

A topographic map of the Portland metropolitan area, showing the city and surrounding hills. The map uses a color gradient from green (low elevation) to brown and white (high elevation). A black outline delineates the city's boundary. Overlaid on the map is yellow text.

Metropolitan Portland Mega Trends 2005-2040

Arthur C. Nelson, Ph.D., FAICP
Presidential Professor &
Director of Metropolitan Research
University of Utah

Presentation to
Portland Metro Council
October 8, 2008



America Grows

200 million in 1968

300 million in 2006

400 million in 2032

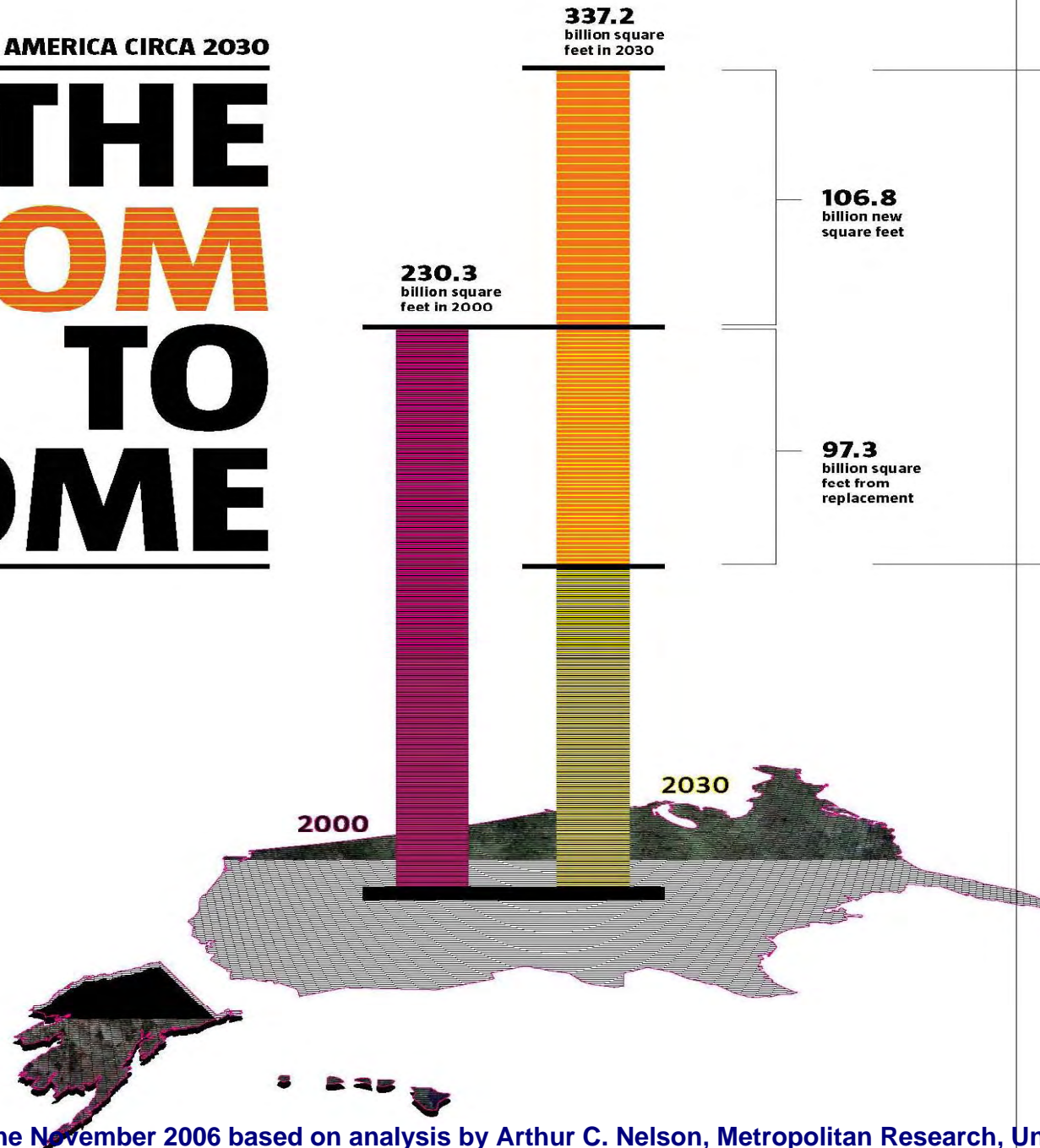
500 million in 2050

America adds 100 million people faster than any other nation except India and Pakistan – But *faster* than China.

Source: Arthur C. Nelson, Metropolitan Research, University of Utah.

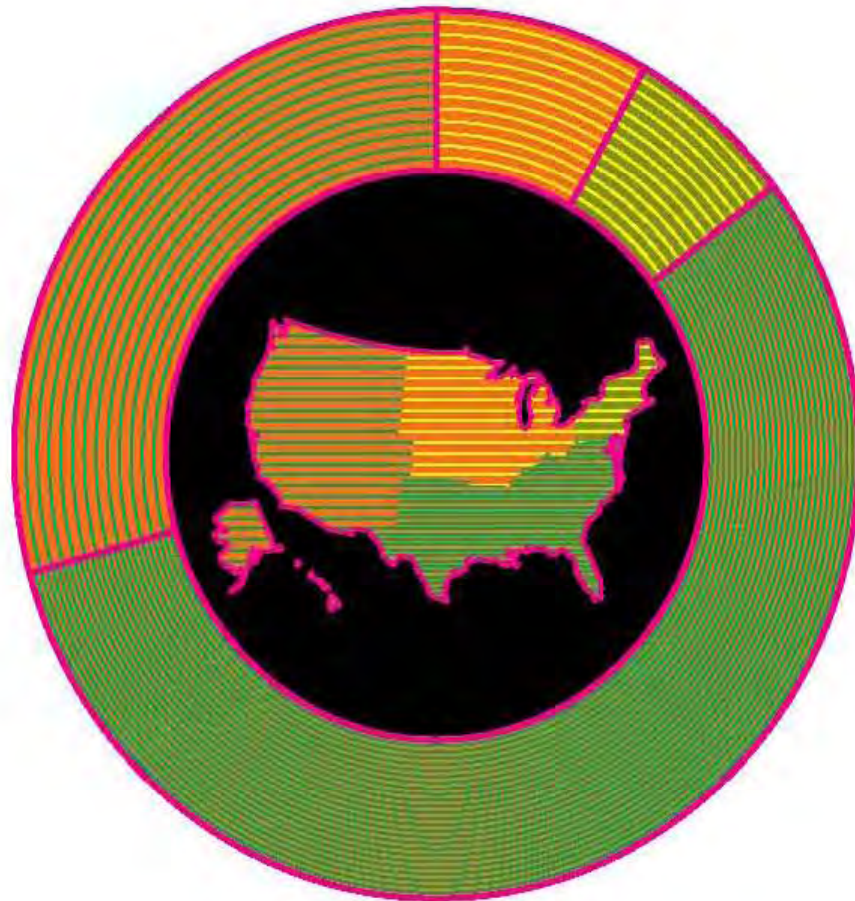
AMERICA CIRCA 2030





THE BOOM TO COME



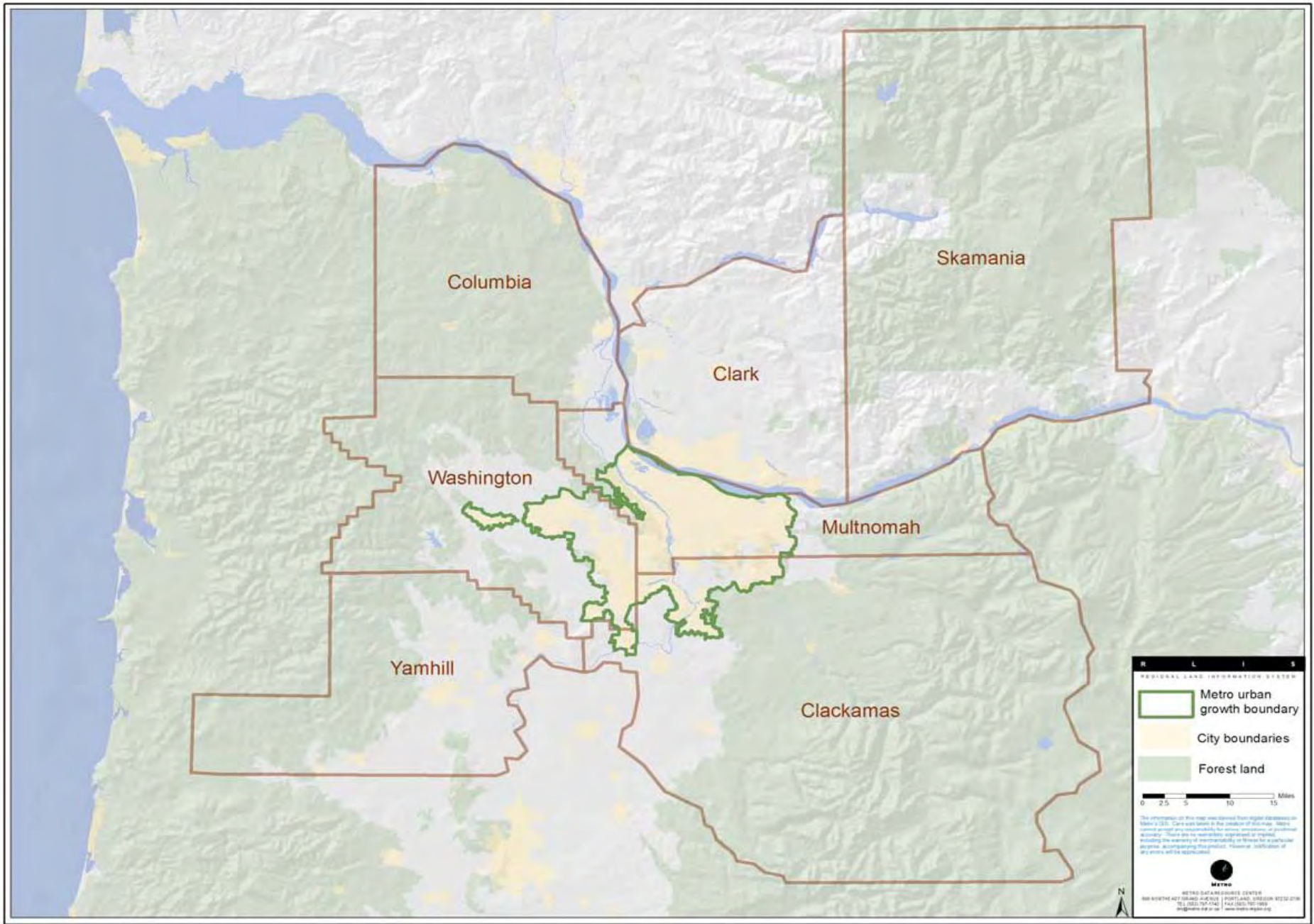
Source: *Architect* magazine November 2006 based on analysis by Arthur C. Nelson, Metropolitan Research, University of Utah.

SHARE OF TOTAL GROWTH BY REGION, 2000–2030



-  **MIDWEST: 8.2 %**
-  **NORTHEAST: 6.5 %**
-  **SOUTH: 56 %**
-  **WEST: 29.4 %**

Source: *Architect* magazine November 2006 based on analysis by Arthur C. Nelson, Metropolitan Research, University of Utah.





Getting Ahead of the Curve

Portland Metro	2005	2040
Population	2.1 million	3.7 million
Housing Units	0.9 million	1.6 million
Jobs	1.3 million	2.3 million

Source: Arthur C. Nelson, Presidential Professor & Director of Metropolitan Research, University of Utah.



Residential Development

Portland Metro	2005 to 2040
Growth-Related Units	700k
Replaced Units	200k
Total Units	900k

Source: Arthur C. Nelson, Presidential Professor & Director of Metropolitan Research,
University of Utah.

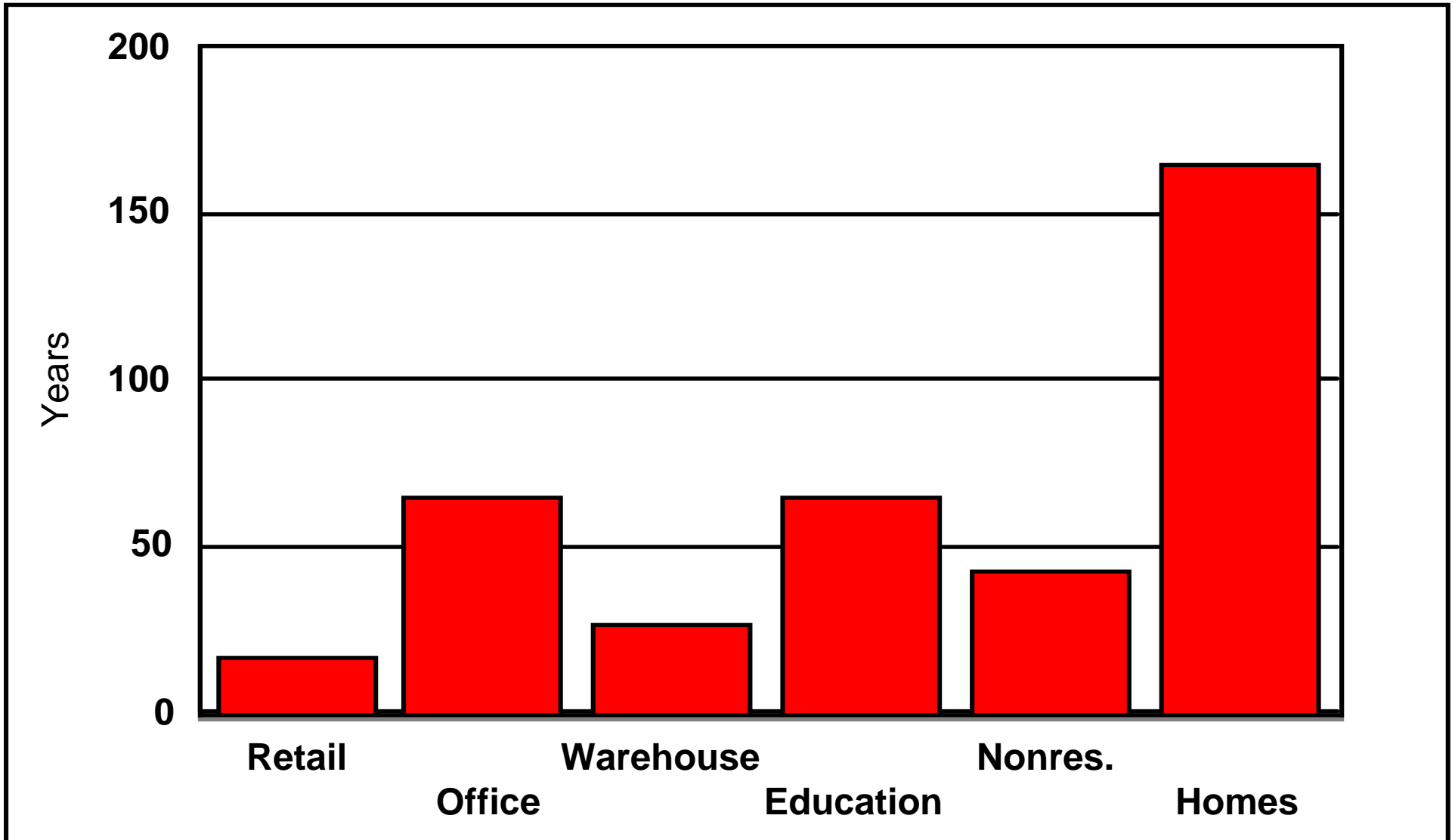


Nonresidential Development

Portland Metro	2000 to 2040
Growth-Related Square Feet	500 million
Replaced Square Feet	900 million
Total Square Feet	1.40 billion

Source: Arthur C. Nelson, Presidential Professor & Director of Metropolitan Research,
University of Utah.

Life-Span of Building Function



Source: Arthur C. Nelson, Presidential Professor & Director of Metropolitan Research, University of Utah, based on DoE Commercial Buildings Energy Consumption Survey.



Bottom Line Construction

US

<i>Residential</i>	\$34 Trillion
<i>Nonresidential</i>	\$14 Trillion
<i>Infrastructure</i>	\$ 9 Trillion
<i>Total</i>	\$57 Trillion

Portland Metro

<i>Residential</i>	\$350 Billion
<i>Nonresidential</i>	\$150 Billion
<i>Infrastructure</i>	\$100 Billion
<i>Total</i>	\$600 Billion

Source: Arthur C. Nelson, Presidential Professor & Director of Metropolitan Research,
University of Utah.



How Does It Grow?



Market Analysts Finding Changing Preferences

**National Association of Realtors
National Association of Home Builders
Nationally Recognized Market Analysts
Urban Land Institute
Lend Lease/PriceWaterhouseCoopers
Joint Center for Housing Policy at Harvard
*Golfing Buddies and Taxi Drivers***

Households are Changing

<u>Household Type</u>	<u>1960</u>	<u>2000</u>	<u>2040</u>
US			
HH with Children	48%	33%	26%
HH without Children	52%	67%	74%
<i>Single/Other HH</i>	13%	29%	34%

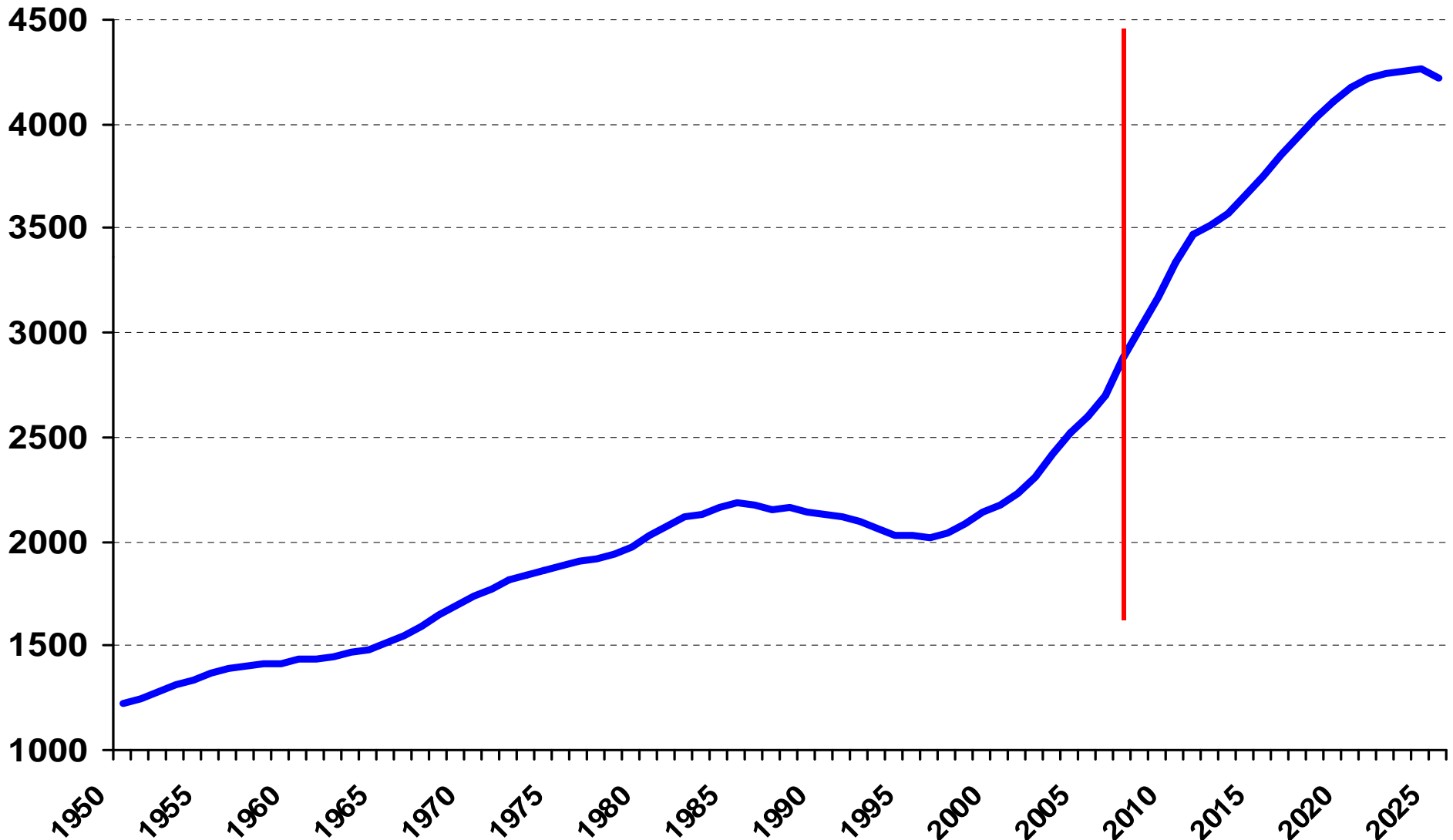
Portland Metro

HH with Children		32%	28%
HH without Children		68%	72%
<i>Single/Other HH</i>		25%	26%

Source: Arthur C. Nelson, Presidential Professor & Director of Metropolitan Research, University of Utah.

People Turning 65 *Each Year*

[Figures in 000s]



Source: US Census Bureau – 65+ in the United States: 2005; Wan He, Manisha Sengupta, Victoria A. Velkoff, & Kimberly A DeBarros. December 2005.



What Futurists Tell Us

**Bio-medical advances extend lifetimes.
Insurance actuarial tables extend to 120.**

Another 20 years added – minimum

Adulthood mostly *after* child-rearing →

***Gen-X & -Y “family” location decisions
differ from their parents.***

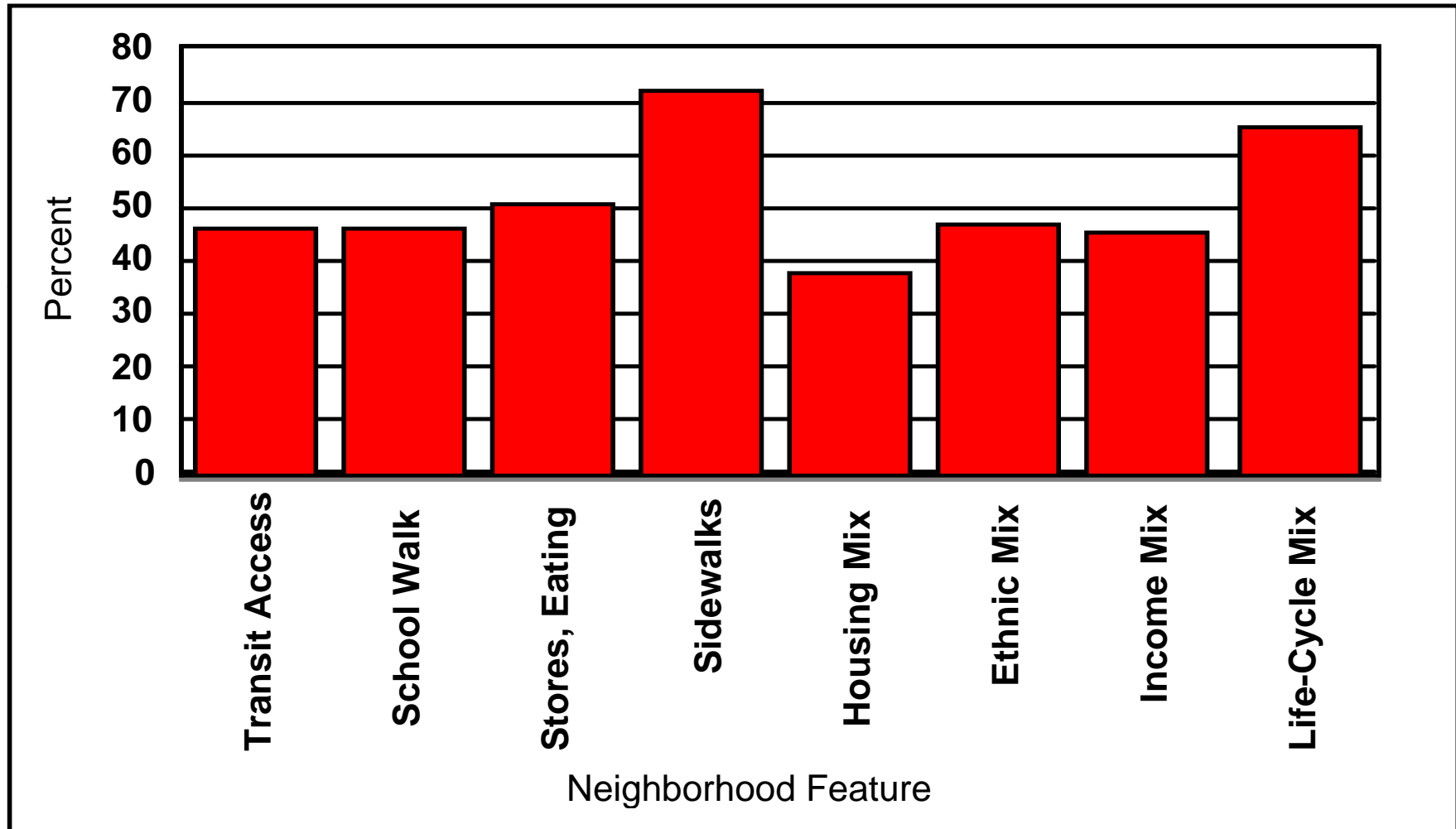
***Pearl District has more children than
market studies predicted.***

Share of Growth 2000-2040

<u>US HH Type</u>	<u>Growth</u>	<u>Share</u>
HH Growth	54M	
With children	7M	14%
Without children	47M	86%
<i>Single/Other</i>	16M	30%
<u>Portland Metro HH Type</u>	<u>Growth</u>	<u>Share</u>
HH Growth	700k	
With children	100k	14%
Without children	600k	86%
<i>Single/Other</i>	180k	26%

Source: Arthur C. Nelson, Presidential Professor & Director of Metropolitan Research, University of Utah.

Neighborhood Feature Preferences



Source: National Association of Realtors, American Preference Survey 2004.



Retired Location Preference

City or suburb close to a city **51%**

Suburb away from a city **19%**

Rural community **30%**

Conventional suburbs away from cities are the losers for this demographic group.

Source: National Association of Realtors & Smart Growth America, American Preference Survey 2004.



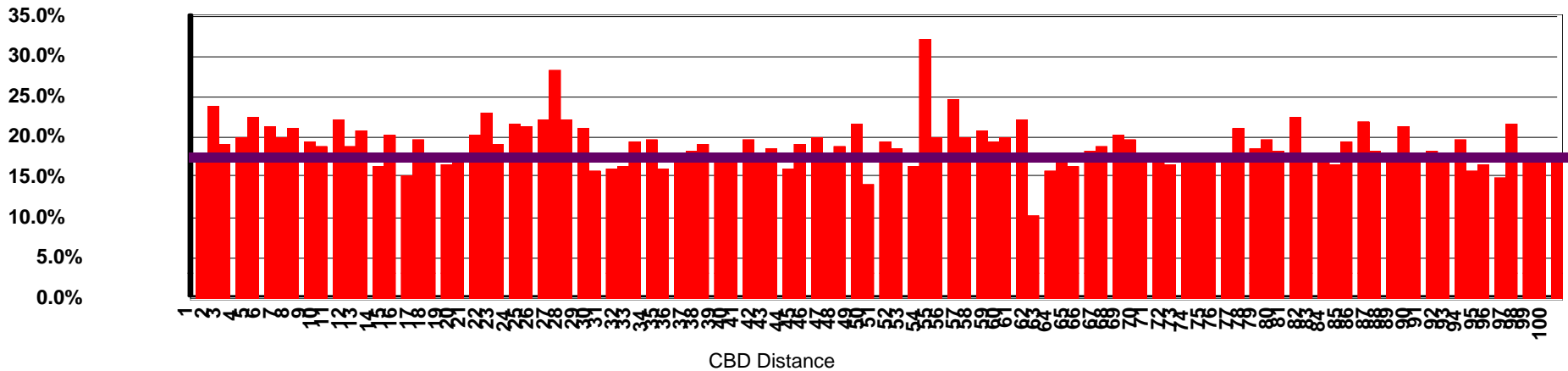
Housing Unit Preference by Type, National Surveys *Before Current Events*

<u>Unit Type</u>	<u>Share</u>
Attached	38%
<i>Apartments</i>	37%
<i>Condos, Coops</i>	24%
<i>Townhouses</i>	39%
Detached	62%
<i>Small Lot (<7,000 sf)</i>	60%
<i>Large Lot (>7,000 sf)</i>	40%

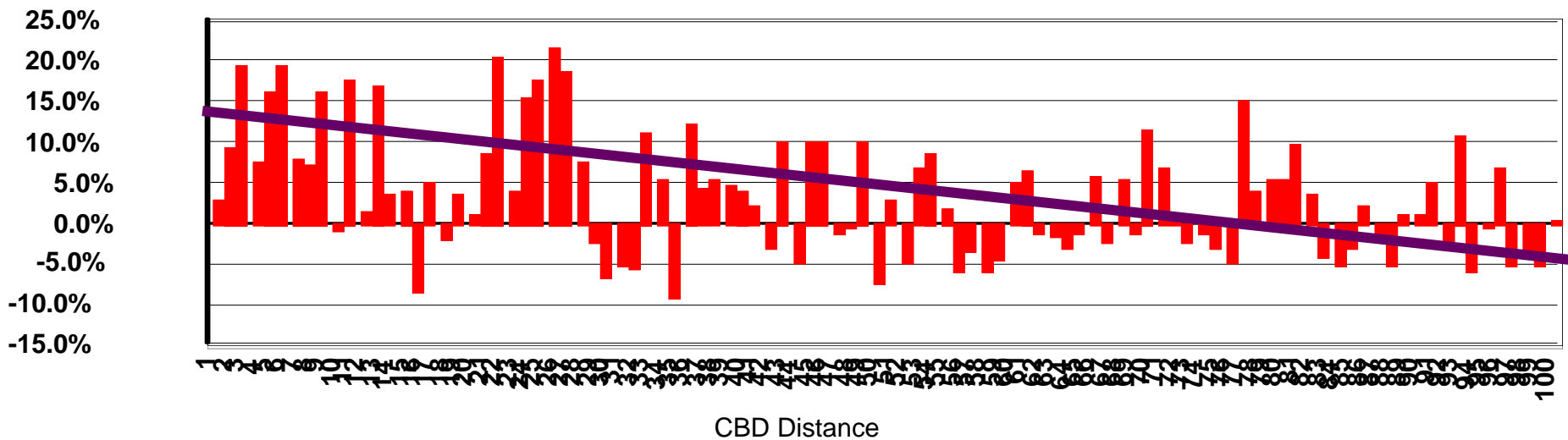
Source: **Low range** of surveys reviewed by Arthur C. Nelson, "Planning for a New Era," *Journal of the American Planning Association*, Fall 2006.

Fringe Values Eroding: Phoenix

Average Annual Appreciation 2004-2006



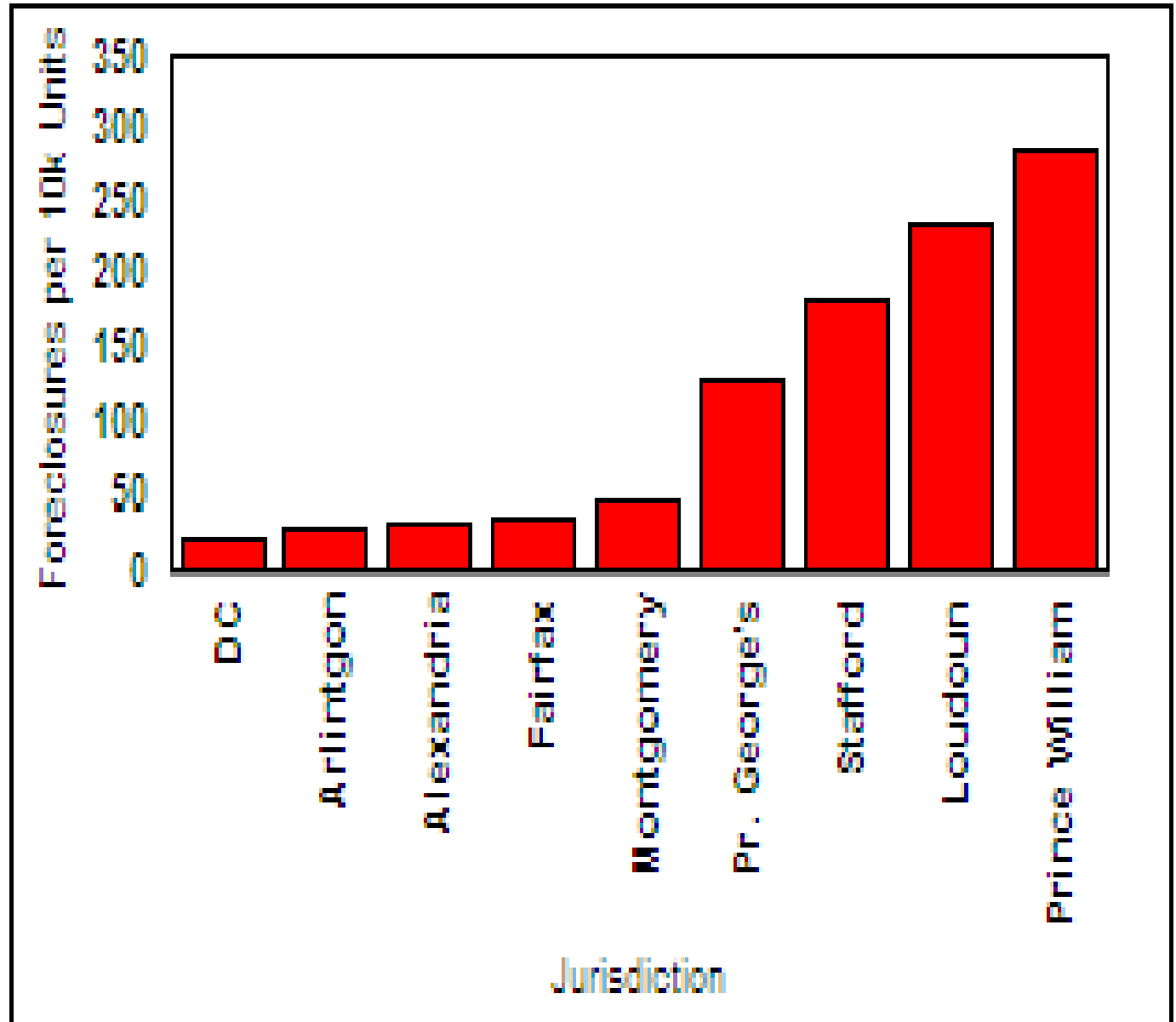
Appreciation 2006-07



Source: Arthur C. Nelson, Metropolitan Institute at Virginia Tech, based in Zillow analysis by Ceylan Oner.

Fringe Foreclosure Pattern

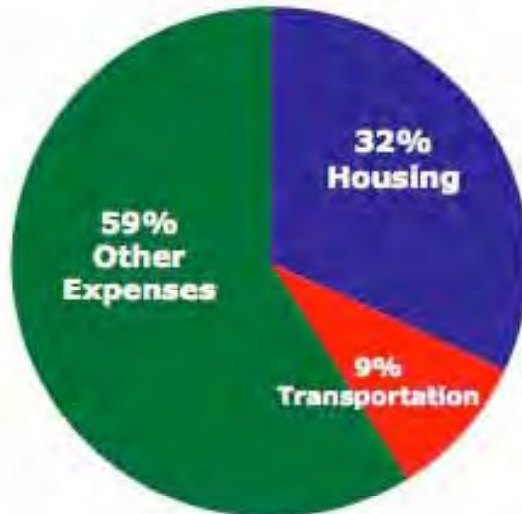
DC Metro
Subprime
Oversupply
Devaluation
Energy prices



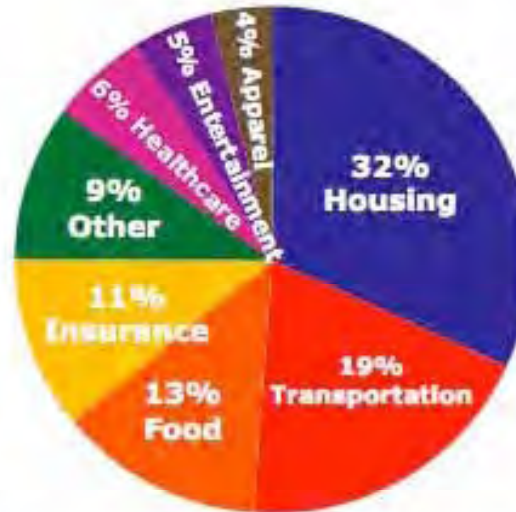
Location Costs

FORECLOSURE RESILIENT

Transit Rich
Neighborhood

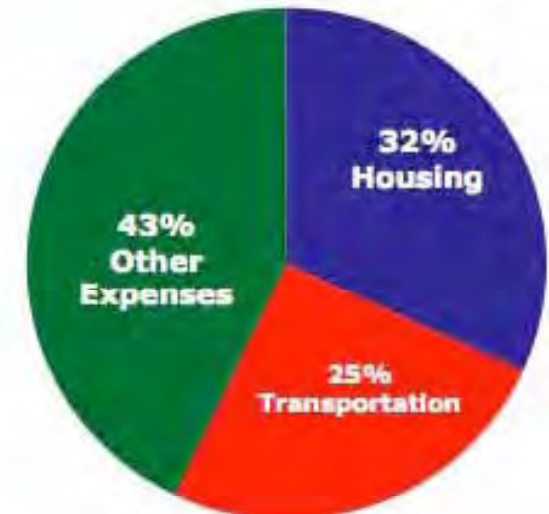


Average American
Family



FORECLOSURE RISKY

Auto Dependent
Neighborhood

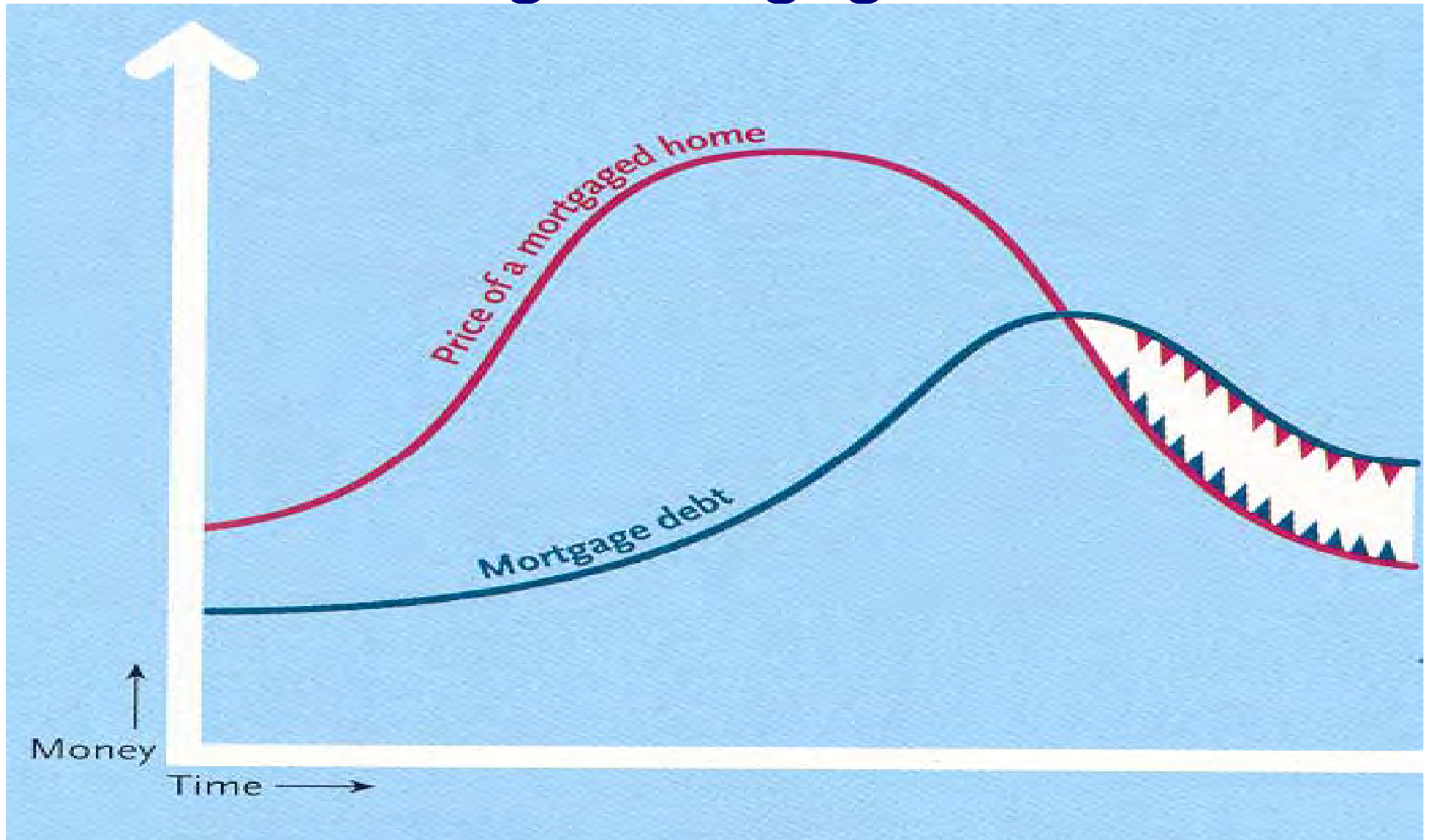


Source: Center for TOD Housing + Transportation Affordability Index, 2004 Bureau of Labor Statistics

**Transit-rich areas reduce
“location” costs making
households more resilient
to economic changes**

**“Drive until you qualify”
mortgage underwriting
bias increases
foreclosure risks**

Suburban Fringe Mortgage Time Bomb?



Source: Michael Hudson, "The New Road to Serfdom." *Harpers* (May 2006), p. 46. This graph depicts the total mortgage market as viewed by Hudson.



Tenure Shift Imminent?

- Sub-prime “meltdown”.
- Private underwriting already far tighter.
- Re-regulation of commercial banks with more rigorous mortgage underwriting.
- Many financially savvy people are renters.
- Renting creates mobility to move to jobs.
- Modern rental buildings and communities attractive to middle/affluent/upper incomes.



Housing Market Shift

Portland Metro ownership in 2000s = 65%

US rate about 67%

PDX Metro ownership may fall to 60% by 2020

US may fall to about 62%, or less

Portland Metro tenure split in 2020:

60% owner

40% renter

Portland Metro new construction to 2020:

50% owner-occupied

50% renter-occupied



New Housing Tenure Demand Share to 2020

The next 400k new residential units:

- 50% for owners
- 50% for renters



The New Promise Land?



Tear Up a Parking Lot, Rebuild Paradise

Large, flat and well drained

Major infrastructure in place

4+ lane highway frontage → “transit-ready”

“*Kelo*” problems avoided

Committed to commercial/mixed use

Can turn NIMBYs into YIMBYs

Slide title phrase adapted from Joni Mitchell, *Big Yellow Taxi*, refrain: “Pave over paradise,
put up a parking lot.”



National Re-Building Capacity

<u>Calculation</u>	<u>Result</u>
“Ripe” Redevelopment Acres by 2040	6.0M
Percent Assumed Redeveloped	25%
Redeveloped Acres	1.5M
15-25 dwellings @ 1,800sq.ft.	
30-50 jobs @ 500sq.ft.	1.5 <i>FAR</i>
Percent Residential Absorption	67%+
Percent Employment Absorption	75%+





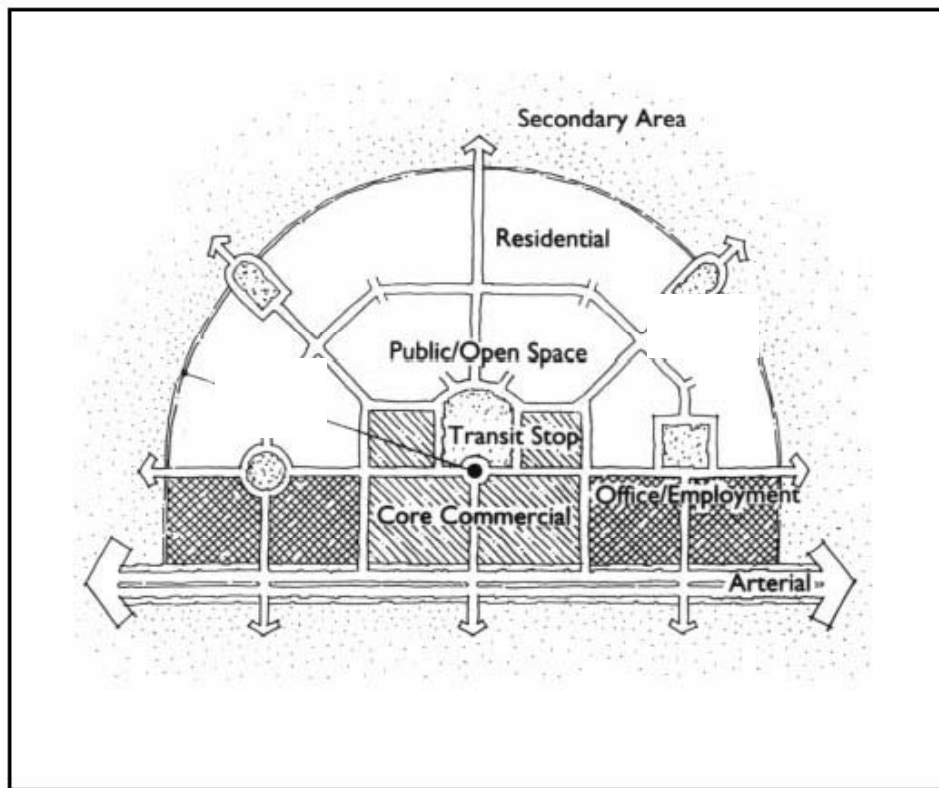


Image courtesy of Dover Kohl Associates

Transit Oriented Development Template

10-minute walk or about 1500-2000 feet

The speed of a saunter or a walk-in-the-park.



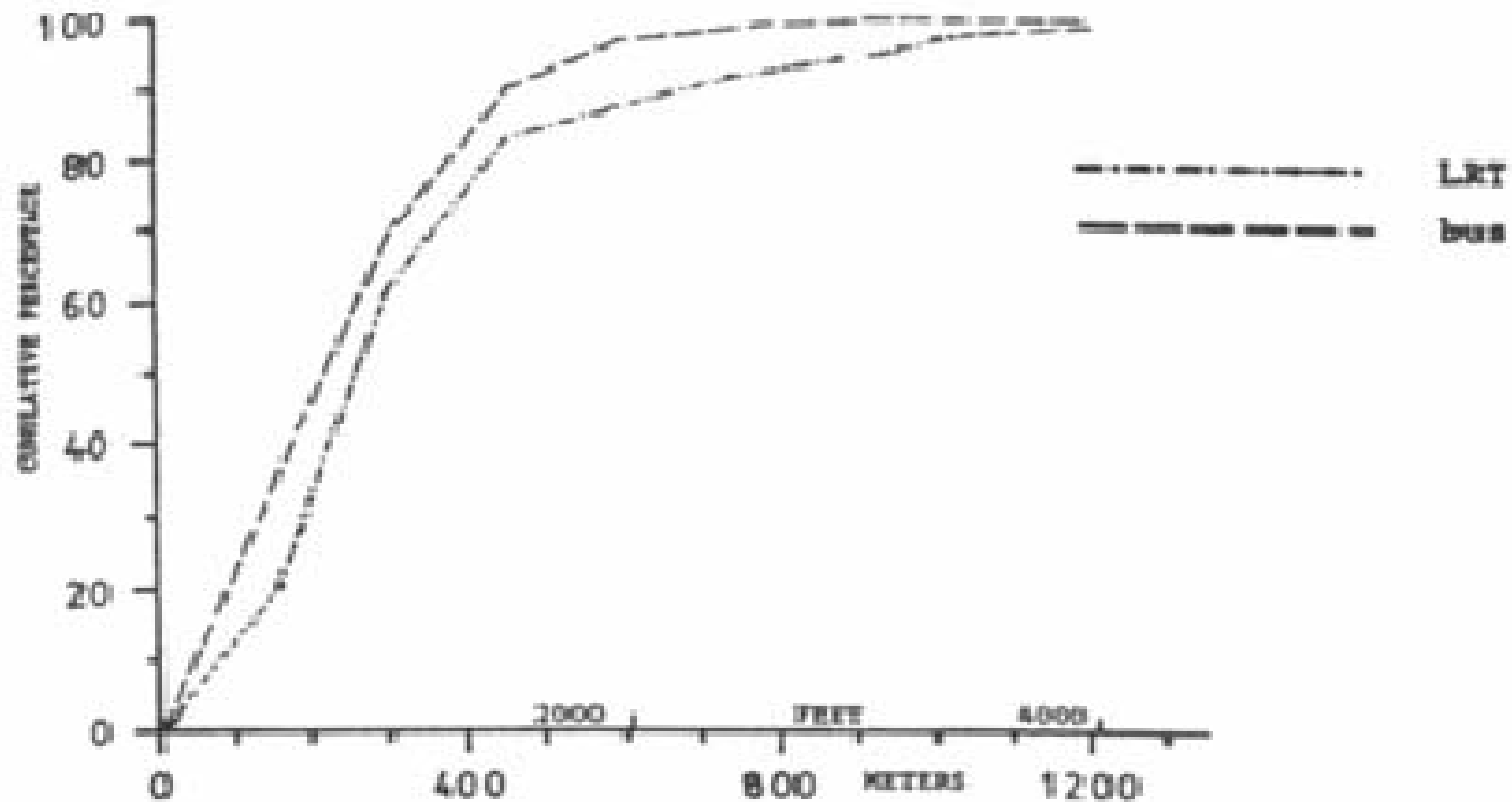
Source: Calthorpe (1993)

Jurisdiction	Distance of District Boundary
Seattle, WA	1/4-mile radius from LRT station
Hillsboro, OR	1,300-ft radius from LRT station
Portland, OR	1/4-mile radius from LRT station
Washington County, OR	1/2-mile radius from LRT station; 1/4 mile radius from primary bus routes
San Diego, CA	2,000-ft radius from transit stop

District Boundary Definitions in TOD Ordinances

Source: Community Design + Architecture (2001)

Cumulative Walking Distances to Bus and Light Rail Transit

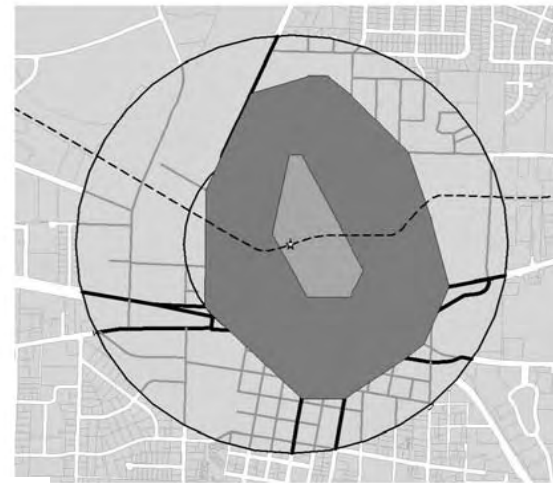
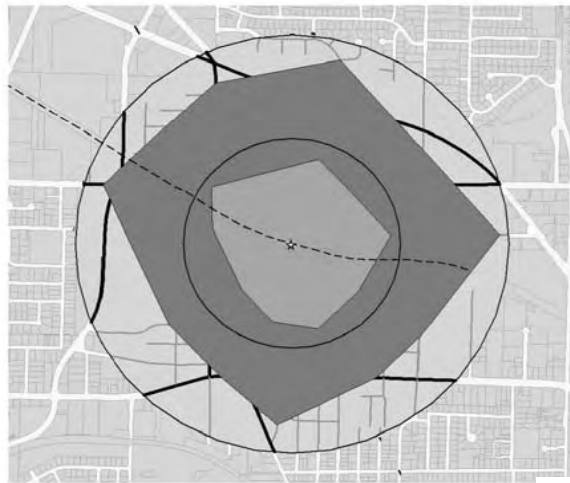


Walking Distance Benchmarks

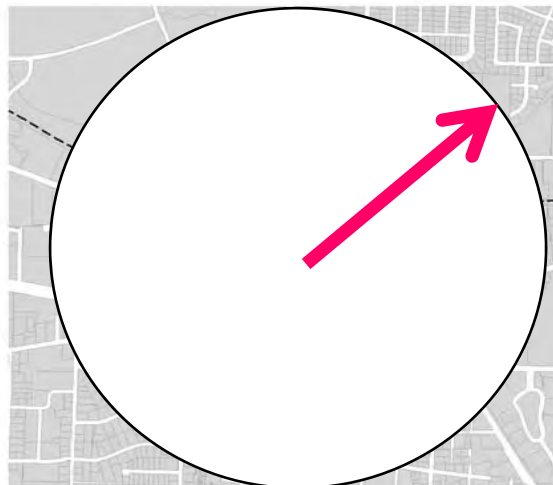
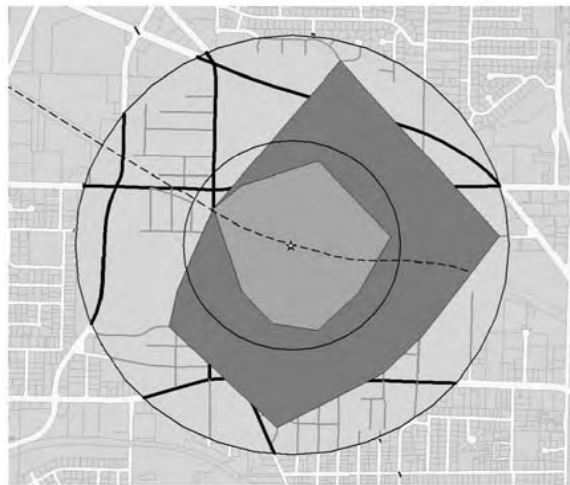
Source: Ewing (1999)

Rethink TOD Planning Areas

10-minute business walk = 1km



- ☆ Transit Stop
- ⋯ Light Rail
- Major Road
- Minor Road
- Quarter Mile
- ◐ Half Mile

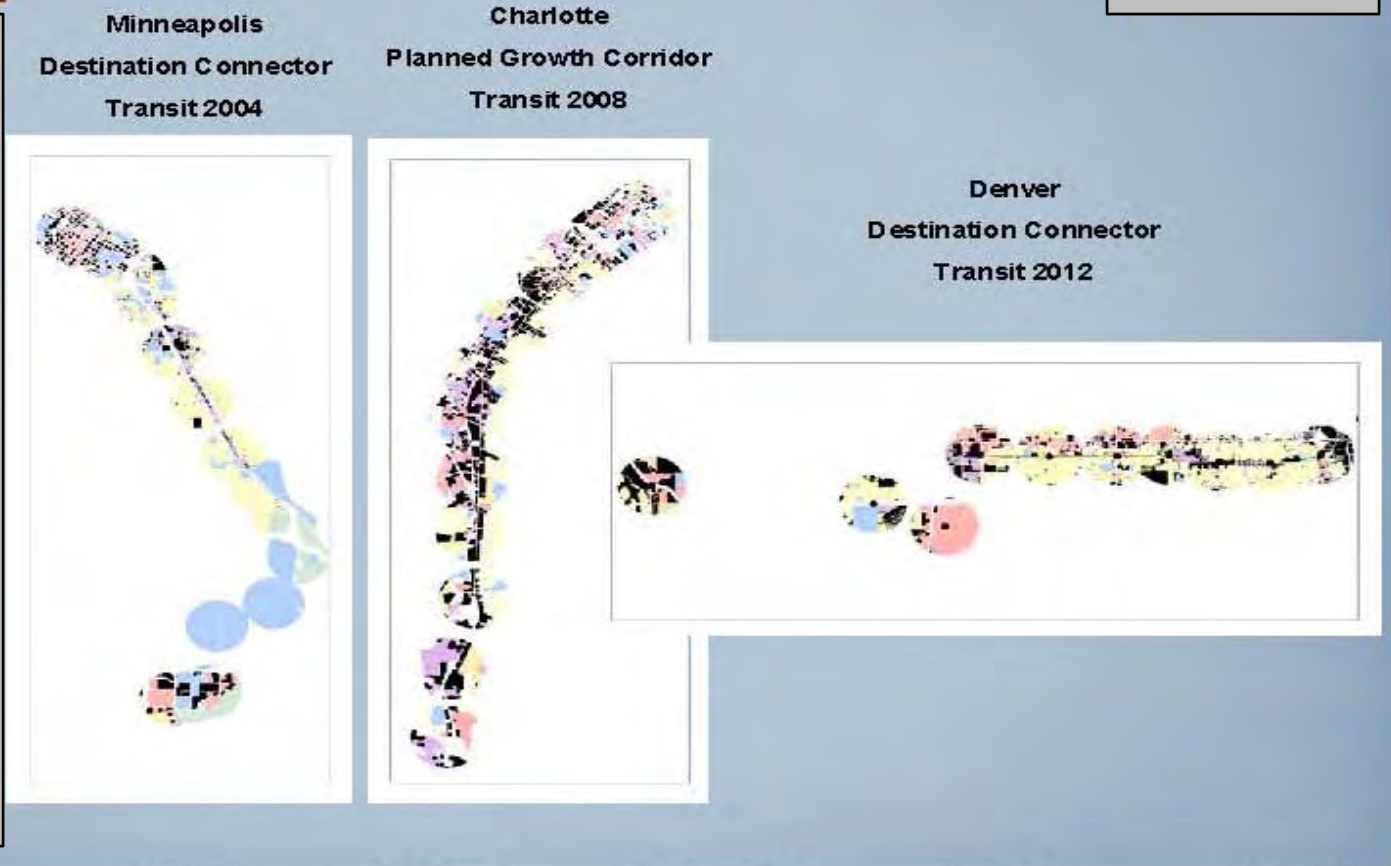
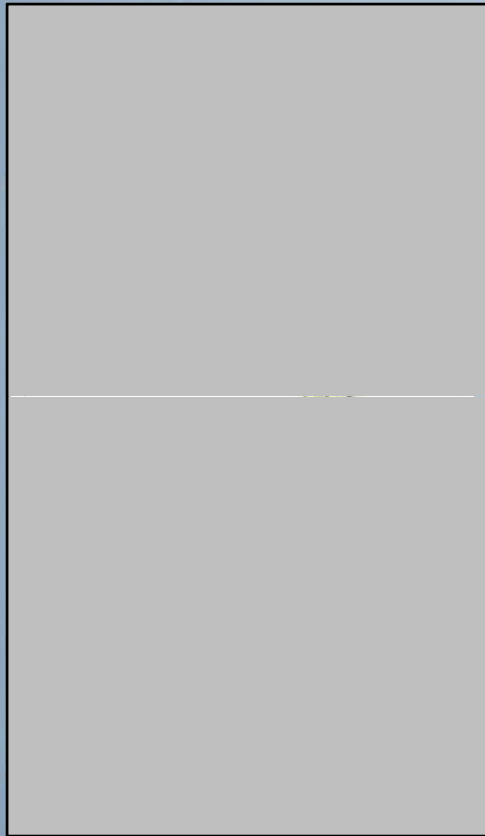


**1km radius = 6 times
the planning area of
1/4 mile radius →
800ac v. 125ac**

Source: Marc Schlossberg and Nathaniel Brown, "Comparing Transit-Oriented Development Sites by Walkability Indicators," Transportation Research Record 1887 (Washington, DC: National Academy Press, 2004) 40.

Re/Development Opportunity

Underdeveloped Parcels in **1km** Station Areas



Total Stations in Corridor

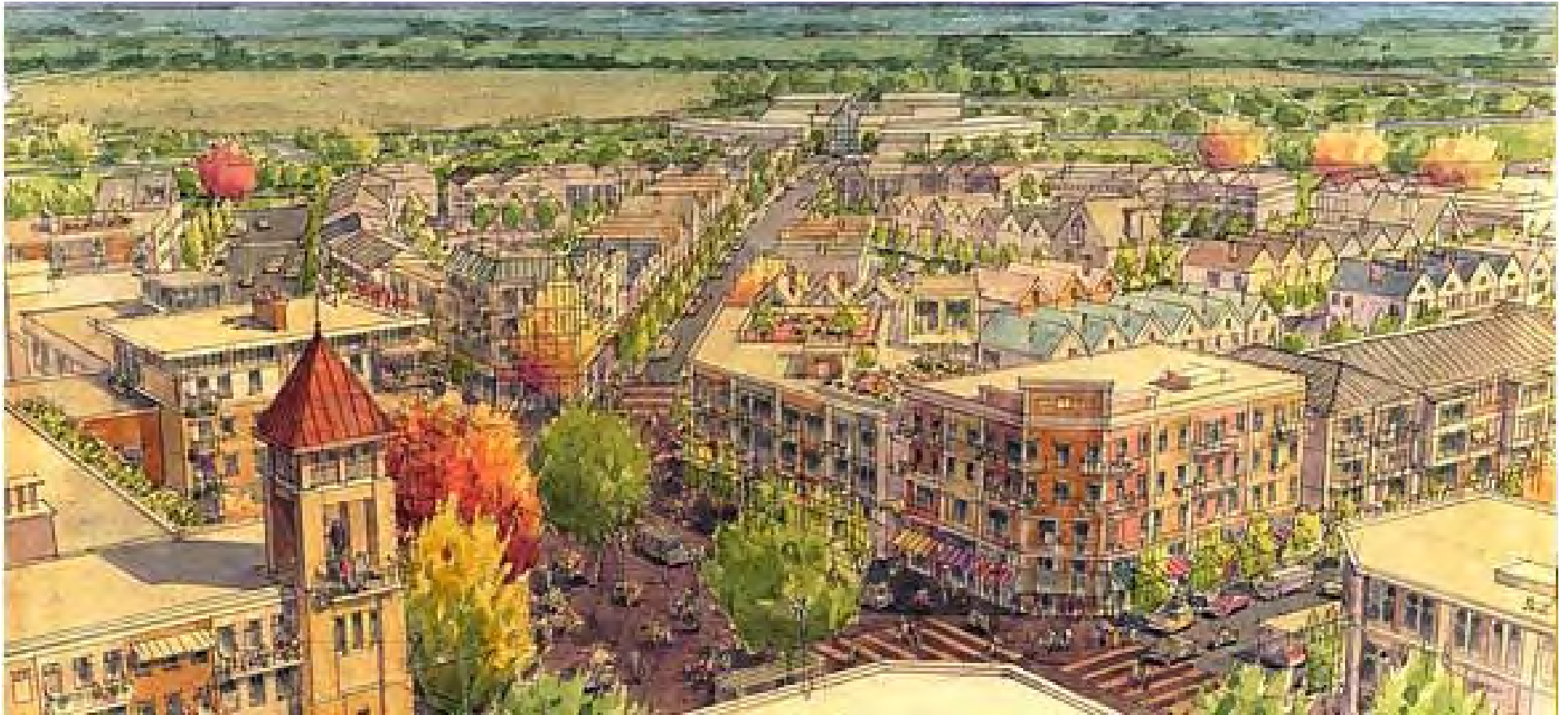
Underutilized Acreage in 1/2M
Radius of Each Station

Redevelopment acres 2040 (est)

Share of metro growth @ 3.0 FAR

	Portland	Minneapolis	Charlotte	Denver
Total Stations in Corridor	38	17	15	11
Underutilized Acreage in 1/2M Radius of Each Station	N/A	542 acres	1,295 acres	1,026 acres
Redevelopment acres 2040 (est)	30,000	14,000	12,000	9,000
Share of metro growth @ 3.0 FAR	35%	65%	35%	20%

Source: Figure from Reconnecting America, *Realizing the Potential: Expanding Housing Opportunities Near Transit.*



(c)2006 Andrew Hall, PortlandBridges.com



33% Solution ...

New Metropolis Template

1%+ Demand for downtown living (~40k)

1%+ Demand for near-downtown living (~40k)

1%+ Demand for suburban center living (~40k)

5%+ Demand for near-center living (~200k)

25%+ Demand for urbane suburbia, TOD, planned communities (~900,000)

Two-thirds (~2.5 million) may prefer traditional suburbs.



New Metropolis Demand 2005-2040

3,700k people 2040

1,600k growth 2005 to 2040

1,200k demand for New Metropolis options

100k supply by 2010(?)

1,100k net new metropolis demand

2/3rd+ of all new housing units must be in new metropolis options to meet demand of the 1/3rd of who want those options in 2040.



Challenge Ahead

- **Business-as-usual rooted in the past**
- **Different realities**
 - **Demographic**
 - **Housing preference**
 - **Increasing demand for “urbanity” especially in suburbs**
 - **Energy constraints**
 - **Global shifts in financial markets**
- **New “business plan” is needed**
- **Metro once again leading the nation**

An aerial photograph of a city during autumn. The scene is filled with buildings of various architectural styles, including a prominent tower with a red roof on the left. The trees are in various stages of fall, showing vibrant colors of red, orange, yellow, and green. The sky is a clear, pale blue. Overlaid on the center of the image is the text 'THANK YOU!' in a large, white, bold, italicized sans-serif font.

THANK YOU!