The Cost of Regulation; The Effect of Municipal Land Use Regulations on Housing Affordability

By Michael Wilt On 21 hours ago In Affordable Housing, City of Austin, Government With 4Comment

This is the last in a series of posts kindly provided by Richard N. Maier. We are honored to provide this in-depth perspective on the real cost of land use regulations and how that impacts housing affordability from one of the most well-respected land use authorities in Austin. The post below is the paper Mr. Maier authored on this subject in its entirety without appendices.

The Cost of Regulation; The Effect of Municipal Land Use Regulations on Housing Affordability.

By Richard N. Maier

One of my professors at the University of Chicago told the class on the first day, "I don't expect you to remember everything I talk about here, so my suggestion is for you to walk out of here with one takeaway from each class." I can't really say I did that every time, but sitting at convocation at Rockefeller Cathedral, I decided the one takeaway that trumped all others was, "There is no free lunch."

Throughout my career it has intrigued me how many of us travel through our careers and personal lives thinking otherwise.

A discussion of "affordable housing" is a perfect platform for testing this statement. While attending the University of Pittsburgh as an undergraduate, I worked for the Allegheny County Housing Authority in Pittsburgh. Our mission was affordable housing. The Authority constructed, rehabilitated and managed thousands of housing units around the county. This program was provided courtesy of the Federal government (a/k/a the American taxpayer). After getting my Bachelor's degree, I entered the private sector and began my lessons in the practicalities of how such programs become retitled as "exactions", "incentives", "impact fees", "water quality preservation" and so forth. While I understand that various governments believe their regulations, laws and ordinances serve a variety of purposes that are in the public interest (neighborhood and historical preservation, safeguarding public safety and the

environment, "saving" resources, and so forth), the cost of that menu of delicacies can be expensive to the homebuyer and therefore a tax on the economy.

Inasmuch as my career the last twenty-five years or so has centered around Austin and Central Texas, my examples will be drawn from that experience.

If life in the development/homebuilding business were simple, we could find a property, get it properly zoned, develop the lots or building sites, and construct the homes. But then, it's not, in fact, simple.

Let's start with an actual example of building on a single lot in a central city residential neighborhood in Austin. A few years ago we contracted to purchase a lot in an area known as North Hyde Park. This example is utilized to illustrate the extreme costs incurred when developing in the central city, an area of high demand and low supply. The various regulations that overlaid this property were the zoning code, a residential design compatibility ordinance known as the "McMansion Ordinance" (all twenty-six pages of it), impervious cover limitations, "Neighborhood Conservation Combining District" regulations (a twenty-eight page ordinance that supplements the zoning ordinance), handicapped accessibility requirements, sidewalk construction ordinances, a tree protection ordinance and an historic preservation overlay (which threatens even the simplest of structures with the prospect of being labeled "historic" or "significant".) While each of these eight regulation categories (which I consider to be menu items on the free lunch menu) have what the municipalities or jurisdictions consider to be public purposes, in many instances they are very costly to the ultimate homebuyer and contribute to the reduction in home affordability. As such, they are certainly not free. The following addresses a few of these categories and their impact on development.

Menu Item #1: Historic Preservation

The building lot in this real example in the City of Austin, Texas, was 80' x 130'; approximately 10,400 square feet in total area. Situated thereon was a bungalow constructed in the early 40's. It was about nine hundred square feet in size, had no particular architectural significance (there are probably a hundred similar structures within a mile and a half), was generally rented to students at the University of Texas and was acquired for the value of the land ($266,000) for new home construction. Despite the builder's determination that the structure was beyond its useful life, the demolition permit was opposed by a neighbor (a renter, in fact; it should be noted that none of the neighbors who owned their homes opposed the demolition). This neighbor posited to the municipality that the structure to be demolished was historically significant and should be preserved. This declaration launched the seller of the house into an entirely new and unanticipated process of having to fight historic designation of the structure. The process from start to finish took approximately nine months during which time the property was left empty.

Cost of having historic preservation on the "Menu":

Carry cost on house at market value: $8,866.00 ($266,000 x 5% P.A. for 8 months) Property taxes: $4,610.00 (8 months at current city tax rate)

Insurance and maintenance: $1,200 (Estimated) Legal fees: $1.550.00
TOTAL COST TO SELLER: $16,226.00 (6.1% of the value of the property)

Menu Item #2: "Protect the Environment": Heritage Tree Ordinance

Once the land was acquired by the builder and the existing structure was demolished, it was determined that the pecan tree in the front yard was a "Heritage Tree" in accordance with the city's tree protection ordinance. Application was made to the city to remove the tree (application fee: $50.00) and the application was rejected. The city stated that a tree preservation or mitigation program was required and a second application was required for preservation/mitigation (another $50.00 fee). Although the city agreed to allow mitigation for the tree removal, this was not financially viable for the builder. The mitigation "fee" is based on caliper inches for the tree. The normal charge is $150.00 per caliper inch but since this was characterized as Heritage, the fee was tripled to $450.00 per caliper inch. The tree was 32" and therefore the fee would have been $14,400.00. Thus, an arborist was engaged by the builder to create a preservation plan. Although even the arborist recommended removing the tree due to its age and condition, the builder chose to follow the arborist's recommendation which included trimming the dead branches and undertaking a tree preservation plan and an agreement to not

construct any impervious improvements (such as walkways) under the tree canopy. This work was despite the fact that the existing driveway (which had to be removed because the Neighborhood Conservation Combining District no longer permitted street-facing garages where alleys exist) was located under the tree canopy (despite the fact that the driveway had been there since the 40's.) The cost of the arborist-recommended deep root and systemic tree fertilization, the tree protection (chain link fence surrounding at the drip line and wrapping the tree in 2×4's) and the post construction inspection and fertilization cost the builder an additional $2,642.00.

Most unusual were the events of the Saturday morning when the tree trimming began. The same neighbor called the City of Austin Police, and an officer came to the site, shut down the job, downloaded the Tree Ordinance on the squad car computer and began trying to measure the size of the trees on the site to see if they complied with the tree preservation ordinance. (This occurred even though the builder showed the officer a recent surveyor-certified tree survey which specified the sizes and types of trees) Forty-five minutes later the job was restarted.

Cost of having this "environmental protection" ordinance on the "Menu": $2,742.00 (includes two $50.00 application fees but does not include time delay costs relating to visits from the City Arborist who held up the inspections several times.) Had the builder chosen the mitigation option, the affordability impact would have been $14,400.00, or 5.4% of the property's value.

Menu Item #3: More "Protect the Environment": Impervious Cover

In the name of environmental protection and maintaining water quality, the City of Austin has imposed maximum impervious cover restrictions on all properties being developed, with the maximums varying depending on the type of use and location of the particular land tract.

Given the anti-development sentiment in Austin, one can only speculate that the real purpose of this ordinance is not environmental protection but restriction on density. Impervious cover limitations restricted this particular property to a maximum of 45% "impervious" coverage. That restriction immediately eliminated 5,720 square feet of land that would have otherwise been buildable. On a pure land basis, the cost of this restriction on this particular tract was $146,300.00 ($266,000 land price x 55%).

What was most interesting about this situation was that the soil at this site was primarily clay, which does not absorb much rainwater, so one could consider the soil itself as substantially impervious. Although it could be argued that no builder would cover 100% of a similar site with impervious cover absent restrictions because such a tract would not be marketable, a blanket restriction of 45% is too little for a central city site. Assuming 75% impervious cover would yield a marketable home, the effect of the 45% maximum was the elimination of at least 3,120 square feet of otherwise usable land. Thus, the calculation is as follows: Land cost: $266,000.00 x 30% = $79,800. Unfortunately, there is an additional cost that results from a regulation such as this one. What the authors of this ordinance also failed to measure was the real cost to the environment and the public of unnecessarily and excessively reducing density. Less density = more suburban sprawl = more roads, infrastructure, city services, gasoline and auto usage required. Reduced central city density also pushes up prices in the central-city (at least in the case of many cities) due to high demand and inadequate supply. (See "Demand and Supply section.)

Cost of having this "environmental protection" (impervious cover) ordinance on the "Menu": $79,800.00.

Menu Item #4: Even More "Protect the Environment": Storm Water Pollution Protection.

The State of Texas requires a SWPPP (Storm Water Pollution Protection Plan) to be filed prior to commencement of any construction. The cost of a typical plan for a single house is approximately $500.00 and the plan/and/or the City of Austin regulations require inspections after each significant rain event, installation of silt fencing, routine street and site cleaning and installation of all-weather construction accesses to prevent mud from entering the street. With respect to the case study tract, the cost of complying with SWPPP was $500.00 for the plan, $250.00 for post-rain inspections (fortunately the construction took place in the dry Austin summer), and $813.00 for silt fencing installation, silt fencing repair, street cleaning and an all- weather construction entrance.

Cost of having this "environmental protection" (impervious cover) ordinance on the "Menu": $1,563.00.

Menu Item #5: Preserve our Neighborhoods! The "McMansion" Ordinance.

This ordinance is perhaps the most impactful to housing affordability. It was originally proposed (and the City Council used this reason to enact this "emergency ordinance" with no waiting period) as a method to control flooding in the central city. In reality, it is a way for the central city neighborhood activists to keep the sizes of new homes small so as to be "compatible" (their word) with the existing structures. What it misses, however, is the fact that much of the central city is improved with very small structures built in the 30's, 40's and 50's, many of which are less than 1,200 square feet on city lots, many of which are forty feet wide (or less). With the impervious cover limitation discussed above, the purchasers of these lots

(assuming a teardown) are forced to employ vertical construction rather than horizontal to realize a great enough amount of living space. However, the McMansion Ordinance further restricts height to generally thirty-five feet and it requires stepped setbacks from the property line as height increases. These restrictions negate the architect's ability to design a more vertical structure.

In general, the McMansion ordinance limits new development on most central city tracts (a very large geographic area encompassing approximately eighteen square miles!) to maximum of .4 F.A.R. (floor to area ratio) or 2,300 square feet, whichever is larger. This means on a typical 40 x 120 city lot, a new house can't exceed 1,920 square feet. Whereas in some circumstances 1,920 square feet may sound reasonably adequate, when the central city lot sells for about $7,000 per front foot (or more, depending on the particular neighborhood), that means that the land alone is $145 per house square foot! That's more than the house costs to build! The land cost is not justified by the house size limitation which ultimately limits affordable development within the McMansion area.

Another element that makes the McMansion rules (and there is a lot more to it than simply the F.A.R. limitations) even more onerous and expensive is the inability to use any sort of a "stock" floor plan. If the lot has a protected tree and is subject to McMansion rules (or either/or), a custom house designed specifically and solely for a certain lot is a necessity. Whereas a stock floor plan and permit set for a forty foot lot could cost less than $2,500.00, a custom design to meet McMansion requirements would typically cost in excess of $15,000.

Cost of having this "Neighborhood Preservation" (McMansion) ordinance on the "Menu": $12,500.00 (Not including loss of use of the property.) The foregoing example was presented as a real-world example of one particular project. A summary of costs is as follows

Menu Item #1:
Historic Preservation
$16,226.00

Menu Item #2:
Protect the environment
$2,742.00

Menu Item #3:
More protect the environment
$79,800.00

Menu Item #4:
Yet even more protect the environment
$1,563.00

Menu Item #5:
Preserve our neighborhoods
$12,500.00

This is a total of: $112,831.00

Further, if a builder works on an 18% gross margin (which means all costs are "grossed up" by the margin requirement), the real cost to the homebuyer was $137,598.00! In fact, this lunch was not free and housing affordability suffers. New development in suburban areas.

But wait, there is more! The preceding example was an existing central city lot and did not include the fees typically encountered in the construction of a home and the infrastructure development of a subdivision. The example did not include water meter fees, building inspection fees, building permit fees, and so forth as described in Appendix A. This appendix summarizes those costs encountered relating to the development of a typical 250-lot subdivision and the construction of the houses within that property.

This particular builder's average sales price for a home within the Austin market area is about $187,000.00, so the total costs of regulation at a builder's 18% gross margin equal $24,492.00, or 13% of the total cost of the house. What is even more telling is the total cost of this increase to the homeowner. The regulation cost increases the property tax (using a typical central Texas city) by $576.00 per year and the annual insurance by some additional amount (not calculated in the example for simplicity.) At a 4.2% interest rate and a 95% loan, the "fully loaded" regulation costs add $1,914.00 to the annual house payment. Because qualifying for a mortgage is primarily dependent on income to debt ratios, the regulation costs only serve to raise the income limit for qualifying for a mortgage and therefore reduce the number of potential

homeowners. Moreover, assuming the homeowner stays in the home for about seven years, the cost of these regulations is $24,482.00 (per Appendix A) plus $13,398.00.00 = $37,880.00.

So what effect does this $24,482.00 increase have on the number of families who can afford to purchase a home? The answer for a city like Austin, Texas is removing 18,000 households out of that price range buying pool, or 5.6% of the total existing households. Appendix C presents an analysis of this calculation.

Affordable Housing Exactions

Yet another governmental regulation that affects housing affordability is the one that at the same time makes housing more affordable for the low and middle income homebuyers, but may dramatically increase the cost of housing for those who are at an income level above median. Specifically, I refer to those regulations that mandate a certain level of "affordable housing" in exchange for granting entitlements (and not necessarily "special" entitlements) or participation in certain planned communities. These regulations are effective in areas from Orange County California to Austin, Texas and beyond.

They work like this: A municipality or jurisdiction tells a developer or builder, "We will grant you your building permit or approve your zoning or entitlements, but you must have a certain percentage of the homes built for sale or lease to be priced at a level wherein a person or family whose annual income falls within a certain range." One example is the requirement

that 25% of the homes must be sold to individuals or families whose income is less than, say 50% of median family income (MFI) for the particular jurisdiction.

The homebuilder can achieve this target several ways: (1) Reduce the size of the home. Whereas a "market rate" (i.e., home being sold to a person or family whose income does not qualify them as needing "affordable housing") homebuyer may typically require an 1,800 square foot home for a family of four, the builder can construct a home for the affordable housing family that is 1,500 square feet and has an equal number of bedrooms. The reduction in the size of the house may be enough to achieve the target sales price. (2) "De-feature" the house. Using plastic laminate countertops instead of granite, eight foot ceilings instead of nine foot, and fiberglass tub and shower enclosures instead of tile, are a few of the ways cost can be cut out of the sales price. (3) Raise the price of the "market rate" units to offset the margin lost on the "affordable units". (4) Jurisdiction-provided incentives (such as jurisdictional-paid utilities or infrastructure, density bonuses, etc.) (5) Some combination of the above (which is more
typical).

Item number one is a tactic with diminishing returns. Builders know that simply reducing the size of a home does not necessarily cut much cost out. The cost of expensive construction items such as kitchens, baths, mechanical systems, etc. are not significantly lowered by reducing the size of a three bedroom two bath house to 1,500 square feet from 1,800 square feet. De-featuring can contribute to the price reduction, but whether it is enough to move the price of the house into the required levels depends on the builder's standard market rate homes' level of "featuring" versus the level of de-featuring on the "affordable" unit. In other words, if the market-rate unit has granite countertops and the "affordable" unit is de-featured to plastic laminate, the price reduction will be more than if the market-rate unit is featured with plastic laminate.

Adjusting market rate unit pricing upward is only successful if the area demand levels and appraisals will permit an upward pricing adjustment and comparable existing homes are priced at a level similar to the positive pricing adjustment on the new home to allow appraisal levels to support financing and to be competitive. Often this price increase is not possible to a great enough extent to offset the builder's loss of margin on the "affordable units." In other words, if the builder's margin expectations are 18% and the "affordable units" net a 5% margin (even after the de-featuring adjustments), then the margin requirements on the market rate units may dictate a sales price that is not achievable in the marketplace. In areas of very high demand, this adjustment has been achieved in some instances but those situations are not typical or normal.

Even if option number three is possible, this can only be viewed as a tax on the market rate homebuyer. Charging a market-rate buyer thousands if not tens of thousands of dollars more in sales price so a lower income buyer can purchase a not dissimilar home in the same community as an "affordable unit" buyer amounts to a tax of those thousands of dollars on the market-rate homebuyer. Moreover, the continuing lower ad valorem taxes on the "affordable" unit place an additional burden on the jurisdiction and school districts.

As to the jurisdiction-provided "incentives", sometimes they can have an effect on offsetting the margin loss to the builder. However, if these incentives are funded by the jurisdiction, they amount to a tax on all property taxpayers and therefore once again this is not a free lunch, even though it is camouflaged as such.

The Cost of Demand and Supply Restricted by Regulation

In addition to the definable regulation costs, the costs of constraining supply should not be overlooked. A very good article on this subject entitled was written by Virginia Postrel in 2007. [The Atlantic Online, November, 2007, A Tale of Two Town Houses, Virginia Postrel]. Ms. Postrel explores the effects of overly restrictive land use regulations which can result in either "cheap plentiful housing" or "expensive scarce housing". While land availability is a significant factor affecting the ability to construct new housing in high-demand areas, the existence of overly restrictive regulations which constrain density (as demonstrated by the example in this paper) can have a huge impact on housing pricing and therefore affordability. In fact, in the foregoing Austin, Texas example, a seventy-year old central city bungalow with antiquated wiring, single pane windows, questionable plumbing and window unit air conditioners will sell for around $215.00 per square foot (average), while a new home with contemporary amenities (and often on a larger than central city lot) in a suburban municipality that is homebuilder-friendly will sell for $60.00 per square foot or less. (See Appendix B.) We have found that many homebuyers will trade off size of home (square footage) and condition in exchange for location. Therefore the $115 per square foot differential referred to above may not translate into an exact home price differential. In other words, a family may choose a 1,300 square foot 50-year old home in the central city at $215 per square foot versus an 1,800 square foot home in a different jurisdiction only fourteen miles away. (In this example: zip code 78751 versus zip code 78653).

Still, the differential will be $202,000.00 ($280,000.00 [$215.00 x 1,300] less $78,000.00 [1,800 x $60.00]), which makes the central city home unaffordable for a large portion of the population. Additionally, the maintenance costs and utility costs of a fifty year-old home in the central city will be much higher than a newer home in the suburbs. (Offset, perhaps, by some savings in transportation costs.) The number of potential homebuyers that are eliminated from the potential buyer pool due to this differential is staggering.

The demand for central city or close-in home sites will expand as travel times to the suburbs and the cost of gasoline continues to increase. Restrictive development regulations that claim to be promoting environmental protections may actually be doing the opposite. Densifying the central cities reduces the need for fossil fuels burned by commuters and delivering of goods and services. Along with an affordability analysis, an analysis of "greenprint" impact should be considered by municipalities when considering any new ordinance that restricts or limits development.

Summary

I am not advocating a complete abandonment of regulation; many regulations especially with respect to health and safety are absolutely necessary. In fact, the irresponsible actions of builders and developers have often precipitated many of the regulations that burden the more responsible businesses.

However, the passage of new rules without a thorough vetting of the reason for the rule (e.g., was the precipitating action a unique case?), and an unbiased "affordability assessment" prior to the passage of the ordinances is counterproductive to a stated goal of affordable housing. Often the jurisdictions consider these regulations without either consulting or giving legitimate credibility to the input from the homebuilding and development community whose real stakeholders are the homebuyers.

Further, jurisdictions may use the excuse, "It only adds $150.00 to the house price." That may the case for a single rule but piling ordinance upon ordinance amounts to death by a thousand cuts. One hundred and fifty dollars or even fifty dollars quickly adds up to

thousands of dollars and has a serious impact on affordability. The business community can not only provide legitimate and quality input into the process but also can suggest alternative (and perhaps less expensive or more efficient) methods of attaining certain goals such as in my experience has been even though jurisdictions may have public hearings (although many do not, especially if they are Federal regulations which are not included in any of the analyses in this paper) when considering implementing rules, ordinances, or legislation that affects the homebuilding industry, often the jurisdiction decision-makers have their minds made up before the process begins. That is counterproductive and results in a poor outcome; one that robs many Americans of the ability to own their own home.

Tagged with: Affordable Housing , City of Austin , Government , Richard Maier

environmental protection or historical preservation.