

**CNU XII**  
**The Sustainable City**

**June 24, 2004**

**Chicago, IL**



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# Our current sustainable leadership



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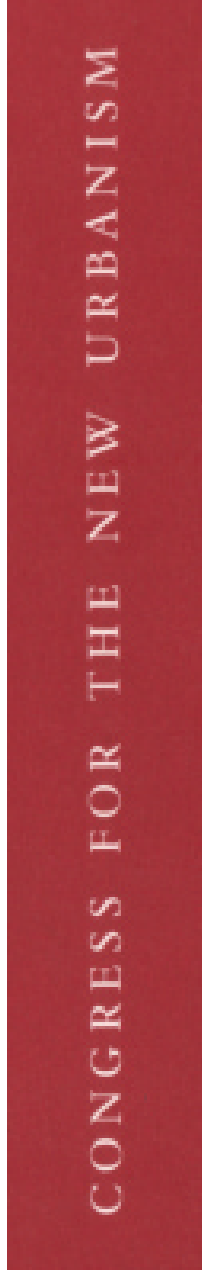
**Sustainable Development**  
**Smart Growth**  
**Great Neighborhoods**  
**Green Buildings**



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# Orgs. w/ Expertise in Human Environment

## Outdoor Habitat



## Indoor Habitat



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# LEED Neighborhood Development



## CNU Representatives

**Doug Farr**

**Kaid Benfield**

**Susan Mudd**

**Shelley Poticha**

**Victor Dover**

**Eliot Allen**



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# LEED-ND Core Committee

## CNU Core Committee

**Doug Farr**

**Susan Mudd**

**Shelley Poticha**

**Victor Dover**

**Eliot Allen**



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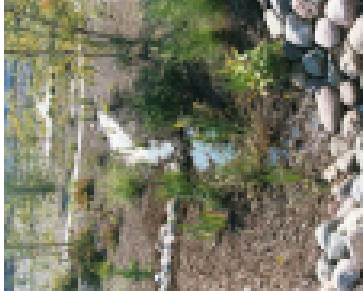
# What is LEED?



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# LEED - Categories

## Sustainable Sites



## Energy & Atmosphere



## Indoor Environmental Quality



Addresses natural light

## Water



## Materials & Resources



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# Why partner with the USGBC?



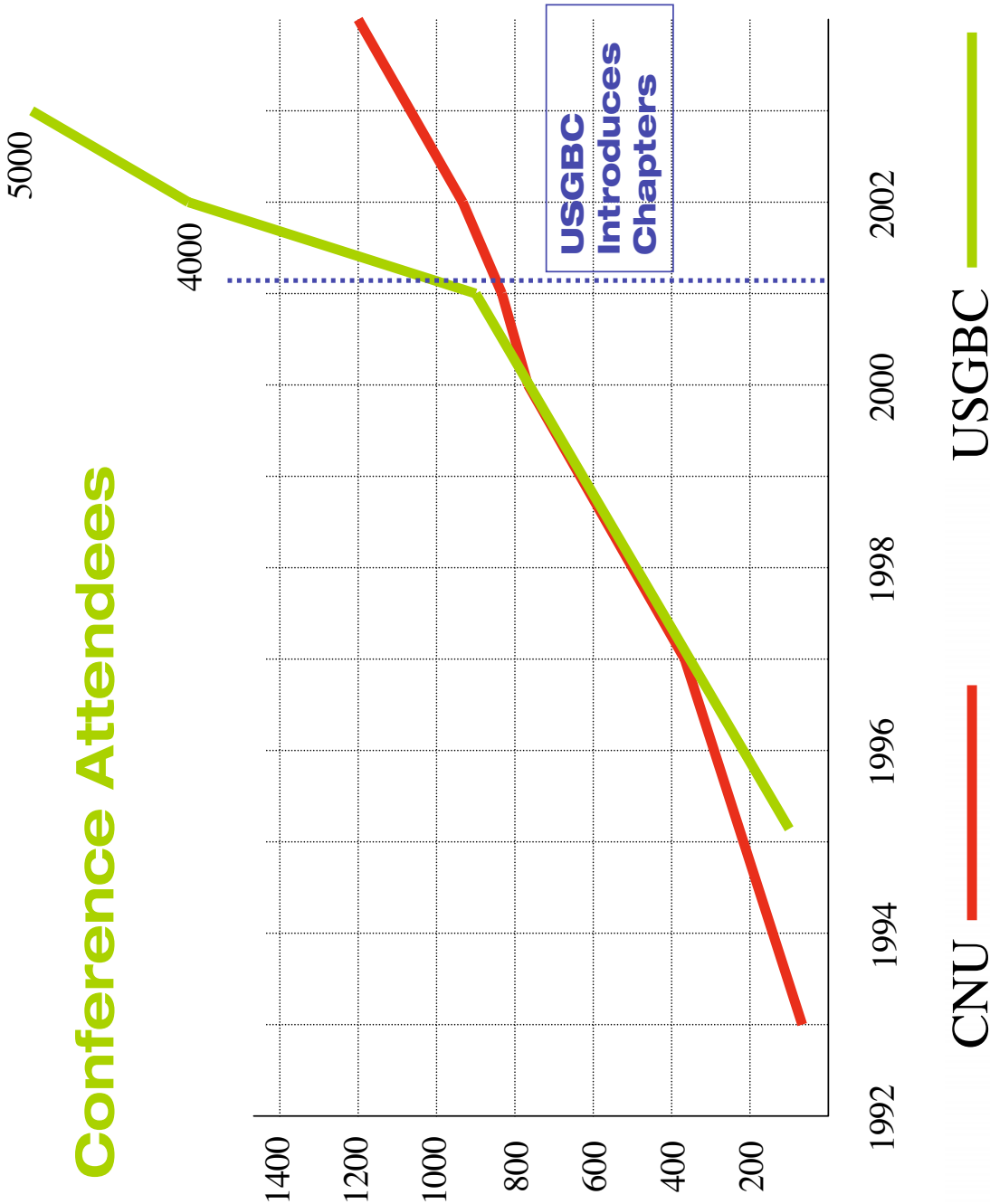
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# Internationally-recognized consensus standard



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# Conference Attendees



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CNU

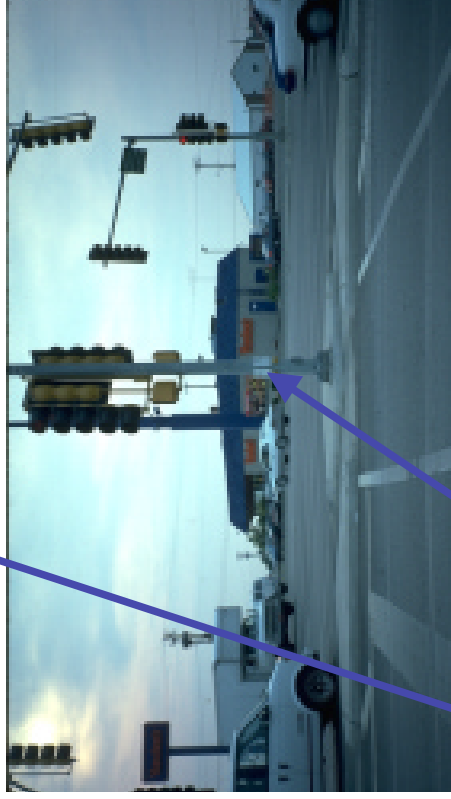
USGBC

**Do they get it?**



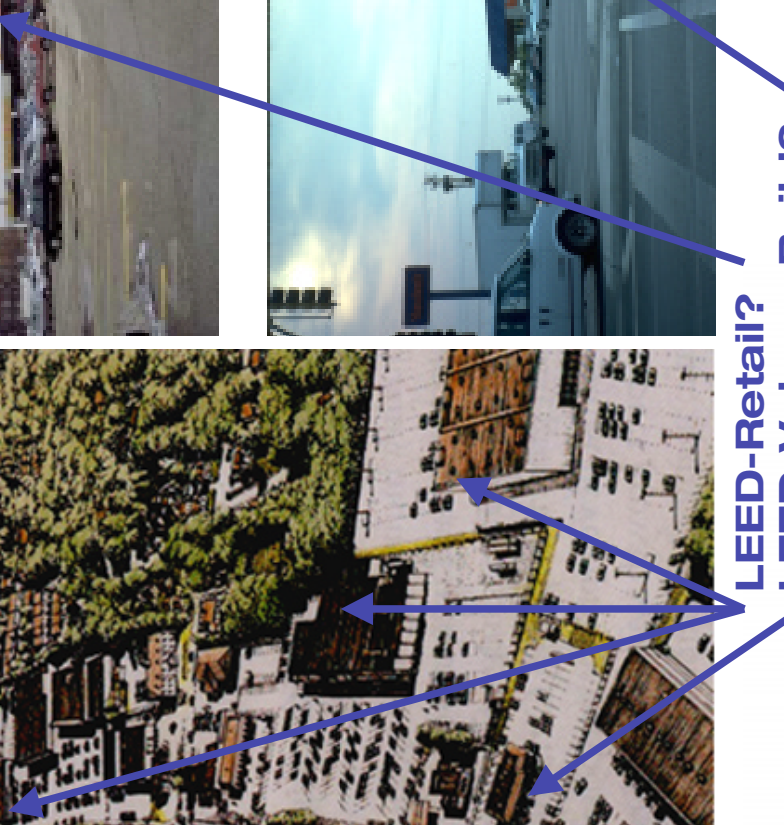
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# Building-centric, trying to grow



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**LEED-Retail?**  
**LEED-Volume Build?**



## Location Efficiency LEED-CI Pilot

**“The LEED Rating System does not distinguish between the size (or quantity) of mass transit systems in proximity to a project...  
Awarding extra credit would create an added advantage for projects located in larger metropolitan areas.”**



# U.S. CO2 Emmissions Buildings vs. Transportation

Transportation	484.9 m.tons	32.6%
Residential	284.5 m.tons	19.0%
Commercial sector	238.4 m.tons	15-16%

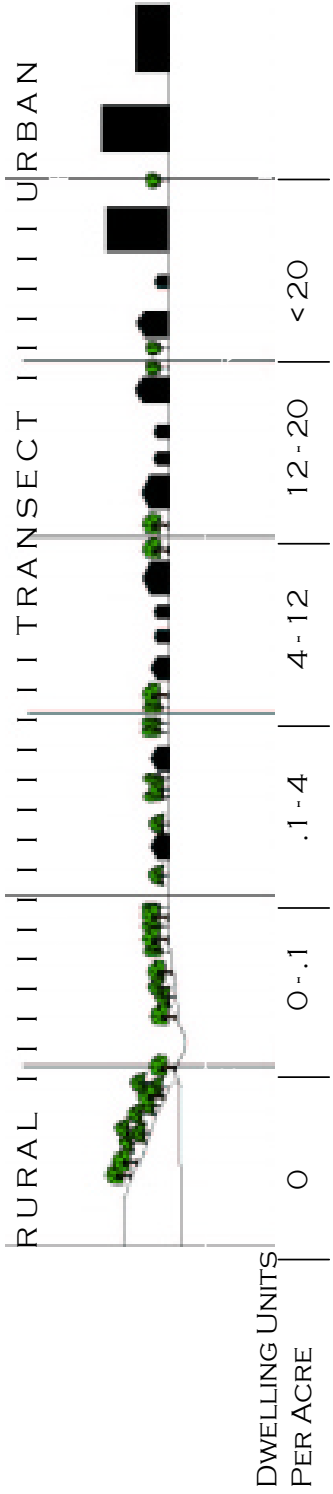
Oak Ridge Labs

Transportation is the fastest growing sector

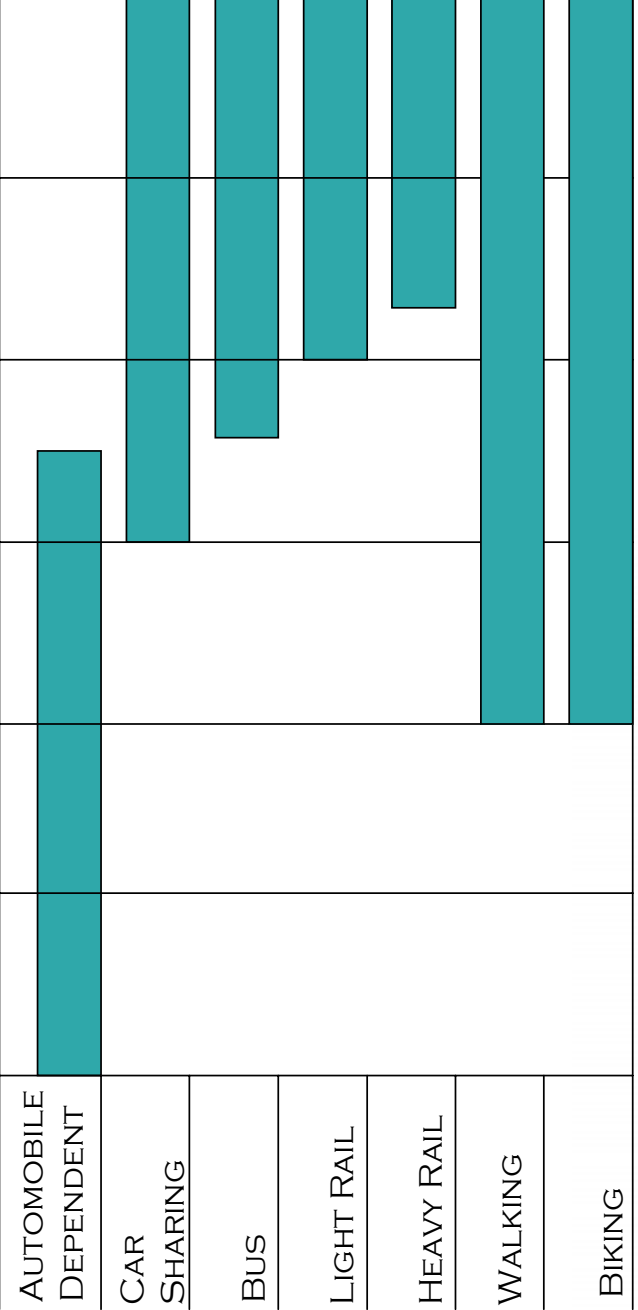


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# Benefits of Density/Walkability



## TRANSPORTATION FOR DAILY TRIPS



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**Do we get it?**



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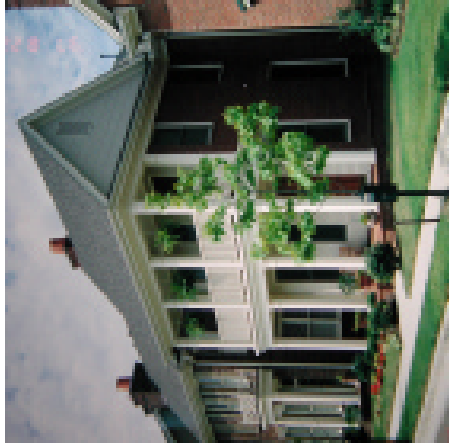
# Energy Efficiency Strategies

## Traditional Neighborhood development



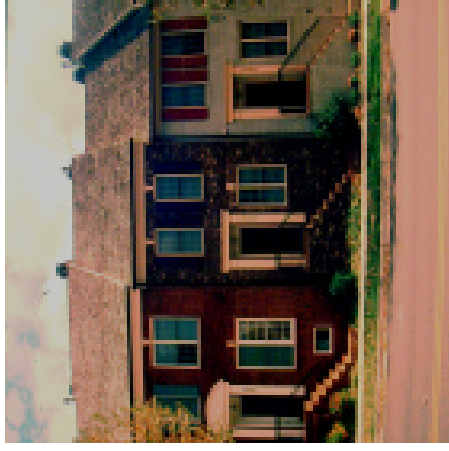
**South side yard**

45' lot  
2 dwellings



**Shaded side yard**

25-30' lot  
1 dwelling



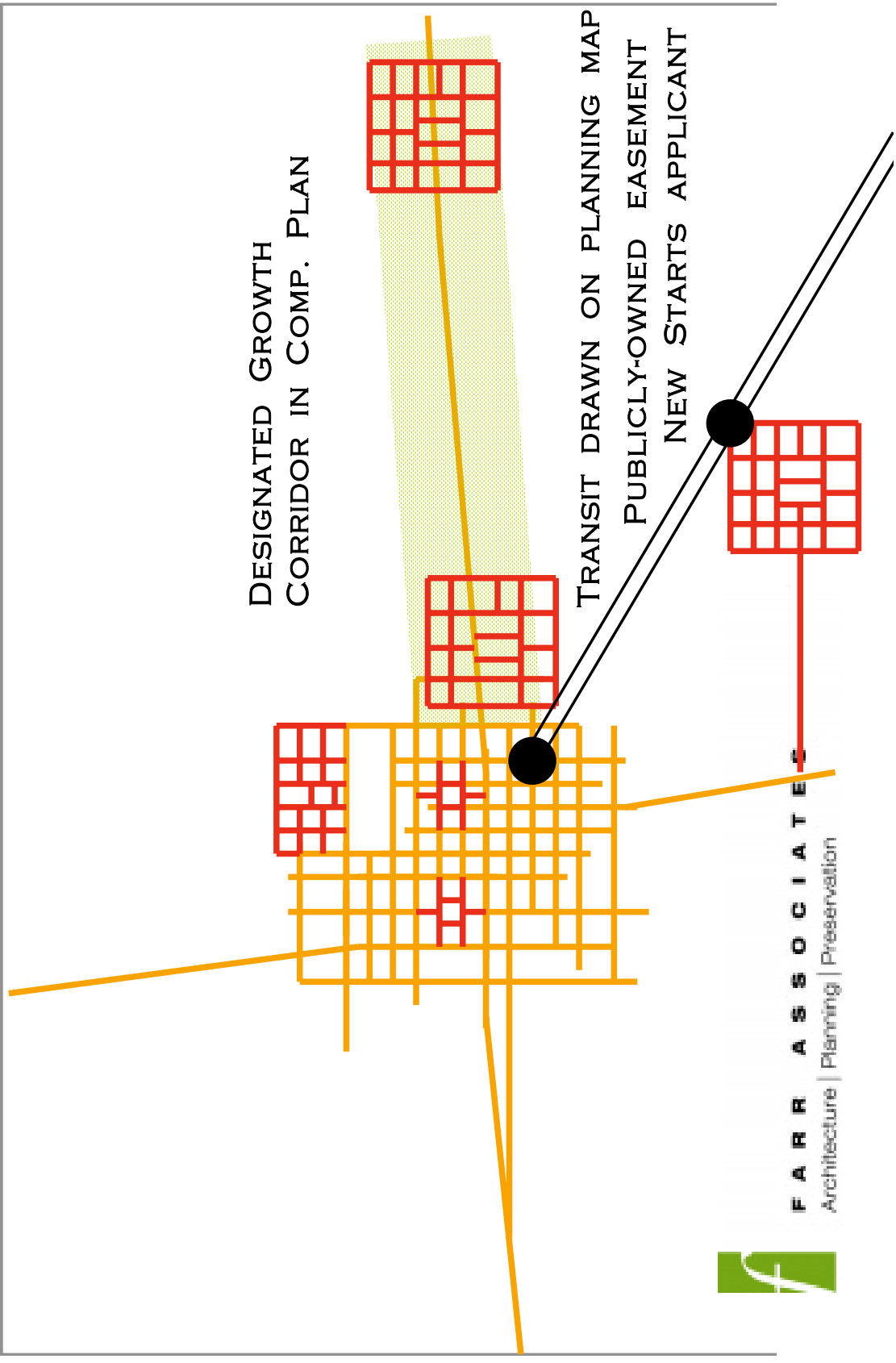
**Party walls**

16-24' lot  
1 dwelling



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# Location and Linkage



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# The Move Indoors

Progressive Architecture ca. 1960

**NOW...**

**at little  
or no  
extra cost**

**You can include *All-Year***

**Serwel**  
*All-Year* AIR CONDITIONING

There are many reasons why you should include Serwel All-Year Air Conditioning in your plans. Serwel All-Year Air Conditioning is the only air conditioning system that can be eliminated from a modern home that will balance the added expense of the Air Conditioning. And this exchange wins favor with clients because the things they forego have value only during parts of the year . . . while Serwel provides them with perfect comfort the whole year round.

NO FIREPLACE  
NO PORCH  
NO SCREENS  
LOWER COST WINDOW CONSTRUCTION  
NO ATTIC RAIN

**air conditioning in your plans**

*Offer it out  
with these savings!*

NO FIREPLACE  
NO PORCH  
NO SCREENS  
LOWER COST WINDOW CONSTRUCTION  
NO ATTIC RAIN

**Once you decide to include Serwel All-Year Air Conditioning,** there are a number of conventional features that can be eliminated from a modern home that will balance the added expense of the Air Conditioning. And this exchange wins favor with clients because the things they forego have value only during parts of the year . . . while Serwel provides them with perfect comfort the whole year round.

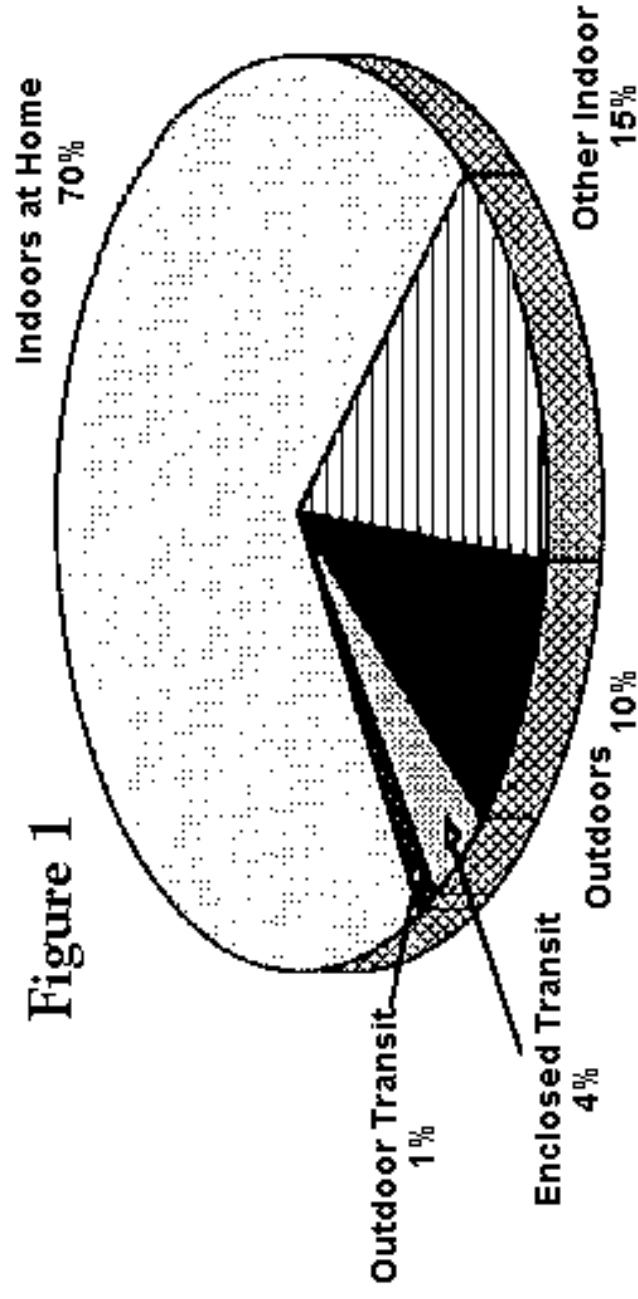
NO FIREPLACE  
NO PORCH  
NO SCREENS  
LOWER COST WINDOW CONSTRUCTION  
NO ATTIC RAIN



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# Time Spent Indoors

English speaking Californians 11 and younger



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# Night Sky Pollution

A Green Building Critique of New Urbanism



View from Sears Tower

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2003 Blackout?

F GeoStar 45

15 EST 14 Aug. 2003

003 / 45 /



# A Green Building Critique of Seaside



Where is the A.C. condenser?

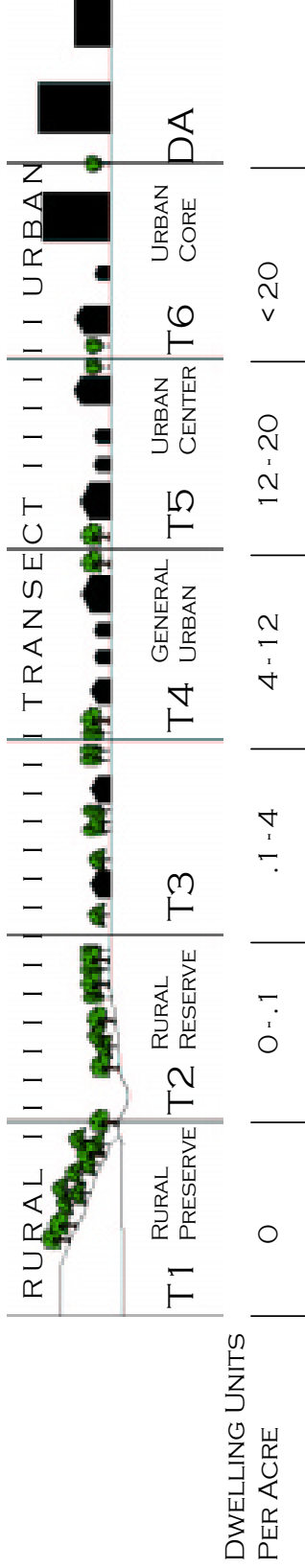


Held together by paint



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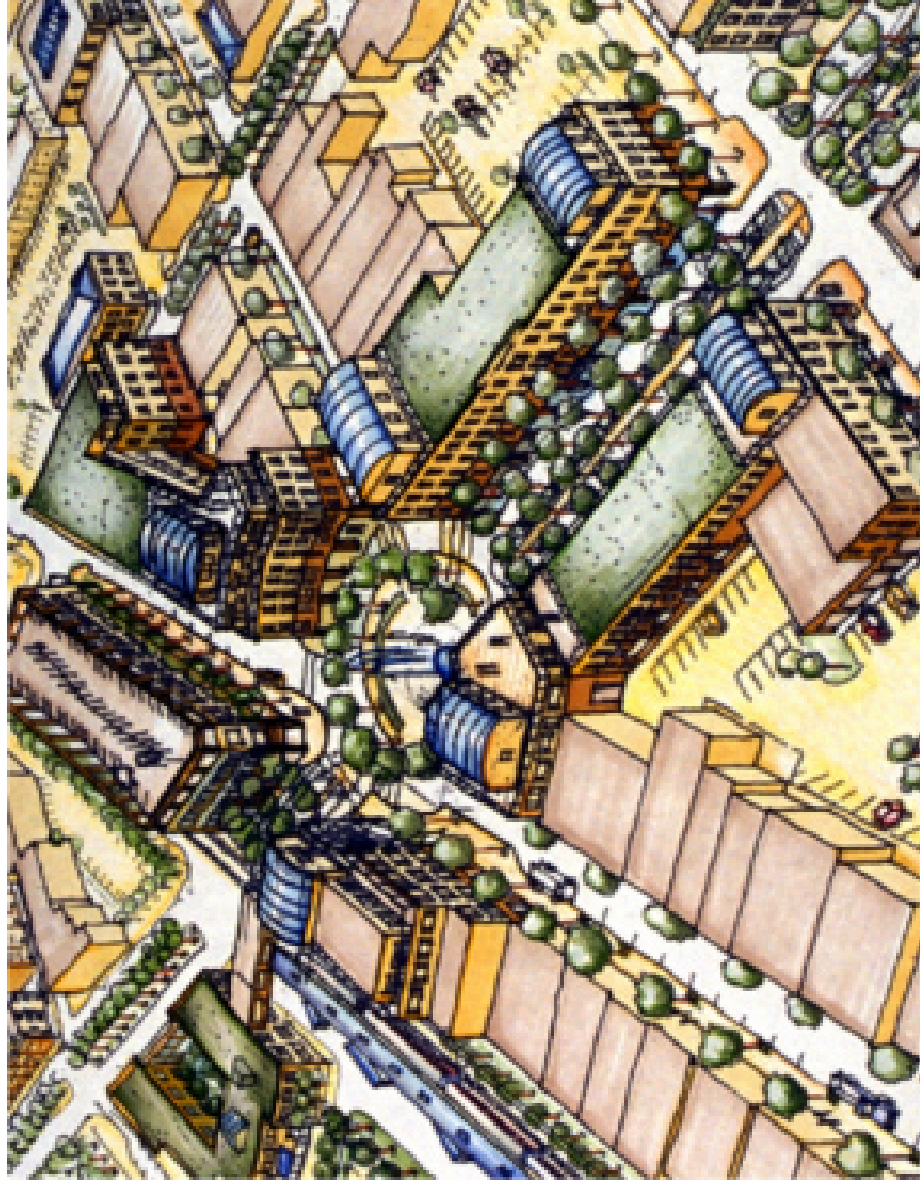


### STORM WATER FILTRATION OF IMPERVIOUS SURFACES (BMP'S)

	T1	T2	T3	T4	T5	T6	DA
Surface Percolation	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Bio Swales	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Rain Gardens	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Vegetated Roof	Yes	Yes	Yes	Yes	Yes	Yes	Yes
District	Yes	Yes	Yes	Yes	Yes	Yes	Yes



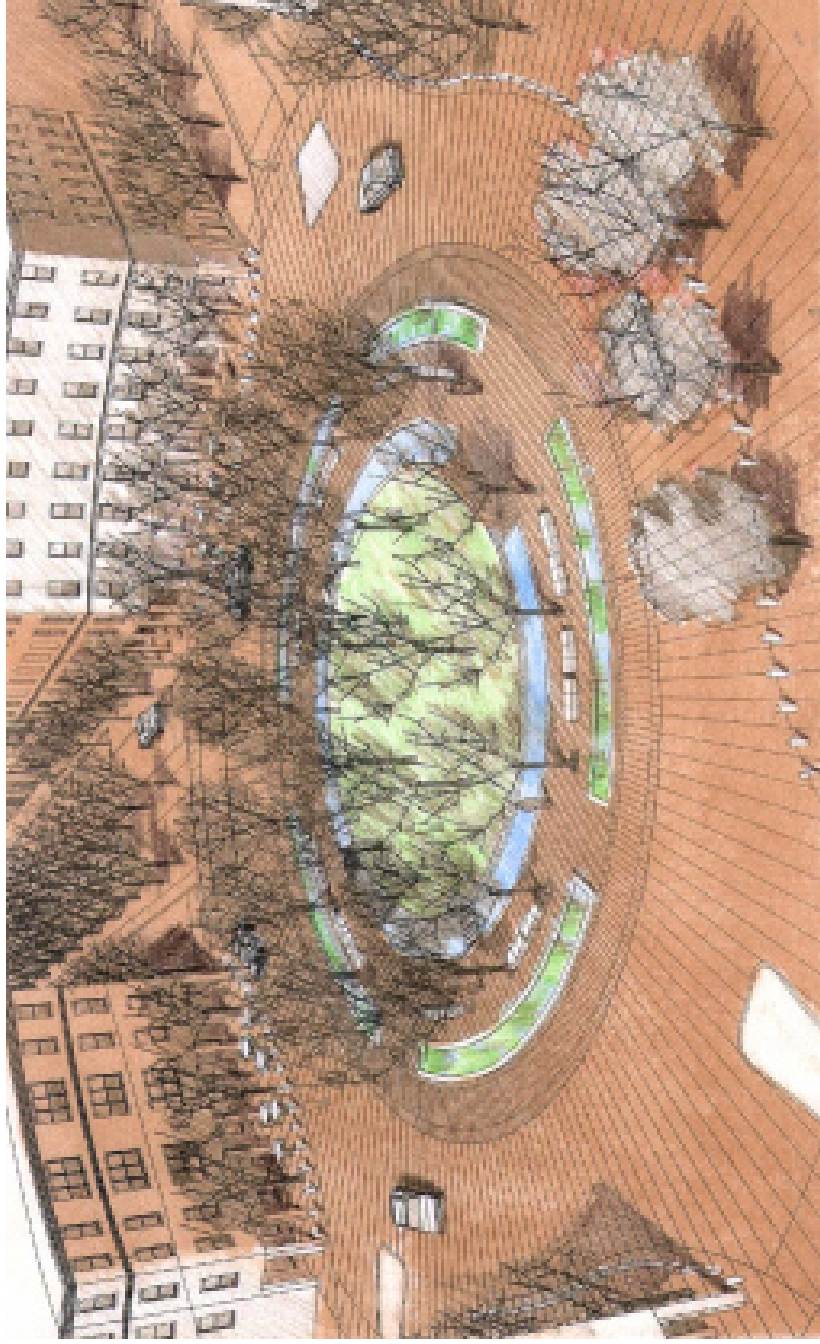
# Green Urbanism



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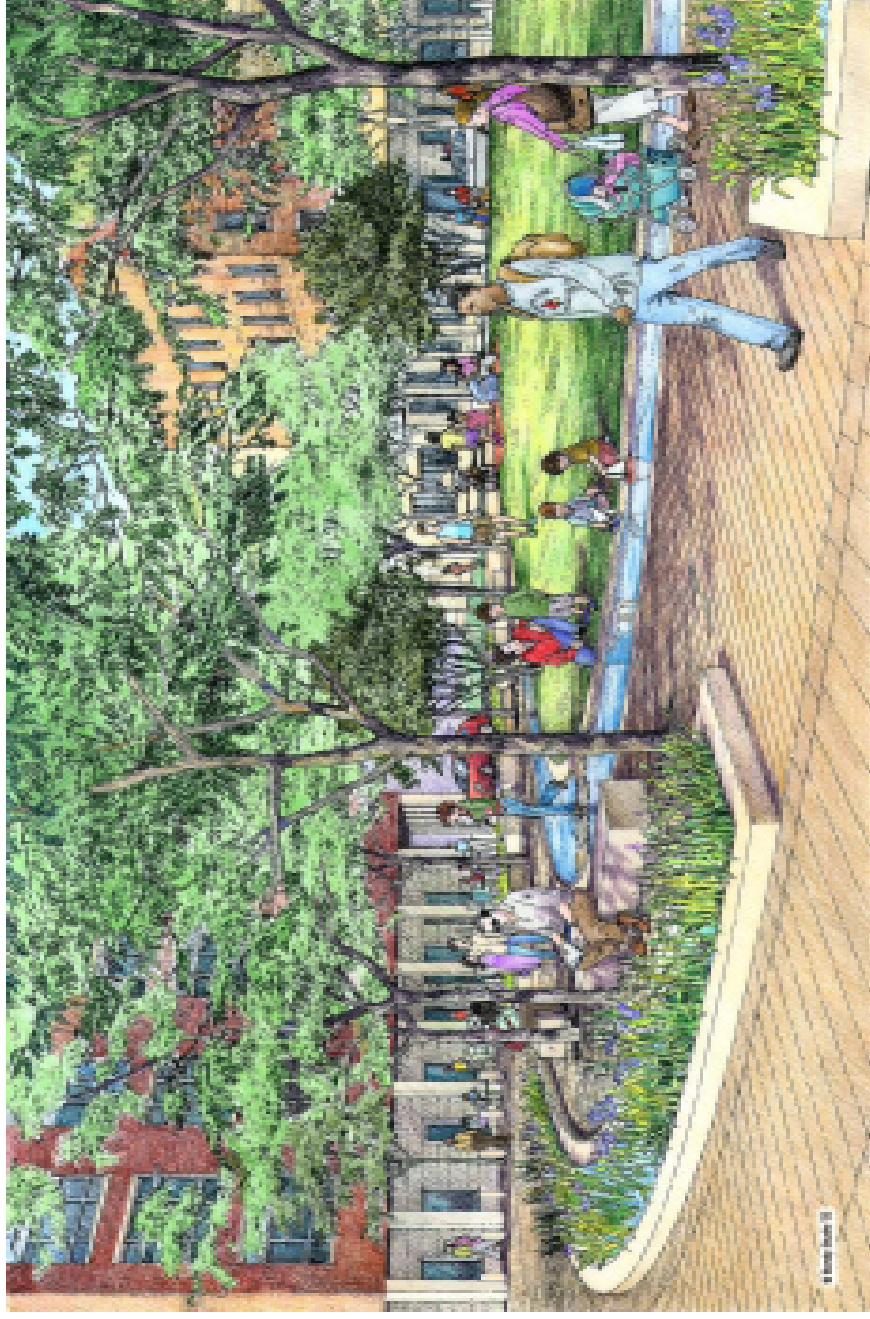
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# Normal, Illinois



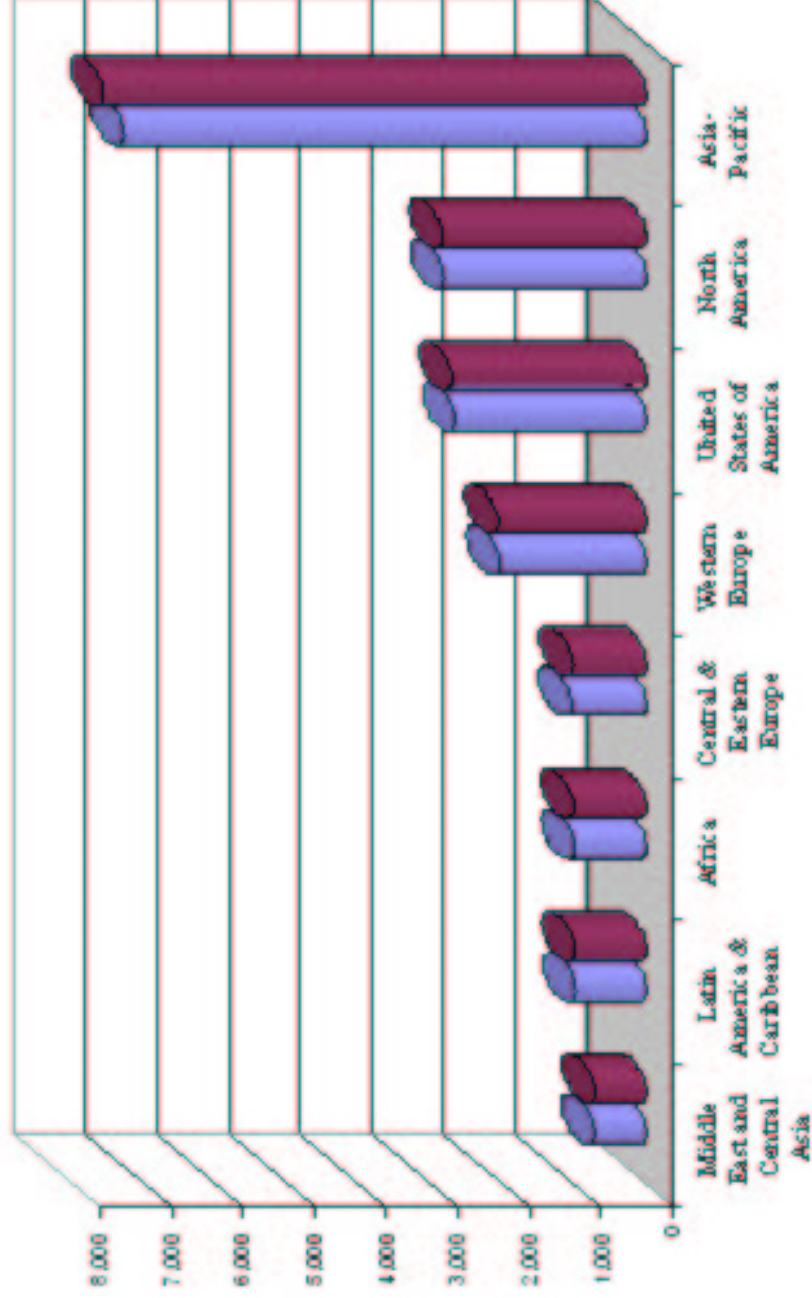
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# Normal, Illinois



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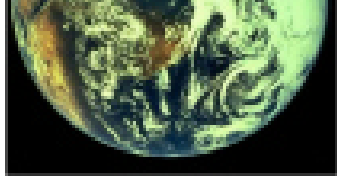
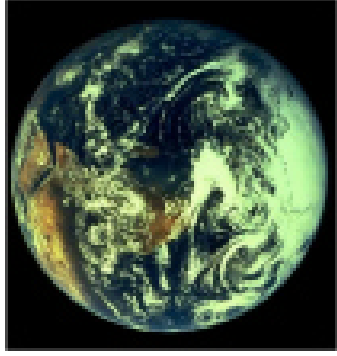
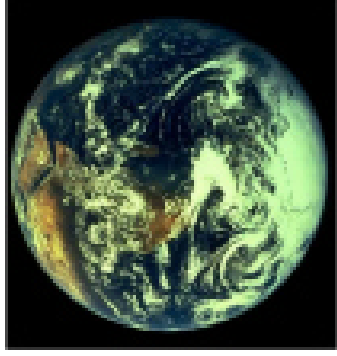
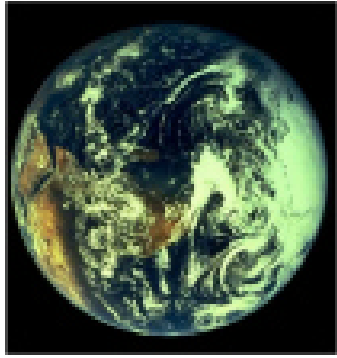
# Ecological Footprint



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# Ecological Footprint



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# **Inputs to Ecological Footprint**

**Your building(s)**

**How you get around**

**Your food**

**Your stuff**



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# Land Use/Transportation Linkage

(by FamilyNorquist)

	AVERAGE LOT SIZE	UNITS PER SQ. MILE	AVG. # OF AUTOS	AVG. ANNUAL VEHICLE MILES
<b>CITY</b>	.02 ACRES	32,000	<1	<b>8,000</b>
INNER-RING SUBURB	0.125 ACRES	5,120	1-2	15,000
OUTER-RING SUBURB	1 ACRE	640	2-3	27,500
<b>EXURB</b>	<b>5 ACRES</b>	<b>128</b>	<b>3+</b>	<b>30,000</b>



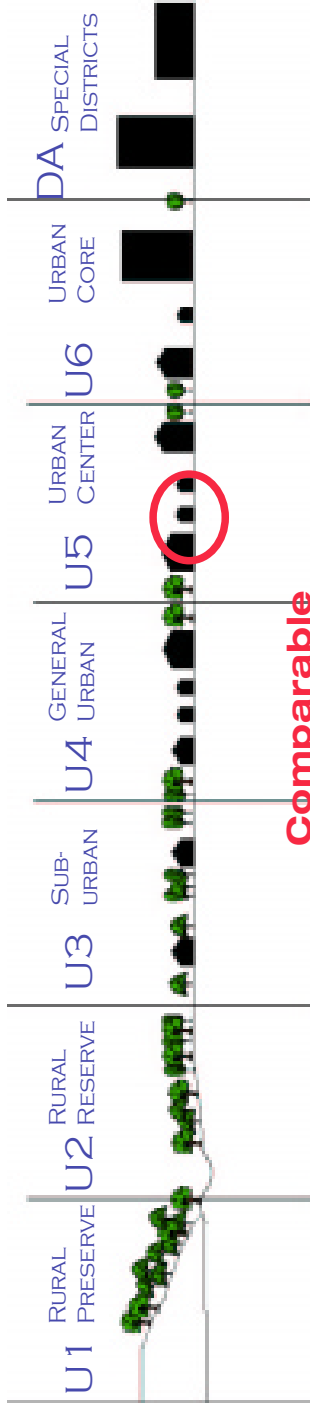
**The Wealth of Cities, John**

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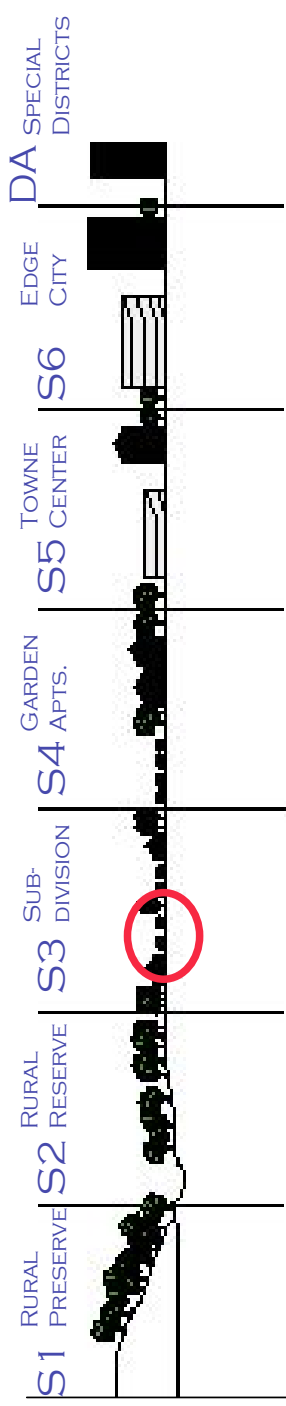
# Urban/Sprawl Transects

## Urban Transect (with old houses)



**Comparable  
Environmental  
Impacts**

## Sprawl Transect (with new "green" houses)



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# Where does th?



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# Ideal Neighborhood Plan

Perry 1926

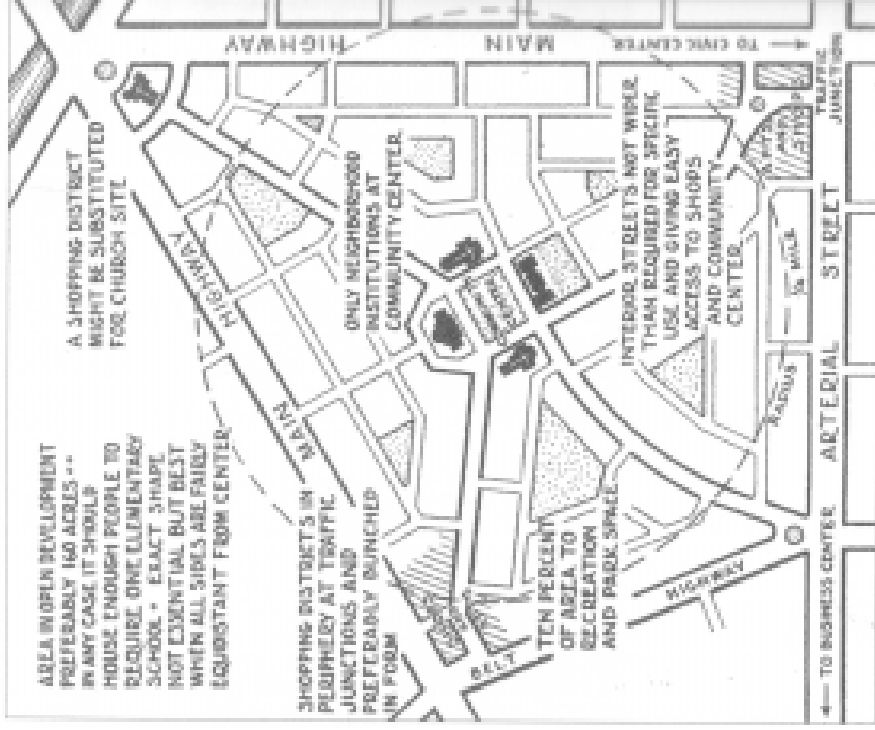
Transit

Storm water

Sewage

Heat island

Power



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# Haymount

## Neighborhood Pattern and Design

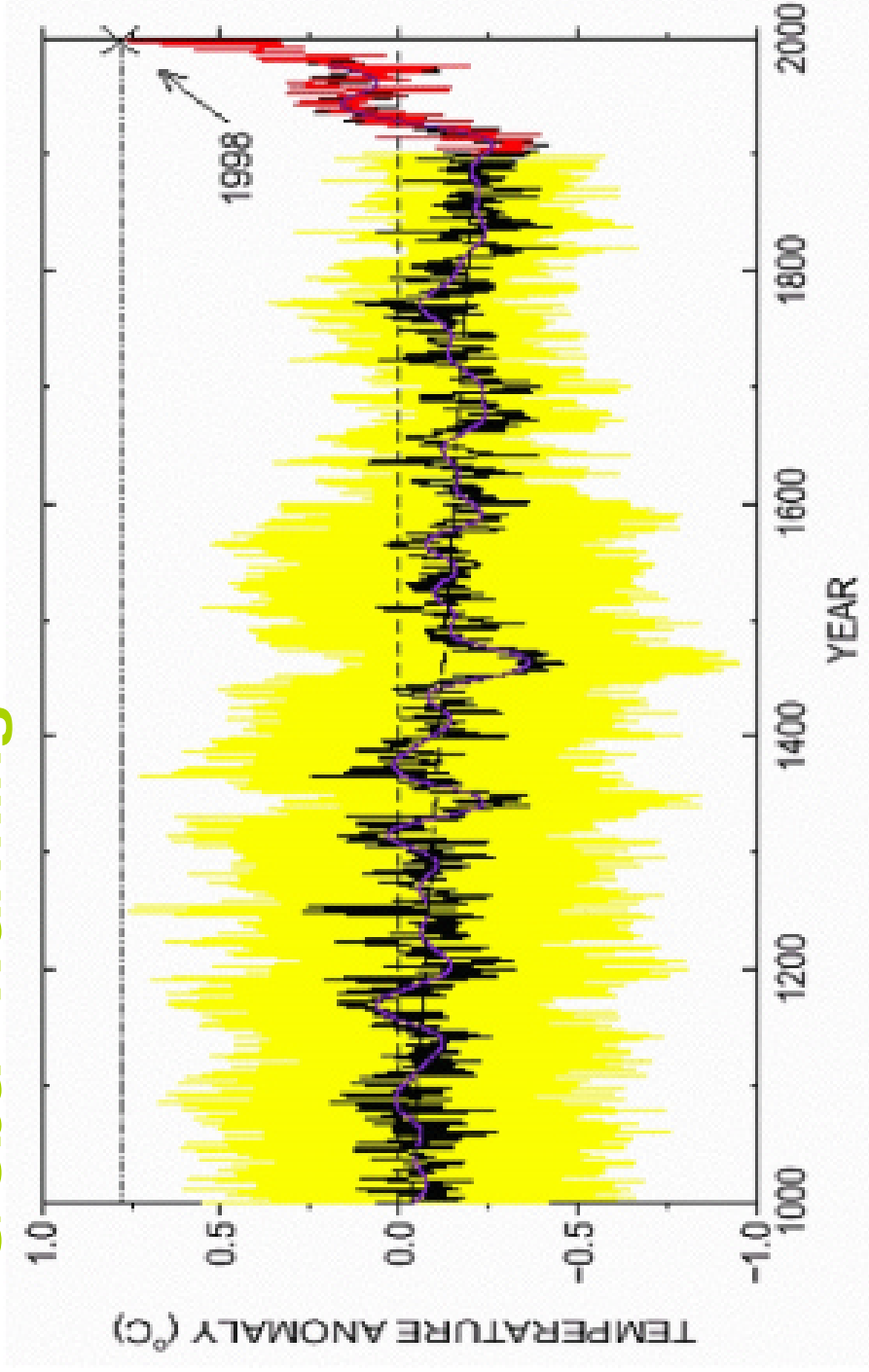
- Designed in 1989
- 1582 acres
- 4000+ dwelling units
- 50,000 sf office space
- 250,000 sf commercial space
- Project not yet built



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Five minute walk

## Global Warming

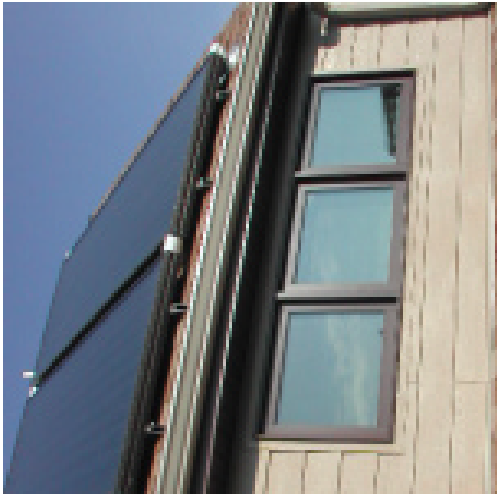


**1000 years of proxy weather data indicating 1998 is hottest**



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# Renewable Energy strategies



**Solar  
domestic  
hot water**



**Photovoltaic  
Solar electricity**

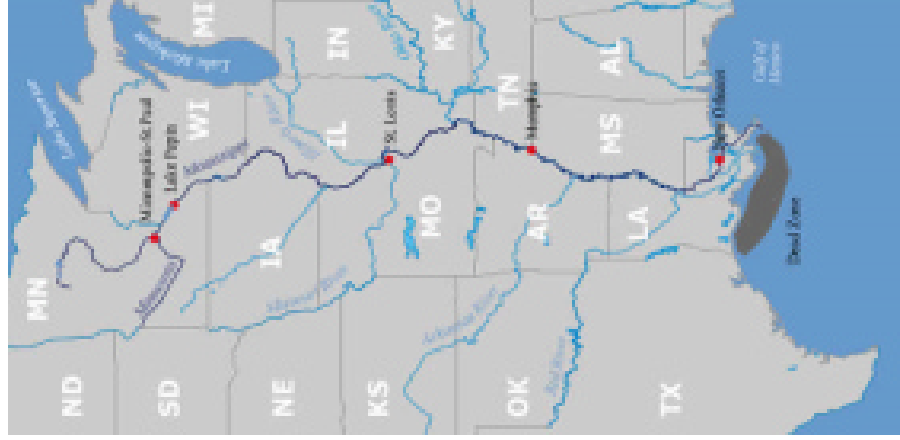


**Wind-generated  
Grid electricity**



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# Non-Point Source Runoff



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**Please visit:**

**[greenurbanism.com](http://greenurbanism.com)**



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