Winnesheik Energy District
Energy Breakfast

5/15/18  Craig Mosher
Cohousing

• A neighborhood developed by the people who live there, based on what is important to them
• Developed in Denmark in the 1960’s
• Now worldwide
• 150 in US, 150 being developed
• Prairie Hill is the first in Iowa
Iowa City Cohousing values

- Multigenerational membership
- Social and economic diversity
- Community and privacy
- Green buildings with small carbon footprints
- Sustainability
- Shared resources
- Emphasis on alternative transportation
- Ecological land use
Alternative transportation & cars

• Emphasize walking, bicycling & bus
• Cars park on periphery
  • Open parking places
  • Some centralized garages
Within walking distance

- 25 restaurants
- 12 car services, 4 auto parts stores, 2 car rentals & 1 car wash
- 4 hair salons/barber shops
- 3 grocery stores
- 3 convenience stores
- 3 general merchandise stores
- 2 pet care & 2 banks
- 1 health club
- And a dry cleaner, stores for package mailing, sporting goods, office supplies & a hotel
Land use

• Following permaculture principles
• Clustered homes
  • Edible landscaping around homes
• 3.75 acres undeveloped hilltop
  • Vegetable gardens
  • Orchard
  • Prairie
Land use

- Orchards
- Gardens
- Fruits and nuts
- Prairie

Legend:
- Green: Stacked flats, 2 entries
- Purple: Duplexes, lower entry
- Orange: Townhouses
- Yellow: Stacked flats, 1 entry
- Red: Duplexes, upper entry
- Blue: Common house apartments
Alternative energy
Solar-ready building siting
Shared resources
Sustainability--Infill development
Sustainability – alternative green

Buffalo grass
Sustainability-bioretention cell
Prairie Hill bioretention cell
Site from above
First Stacked flat complete
Common House
Townhomes—rear view
Duplex
Sustainability - building methods

• Building for LEED certification
  – Aiming for silver, may reach gold
• Sealing out cold, heat & moisture
• Using sustainably produced materials
  – Renewable source wood
  – Most materials from within 200 miles
  – Low-VOC (volatile organic compound) sealants and paint
• Energy efficiency
Sealing out moisture

Form-a-drain under foundation
Sealing out moisture

Filter fabric over Form-a-drain

Footings
Sill Seal & Water Channel
Sealing out moisture

Under slab insulation, vapor & radon barrier

Sealing seams & around radon tube

Vapor barrier under sill
Pouring First Floor Slab
Earth-Sheltered Design – N&W
Insulation

R-24 Foam board inside concrete wall
Insulation

R-27 Spray foam and fiberglass inside frame walls
Insulation

Attic: foam above wall plates plus R-50 blown fiberglass
Insulation & air seal

Taped 1 inch Zip siding

Stretch tape sealing around window and door openings
Insulation & air seal – Window
Fire Boxes – Seals – Framing
Corner with Fewer Studs
No cripples under sill
HVAC (heating & cooling)

Mini split air-to-air heat exchanger

ERV Energy recovery ventilator

Exterior condenser
Blower door test
Cohousing costs include extra value

• A new energy-efficient, green home
• A share of 3.75 acres for gardens, orchards, play area
• A common house that saves space in units
  • Guest rooms
  • Laundry
  • Kids’ play room
  • Living room & activity room
  • Large kitchen & dining room
  • And more
• Separate workshop
• Friendly neighbors who share responsibilities
Traditional development

- Developer-investors
  - Own the land
  - Provide the capitol
  - Make the decisions
  - Control the process
  - Earn profit
Cohousing development

- Member-investors
  - Make no profits – sell at our cost
  - Own the land
  - Control the process
  - Make all decisions
  - Provide start-up capital, time and talents
- Members share actual costs
  - Dilute risk
  - Establish a community
Committed to affordable housing

- Housing Trust Fund of Johnson County grant of $50,000
- Private grant of $30,000
  - Down-payment assistance of $80,000 for 3 affordable homes
- Iowa Workforce Housing Tax Credit
  - Incentive for building 8 units of workforce housing
  - Rebate of sales tax on materials for 8 units
  - Grant of $8,000 from City of Iowa City
- State and federal down-payment assistance through banks

[Logos: Housing Trust Fund Johnson County, Iowa, City of Iowa City]
Thank you!

iowacitycohousing.org
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Estimated price ranges

Common house apartments (4)
515 square feet - $165,000 (3 sold, 1 available soon)

Stacked flats (16, various sizes) (3 sold)
• 645 square feet - $205,000 (2 sold)
• 800 square feet - $240,000 (1 sold, 1 available soon)
• 950 square feet - $275,000

Townhouses (2 - 800 sf, 2 - 950 sf)
• 800 square feet - $240,000 (1 sold, 1 available soon)
• 950 square feet - $265,000 (both sold)

Duplexes (12, either size) (2 sold)
• 1290 square feet - $371,000 (2 available in spring)
• 1600 square feet - $446,000
Distribution of cohousing in the US

Map 2015; Data 2017
Sustainability – alternative green

Blue Grama