



sustainable boomtowns

CPLN 704

PennDesign Spring 2015 Elective Studio

Open to MCP, LARP, + ARCH

sustainable boomtowns

how can planners,
architects and
landscape architects
address the
challenges of this
century's energy
boomtowns in a
sustainable way ?



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equitable boomtowns

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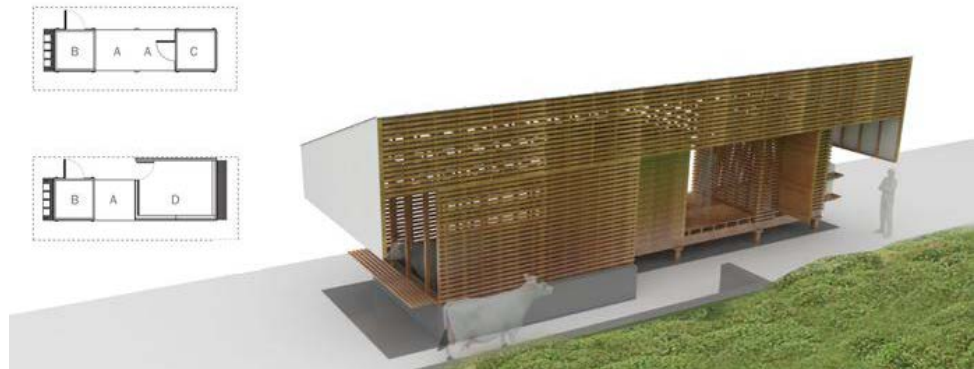
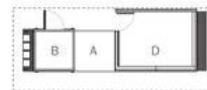
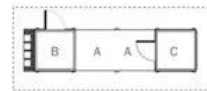
historical

- 19th century
 - industrial revolution
 - railroads
 - mining / gold rush era
- 20th century
 - oil (Texas, Alaska ...)
- 21st century
 - oil part 2
 - fracking



global trends

- North America / Canada
 - Alberta / Fort McMurray
 - Saskatchewan
 - Manitoba
- Africa
 - Ghana
 - Botswana
- South America
 - Quito
 - Panama



bakken region

- HUD-funded regional plan for sustainable development
- 19 counties
- community engagement
- 5 focus areas
 - Child Care,
 - Emergency Services
 - Housing
 - Transportation
 - Water



■ PLANS FUNDED BY VISION WEST ND ■ PLANS FUNDED BY NDAOGPC ■ AE2S COMPILED PLANS (Medora - Wastewater Only)

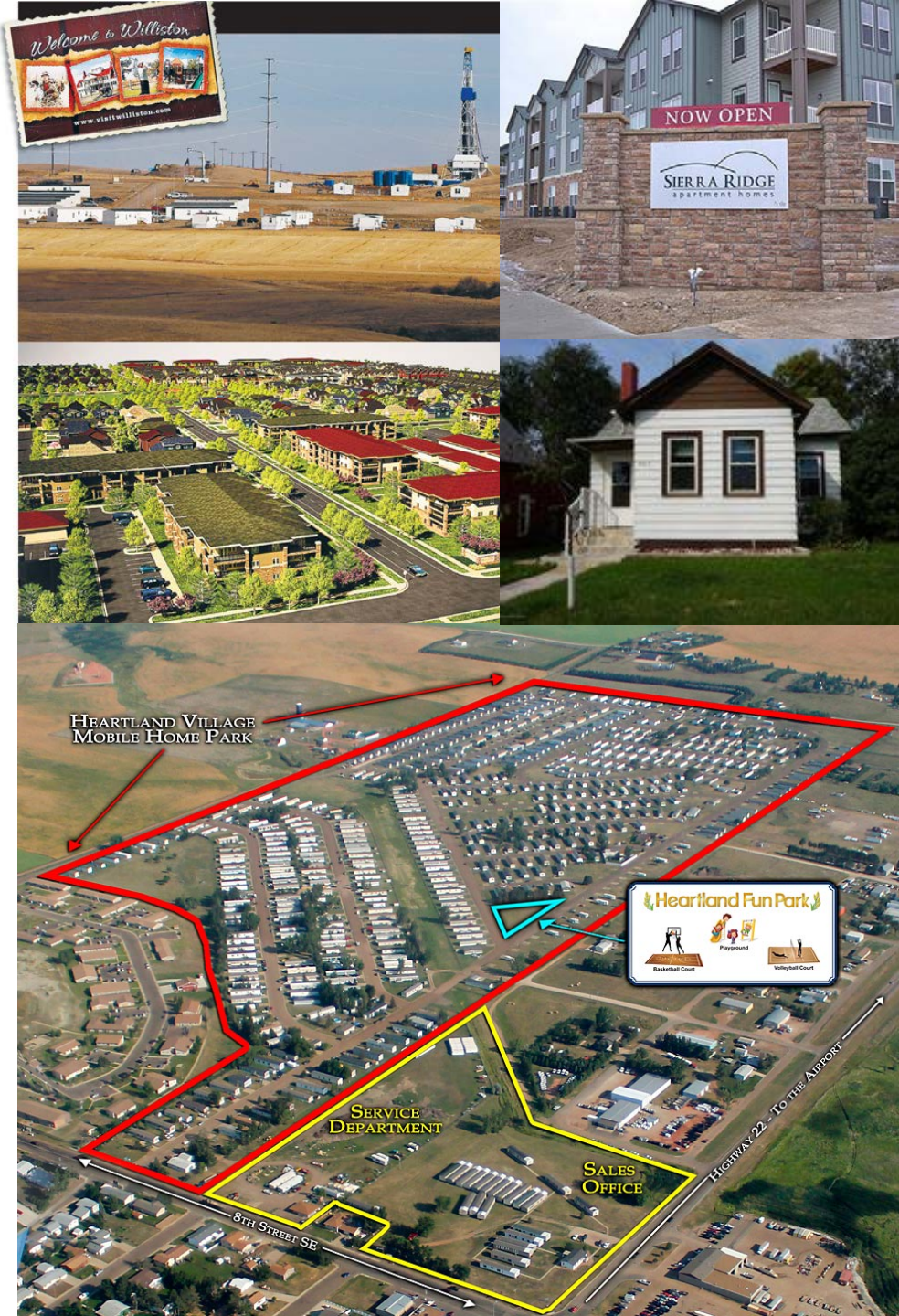
bakken region

- <http://bakken.com> 
- 52k people in 60 years
- 50k people in 4 years
- state budget quadrupled from \$4 to \$16 billion
- extended low oil pricing threatens to cut \$ by 1/3
- local municipalities are on the hook for millions in infrastructure bonds



bakken region

- 2014 rents 2nd highest in US between the Bay Area and Key West
- urban design is left to the developers
- density is at odds with local character / identity
- parks are small and not well integrated



bakken region

- new community models
- indoor / outdoor rec
- intensity vs density
- parks aren't integrated
- winter recreation model?



growth management

- sprawl vs intensification
- new towns
- cultural change
- future of agriculture
- renewables
- economic diversification
- post-boom?



BOOMTOWN, USA



housing

- mobile homes / rv's
- manufactured homes
- rental vs buy
- multi-story vs singles
- man camps



housing

the man camps

“Temporary doesn’t have to mean ordinary, and we’re determined to deliver an experience that brings your employees satisfaction, relaxation, and restful sleep after a busy workday. South Heart Lodge offers satellite television in every room, theater facilities, tri-weekly housekeeping, and a dining hall option of three hearty meals per day. Your employees will have all the amenities and comforts they need to stay productive and motivated.”



Average "Man Camp"

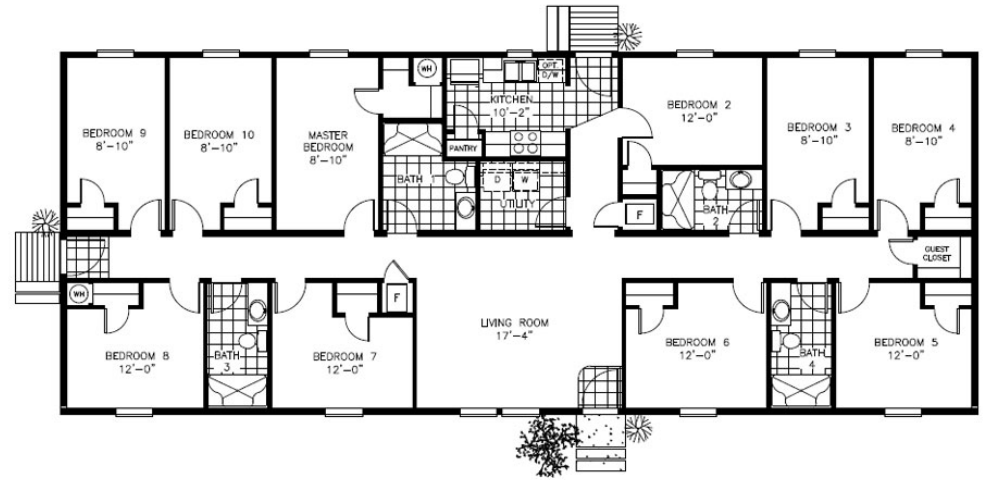


LifeinWilliston.com

housing

the man camps

“We offer a manufactured housing building experience you can trust and the quality home you deserve. When time and money is of the essence, we are here to help!”



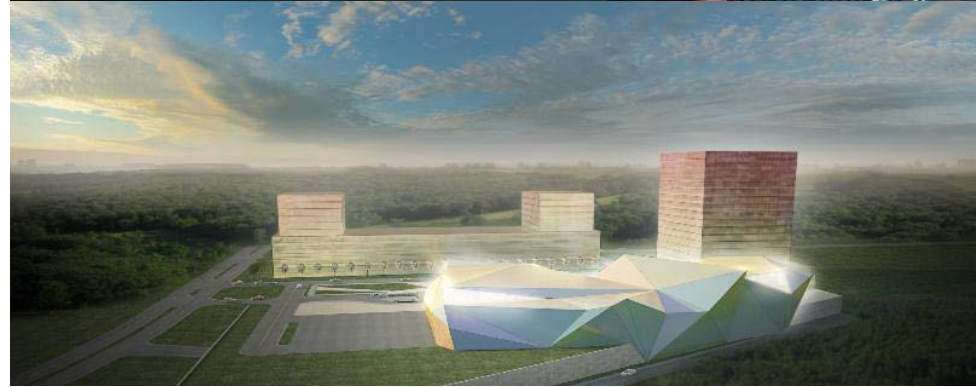
architecture

- container homes
- 'tin cribs'
- tinygreencabins.com
- diy homes
- the new mobile homes
- new technologies
- net zero in subzero?



commerce

- the new “wild west”
- espresso
- casinos
- office parks
- lifestyle centers
- new main streets
- international interests
money, money, money



environment

- how does growth address “zero harm”?
- what happens during slow growth period?
- how extreme weather affect landscape form?
- what does a restoration plan look like?



investigate urban models

How does commuting among the cities and towns impact policy choices to invest in some areas that provide better amenities and is there a mobility plan to address commuting in the region?



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investigate urban models

What are the best practices for dealing with boomtowns in terms of new towns and growth scenarios?



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With the permanent industry workforce population about 60% of the total, how and where should growth occur that will be sustainable after the boom time?



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How does the
demographic shifts
affect housing choice,
both in location,
tenancy and form?



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With a suburban
development pattern as
the predominant form,
what adaptations are
possible?



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What architectural solutions are possible for the temporary and permanent housing that better integrates with the existing patterns of development?



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What happens to the areas of temporary housing during periods of disinvestment or after the boom's decline? – 2050, 2100?



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With the HUD-funded plan laying out significant policy choices for the state, what implementation tools are possible in the conservative climate of North Dakota?



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