

An aerial photograph of a mountainous region. In the foreground, there is a large, irregularly shaped reservoir with a greenish-blue hue. The surrounding terrain is rugged and mountainous, with various shades of brown, tan, and green. The text is overlaid on this image.

Mountain Megapolitans

Long-term development of the Mountain Megapolitan Areas

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

New Partners for Smart Growth Conference
January 23, 2009



America Grows

200 million in 1968

300 million in 2006

400 million in 2034

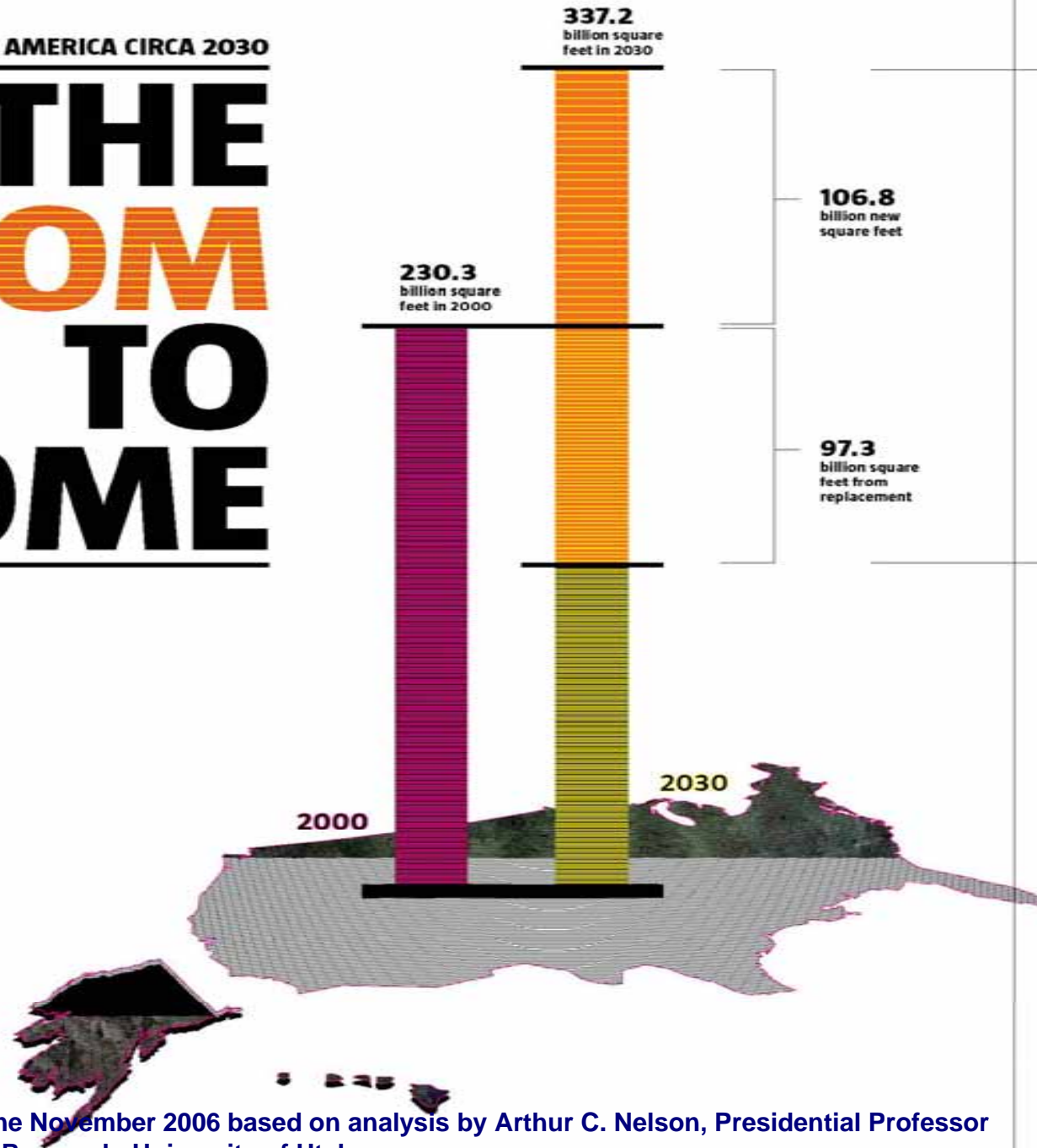
500 million in 2050

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

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

AMERICA CIRCA 2030

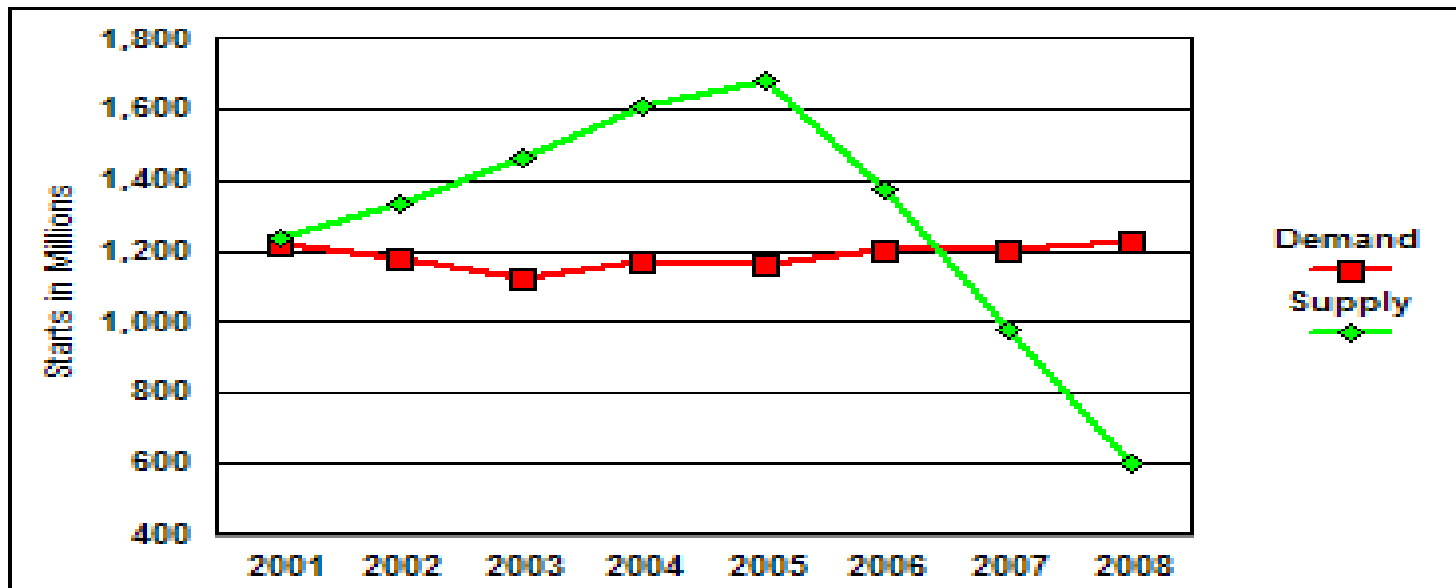
THE BOOM TO COME



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

Crystal Ball of the Recovery

Single family home starts, 2001-2008



Excess SF home supply nationally through 2009.
Continued shake-out through 2010 to re-finance
or re-position (to rental) millions of SF homes.

Source: Arthur C. Nelson, Presidential Professor & Director of Metropolitan Research, University of Utah; adapted from Census, 12/15/08.

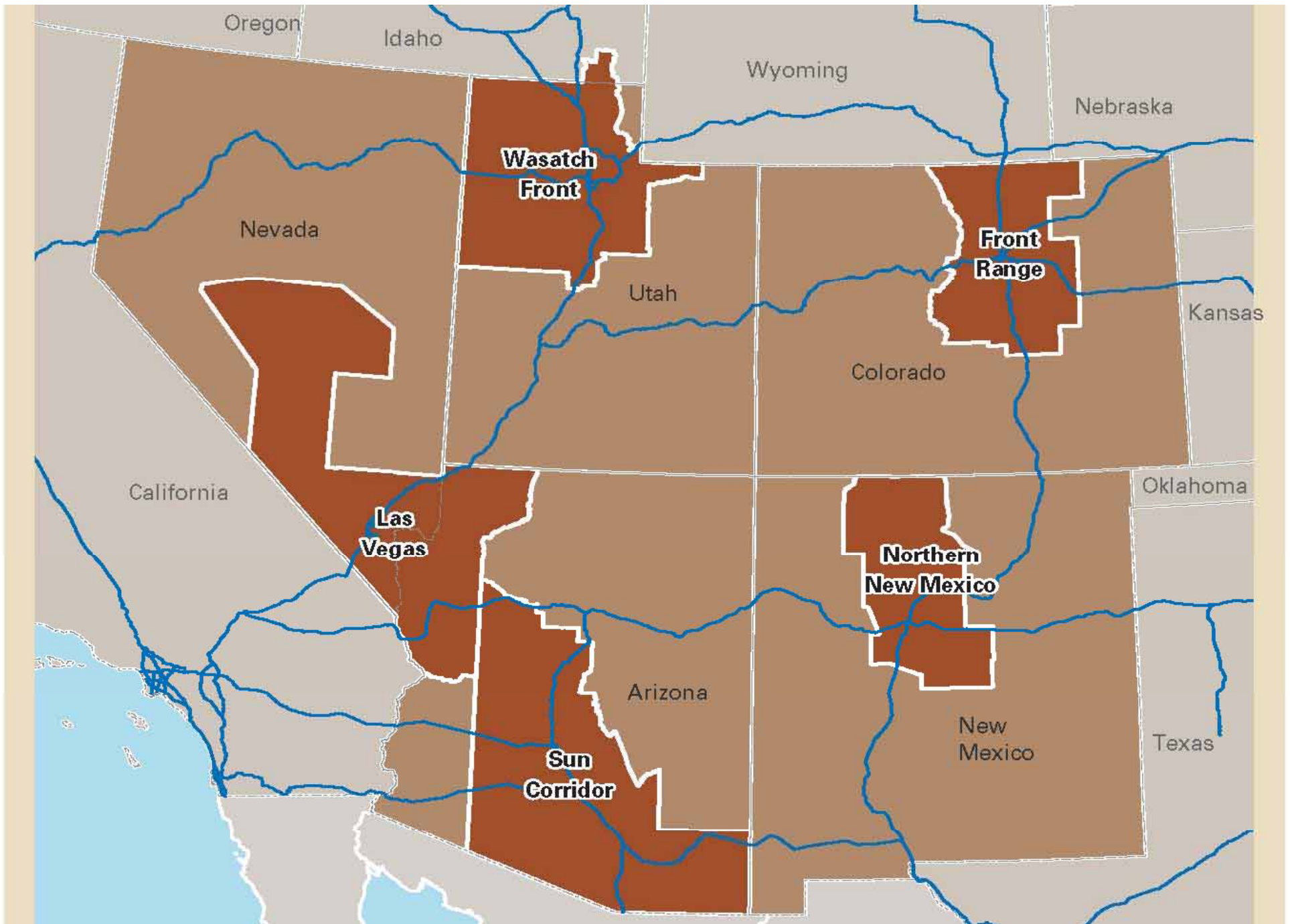


Image from Brookings Institution, *Mountain Megas*, July 2008.



Population Growth 2005-2040

Area	2005	2040	Change	Percent
No. NM	1,025k	1,587k	562k	55%
Vegas	1,936k	4,707k	2,770k	143%
Sun C.	5,171k	10,509k	5,338k	103%
Front R.	3,728k	6,286k	2,553k	69%
Wasatch	2,170k	3,692k	1,522k	70%
Total	14.0M	26.8M	12.8M	91%

Source: Arthur C. Nelson, Presidential Professor & Director of Metropolitan Research, University of Utah. Numbers may not add or calculate due to rounding. Adapted from Brookings Institution, *Mountain Megs*, June 2008.

Residential Units 2005-2040

<u>Area</u>	<u>2005</u>	<u>Growth</u>	<u>Replaced</u>	<u>Total</u>	<u>% '05</u>
No. NM	433k	237k	110k	348k	80%
Vegas	802k	1,148k	498k	3,124k	389%
Sun C.	2,143k	2,212k	659k	2,872k	134%
Front R.	1,511k	1,037k	420k	1,457k	96%
Wasatch	720k	505k	245k	750k	104%
Total	5.6M	5.1M	1.9M	7.0M	126%

Source: Arthur C. Nelson, Presidential Professor & Director of Metropolitan Research, University of Utah. Numbers may not add or calculate due to rounding. Adapted from Brookings Institution, *Mountain Megs*, June 2008.

Employment Growth 2005-2040

<u>Area</u>	<u>2005</u>	<u>2040</u>	<u>Change</u>	<u>Percent</u>
No. NM	563k	948k	562k	55%
Vegas	1,026k	2,540k	1,514k	148%
Sun C.	2,594k	5,752k	3,158k	122%
Front R.	2,200k	4,137k	1,938k	88%
Wasatch	1,204k	2,305k	1,101k	104%
Total	7.6M	15.7M	8.1M	107%

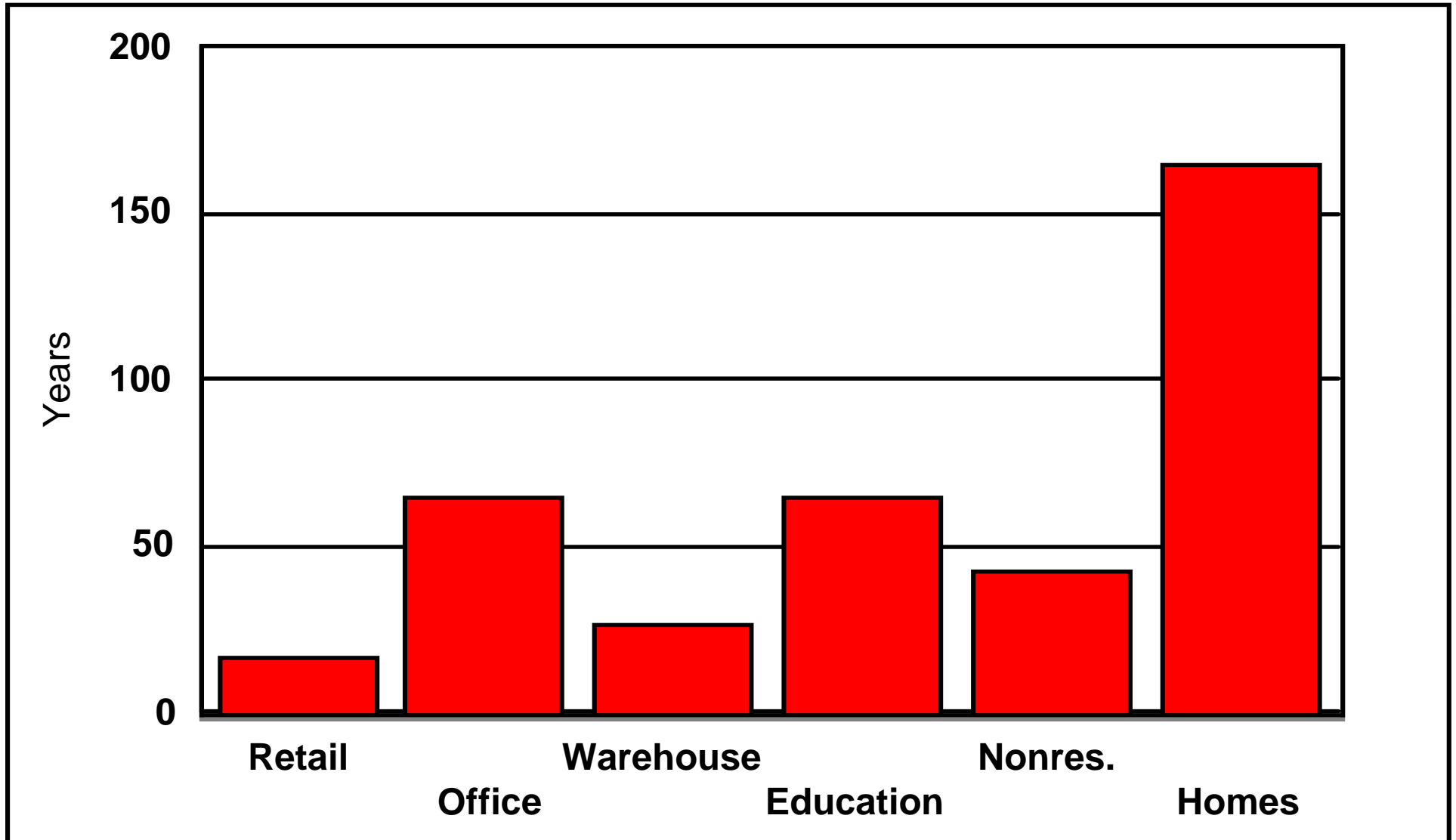
Source: Arthur C. Nelson, Presidential Professor & Director of Metropolitan Research, University of Utah.
Numbers may not add or calculate due to rounding. Adapted from Brookings Institution, *Mountain
Megs*, June 2008.

Nonresidential Space 2005-2040

Area	2005	Growth	Rebuilt	Total	% '05
No. NM	271m	164m	388m	552m	204%
Vegas	443m	658m	846m	1,504m	340%
Sun C.	1,127m	1,531m	2,244m	3,775m	335%
Front R.	1,053m	581m	1,634m	2,214m	210%
Wasatch	601m	447m	919m	1,366m	227%
Total	3.5B	3.4B	6.0B	9.4B	269 %

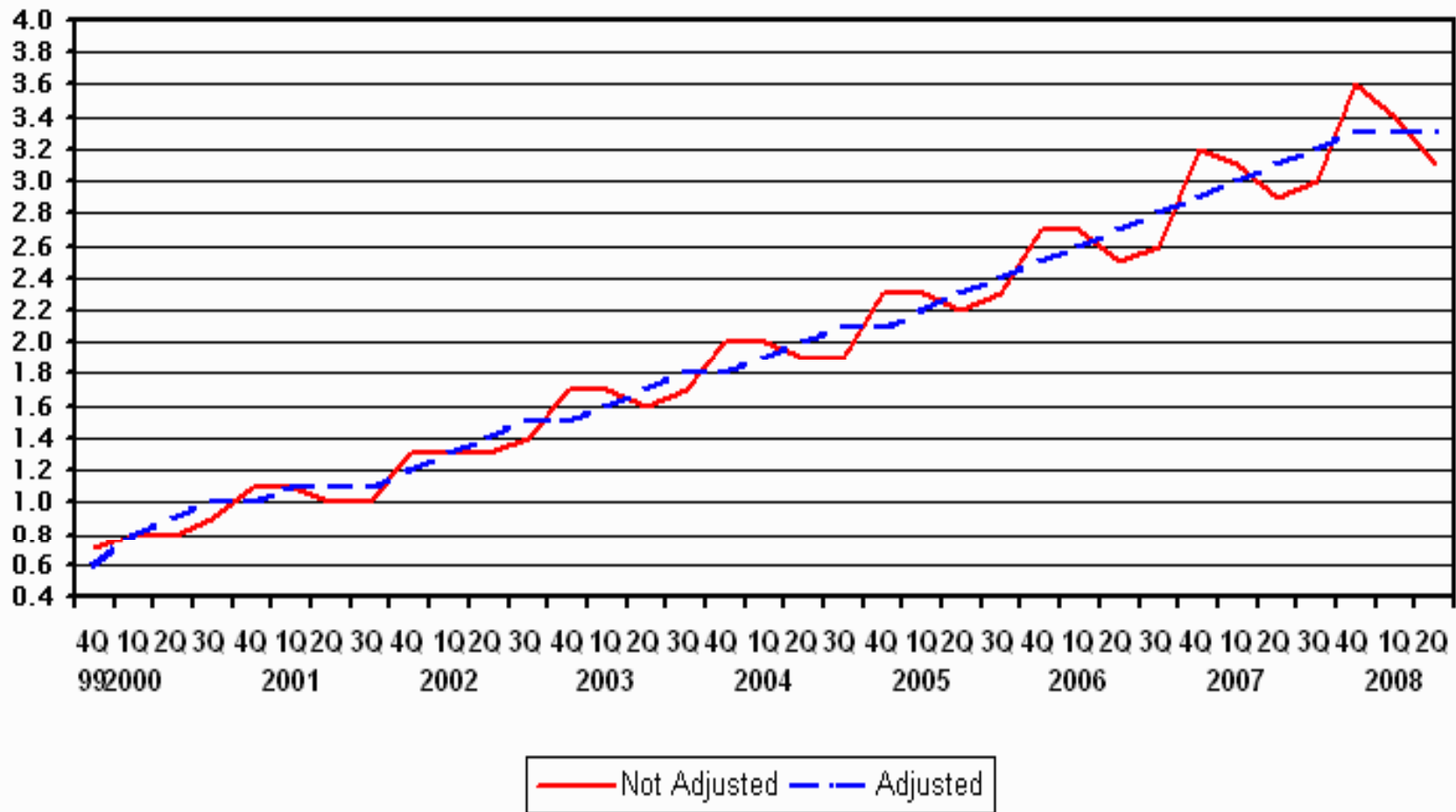
Source: Arthur C. Nelson, Presidential Professor & Director of Metropolitan Research, University of Utah.
Numbers may not add or calculate due to rounding.

Life-Span of Buildings



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

Internet Retail Sales as Percent of Retail Sales, 1999-2008



Source: US Dept. of Commerce, October 4, 2008, <http://www.census.gov/mrts/www/data/html/08Q2.html>.



Reality Check

Space Class	1992	2003	%Dif
Total <i>Glamour</i> Space	145	149	+3%
<i>[Retail, Office, Medical, Institutional]</i>			
Warehouse & Storage	45	35	-23%
All Other	75	63	-16%

Non-percentage figures per capita based on Census estimates.

Source: Calculated by Arthur C. Nelson, Presidential Professor & Director of Metropolitan Research, University of Utah, from Energy Information Administration, *Commercial Buildings Energy Consumption Surveys* for 1992 and 2003.



Bottom Line Construction

Mountain Megapolitans 2005-2040

<i>Residential</i>	\$2.2 Trillion
<i>Nonresidential</i>	\$0.9 Trillion
<i>Infrastructure</i>	\$0.6 Trillion
<i>Total</i>	\$3.7 Trillion

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***



The View from Rural Virginia

3/5/08

Dr. Nelson:

I'm writing for the Shenandoah Valley Business Journal.

I have a couple of questions regarding the housing market here in Harrisonburg and Rockingham County.

We're seeing some of (your) trends already. Realtors I've talked with say condominiums, townhouses and duplexes have continued to sell in the soft market of the past two years. Meanwhile, sales of detached homes are off.

What's behind this trend?

**Dan Wright, business reporter
Daily News-Record
Harrisonburg, VA**



Residential Resale Indicators

<u>Year</u>	<u>SF+TH</u>	<u>Condo/Coop</u>
2006	\$221,900	\$221,900
2007	\$217,900	\$226,300
2008	\$180,800	\$185,400

Source: Arthur C. Nelson, Presidential Professor & Director of Metropolitan Research, University of Utah, adapted from National Association of Realtors monthly resale data accessed December 14, 2008. Figures are median resale prices; November 2008 used for 2008.



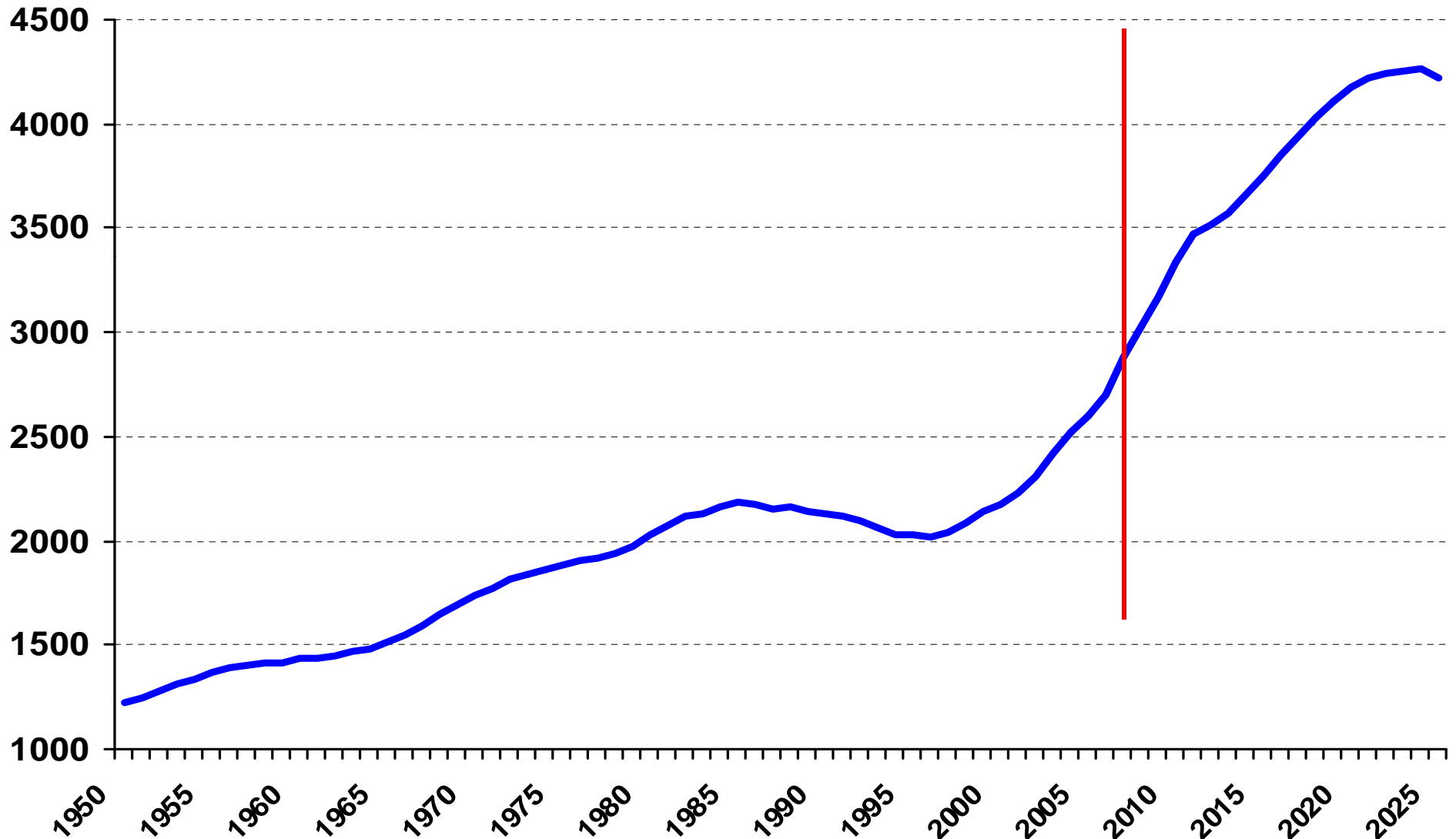
Households are Changing

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

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.**



Retired Location Preference

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

Suburb away from a city **19%**

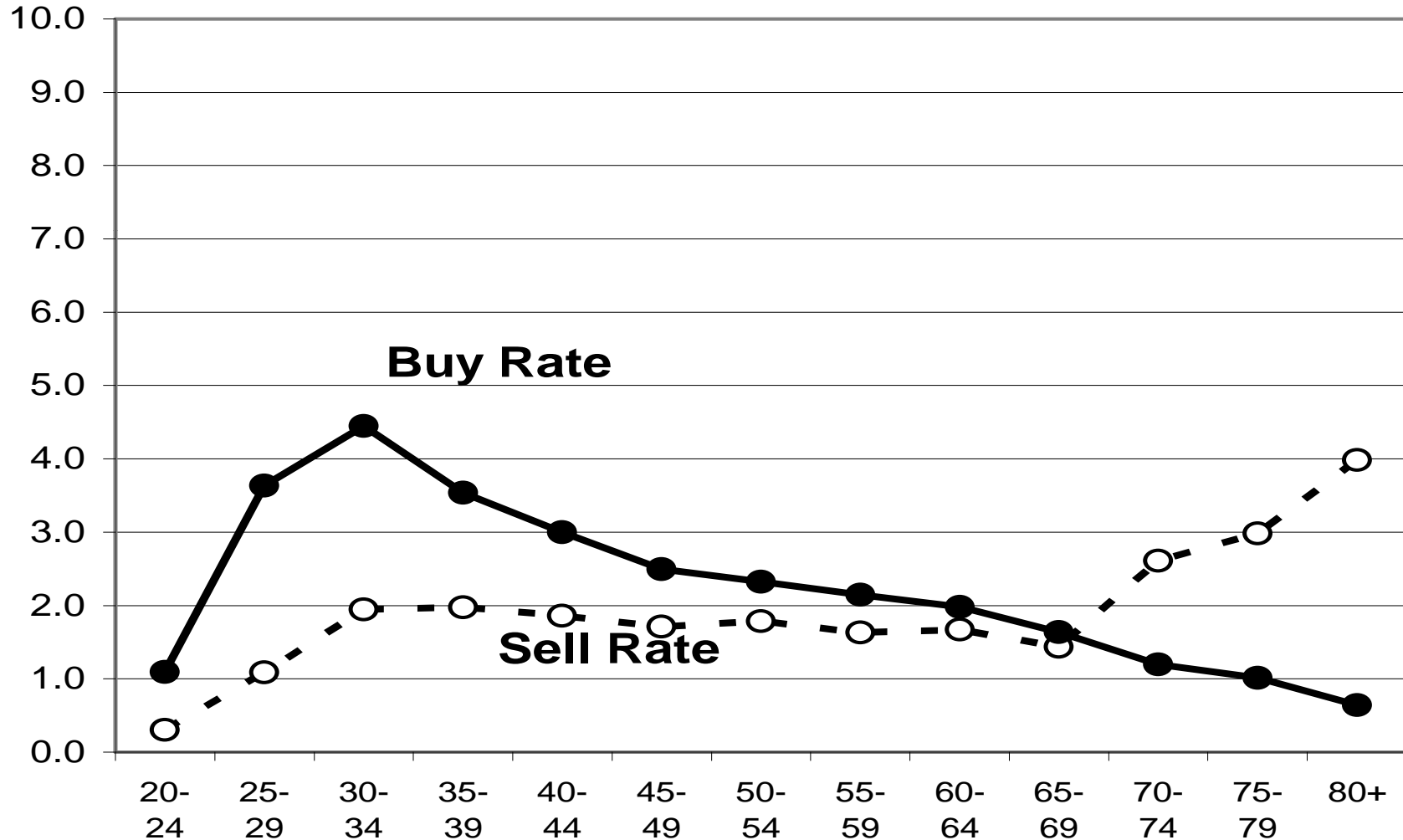
Rural community **30%**

Conventional suburbs away from cities are losers.

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

Buy-Sell Rates by Age Cohort

AHS



Source: Dowell Myers & SungHo Ryu, "Aging Baby Boomers and the Generational Housing Bubble: Foresight and Mitigation of an Epic Transition", *Journal of the American Planning Association* 74(1): 1-17 (2007).



Housing Choices of Seniors

<u>Housing Type</u>	<u>Before Move</u>		<u>After Move</u>
Attached	24%	→	54%
Renter	20%	→	59%

Source: American Housing Survey 2003. “Before” means moved in next year. Annual senior movers are about 5% of all senior households; 75%+ of all seniors will change housing type between ages 65 and 80.



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%
<u>Single/Other*</u>	<u>16M</u>	<u>30%</u>

****New single-person HHs will be twice as many as new HHs with children.***

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

Housing Preference Surveys by Type, 1995-2004

<u>Unit Type</u>	<u>Share</u>
Attached	38%
<i>Apartments</i>	14%
<i>Condos, Coops</i>	9%*
<i>Townhouses</i>	15%
Detached	62%
<i>Small Lot (<7,000 sf)</i>	37%
<i>Large Lot (>7,000 sf)</i>	25%

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



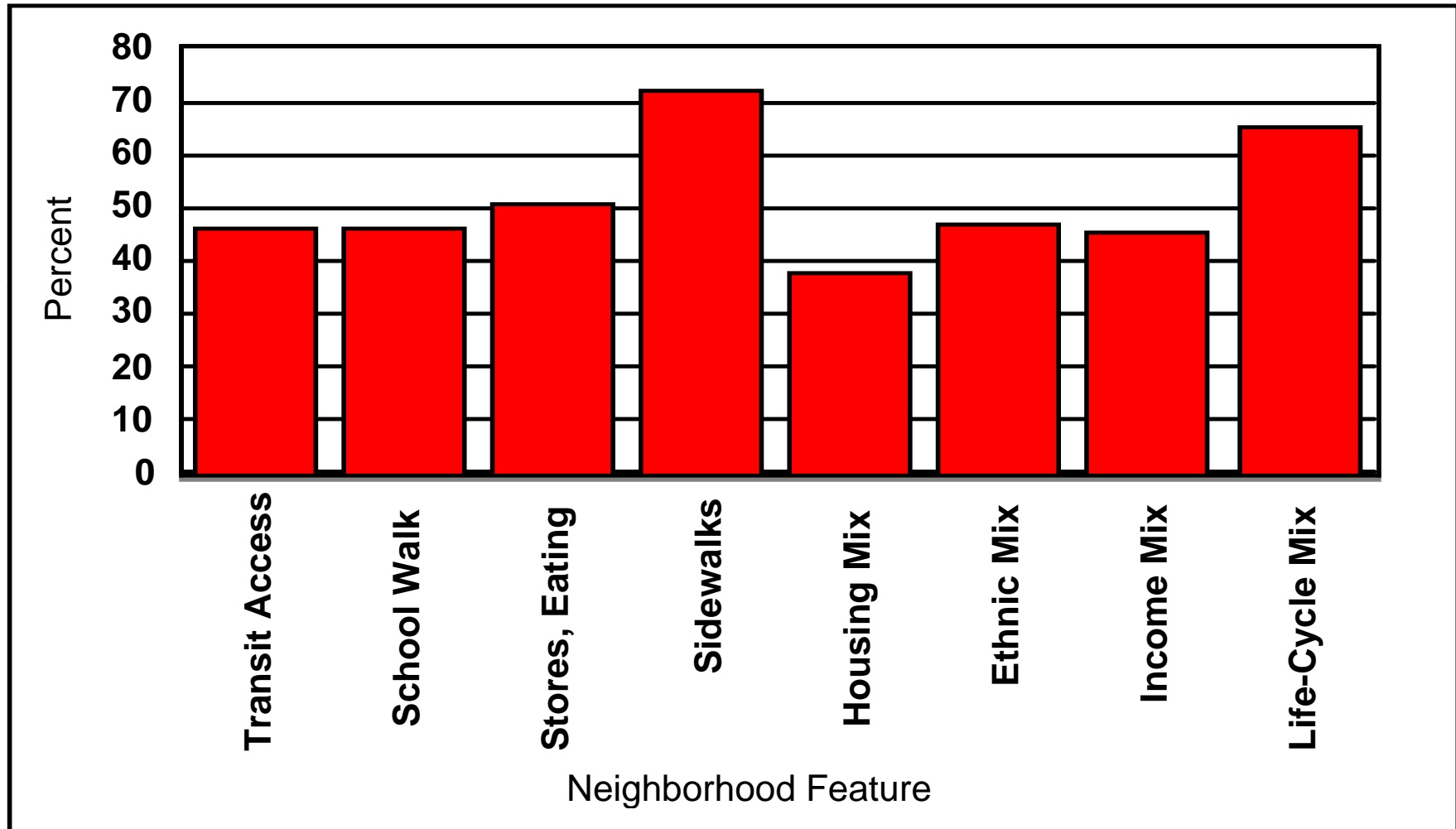
Large-Lot Oversupply 2030

<u>Unit Type</u>	<u>Supply 2005</u>	<u>Preference Demand</u>
Attached	39M	15M
Small Lot	12M	40M
Large Lot	58M	- 23M

Figures in millions of units.

Preference change based on low-range of preference survey averages.

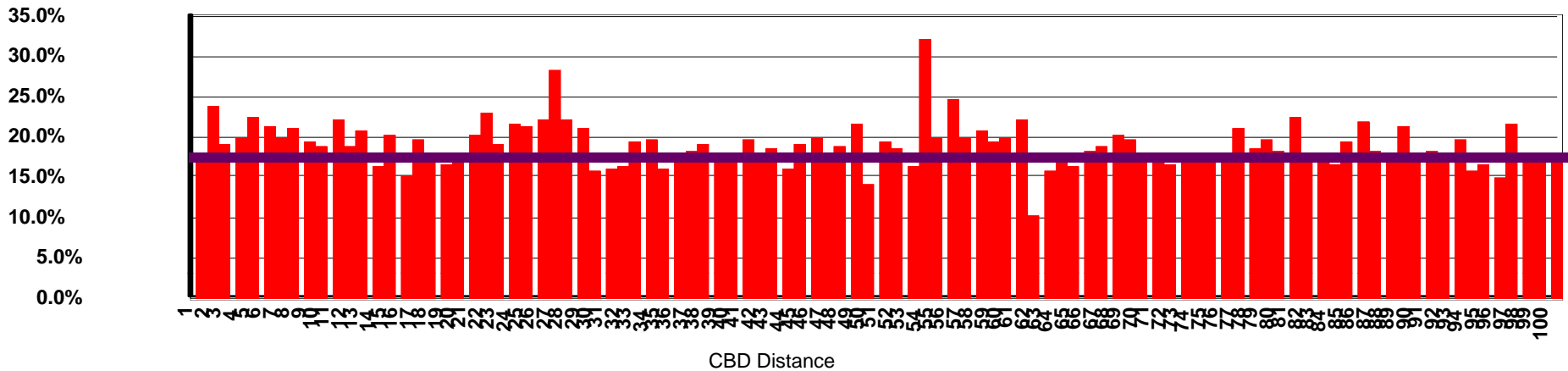
“New Urbanity” Preferences



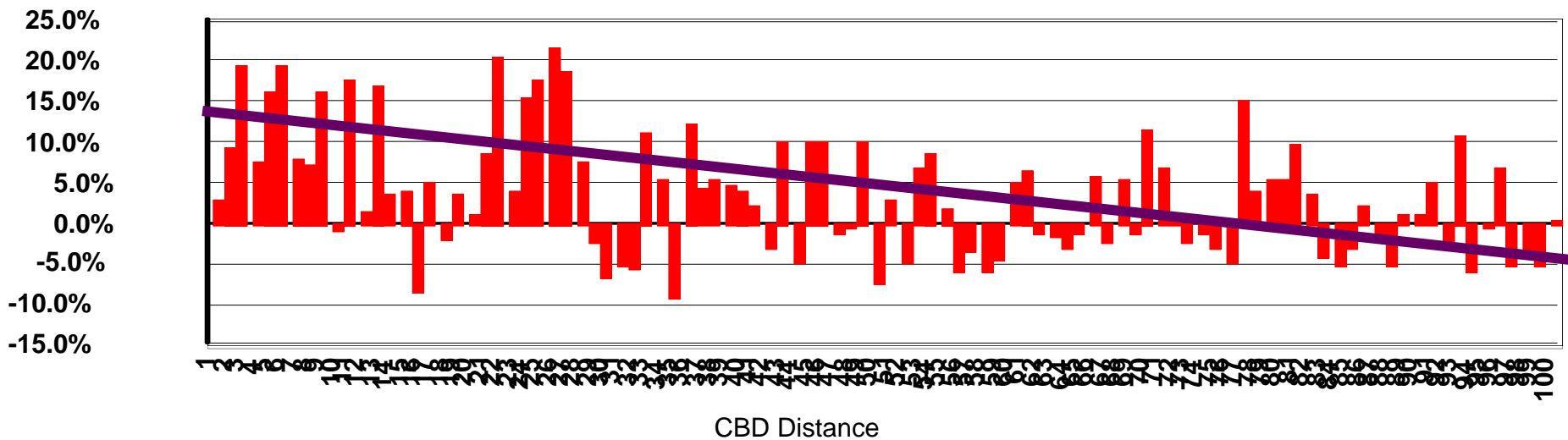
Source: National Association of Realtors, American Preference Survey 2004.

Fringe Values Eroding: Phoenix

Average Annual Appreciation 2004-2006



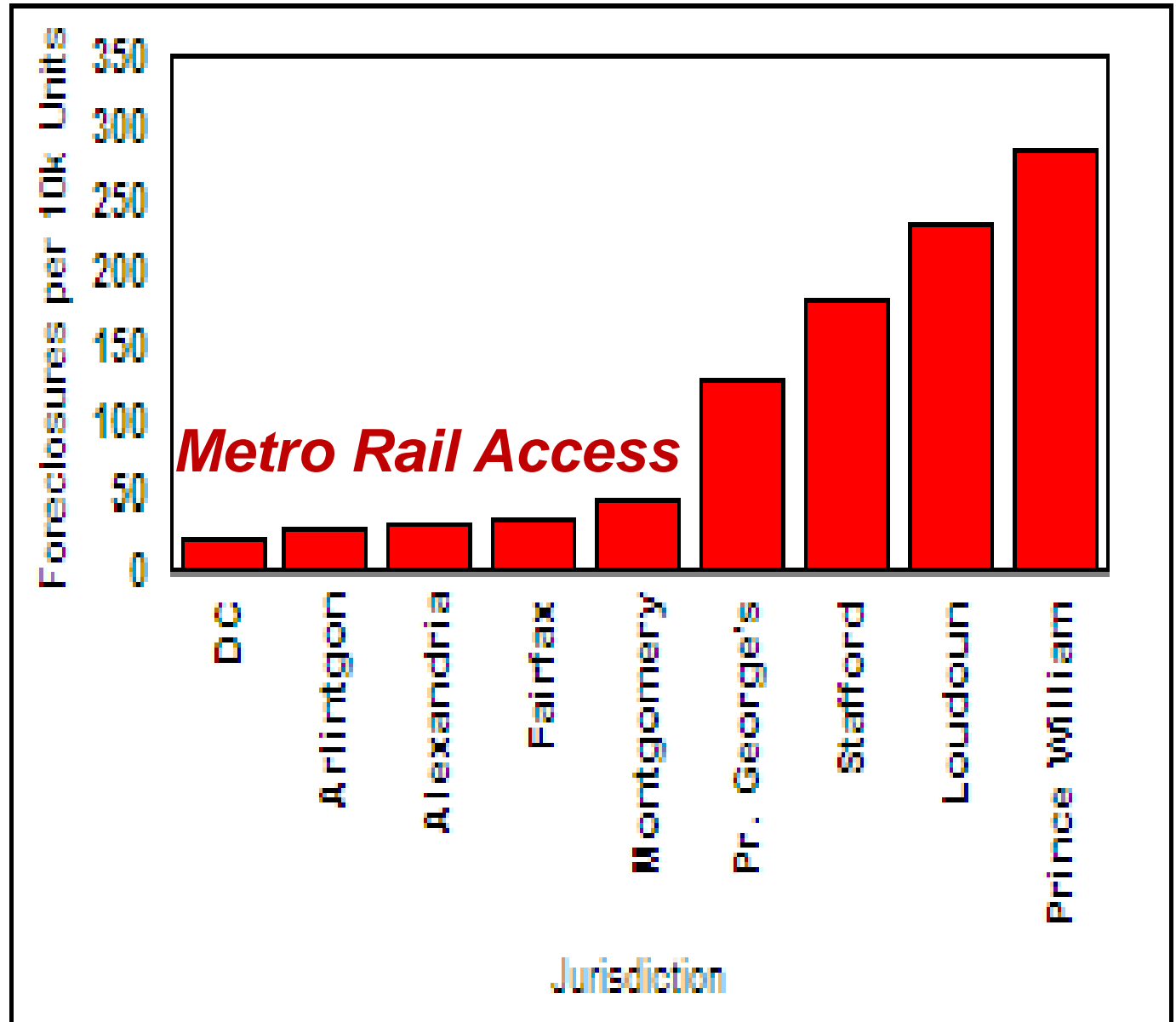
Appreciation 2006-07



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

Fringe Foreclosure Pattern

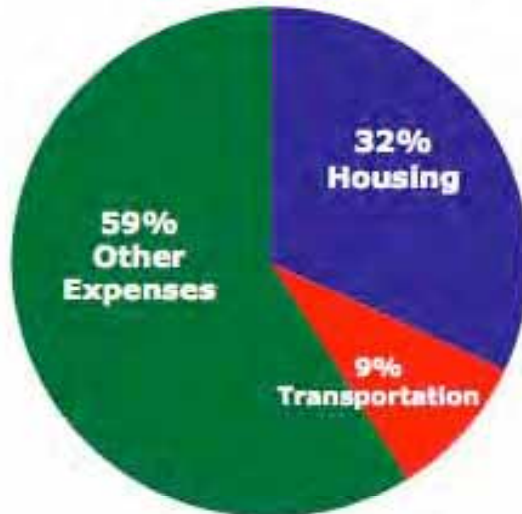
DC Metro
Subprime
Oversupply
Devaluation
Energy prices



Location Costs

FORECLOSURE RESILIENT

Transit Rich
Neighborhood

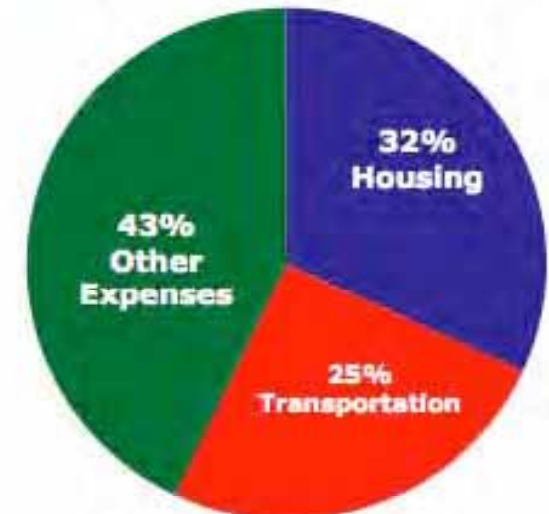


Average American
Family



FORECLOSURE RISKY

Auto Dependent
Neighborhood

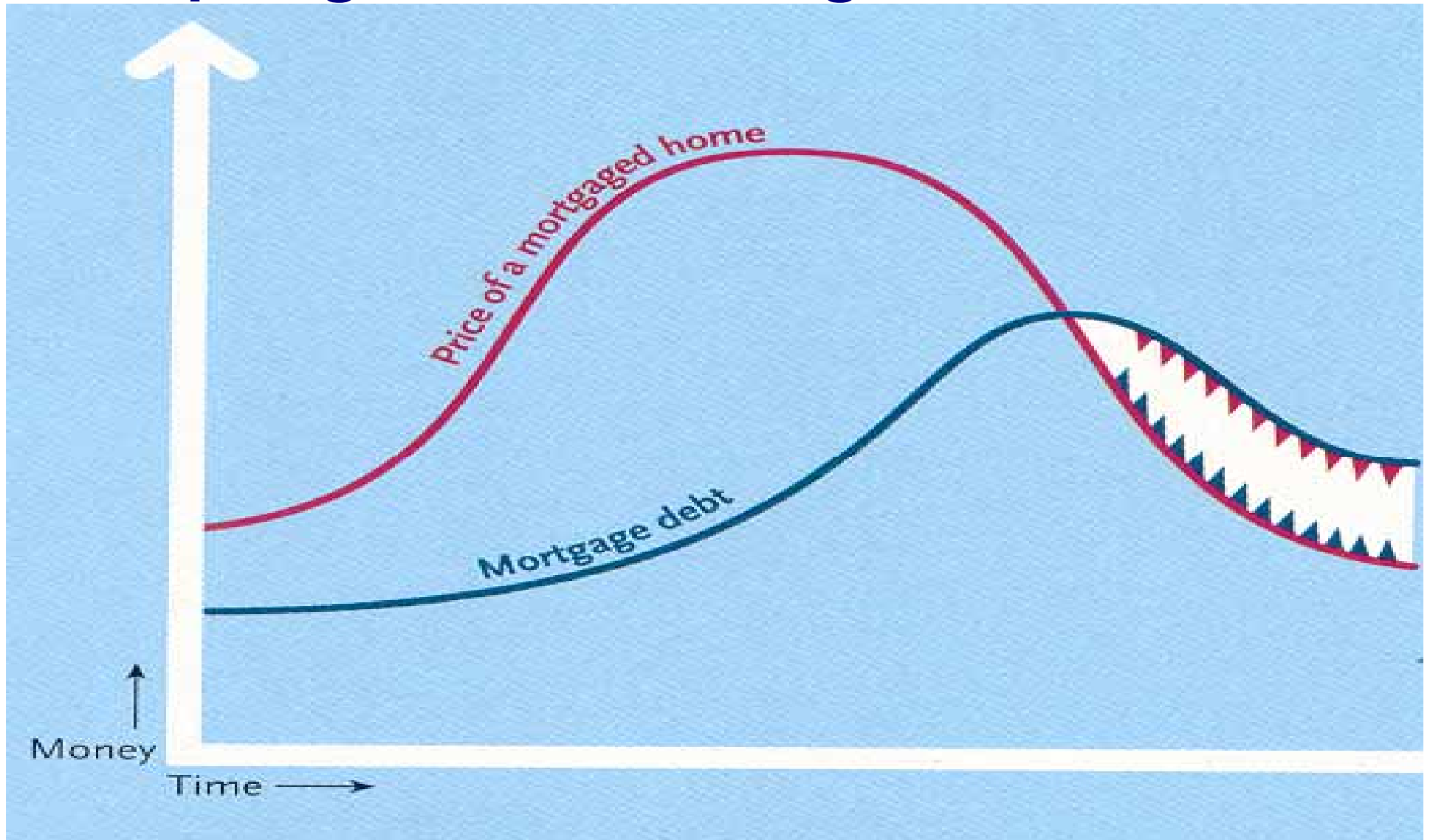


Source: Center for TOD Housing + Transportation Affordability Index, 2004 Bureau of Labor Statistics

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

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

Collapsing Suburban Fringe/Exurban Values



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



U.S. homes lost \$2 trillion in 2008

Les Christie, CNNMoney.com staff writer. Dec. 15, 2008: 11:02 AM ET



Home Ownership Falling?

- Sub-prime “meltdown”.
- Private underwriting tighter.
- New regulations will tighten underwriting more.
- Many financially savvy people are renters.
- Renting provides mobility for jobs.
 - *Some Gen-X & Gen-Y attitudes different*
- Upscale rental communities attractive to middle/affluent/upper incomes.



Housing Tenure Demand Shift

US Home Ownership in 2000s = 67%

Ownership may fall to 62%, or less, by 2020

Tenure split in 2020

62% owner

38% renter

New home new construction to 2020:

50% owner-occupied

50% renter-occupied

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



The New Promised Land?



Tear Up a Parking Lot, Rebuild Paradise

Large, flat and well drained

Single, profit-motivated ownership

Major infrastructure in place

4+ lane highway frontage → “transit-ready”

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.”



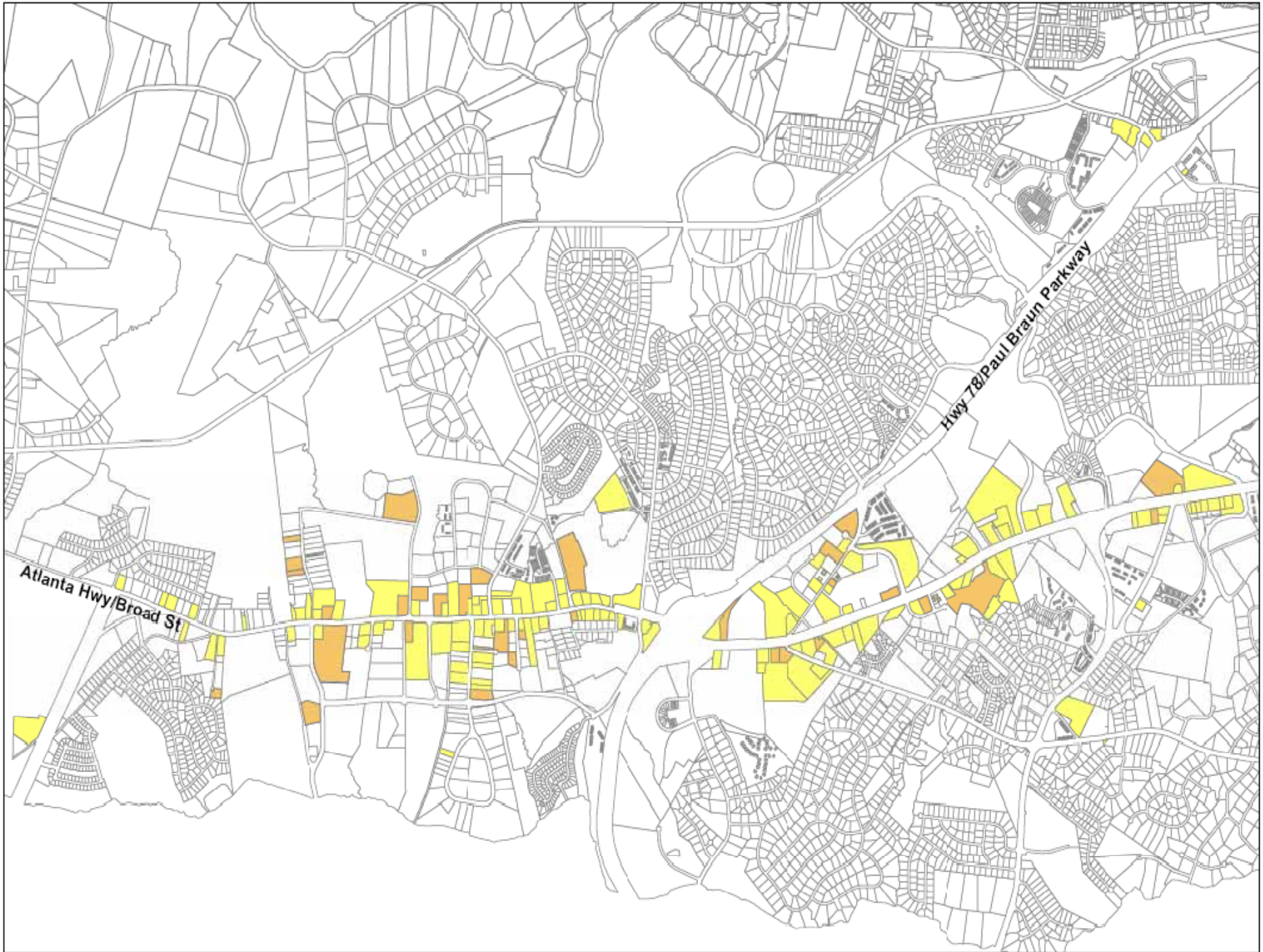


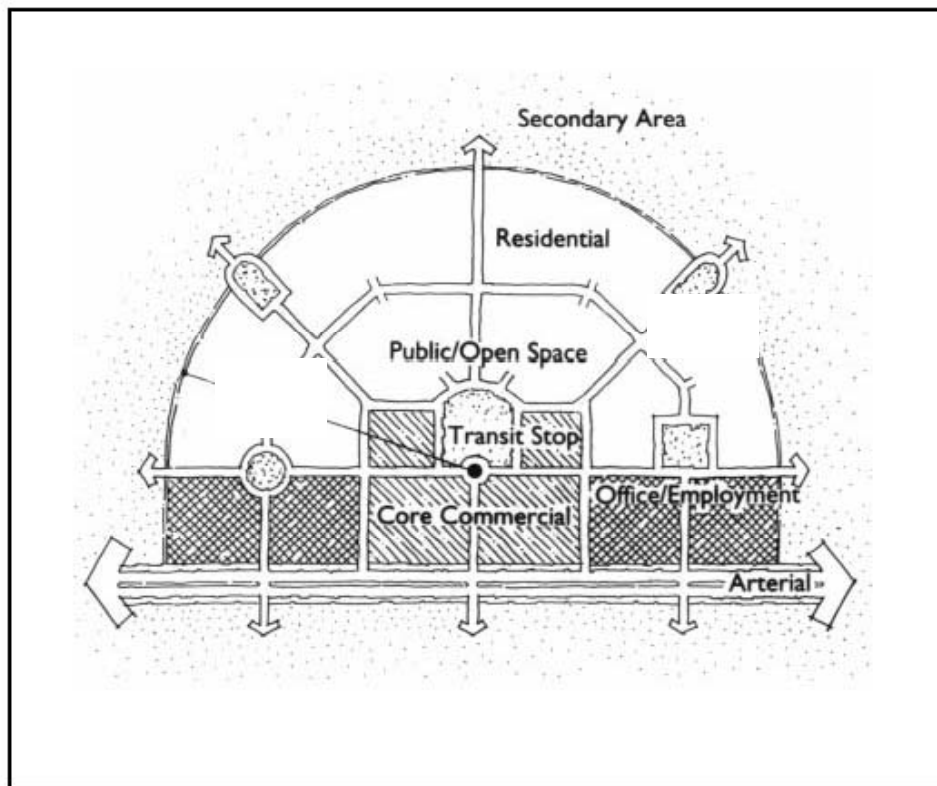


Figure courtesy of Dover Kohl Associates

Transit Oriented Development Template

10-minute walk or about 1500-2000 feet

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



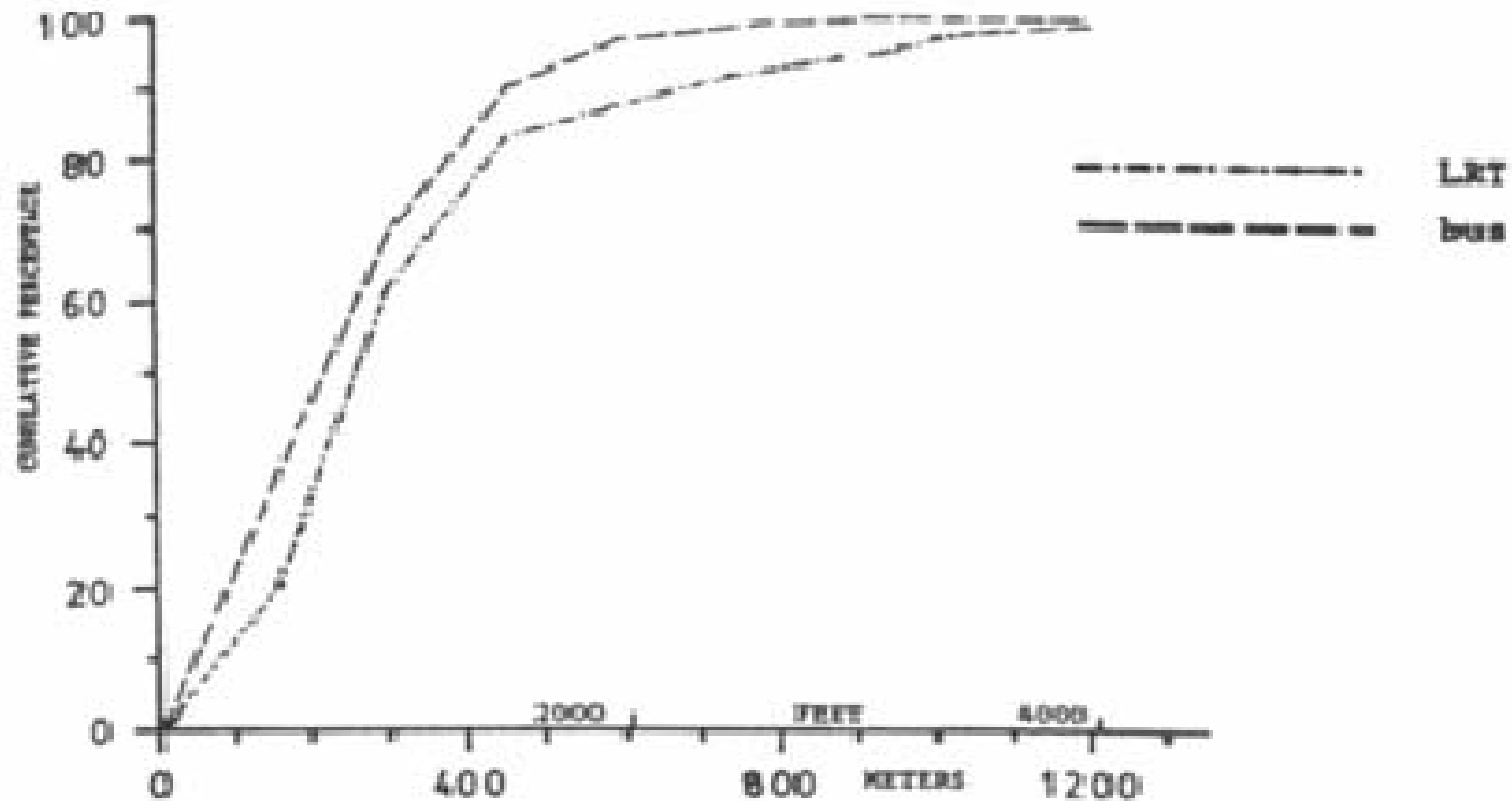
Source: Calthorpe (1993)

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)



Mountain Mega TOD Market Absorption

1km planning radius = 800 acres

<u>Megapolitan Area</u>	<u>@ 10du/Ac</u>
Albuquerque	20%
Denver	22%
Las Vegas	10%
Phoenix	19%
Salt Lake	57%
<i>Mountain Megapolitans</i>	<i>24%</i>



Mountain Mega “New Urbanity” Demand

1%→ Downtown demand

250,000 people

1%→ Secondary center demand

250,000 people

5%→ Other urban transit access demand

1,250,000 people

25%→ Suburban transit access new community demand

7,000,000 people

70% of new all development must be in “New Urbanity”
options to meet demand for the 1/3rd wanting them in 2040.

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

An aerial photograph of a mountain range with a river and a lake. The mountains are covered in dense green forest, and the river flows through a valley. A large lake is visible in the foreground, reflecting the surrounding landscape. The text "THANK YOU!" is overlaid in the center of the image.

THANK YOU!