

# **THE IMPACT OF SMART GROWTH ON HOUSING AFFORDABILITY**

## **An Analysis of Metropolitan Markets by Land Use Planning System**

**Atlanta • Dallas-Fort Worth • Indianapolis • Kansas City  
Boston • Portland • San Diego • Washington**

*POLICY REPORT*

Available at  
<http://www.demographia.com/dhi-us8.pdf>



**DEMOGRAPHIA**

January 2008

## Table of Contents

Executive Summary	1
1. Housing Affordability in the United States	3
2. Existing House Prices	5
3. New House Prices	11
4. Conclusion: Smart Growth & Housing Prices	13
5. Implications of Higher Smart Growth Housing Prices	14

Note: A more complete analysis will be found in the working paper at  
<http://www.demographia.com/dhi-us8w.pdf>

*Cover Illustrations*  
*Kansas City (Left); Portland (Right)*

## EXECUTIVE SUMMARY

### Introduction

House prices have risen substantially in the United States over the past decade. There is disagreement over the causes. Many economists are of the view that house prices have risen because of prescriptive (or “smart growth”) land use policies. Smart growth advocates deny this claim; though admit that smart growth can increase housing prices under some circumstances.

This report compares prices and trends in markets with and without smart growth. The purpose is to determine whether price increases can be attributed to smart growth markets and if so, the extent of such increases.

### House Prices

House prices and trends are analyzed in four smart growth markets (Boston, Portland, San Diego and Washington) and four markets without smart growth, or responsive markets (Atlanta, Dallas-Fort Worth, Indianapolis and Kansas City). Prices are compared to a “market ceiling,” which is an estimate of the highest likely prices in a market without smart growth. Any excess in house price above the corresponding market ceiling is considered regulatory *excess*, the result of more restrictive land use restrictions.

**Existing Houses:** The median prices of existing houses are analyzed over the period of 1996 to 2006. Underlying market factors changed little between 1996 and 2006 in responsive markets. In both 1996 and 2006, median house prices were below the market ceiling for existing houses in all four responsive markets. In contrast, median house prices were above the market ceilings in all four prescriptive (smart growth) markets in both 1996 and 2006. This “regulatory excess” was 14 percent in 1996 and escalated to 124 percent in 2006. The much higher rate of increase in prescriptive markets cannot be attributed to inflation, which was, in fact, higher between 1996 and 2006 in the responsive markets.

**New Houses:** The prices of new starter houses were also evaluated. New house prices were below the normal market limit in all four responsive markets. By contrast, new house prices were above the market ceiling in all four smart growth markets. On average, this regulatory excess was 84 percent above the market ceiling.

**Conclusion: Smart Growth and Housing Prices:** Demand is rejected as the cause of higher prices in smart growth markets, since the same demand inducing more liberal loan products have been available in all markers, not just smart growth markets. Moreover, no normal market factors were identified that would justify the materially higher prices or price increases in the smart growth markets compared to the responsive markets. Thus, *it is concluded that smart growth increases housing prices.*

## Implications

There are potentially serious implications to the conclusion that smart growth raises housing prices. These consequences are already becoming evident.

- In the prescriptive markets, the share of median household income required for a mortgage on the median priced house doubled between 2000 and 2006 (from 23 percent to 46 percent). There was no change in responsive markets (19 percent). Lower home ownership rates and a lower standard of living are likely outcomes of the higher housing prices created by smart growth.
- First homebuyers are finding it much more expensive to make house purchases. The Quintile Multiple indicates that first homebuyers are likely to have to pay nearly six years of income more than the median household.
- Because of their generally lower incomes, ethnic minorities are required to pay much more relative to incomes than Non-Hispanic White households. Hispanic households must pay 4.0 years more in median income for the median priced house than Non-Hispanic White households. African-American households must pay 4.4 years more in median income for the median priced house than Non-Hispanic White households. It is likely that the home ownership gap between Non-Hispanic White households and minority households will expand because of smart growth's impact on housing prices.
- Federal Reserve Board research indicates that metropolitan areas with more restrictive land use regulation experience less job growth than would be expected with responsive regulation. This declining competitiveness is evident in strong domestic net migration losses in smart growth metropolitan areas.
- Price differences have become so substantial that moving from a prescriptive market to a responsive market saves an average of approximately \$650,000 in purchase and financing costs. This is the equivalent of 11 years of household income, or more than one-quarter of a 40-year work career.

Achieving the goals of prescriptive planning may not be possible without destroying housing affordability. This dilemma has led Donald Brash, former governor of the Reserve Bank of New Zealand to propose prohibiting some smart growth policies.

**Note: A more complete analysis will be found in the working paper at <http://www.demographia.com/dhi-us8w.pdf>**

# THE IMPACT OF SMART GROWTH ON HOUSING AFFORDABILITY

## An Analysis of Metropolitan Markets by Land Use Planning System

### 1. HOUSING AFFORDABILITY IN THE UNITED STATES

In recent years, on average, housing has become less affordable in the United States.

#### The Two-Speed Housing Market: The Debate

However, national data obscures differing levels of housing affordability. Housing is no longer affordable in some markets, but it remains affordable in other markets. There is strong disagreement about the causes of the higher housing prices that have emerged in some metropolitan markets.

Economists, as liberal Paul Krugman of *The New York Times* and conservative Thomas Sowell of the Hoover Institution attribute the geographically focused house cost escalation to prescriptive land use regulation. Central (reserve) bankers in the United Kingdom, Australia and New Zealand have also noted the connection between higher house prices prescriptive land use planning.<sup>1</sup> An Organization for Economic Cooperation and Development (OECD) report noted an association between strongly regulated land markets and higher housing prices.<sup>2</sup>

Prescriptive planning systems, often called “smart growth” can severely limit development, such as by prohibiting development on the urban fringe, establishing large development prohibited zones and impose significant, imposing large lot zoning in rural areas and charging expensive development impact fees. The economic view is that land use regulations, such as urban growth boundaries and minimum building lot sizes in some areas have resulted in land rationing, leading to materially higher house prices.

Proponents of smart growth generally claim that their policies do not raise house prices. In fact, most authoritative “smart growth” volume, *Costs of Sprawl – 2000*, predicts that

---

<sup>1</sup> Including Bank of England Monetary Policy Committee Member Kate Barker (Kate Barker (2004 and 2006). *Review of Housing Supply: Delivering Stability: Securing Our Future Housing Needs: Final Report—Recommendations*. Norwich, England: Her Majesty’s Stationery Office. [www.hmtreasury](http://www.hmtreasury)), Chairman of the Reserve Bank of New Zealand Arthur Grimes (Arthur C. Grimes, *Housing Supply in the Auckland Region*, Centre for Housing Research Aotearoa New Zealand (2007). <http://www.hnzc.co.nz/chr/pdfs/housing-supply-in-the-auckland-region-2000-2005.pdf>.) and Former Chairman of the Reserve Bank of New Zealand Donald Brash (see below). Statements indicating the relationship between higher fringe housing costs and prescriptive planning have also been made by former Reserve Bank of Australian Governor Ian MacFarland and present Governor Glenn Stephens.

<sup>2</sup> “Recent House Price Developments: The Role of Fundamentals,” *OECD Economic Outlook #78* (2005), <http://www.oecd.org/dataoecd/41/56/35756053.pdf>.

new house prices will fall in prescriptive markets relative to those in responsive markets. At the same time, proponents indicate the potential for their strategies to result in higher housing prices, if they are not properly implemented.<sup>3</sup> Smart growth proponents often suggest that the higher housing prices have been caused by greater demand, especially from more liberal mortgage loan practices.

Land use planning regulations in the United States have been comparatively responsive to the market since World War II. This regulatory regime allowed residential construction on inexpensive urban fringe land. This was a principal factor driving suburbanization and a much higher home ownership rate in the United States. Home ownership rates rose from approximately 40 percent in 1940 to nearly 70 percent by 2000.

However, in recent decades, some areas have abandoned these “responsive” planning systems and imposed more “prescriptive” planning or smart growth models.

This report compares house prices and trends relative to incomes in eight representative metropolitan markets, including four responsive markets (Atlanta, Dallas-Fort Worth, Indianapolis and Kansas City) and four prescriptive planning markets (Boston, Portland,<sup>4</sup> San Diego and Washington, DC).

The purpose is to identify whether smart growth is associated with higher housing prices, and if so, to identify the extent and outline the policy implications. Existing and new house prices are evaluated in each of the markets. The principal evaluation standard is the “normal market ceiling.” (Or “market ceiling”). The market ceiling is an estimate of the highest normal market price that would be expected in a responsive market, or a market without smart growth policies. Any house price above the market ceiling is considered regulatory *excess*.

If, after accounting for normal market condition, prescriptive planning is not associated with higher housing prices, then it will be concluded that smart growth does not increase housing prices. Alternatively, if house prices are materially higher than can be explained by normal market fluctuations in prescriptive markets, then it will be concluded that smart growth increases housing prices. In this case, a finding will be offered with respect to the extent of any smart growth related price escalation, with observations on potential implications.

---

<sup>3</sup> *Costs of Sprawl-2000* indicates that higher housing prices can occur from 7 of its 10 recommended smart growth strategies (Robert W. Burchell, George Lowenstein, William R. Dolphin, Catherine C. Galley, Anthony Downs, Samuel Seskin, and Terry Moore, *Costs of Sprawl—2000*. Washington, DC: Transportation Research Board, 2002). A Brookings Institution paper contends that smart growth does not increase housing prices, yet indicates that smart growth can increase housing prices by creating shortages of land for development (Arthur C. Nelson, Rolf Pendall, Casey J. Dawkins and Gerrit J. Knaap. *The Link Between Growth Management and Housing Affordability: The Academic Evidence*, Washington: Brookings Institution, 2002).

<sup>4</sup> Portland is unique among the prescriptive market, with approximately one-fourth of its area outside the state of Oregon, where land use restrictions are considerably less restrictive.

## 2. EXISTING HOUSE PRICES

Existing house prices and trends are examined using median price (“middle” price) data for 1996 and 2006 and the “Median Multiple” (Box).<sup>5</sup> Median house prices are compared to the market ceiling. The market ceiling for new houses is estimated at 20 percent above the average Median Multiple in non-smart growth markets from 1980 to 2000, based upon data from the John F. Kennedy School of Government (Harvard University).<sup>6</sup> Any excess in median house prices above the market ceiling is considered a regulatory excess.

### Box Median Multiple

The Median Multiple is the median house price divided by the median household income. The Median Multiple is a widely used indicator of housing affordability in urban markets. It is recommended by the World Bank and the United Nations.<sup>7</sup> More elaborate indicators, which may include mortgage interest rates and other factors, mask the structural elements of house pricing. They tend to be not well understood outside the financial sector, though are important to industry analysts. The Median Multiple provides an easily understood indicator of the structural health of residential markets and facilitates meaningful housing affordability comparisons, both between national and international markets and over time. Historically, most markets have exhibited Median Multiples of 3.0 or below.

The results of the existing house analysis follow (Figure 1, Figure 2 and Table 1):

**Existing House Prices in Responsive Markets:** Underlying market factors changed little between 1996 and 2006 in responsive markets. Overall house prices increased \$11,000, which was within the \$12,000 increase in the market ceiling for existing houses. The average structure replacement<sup>8</sup> cost rose from \$109,000 in 1996 to \$132,000 in 2006, an increase of 21 percent. The average structure replacement costs represented 77 percent of the median house price in 1996 and grew to 87 percent by 2006.

House prices remained within the market ceiling in both years. In 1996, the median house price averaged \$141,000<sup>9</sup> in the responsive markets, which was 11 percent below the market ceiling. By 2006, the median house price had risen by 8 percent to \$152,000, yet continued to be 11 percent below the market ceiling. The median house prices remained below the market ceiling in all four responsive markets. The average Median Multiple among responsive markets was 2.7 in 1996 and in 2006.

---

<sup>5</sup> The median house price for 1996 and 2006 is obtained from the National Association of Realtors and the National Association of Home Builders. In each case, September data is used.

<sup>6</sup> Based upon an analysis of Joint Housing Center data (John F. Kennedy School of Government, Harvard University). The average Median Multiple was 2.5, which places the market ceiling at a Median Multiple of 3.0.

<sup>7</sup> *Promoting Sustainable Human Development*, United Nations, <http://www.un.org/esa/sustdev/natlinfo/indicators/worklist.htm> and [http://esl.jrc.it/envind/un\\_meths/UN\\_ME050.htm](http://esl.jrc.it/envind/un_meths/UN_ME050.htm) and *Sectoral Indicators*, The World Bank, <http://www.worldbank.org/html/opr/pmi/urban/urban006.html>.

<sup>8</sup> Estimated from Calculated from geographical factors in *Means Residential Square Foot Costs: Contractor's Pricing Guide: 2007*, R. S. Means, 2007.

<sup>9</sup> All 1996 figures in 2006\$.

## Market Ceiling & Regulatory Excess

EXISTING HOUSE: METROPOLITAN MARKETS: 1996

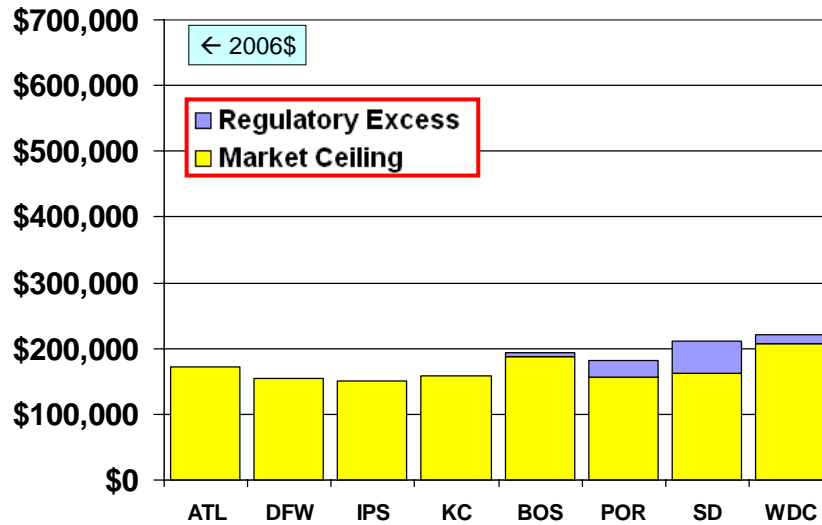


Figure 1

## Market Ceiling & Regulatory Excess

EXISTING HOUSE: METROPOLITAN MARKETS: 2006

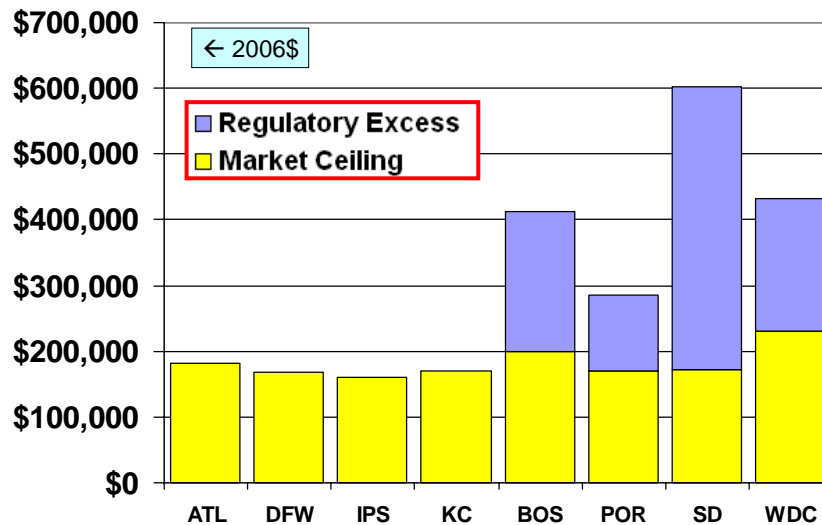


Figure 2



**Atlanta:** In 1996, the normal market ceiling for existing houses in Atlanta was \$173,000. The market ceiling rose to \$182,000 in 2006, an increase of 5 percent from 1996. The structure replacement cost rose from \$107,000 to \$140,000, an increase of 31 percent. As a result, house prices remained within the normal market ceiling. The median house price in 1996 was \$150,000, or 13 percent below the 1996 market ceiling. By 2006, the median house price had risen to \$176,000, which is 3 percent below the 2006 market ceiling. The Atlanta Median Multiple was 2.6 in 1996 and increased to 2.9 in 2006.

**Dallas-Fort Worth:** In 1996, the normal market ceiling for existing houses in Dallas-Fort Worth was \$154,000. The market ceiling rose to \$169,000 in 2006, an increase of 10 percent from 1996. The structure replacement cost rose from \$103,000 to \$117,000, an increase of 14 percent. Again, as a result, house prices remained within the normal market ceiling. The median house price in 1996 was \$144,000, or 6 percent below the 1996 market ceiling. By 2006, the median house price had risen to \$151,000, which is 11 percent below the 2006 market ceiling. The Dallas-Fort Worth Median Multiple was 2.8 in 1996 and declined to 2.7 in 2006.

**Indianapolis:** In 1996, the normal market ceiling for existing houses in Indianapolis was \$150,000. The market ceiling rose to \$160,000 in 2006, an increase of 7 percent from 1996. The structure replacement cost rose from \$109,000 to \$128,000, an increase of 17 percent. Again, as a result, house prices remained within the normal market ceiling. The median house price in 1996 was \$150,000, equaling the 1996 market ceiling. By 2006, the median house price had fallen to \$122,000, which is 24 percent below the 2006 market ceiling. The Indianapolis Median Multiple was 3.0 in 1996 and decreased to 2.3 in 2006.

**Kansas City:** In 1996, the normal market ceiling for existing houses in Kansas City was \$150,000. The market ceiling rose to \$160,000 in 2006, an increase of 7 percent from 1996. The structure replacement cost rose from \$118,000 to \$142,000, an increase of 20 percent. Again, as a result, house prices remained within the normal market ceiling. The median house price in 1996 was \$121,000, which was 23 percent below the 1996 market ceiling. By 2006, the median house price had risen to \$158,000, which is 7 percent below the 2006 market ceiling. The Kansas City Median Multiple was 2.3 in 1996 and increased to 2.8 in 2006.

**Existing House Prices in Prescriptive Markets:** As in responsive, markets, underlying market factors changed little between 1996 and 2006 in prescriptive markets, with the market ceiling for existing houses increasing \$16,000. The average structure replacement cost rose from \$130,000 in 1996 to \$132,000 in 2006, an increase of 15 percent. The average structure replacement costs represented 64 percent of the median house price in 1996. By 2006, structure replacement costs had fallen nearly in half, to 35 percent, representing an inordinate increase in average land value.

However, unlike in the responsive markets, house prices escalated well above the levels justified by the underlying market factors. The average house price increase was \$231,000, which is more than 14 times the increase in the market ceiling. In 1996, the median house price averaged \$202,000 in the prescriptive markets, which was 11 percent above the market ceiling. By 2006, the median house price had risen by 114 percent to \$432,000, to 124 percent above the market ceiling. The median house prices were above the market ceiling in all four prescriptive markets in both years. The average Median Multiple among prescriptive markets was 3.4 in 1996 and more than doubled, to 6.9 in 2006.

**Boston:** In 1996, the normal market ceiling for existing houses in Boston was \$188,000. The market ceiling increased to \$199,000 in 2006, an increase of 6 percent from 1996. The structure replacement cost rose from \$141,000 to \$164,000, an increase of 20 percent. However, house prices escalated strongly relative to the market ceiling. The median house price in 1996 was \$194,000, which was 3 percent above the 1996 market ceiling. By 2006, the median house price had risen to \$412,000, which is 107 percent above the 2006 market ceiling. The Boston Median Multiple was 3.1 in 1996 and doubled to 6.2 in 2006.

**Portland:** In 1996, the normal market ceiling for existing houses in Portland was \$156,000. The market ceiling increased to \$170,000 in 2006, an increase of 9 percent from 1996. The structure replacement cost rose from \$126,000 to \$140,000, an increase of 11 percent. However, house prices escalated strongly relative to the market ceiling. The median house price in 1996 was \$182,000, which was 17 percent above the 1996 market ceiling. By 2006, the median house price had risen to \$285,000, which is 68 percent above the 2006 market ceiling. The Portland Median Multiple was 3.5 in 1996 and increased to 5.0 in 2006.

**San Diego:** In 1996, the normal market ceiling for existing houses in San Diego was \$163,000. The market ceiling increased to \$172,000 in 2006, an increase of 6 percent from 1996. The structure replacement cost rose from \$126,000 to \$143,000, an increase of 13 percent. However, house prices escalated strongly relative to the market ceiling. The median house price in 1996 was \$212,000, which was 30 percent above the 1996 market ceiling. By 2006, the median house price had risen to \$602,000, which is 250 percent above the 2006 market ceiling. The San Diego Median Multiple was 3.9 in 1996 and nearly tripled to 10.5 in 2006.

**Washington:** In 1996, the normal market ceiling for existing houses in Washington was \$207,000. The market ceiling increased to \$230,000 in 2006, an increase of 6 percent from 1996. The structure replacement cost rose from \$126,000 to \$143,000, an increase of 11 percent. However, house prices escalated strongly relative to the market ceiling. The median house price in 1996 was \$221,000, which was 7 percent above the 1996 market ceiling. By 2006, the median house price had risen to \$432,000, which is 88 percent above the 2006

market ceiling. The Washington Median Multiple was 3.2 in 1996 and increased to 5.6 in 2006.

**Regulatory Excess:** As the information above shows, house prices in prescriptive markets escalated strongly relative to prices in responsive markets and relative to household incomes.

Median house prices in responsive markets were under the normal market ceilings, both in 1996 and 2006. As a result, there was no regulatory excess in either year.

Median house prices were somewhat above the normal market ceilings in 1996 in prescriptive markets. However, by 2006 the median house prices averaged \$215,000 more than the normal market ceilings in the prescriptive markets. This represents a substantial regulatory excess that increased nearly 10 times, from a 1996 average of \$25,000.

Regulatory excess accounted for 93 percent of the median house price increase in prescriptive markets from 1996 to 2006 (Figure 3). Non-smart growth market factors accounted for only 7 percent of the increase in prescriptive market median prices over those of responsive markets.

### Share of Change in Price Increases PRESCRIPTIVE PLANNING: 1996-2006

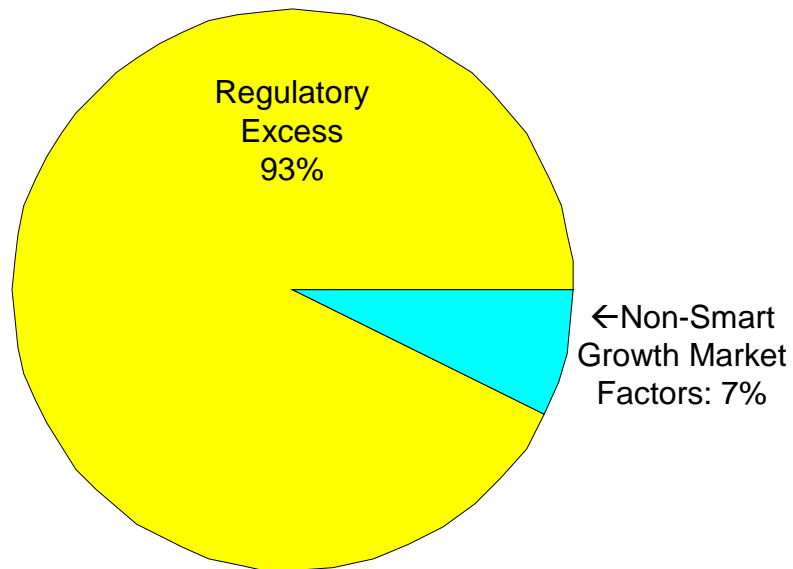


Figure 3

**Inflation:** Differences in inflation rates had nothing to do with the differences in house price increases between responsive and prescriptive markets. In fact, overall inflation was

greater in the responsive markets than in the prescriptive markets. This is indicated by the normal market ceiling, which rose 7 percent in responsive markets between 1996 and 2006 and only 5 percent in prescriptive markets.

**Forecast and Reality:** Moreover, the price contrasts with forecasts made by smart growth advocates. The *Costs of Sprawl---2000*<sup>10</sup> predicted that smart growth would reduce average new house costs \$11,000 (inflation adjusted) per unit between 2000 and 2025 relative to areas with responsive planning policies.<sup>11</sup> At this rate, a reduction in costs of more than \$3,000 per unit would have been expected between 2000 and 2006. To the contrary, median house prices rose more than \$160,000 in prescriptive planning areas relative to prices in markets with responsive planning in just six years.

**The Role of Demand:** The cause of the price increase differences was not demand. Demand increased at a greater rate in the responsive metropolitan markets than in the prescriptive markets. This is the opposite of what would have been expected given the higher price increases in prescriptive markets. Population growth averaged 23 percent in the responsive markets from 1996 to 2006. Population growth was approximately one-half that rate in the prescriptive markets, at 12 percent.

Moreover, demand from more liberal loaning practices could not have been the cause of the differing house price increase experiences between responsive and prescriptive markets. The same financing arrangements were available in both responsive and prescriptive markets. If financing induced demand drove prices higher, similar experiences would have been expected in all markets. In fact, however, it appears that the responsive planning systems were able to accommodate the increased housing supply required by the new demand. The smart growth systems failed to permit the supply increase that would have been necessary to keep housing prices from escalating.

**Conclusion: Existing Houses:** There is no evidence of any inherent market differences that could account for the substantially higher existing house prices in smart growth markets compared to responsive markets. The data leads to a conclusion that smart growth is associated with higher existing house prices.

### 3. NEW HOUSES

The new house analysis uses a detached 1,600 square foot starter house on a 1/6<sup>th</sup> acre lot on urban fringe. The least expensive new house offered by a national or metropolitan

---

<sup>10</sup> Robert W. Burchell, George Lowenstein, William R. Dolphin, Catherine C. Galley, Anthony Downs, Samuel Seskin, and Terry Moore, *Costs of Sprawl—2000*. Washington, DC: Transportation Research Board, 2002.

<sup>11</sup> The *Costs of Sprawl---2000* projection related to new housing. This analysis refers to existing housing, which typically exhibits similar cost increase trends and is closely related to the price of new housing. In 2006, the new starter house price (below) represented approximately 85 percent of the median house price in the reviewed responsive markets and 90 percent in the prescriptive markets. Thus, the increase in existing house prices is associated with similar increases in new house prices.

builder, on the urban fringe was selected in each metropolitan market.<sup>12</sup> The normal market ceiling is estimated at 20 percent above the normal production cost<sup>13</sup> in a non-smart growth market. This includes the land purchase, infrastructure and construction of the house. As in the case of existing houses, any actual house price above the normal market limit is considered a *regulatory excess*.

The new house analysis results follow (Table 2)

**Responsive Markets:** New house prices were below the normal market limit in responsive markets. The normal market ceiling for new houses in responsive markets averaged \$173,000. The actual new house price averaged \$132,000, which is 24 percent below the market ceiling. The actual house price was below the market ceiling in each of the responsive markets. The cost of house construction represented 89 percent of the actual purchase price of the house (and land). Moreover, the actual house price averaged below the normal production cost. This illustrates the role of competition in relatively unconstrained markets as builders and developers seek buyers by reducing costs and profit margins (Figure 4).

**Atlanta:** The normal market ceiling for new houses in Atlanta was \$173,000. The actual new house price in Atlanta was \$135,000, which is 22 percent below the market ceiling.

**Dallas-Fort Worth:** The normal market ceiling for new houses in Dallas-Fort Worth was \$152,000. The actual new house price in Dallas-Fort Worth was \$104,000, which is 32 percent below the market ceiling.

**Indianapolis:** The normal market ceiling for new houses in Indianapolis was \$173,000. The actual new house price in Indianapolis was \$126,000, which is 27 percent below the market ceiling.

**Kansas City:** The normal market ceiling for new houses in Kansas City was \$193,000. The actual new house price in Kansas City was \$163,000, which is 16 percent below the market ceiling.

**Prescriptive Markets:** New house prices were above the normal market limit in prescriptive markets. The normal market ceiling for new houses in prescriptive markets averaged \$201,000. The actual new house price averaged \$369,000, which is 84 percent above the market ceiling. Unlike the responsive markets, the actual house price was above the market ceiling in each of the prescriptive markets. The cost of house construction represented 36 percent of the actual purchase price of the house (and land),

---

<sup>12</sup> The urban fringe was selected, since most new housing has been built on greenfield land on the edge of American urban areas for decades (even before World War II).

<sup>13</sup> The normal production cost includes the cost of agricultural land on the fringe (estimated from US Department of Agriculture data for the fringe county, a premium for conversion to residential use, lot finishing and infrastructure costs and the cost of house construction).

well below the 89 percent in the responsive markets. Moreover, the actual house price averaged well above (\$201,000) the normal production cost.

## Market Ceiling & Regulatory Excess

### NEW HOUSE: METROPOLITAN MARKETS

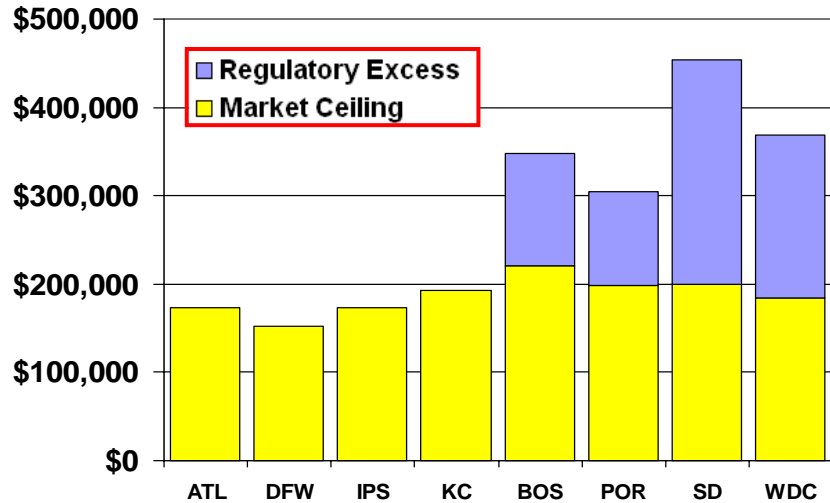


Figure 4

**Boston:** The normal market ceiling for new houses in Boston was \$221,000. The actual new house price in Boston was \$348,000, which is 57 percent above the market ceiling.

**Portland:** The normal market ceiling for new houses in Portland was \$198,000. The actual new house price in Portland was \$304,000, which is 54 percent above the market ceiling.

**San Diego:** The normal market ceiling for new houses in San Diego was \$200,000. The actual new house price in San Diego was \$454,000, which is 127 percent above the market ceiling.

**Washington:** The normal market ceiling for new houses in Washington was \$201,000. The actual new house price in Washington was \$369,000, which is 84 percent above the market ceiling.

**Regulatory Excess:** As in the case of existing houses, no regulatory excess is identified in responsive markets. Actual new house price is below the normal market ceiling for new houses. There are, however, substantial regulatory excesses in the prescriptive markets. Actual new house prices are well above the normal market ceiling, with an average regulatory excess of \$169,000.

**Conclusion: New Houses:** There is no indication that the higher prices or more rapid price increases of houses in prescriptive markets is due to any normal market factor (non-smart growth factor). The differences in agricultural land, lot finishing and construction costs are far too small to justify the higher prices evident in prescriptive markets. The data leads to a conclusion that smart growth is associated with higher new house prices.

**4. CONCLUSION: SMART GROWTH & HOUSE PRICES**

The higher prices and steeper house price increases in prescriptive markets (smart growth markets) are consistent with the economic view that more restrictive land use regulation leads to higher house prices. It seems likely that the principal cause of these higher prices is land use restrictions that drive the price of land higher (Figure 5).

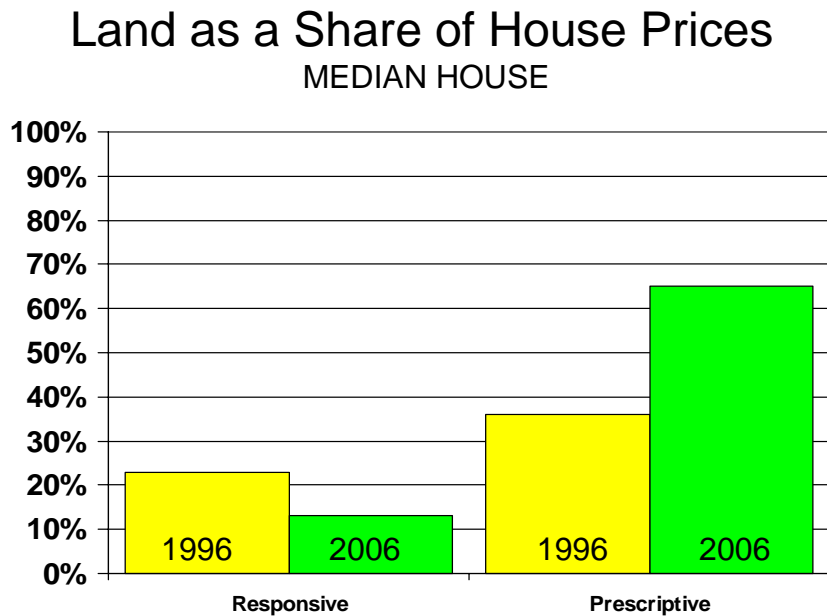


Figure 5

Thus, since house prices are materially higher than can be explained by normal market fluctuations in prescriptive markets, *it is concluded that smart growth increases housing prices*. Moreover, the extent to which smart growth elevates housing prices is considered material and could lead to serious negative consequences, which are outlined in the next section.

**5. IMPLICATIONS OF HIGHER SMART GROWTH HOUSING PRICES**

The substantially higher costs of housing in prescriptive markets are likely to have significant negative impacts on household budgets and, as a result, the quality of life.

**Smart Growth and Household Budgets:** The impact on household budgets varies widely by metropolitan market. In 1996, mortgage payments on the median priced

equaled 18 percent of median household income in the responsive markets. This figure was unchanged in 2006. In the four prescriptive markets, the share of the median household income taken by mortgage payments on the median priced house doubled over the same period, from 23 percent to 46 percent (Figure 6). In the case of San Diego, the median house mortgage share of median household income rose from 26 percent to 70 percent over the 10 years.

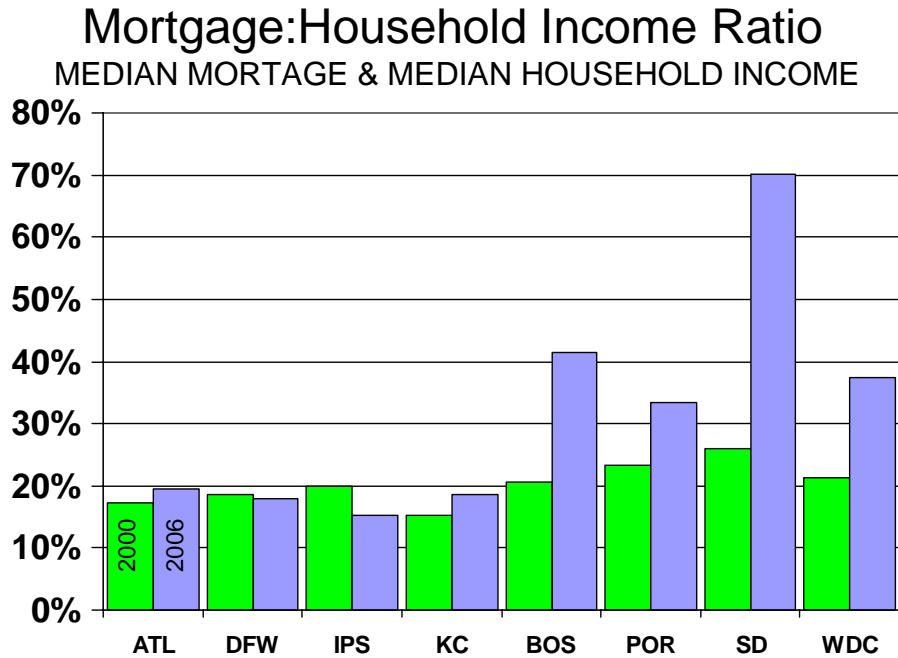


Figure 6

Middle-income households will be increasingly less able to afford today’s median house prices. Future households may have to accept less value in housing. For example, new house sizes are already declining in Portland.<sup>14</sup> The alternative is for households to spend less on other goods, because of the huge increase in housing costs. It is moreover likely that many households that would formerly have been able to afford to buy a house will not be able to in the future. Each of these eventualities translates into deterioration in the quality of life. Moreover, any reduction in home ownership or the quality of life is likely to lead to a wider income disparity between higher and lower income households.

**Smart Growth and First Home Buyers:** In the longer run, smart growth’s higher house prices relative to incomes will make it more difficult for many households to purchase their first homes. This is indicated by the Quartile Multiple, which is an indicator of “first home buyer” or lower income housing affordability. The Quartile Multiple measures the number of years of income it takes for the quartile (25<sup>th</sup> percentile) income household to pay for the quartile priced house. The Quartile Multiple measures the number of years of

<sup>14</sup> Sonny Conder and Karen Larson, Metro Single Family Home Price Trends: Donuts Without Holes and Turnips Without Blood, Portland: Metropolitan Regional Government; [http://www.metro-region.org/library\\_docs/maps\\_data/sfrpricestudy1999\\_2000.pdf](http://www.metro-region.org/library_docs/maps_data/sfrpricestudy1999_2000.pdf).



income it takes for the quartile (25<sup>th</sup> percentile) income household to pay for the quartile priced house. The Quartile Multiple averages 1.4 years more than the Median Multiple in responsive markets. In prescriptive markets, the Quartile Multiple is 5.9 years more than the Median Multiple (Figure 7).<sup>15</sup>

### Quartile Multiple (First Home Buyers) COMPARED TO MEDIAN MULTIPLE: 2006

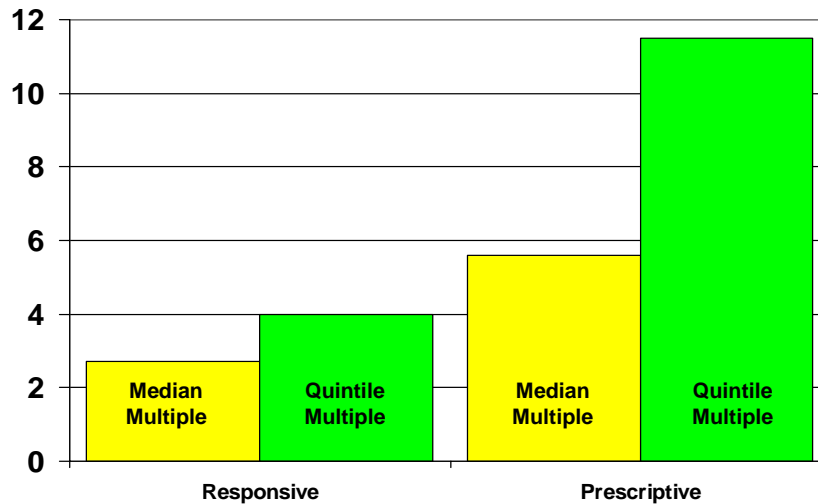


Figure 7

**Smart Growth and Ethnic Minorities:** Perhaps none of the negative consequences of smart growth is more obvious than its impact on ethnic minorities. For decades, the nation has sought to bring ethnic minorities, particularly African-Americans and Hispanics into the mainstream of society. This requires strategies that increase incomes, which necessarily requires increasing home ownership, a principal mechanism of middle and lower income wealth creation.

Home ownership rates among African-Americans and Hispanics remain a full third below that of white-non-Hispanic. Generally, African-Americans and Hispanics have lower incomes than white-non-Hispanics. A Tomas Rivera Policy Institute report cited prescriptive land use policies as a principal barrier to Hispanic home ownership in California.<sup>16</sup> The higher relative cost of housing for ethnic minorities is indicated in the reviewed markets (Figure 8)

In the four responsive markets Hispanic households pay 1.6 years more in median income for the median priced house than White-Non-Hispanics. African-

<sup>15</sup> <http://www.demographia.com/db-quartilemult.pdf>.

<sup>16</sup> Waldo Lopez-Aqueres, Joelle Skaga, and Tadeusz Kugler (2002). *Housing California's Latino Population in the 21st Century: The Challenge Ahead*. Los Angeles, CA: The Tomas Rivera Policy Institute. Pp. 23-30

Americans require 1.8 years more in median household income to pay for the median priced house.

In the four smart growth markets Hispanic households pay 4.0 years more in median income for the median priced house than White-Non-Hispanics. African-Americans require 4.4 years more in median household income to pay for the median priced house. Compared to responsive markets, Hispanic households pay 7.4 more years in median household income for the median priced house, while African-Americans pay 8.3 years more in median income.

Moreover, as housing affordability is lost, the losses in economic opportunity are likely to be disproportionately experienced by ethnic minorities because of their generally lower incomes. It is further likely that the gap between minority and White-Non-Hispanic home ownership will increase.

### Housing Affordability by Ethnicity MEDIAN MULTIPLE: 2006

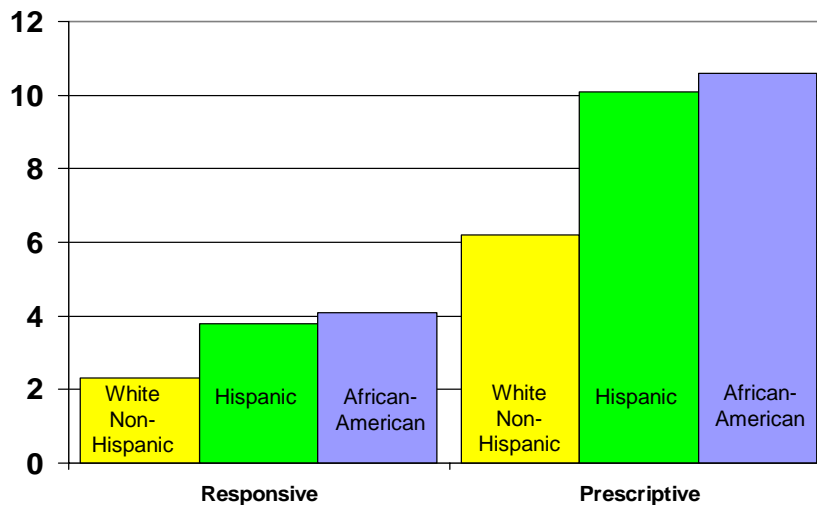


Figure 8

**Impact on Metropolitan Economies:** Research indicates that prescriptive land-use regulations lead to lower levels of economic growth. A paper by Raven Saks of the Federal Reserve Board concluded, “metropolitan areas with stringent development regulations generate less employment growth than expected given their industrial bases”<sup>17</sup> It can be expected that reduced economic growth will lead to comparative poverty levels that are higher.

<sup>17</sup> Raven E. Saks, *Job Creation and Housing Construction: Constraints on Metropolitan Area Employment Growth*, <http://www.federalreserve.gov/pubs/feds/2005/200549/200549pap.pdf>.

**Migration:** The household economic disruption caused by higher housing prices is already evident in domestic migration trends, as households leave more expensive areas for less expensive areas.<sup>18</sup>

While the responsive and prescriptive planning markets have nearly the same total population, the domestic migration patterns are radically different. Overall, the four responsive planning markets gained more than 500,000 domestic migrants between 2000 and 2006. At the same time, there was a net loss of 400,000 domestic migrants in the prescriptive planning markets. San Diego, which has been one of the nation's fastest growing metropolitan areas for more than one-half century is now losing domestic migrants at a rate greater than the Rust Belt metropolitan areas of Pittsburgh, and Buffalo and at a rate equal to those of Cleveland and Detroit.<sup>19</sup>

**Relocation Bonus:** House prices in the prescriptive markets have risen so strongly, that a significant *relocation bonus* can be earned by households moving to responsive markets. On average moving from one of the four prescriptive markets to one of the four responsive markets will reduce median house purchase and financing costs by nearly \$650,000 (and as high as \$1,000,000). This is the equivalent of 11 years of median household income, or one-quarter of a 40-year work career for the household (Tables 3 and 4).<sup>20</sup>

By comparison, in 1996, the average relocation bonus would have been \$140,000, which was the equivalent of 2.7 years of median household income.<sup>21</sup> The more than three times increase in housing costs in the more expensive (prescriptive) markets is unprecedented.

Moving from prescriptive markets to responsive markets result in the following relocation bonuses, based upon median house prices in 2006:

---

<sup>18</sup> A similar trend is evident: prescriptive planning markets tend to lose domestic migrants, while responsive planning markets are gaining domestic migrants. The most expensive prescriptive planning markets lost nearly 4,000,000 residents to other parts of the country between 2000 and 2006. However, a number of prescriptive planning markets gained (referred to as "safety valve" markets), apparently because their principal sources of domestic migration had far worse housing affordability (such as Portland, which gains domestic migrants from California). The more affordable large markets, all without prescriptive planning, gained more than 700,000 domestic migrants. In perhaps the most significant turnaround, the nation's smaller urban and rural area gained more than 1.9 million domestic migrants as the nation accelerated its historic decentralization. Generally, the smaller markets have less prescriptive planning policies.

<sup>19</sup> See: <http://www.demographia.com/db-msamigra-ann.pdf>, *Net Internal Migration by MSA: Total and Annual: 2000-2006*.

<sup>20</sup> This does not include the impact of the federal income tax mortgage deduction, which would reduce the relocation bonus. On the other hand, some or all of this reduction would be nullified by the higher cost of living in each of the prescriptive markets compared to the responsive markets (based upon an analysis of ACCRA cost of living data).

<sup>21</sup> Based upon the difference in financing the median priced house at a 6.5 percent annual percentage rate, with a 30-year fixed rate mortgage. Down payment assumed to equal 10 percent of the national average median priced house.

**Atlanta:** A move from a prescriptive market to Atlanta would result in an average relocation bonus of approximately \$590,000, or 9.7 years of median household income. This ranges from a \$250,000 bonus (4.1 years of median household income) for a move from Portland to a \$980,000 bonus (16.2 years) for a move from San Diego.

**Dallas-Fort Worth:** A move from a prescriptive market to Dallas-Fort Worth would result in an average relocation bonus of approximately \$650,000, or 11.5 years of median household income. This ranges from a \$310,000 bonus (15.5 years of median household income) for a move from Portland to a \$1,040,000 bonus (18.4 years) for a move from San Diego.

**Indianapolis:** A move from a prescriptive market to Indianapolis would result in an average relocation bonus of approximately \$650,000, or 13.4 years of median household income. This ranges from a \$370,000 bonus (7.0 years of median household income) for a move from Portland to a \$1,100,000 bonus (20.7 years) for a move from San Diego.

**Kansas City:** A move from a prescriptive market to Kansas City would result in an average relocation bonus of approximately \$630,000, or 11.2 years of median household income. This ranges from a \$370,000 bonus (5.4 years of median household income) for a move from Portland to a \$1,100,000 bonus (18.3 years) for a move from San Diego.

**Conclusion:** Achieving the goals of prescriptive planning may not be possible without destroying housing affordability. For example, an urban growth boundary is likely to increase the price of land (and housing), unless it is drawn so far from the urban footprint that it has no serious impact on land prices. Despite the qualified claims of smart growth proponents, it is clear that smart growth materially raises housing prices. This is consistent with economic theory and the views of the economists cited above.

This dilemma has led Donald Brash, former governor of the Reserve Bank of New Zealand has gone so far as to suggest that urban growth boundaries be prohibited due to their negative impacts.

*... Metropolitan Urban Limits and similar restrictions should simply be outlawed, no ifs or buts.*<sup>22</sup>

---

<sup>22</sup> [http://www.fcpp.org/main/publication\\_detail.php?PubID=1899](http://www.fcpp.org/main/publication_detail.php?PubID=1899).

Table 1 Existing House Analysis Information					
1996	A	B	C	D	E
Metropolitan Market	Structure Replacement Value	Median House Price	Normal Market Ceiling	Median House Price/Market Ceiling	Regulatory Excess (B-C)
<b>RESPONSIVE MARKETS</b>	<b>\$109,000</b>	<b>\$141,000</b>	<b>\$158,000</b>	<b>-11%</b>	<b>None</b>
Atlanta	\$107,000	\$150,000	\$173,000	-13%	None
Dallas-Fort Worth	\$103,000	\$144,000	\$154,000	-6%	None
Indianapolis	\$109,000	\$150,000	\$150,000	0%	None
Kansas City	\$118,000	\$121,000	\$158,000	-23%	None
<b>PRESCRIPTIVE MARKETS</b>	<b>\$130,000</b>	<b>\$202,000</b>	<b>\$177,000</b>	<b>14%</b>	<b>\$25,000</b>
Boston	\$141,000	\$194,000	\$188,000	3%	\$6,000
Portland	\$126,000	\$182,000	\$156,000	17%	\$26,000
San Diego	\$126,000	\$212,000	\$163,000	30%	\$49,000
Washington	\$126,000	\$221,000	\$207,000	7%	\$14,000
<b>Difference</b>	<b>\$21,000</b>	<b>\$61,000</b>	<b>\$19,000</b>		<b>\$25,000</b>
Percentage	19.3%	43.3%	12.0%		
2006	Structure Replacement Value	Median House Price	Normal Market Ceiling	Median House Price/Market Ceiling	Regulatory Excess (B-C)
<b>RESPONSIVE MARKETS</b>	<b>\$132,000</b>	<b>\$152,000</b>	<b>\$170,000</b>	<b>-11%</b>	<b>None</b>
Atlanta	\$140,000	\$176,000	\$182,000	-3%	None
Dallas-Fort Worth	\$117,000	\$151,000	\$169,000	-11%	None
Indianapolis	\$128,000	\$122,000	\$160,000	-24%	None
Kansas City	\$142,000	\$158,000	\$170,000	-7%	None
<b>PRESCRIPTIVE MARKETS</b>	<b>\$150,000</b>	<b>\$433,000</b>	<b>\$193,000</b>	<b>124%</b>	<b>\$240,000</b>
Boston	\$164,000	\$412,000	\$199,000	107%	\$213,000
Portland	\$140,000	\$285,000	\$170,000	68%	\$115,000
San Diego	\$143,000	\$602,000	\$172,000	250%	\$430,000
Washington	\$153,000	\$432,000	\$230,000	88%	\$202,000
<b>Difference</b>	<b>\$18,000</b>	<b>\$281,000</b>	<b>\$23,000</b>		<b>\$240,000</b>
Percentage	13.6%	184.9%	13.5%		
Change: 1996-2006	Structure Replacement Value	Median House Price	Normal Market Ceiling	Regulatory Excess (B-C)	
<b>RESPONSIVE MARKETS</b>	<b>\$23,000</b>	<b>\$11,000</b>	<b>\$12,000</b>		<b>None</b>
Atlanta	\$33,000	\$26,000	\$9,000		None
Dallas-Fort Worth	\$14,000	\$7,000	\$15,000		None
Indianapolis	\$19,000	(\$28,000)	\$10,000		None
Kansas City	\$24,000	\$37,000	\$12,000		None
<b>PRESCRIPTIVE MARKETS</b>	<b>\$20,000</b>	<b>\$231,000</b>	<b>\$16,000</b>		<b>\$215,000</b>
Boston	\$23,000	\$218,000	\$11,000		\$207,000
Portland	\$14,000	\$103,000	\$14,000		\$89,000
San Diego	\$17,000	\$390,000	\$9,000		\$381,000
Washington	\$27,000	\$211,000	\$23,000		\$188,000
<b>Difference</b>	<b>(\$3,000)</b>	<b>\$220,000</b>	<b>\$4,000</b>		<b>\$215,000</b>
Percentage	-113.0%	1900.0%	-66.7%		

Table 2 New House Analysis Information										
	A	B	C	D	E	F	G	H	I	J
Metropolitan Market	Exhibit: Raw Land Cost	Land Sale Price	Site Preparation Cost	Finished Lot Cost (B+C)	Construction Cost	Normal Production Cost (D+E)	Actual New House Price	Normal Market Limit	House Price/Market Ceiling	Regulatory Excess (H-I)
<b>RESPONSIVE MARKETS</b>	<b>\$800</b>	<b>\$4,000</b>	<b>\$22,000</b>	<b>\$26,000</b>	<b>\$118,000</b>	<b>\$144,000</b>	<b>\$132,000</b>	<b>\$173,000</b>	<b>-24%</b>	<b>None</b>
Atlanta	\$1,200	\$6,000	\$22,000	\$28,000	\$116,000	\$144,000	\$135,000	\$173,000	-22%	None
Dallas-Fort Worth	\$500	\$2,000	\$20,000	\$22,000	\$105,000	\$127,000	\$104,000	\$152,000	-32%	None
Indianapolis	\$900	\$5,000	\$22,000	\$27,000	\$117,000	\$144,000	\$126,000	\$173,000	-27%	None
Kansas City	\$800	\$4,000	\$25,000	\$29,000	\$132,000	\$161,000	\$163,000	\$193,000	-16%	None
<b>PRESCRIPTIVE MARKETS</b>	<b>\$1,900</b>	<b>\$10,000</b>	<b>\$25,000</b>	<b>\$35,000</b>	<b>\$133,000</b>	<b>\$168,000</b>	<b>\$369,000</b>	<b>\$201,000</b>	<b>84%</b>	<b>\$168,000</b>
Boston	\$2,600	\$13,000	\$27,000	\$40,000	\$144,000	\$184,000	\$348,000	\$221,000	57%	\$127,000
Portland	\$1,900	\$10,000	\$24,000	\$34,000	\$131,000	\$165,000	\$304,000	\$198,000	54%	\$106,000
San Diego	\$1,700	\$8,000	\$25,000	\$33,000	\$134,000	\$167,000	\$454,000	\$200,000	127%	\$254,000
Washington	\$1,500	\$8,000	\$23,000	\$31,000	\$122,000	\$153,000	\$369,000	\$184,000	101%	\$185,000
<b>Difference</b>	<b>\$1,100</b>	<b>\$6,000</b>	<b>\$3,000</b>	<b>\$9,000</b>	<b>\$15,000</b>	<b>\$24,000</b>	<b>\$237,000</b>	<b>\$28,000</b>		<b>\$168,000</b>
Percentage	137.5%	150.0%	13.6%	34.6%	12.7%	16.7%	179.5%	16.2%		

Table 3 Relocation Bonus: Move from Prescriptive to Responsive Markets RESPONSIVE MARKETS					
Move From/To-->	Atlanta	Dallas-Fort Worth	Indianapolis	Kansas City	Average
<b>PRESCRIPTIVE MARKETS</b>					
Boston	\$540,000	\$600,000	\$670,000	\$580,000	\$598,000
Portland	\$250,000	\$310,000	\$370,000	\$290,000	\$305,000
San Diego	\$980,000	\$1,040,000	\$1,100,000	\$1,020,000	\$1,035,000
Washington	\$590,000	\$650,000	\$710,000	\$630,000	\$645,000
Average	\$590,000	\$650,000	\$713,000	\$630,000	\$646,000

Table 4 Relocation Bonus: Move from Prescriptive to Responsive Markets: In Years of Median Household Income RESPONSIVE MARKETS					
Move From/To-->	Atlanta	Dallas-Fort Worth	Indianapolis	Kansas City	Average
<b>PRESCRIPTIVE MARKETS</b>					
Boston	9.0	10.7	12.5	10.3	10.6
Portland	4.1	5.5	7.0	5.2	5.4
San Diego	16.2	18.4	20.7	18.0	18.3
Washington	9.7	11.5	13.3	11.1	11.4
Average	9.7	11.5	13.4	11.2	11.0