The Built Environment:
A Healthy Dose of Good Design Improves the Bottom Line

Lee Sobel, US EPA

Rockville Town Square, Rockville, MD

What is Smart Growth?

- Growth that benefits the economy, the community, the environment, and public health.
- Provides consumers with choices for housing, working, shopping, playing, and getting around.
- Follows well established principles and design techniques, but not one size fits all - each project conforms to the local character whether in an rural, suburban or urban setting.

Haile Village, FL

Mashpee Commons, MA

King Farm, MD

Carlyle, DC

US EPA and Smart Growth

- US EPA's mission is to protect the environment and public health
- How and where we build have direct and indirect effects on the natural environment and public health
- Not all development affects the environment and human health in the same ways. As communities think about how to grow, they are looking for strategies that protect the environment while accommodating new growth.
- The EPA promotes Smart Growth as a land use and development strategy through its Office of Policy via outreach, education, research, policy and technical assistance.
- The EPA is a Partner member in the Smart Growth Network – www.smartgrowth.org.
- The EPA is a partner in the Partnership for Sustainable Communities.

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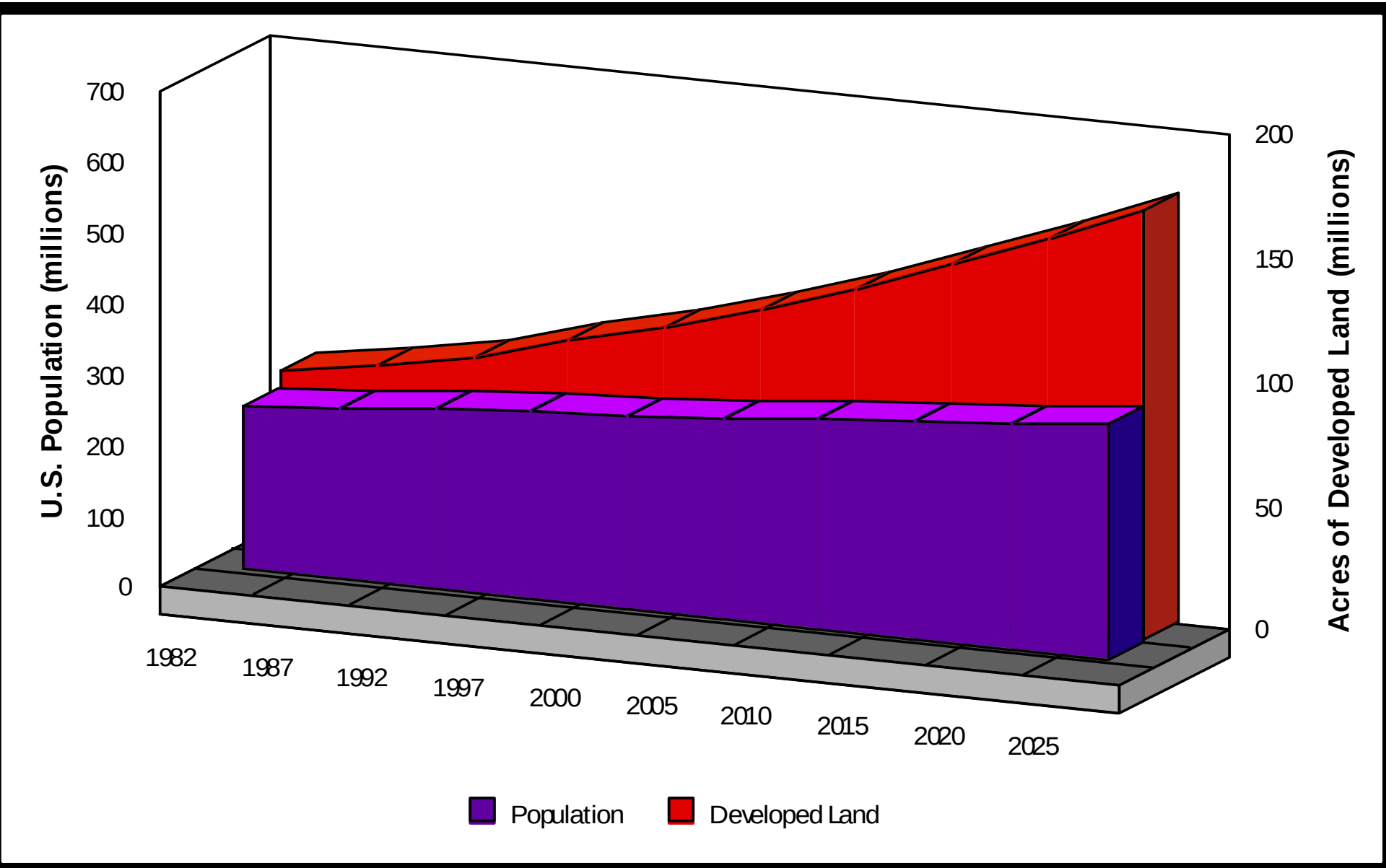
Partnership for Sustainable Communities

Mission: To meet the President's challenge for our agencies to work together to encourage and fully assist rural, suburban, and urban areas to build sustainable communities, and to make sustainable communities the leading style of development in the United States.

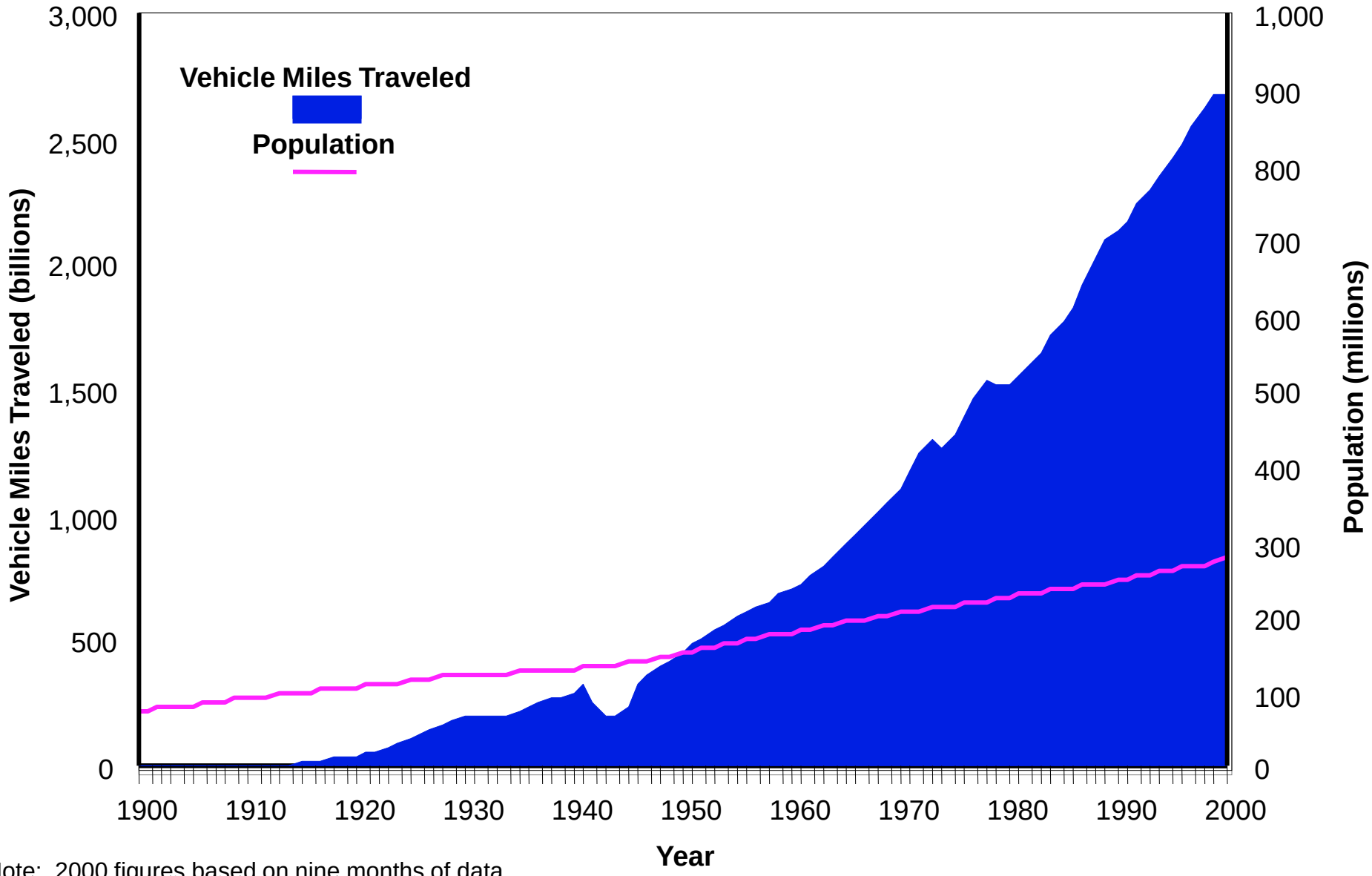
The Partnership is focused on ensuring that federal investments, policies, and actions do not subsidize sprawl and, instead, support development in more efficient and sustainable locations.

Rate of Land Development vs. Rate of Population Growth



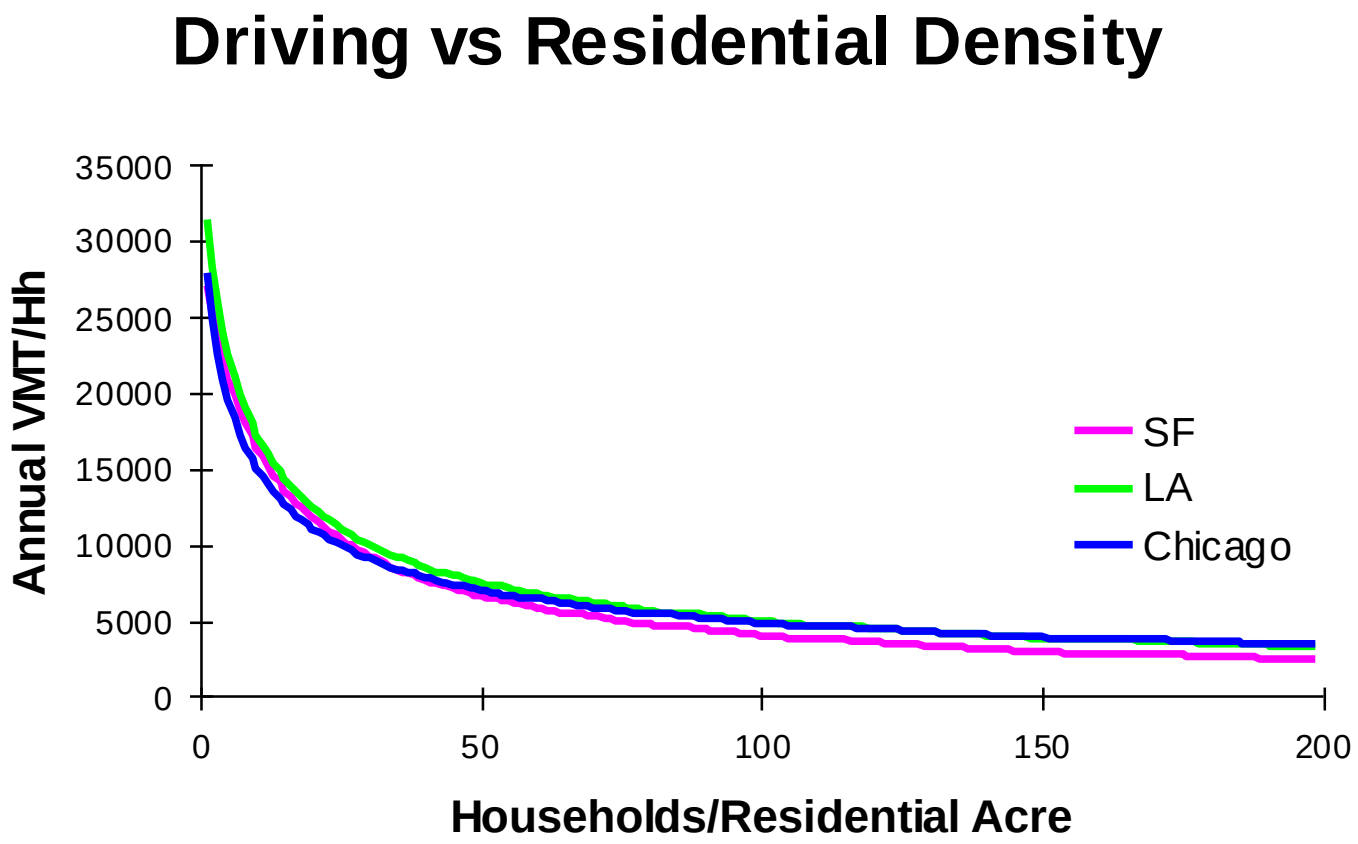
It's how and where we are growing that are driving our significantly increasing rate of land consumption, not domestic population growth.

Trends in Vehicle Miles Traveled

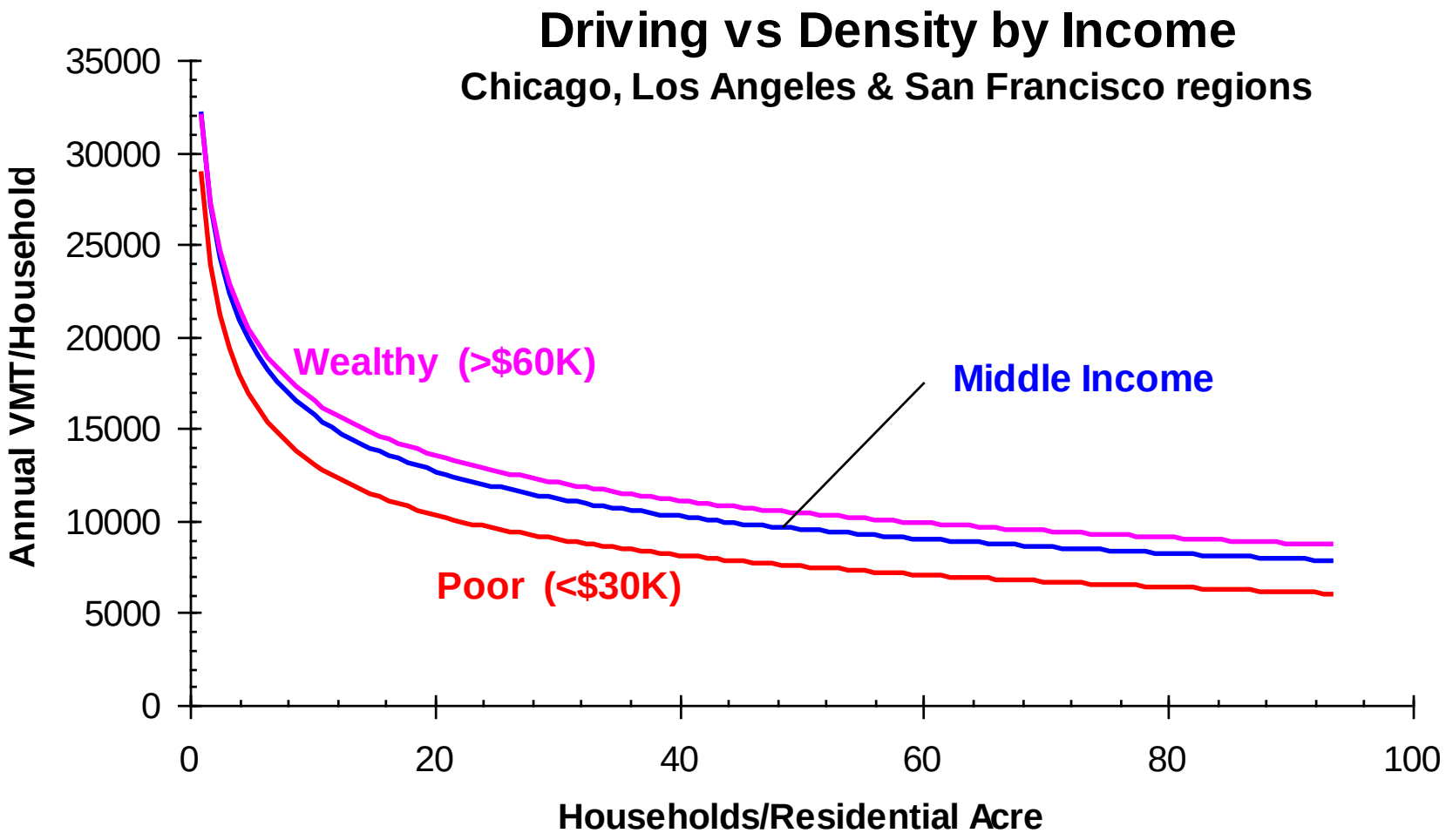


Note: 2000 figures based on nine months of data
Source: Dana Beach, Pew Oceans Commission

Housing and air quality

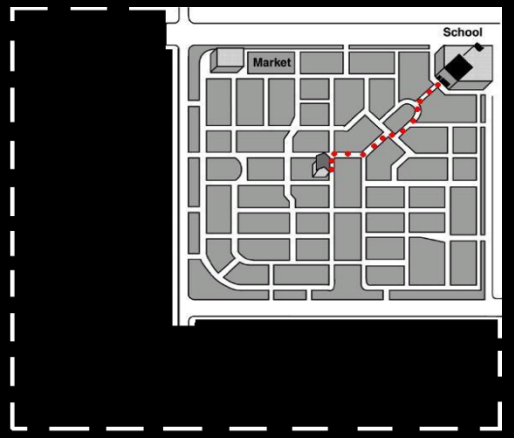


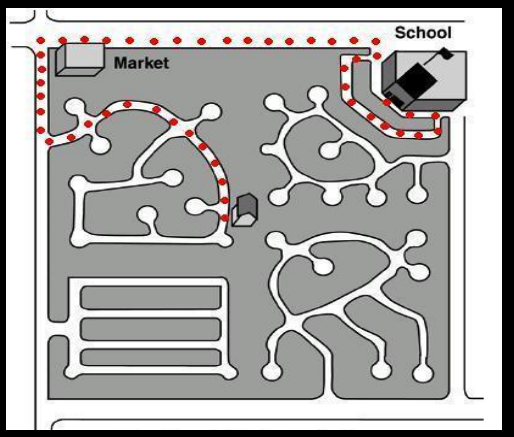
Source: Center for Neighborhood Technology



Source: Center for Neighborhood Technology

Same real estate, different arrangement





Renderings by Dover, Kohl & Partners

Demographics and consumer preference, today and tomorrow

- Consumer demand for smart growth is one-third of all home buyers and growing
  - Based on projected growth in demographic cohorts, demand for smart growth housing expected to increase. Preference favors attached housing and small lots. Existing supply of large lot housing meets all demand through 2025.

- The definition of the "family" unit is changing quickly

Households	2000	2025
With Children	33%	**28%**
Without Children	67%	**72%**
– *Single person households*	*26%*	*28%*

Source: Leadership in a New Era. Arthur C. "Chris" Nelson, JAPA, 2006.

See also EPA White Paper: *Where Will Everybody Live?* Arthur C. "Chris" Nelson, Virginia Tech. 2007.

Supply/Opportunity gap for smart growth

- 71 smart growth projects as total share of US housing market from 1Q2000 – 2Q2004: .43%
- New units for 2008: 905,359
- Consumer preference to buy SG: 33%

- **2008 supply gap: ~300,000**

- The market for smart growth is here!

Source: EPA White Paper: The Market for Smart Growth. Gregg Logan, Robert Charles Lesser & Co. 2007, and US Department of Commerce.

Rural Smart Growth Strategy

Support the rural landscape; Help existing places thrive; Create great new places.

- About 95% of all development is in greenfields. From 1994 to 1997:
  - 80% of all land developed for new housing (~2 million acres) was outside urban areas.
  - Half of those homes were on lots larger than 1-acre, consuming 94% of the land.
  - Of that, 10% were on lots larger than 10 acres, which consumed 57% of the land.

Source: US Dept. of Agriculture.

Suburbs

- Greenfield development
- Traditional neighborhood development (TND) / Transit Oriented Development (TOD)
- Suburban retrofit
  - Corridor
  - Greyfield

Urban

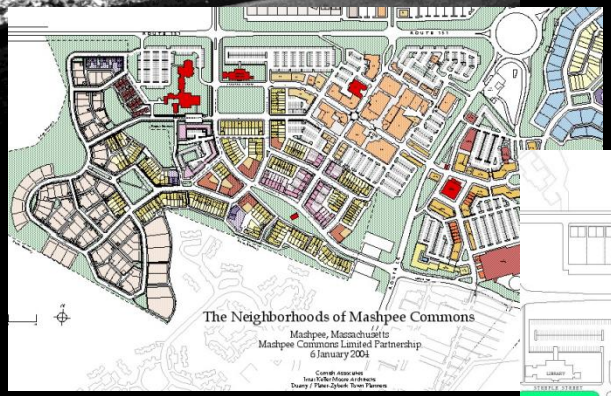
- Infill
- Transit Oriented Development (TOD)
- Brownfields (rural and suburban included)

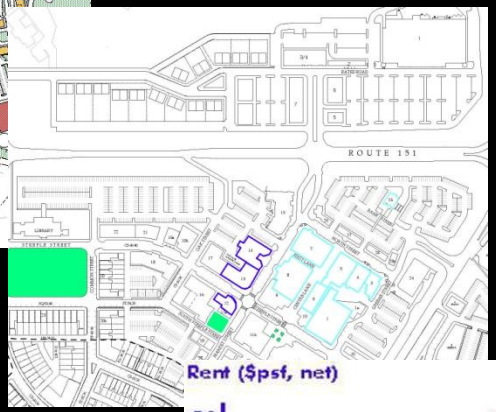


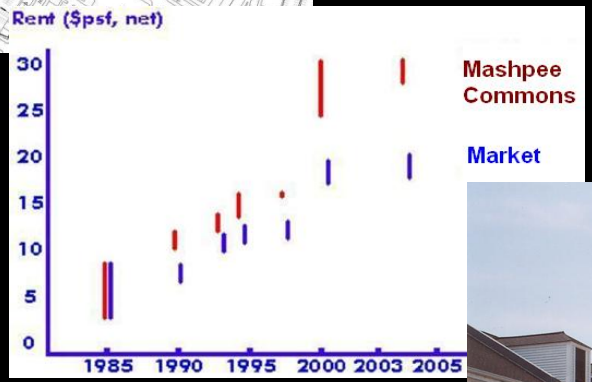

The region

Source: Arlington County, Virginia

Seabury Shopping Center is now Mashpee Commons







Mashpee, MA

Market Survey of Boca Raton Mall & CRA Sub-Market

Prior to Redevelopment

1980: Mall & CRA sub-market comprise 330 acre

History of Tax--Assessed Value

1990: Boca Raton Mall: $26.8M

1990-91: Site after demolition: $16.5M

1991-92: Mizner Park Phase I: $35.2M

1991-92: CRA area value: $83m (42.4% Mizner Park)

2001: Mizner Park: $68,254,478

Downtown CRA: $229,795,741

Commercial Development Trends

1982 - 1998: 75,000sf of new commercial construction

1998 - 2001: 1,774,000 under construction

Apartment Development Trends

1998: Approx. 700 new units in CRA

2001: Approx. 900 new units under construction

Cooper Cary: aerial, Boca Raton Mall, Boca Raton, FL

Market Survey of Boca Raton Mall

Office Market to 1998

Downtown is smallest of five sub-markets at 885,514sf in fourteen buildings

Lowest rental rate at $19.47psf, gross (26.55% below largest sub-market)

No new office construction from 1988 to 1998

Office Market - 1998 to 2001

Downtown adds 693,784sf in seven new office buildings (78.34% increase).

Rental rate is the second highest in Palm Beach County.

Downtown achieves fastest absorption rate in county.

Palm Beach County vacancy rate is 13.04% on 23.4 msf. All of Boca Raton's vacancy is 15.80% and the Mizner Park sub-market is 11.34%.

Market Survey of Boca Raton Mall

Existing Housing Market

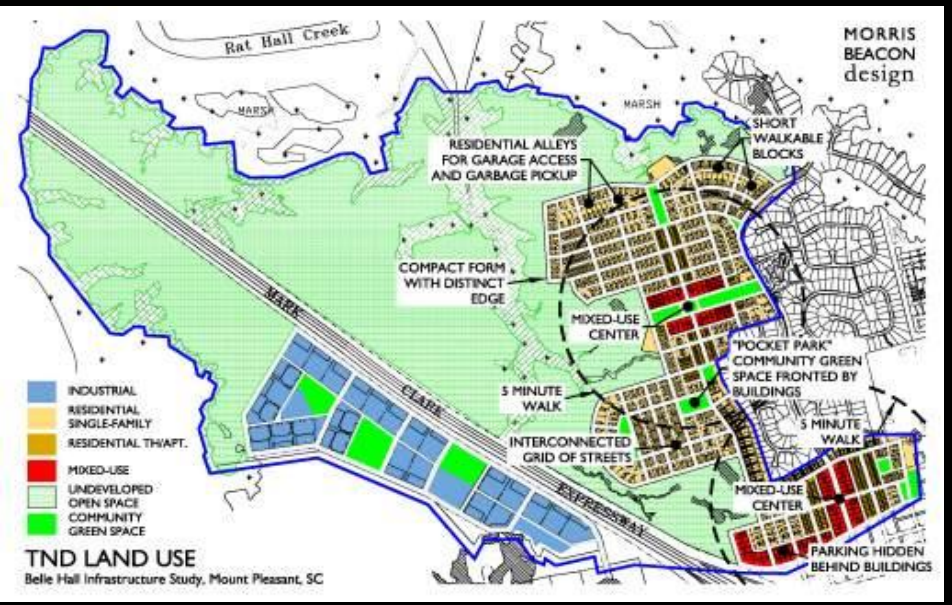
473 existing houses

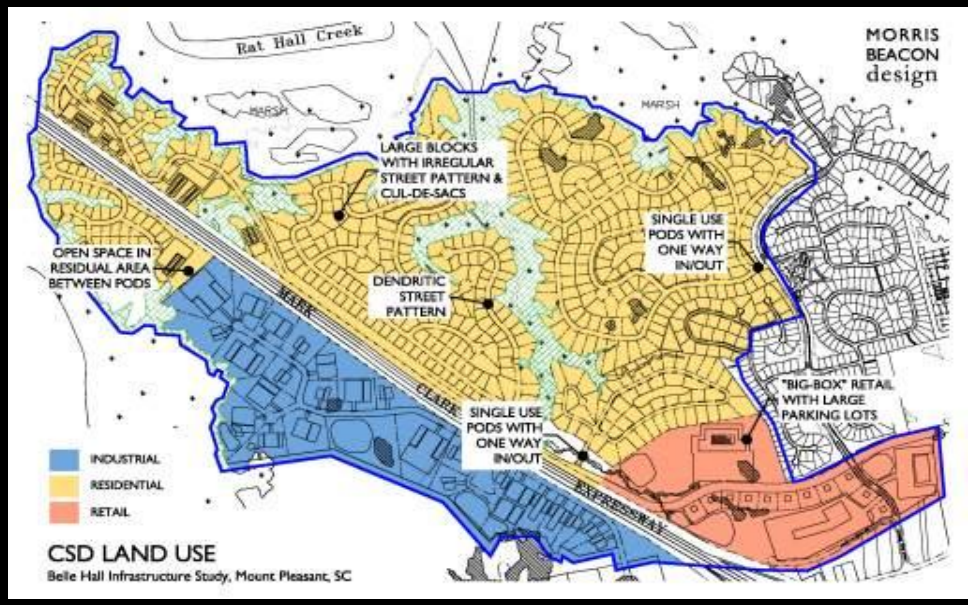
1991 Ave. Appreciation:	County:	5.52%
	Market:	10.06%
1999 Ave. Appreciation:	County:	7.63%
	Market:	33.16%

Average Sale Price (existing):

1993	County:	$142,352
	Market:	$124,317 (-12.67%)
2001	County:	$217,200
	Market:	$303,346 (+39.67%)

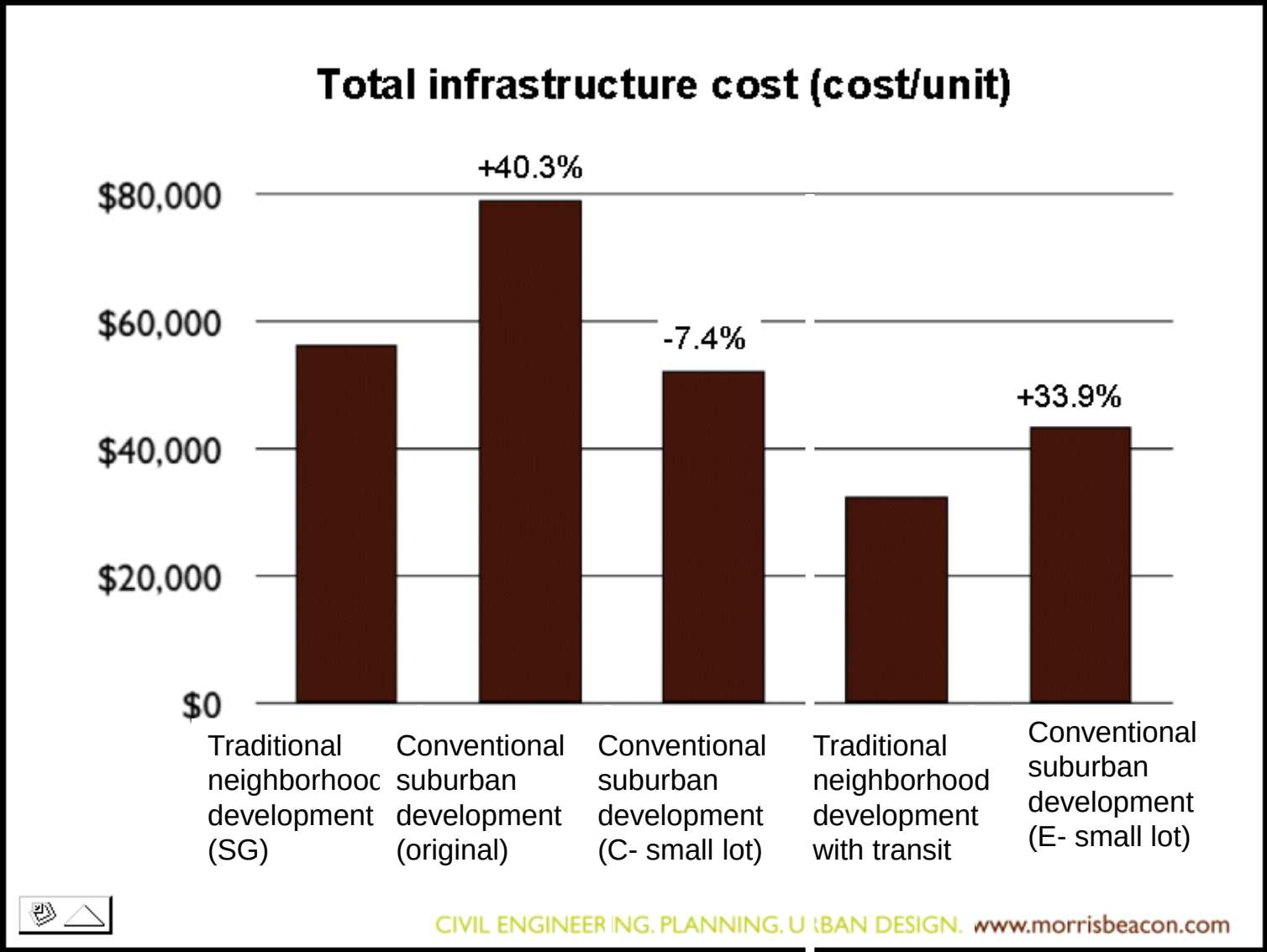
Infrastructure: which costs more?





It depends… but, costs are measurable!

Making the case: Infrastructure



Smart growth is more cost efficient

Cost Efficiencies of Production Home Construction Elements			
Construction Element	**Cost-Neutral**	**Smart Growth**	**Conventional**
Site planning			√
Footprint size and configuration		√	
Foundation - Slab		√	
Foundation - Stem-wall	√		
Exterior corners		√	
Roof pitches	√		
Exterior doors	√		
Exterior windows		√	
Ceiling heights		√	
Decks and porches	√		
Exterior details	√		
Quality of materials and finishes	√		
Front elevation variety		√	
360° vs. 90° architecture	√		
Interiors	√		
Garage configuration		√	
Garage - attached/detached			√
Setbacks ("build-to lines")		√	
Floor area and design		√	
Systems approach	√		

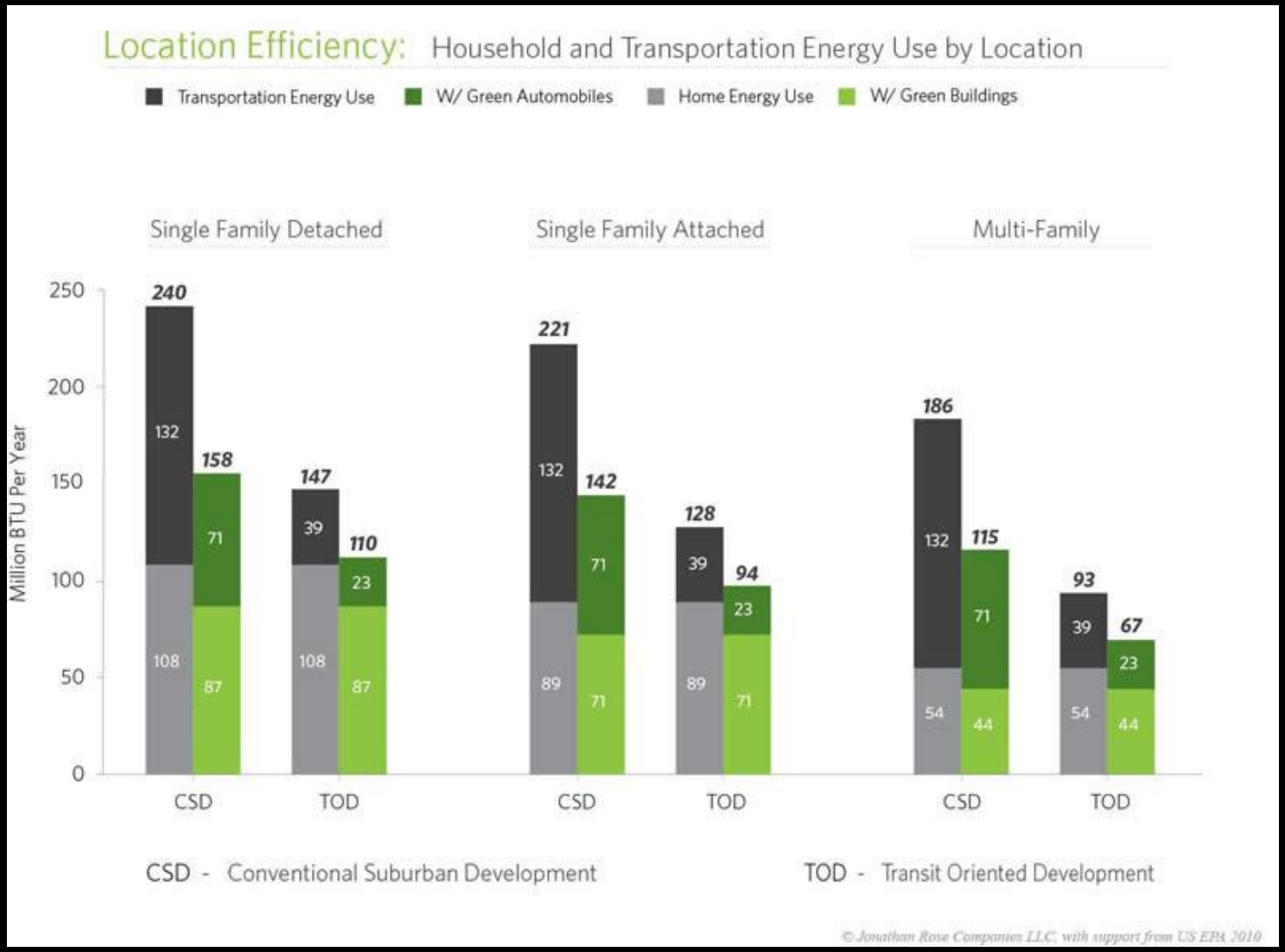
EPA, The Business Case for Smart Growth; Production-Built Homes, 2008.

Market acceptance of smart growth

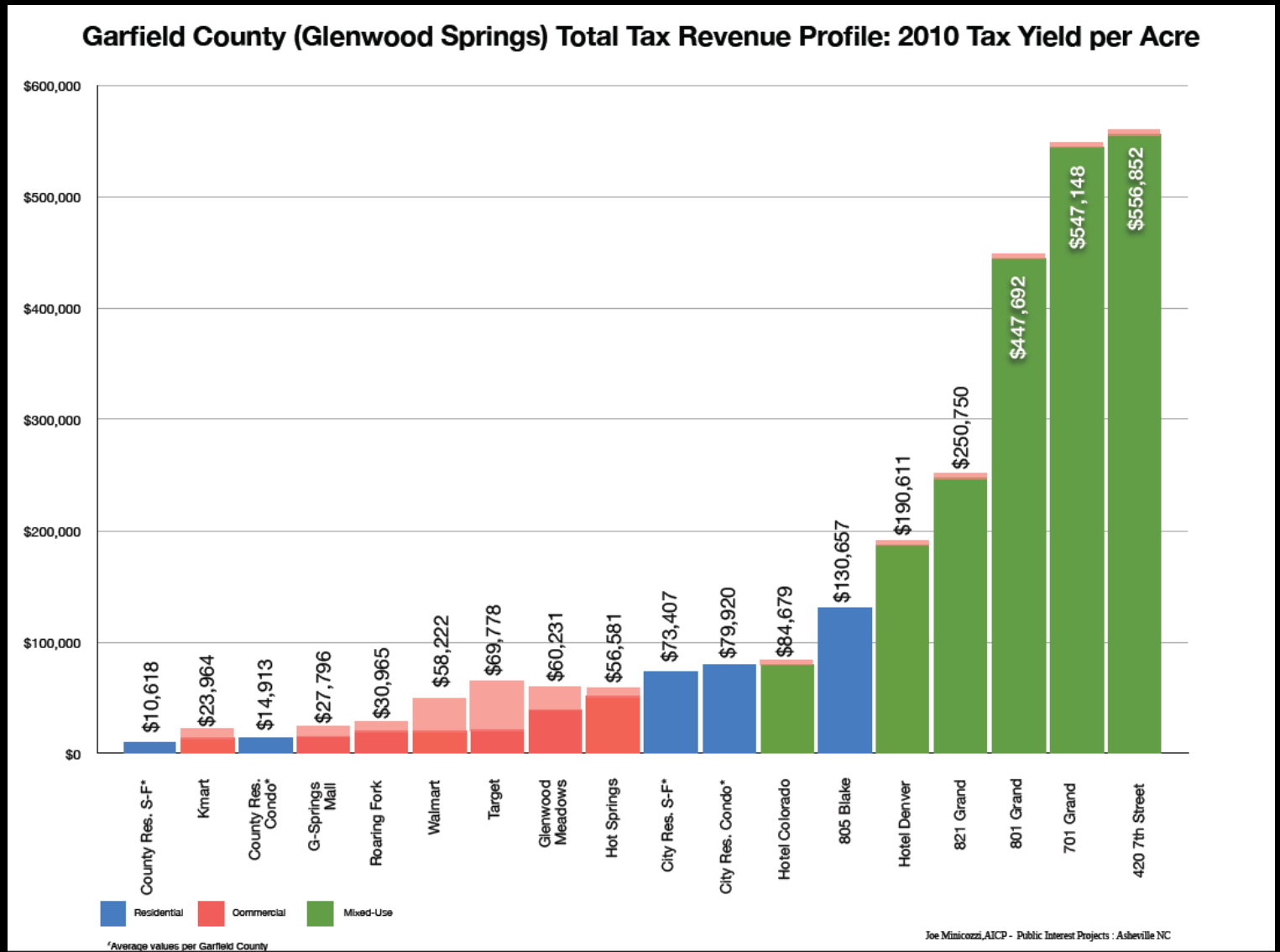
- Valuing the New Urbanism (Eppli & Tu. 1999.)
  - 13% price premium for Kentlands, 1995 - 1997
- Updated paper by Eppli & Tu, 2007
  - Kentlands, Lakelands, and entire 20878 zip code
    - 4,744 resales between 1997 - 2005
    - Kentlands 16.1% price premium
    - Lakelands 6.5% price premium
- Urban versus suburban housing: Premiums favor urban housing by 40 to 200% (Denver, Detroit, New York, and Seattle). ***The Option of Urbanism; Investing in a New American Dream*, Christopher B. Leinberger. 2008**

Source: EPA White Paper: Market Acceptance of Single-Family Housing Units in Smart Growth Communities. Mark Eppli, Charles Tu. 2007.

Pocketbook Performance



Mixed use development increases tax revenues



Thank you

- EPA Office of Sustainable Communities
- Partnership for Sustainable Communities
- Smart Growth Network

•New Partners for Smart Growth
February 2-4, 2012
San Diego, CA

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