

**SAVING THE WORLD THROUGH ZONING:
SUSTAINABLE COMMUNITY DEVELOPMENT CODE REFORM PROJECT**



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C L A R I O N

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**ZONING:
EVOLVE OR R.I.P.**

Sustainable Community Development Code

Smart Code




Form-based

Hybrid Codes

Performance

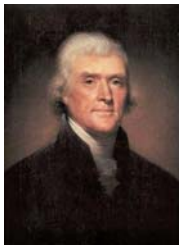
PUD

Euclidian Zoning



What is a Sustainable Community?

"Then I say the earth belongs to each generation during its course, fully and in its own right, [but] no generation can contract debts greater than can be paid during the course of its own existence."



- Thomas Jefferson (1789)

Sustainable Communities...

- ...meet the needs of the present while ensuring that future generations have the same or better opportunities. *Brundtland Commission 1987*



Sustainable Communities...

THERE IS NO FREE LUNCH!!

In nature, both sides of the equation must balance, for every gain there is a cost, and all debts are eventually paid. (Barry Commoner)





A SUSTAINABLE WORLD???

- **Fuel:** Oil production to peak in next 5-10 years...while world oil consumption increases by 50% by 2030.
- **Food:** China will demand more food in 2030 than the entire world produces today.
- **Health:** 20% of U.S. population obese—doubled in last 10 years. 60% overweight.
- **Climate:** Burning of fossil fuels and changes in land use are taking us into uncharted waters: unpredictable weather, rising sea levels, increased uncertainty.
- **Biodiversity:** 6TH major species extinction event looming??

Local Sustainability Programs

Typical Focus: Gov't Operations

- Hybrid fleets
- Compact florescent bulbs
- Mass transit
- Green city buildings
- Purchase renewable power
- Recycling programs

Local Sustainability Programs

WHAT'S MISSING??

- Little focus on:
 - Development patterns/private development
 - Comprehensive plans
 - Development codes

How Can a Development Code Support Sustainability?

- Development codes CAN help address critical issues:
 - CLIMATE CHANGE/CARBON EMISSIONS
 - RENEWABLE ENERGY
 - FOOD SUPPLY
 - HEALTH
 - WATER CONSERVATION
 - SAFETY
 - HABITAT PROTECTION
 - AND OTHERS

THINK GLOBALLY... ACT LOCALLY

- Development codes = powerful tool to accomplish community goals.
- Timely -- federal government apparently in denial...
- DON'T WAIT: States preempting/suing local govts.



How Does A Sustainable Code Compare to Other Types of Reform Codes?

- **Traditional Euclidean Zoning (1920s +)**
--Emphasis on separation of use: "...fire, contagion, disorder..." Can protect against incompatibilities.
--Can be inflexible and stifle creative development
- **PUD Zoning (1960s--present)**
--Prevalent form of zoning in fast-growing areas
--Negotiated, flexibility = amenities + uncertainty
- **Performance Systems (1970s)**
--Anything, anywhere...if can mitigate; uncertainty.
--Emphasis on environmental protection
- **Form-Based Regs/Smart Code**
--Form vs. use. Connectivity, mixed-use, public realm
--Highly prescriptive; "design without nature?"



EUCLIDEAN ZONING

Origin: Early 1900s--Reaction to the Industrial Revolution and Urbanization

Goals: Prevent "fire, contagion, congestion, disorder..." Segregate homes from industrial pollution and commercial hubbub; limit height

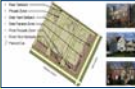
Historical Milestones:

- 1916—New York City adopts city wide zoning scheme. Only 48 cities by 1921
- 1921—Standard State Zoning Enabling Act
- 1926—Upheld by U.S. Supreme Court
- 1926—425 zoned cities=1/2 U.S. population



KEY FEATURES OF A SUSTAINABLE CODE?

- Draws on useful features of other code types (districts, procedures, design standards, etc.)
- Covers new topics—energy, health, food security, climate change...
- Tailored regionally to climate and ecology...Design With Nature.



IMPLEMENTING SUSTAINABILITY PRINCIPLES THROUGH ZONING

THREE BASIC APPROACHES:

- REMOVE OBSTACLES
 - > Eliminate bans on solar panels/wind turbines
- CREATE INCENTIVES
 - > Density bonuses for green roofs
- REGULATE
 - > Mandatory water-conserving landscaping



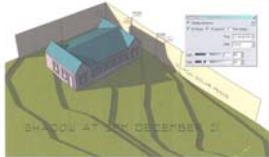
Sustainable Code: Energy Conservation/Production

- **Remove Obstacles:** Solar collectors as by-right accessory use (including historic districts); height limits on wind turbines
- **Create Incentives:** Over-the-counter permitting and fee waivers



Sustainable Code: Energy Conservation/Production

- **Regulations:** Solar access at site level



Sustainable Code: Energy Conservation/Production

- **Regulations:** Require subdivision solar orientation analysis

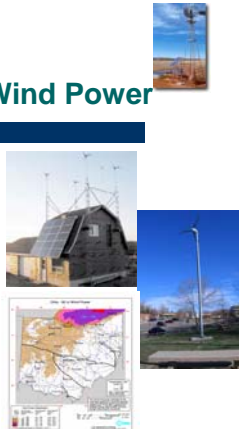
Community examples:

- Cheyenne, WY
- Fort Collins, CO
- Multnomah, OR



Sustainable Code: Energy Production/Wind Power

- **Remove Obstacles:**
 - Increase height limits
 - Allow compact turbines in residential districts
 - Permit clothes lines
- **Create Incentives:**
 - Identify suitable sites in comprehensive plans



Sustainable Code: Energy Production/Wind Power

- **Regulations:**
 - Regulate placement in flyways (avoid condor cuisinarts)
 - Preserve areas with wind potential



Sustainable Code: Food Production

- **Remove Obstacles:**
 - Allow raising of animals/fowl in residential districts or vegetable gardens in front yards
- **Create Incentives:**
 - TDR/cluster subdivisions



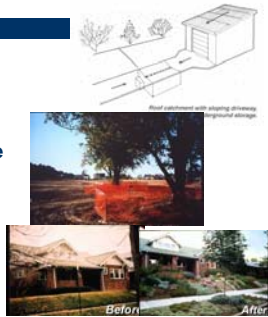
Sustainable Code: Food Production

- **Regulations:**
 - True agricultural zoning (1 unit/160+ acres)
 - Open space set asides for community gardens
 - Require planting of fruit trees



Sustainable Code: Water Conservation

- **Remove Obstacles:** Water harvesting
- **Create Incentives:** Landscape credit for tree preservation
- **Regulations:** Mandatory water-conserving landscape standards



Sustainable Code: Health/Safety

- **Remove Obstacles:** Reduce parking requirements for walkable mixed-use projects
- **Create Incentives:** Offer additional open space credit for maintaining public lands access
- **Regulations:** Adopt enhanced hazard-area standards. Require safe-street routes.

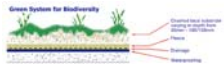


Sustainable Code: Climate Change

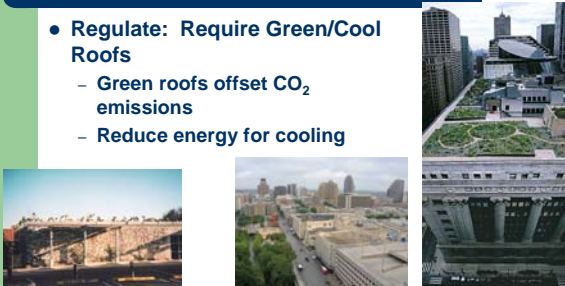
- **Remove Obstacles**
 - Create mixed-use zone districts and help reduce reliance on automobile
- **Create Incentives**
 - Landscaping credit for protecting existing trees



Sustainable Code: Climate Change





- Regulate: Require Green/Cool Roofs
 - Green roofs offset CO₂ emissions
 - Reduce energy for cooling



Sustainable Code: Other Issues

- Housing choices
- Development patterns
- Mobility/transportation
- Green infrastructure
- Habitat protection

**THE TIME IS RIPE:
PEOPLE ARE READY!!!**

Rooftop garden on car



Sustainable Code Implementation: Low-Hanging Fruit Strategy

Energy Production: Permit solar/
wind turbines as by-right accessory
uses

Climate Change/CO2 Budget:
Require replacement of trees
removed

Water Conservation: Enact
mandatory xeriscape requirements
for commercial development



Sustainable Code Implementation: Use Menus As A First Step

Article 8, Building Design Provisions
Section 8.3, Minimum 2.5 Building Envelope Change
Adoption to 2.5 Building Envelope Change

C. Table of Design Options

Option	Description / Comments
Group A, Best option worth 3 points	
Adopt a solar rating under the City of Austin Clean Building program.	Each row of the rating specifies the one point. The rating is used for Clean Building points from 2008-10.
Require that new areas in building require 17 points for each 100 sq ft.	See Article 8, Definition
Provide passive ventilation.	See definition O.1, Vent.
Provide primary services design.	See definition O.2, Serv.
Provide roof design.	See definition O.3, Serv.
Provide building envelope meeting the minimum 2.5 envelope change.	See definition O.4, Serv.
Require an alternative to use regulatory standard of design, 2.5 for existing buildings & existing.	Applies only to buildings existing at the effective date of this ordinance.
Costs of providing an optional floor finishes that does not exceed an additional 10% of the total construction cost of 2.5 or higher.	
Complies with neighborhood design guidelines.	
Group B, Best option worth 2 points	
Energy building on solar or 20% of the building's floor area.	See definition O.4, Serv.
Require having the greatest amount of outdoor space possible for each building.	See definition O.4, Serv.
Provide sustainable roof.	See definition O.4, Serv.
Integrate solar power generation into building design.	The specific location and design shall be approved by the Director. Examples shall include, but not be limited to, rooftop solar panels on building facades.
Adopt a Clean Building rating of 2 stars.	



SUSTAINABLE COMMUNITIES BEGIN WITH SUSTAINABLE PLANS AND DEVELOPMENT CODES

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