat

600 lb. Straw Bale Walls

Manifesting Mechanical Building

Southern Facing – Living Roof – SIP Walls

Large Greenhouse – Solar System

Heat Storage - 10 miles of Tubing

Manifesting Mechanical Building

Living Roof

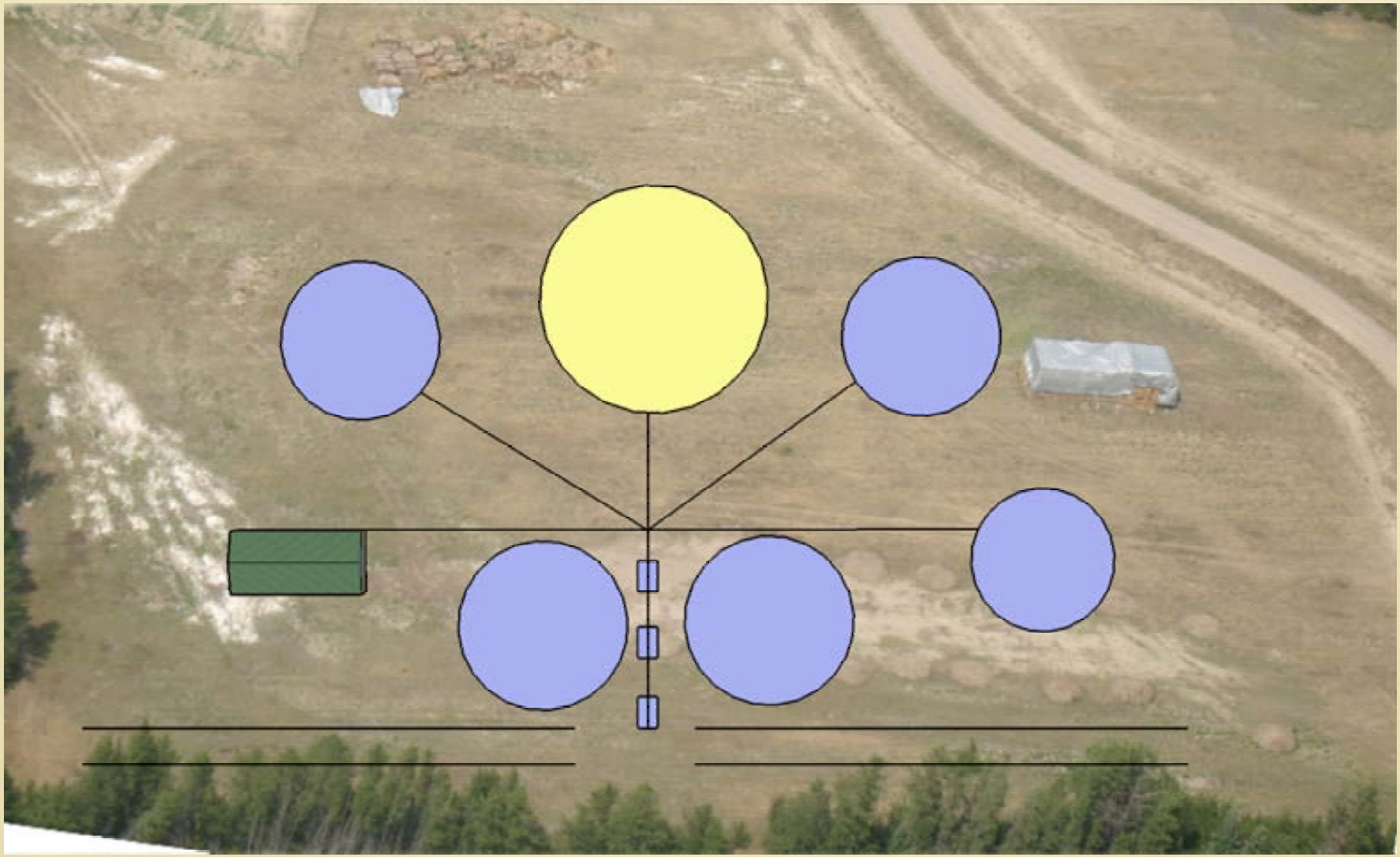
Manifesting Mechanical Building

Heat Storage – 10 miles of Tubing

RREAL experimental Solar

Trailer Home – NINE Solar Panels

SOUTH FIELD



SOUTH FIELD

- Design model straw-bale buildings
- Community Center
  - public parking
  - creating community
  - Hands-on educational facility
  - design around a central core
- Permaculture
  - passive solar and greenhouse space
  - individual and community garden spaces
  - creating healthy soil through plant guilds
  - water conservation

Happy Dancing Turtle Southfield Cabin

South facing – Greenhouse
SIP Roof – 600 lb bale walls
(640ft²)

Southfield Cabin (640ft²)

- Process
  - Site cabin for optimum solar exposure
  - Utilities large bales for north, east, west walls
  - Design around a utility core
  - Simple, comfortable, open design
  - Natural materials
  - Easily Transferable
- Components
  - Crushed rock foundation
  - Large bale construction
  - Passive solar
  - Attempting 100% solar hot water
  - SIP roof

LOOKING AHEAD

- Concept Buildings for the Future
  - The Turtle Shell (Community Center)
  - Kemp's Ridley (640 ft^2),
  - Ouachita Map and Blandings (960 ft^2),
  - Loggerhead and Hawksbill (1152 ft^2)
  - Camping Area
- Experimentation
  - Different Heating Systems
  - Water Catchment for Potable Usage
  - Living Roof
  - Gray-water Systems
  - Straw Bales and other materials