THE PROBABLE ECONOMIC IMPACT OF THE T-MOBILE CELL TOWER ON THE RESIDENTS AND CITY OF EL CERRITO, CALIFORNIA.

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Summary

Examination of the three types of data available suggests that the boy scouts lot is not a favorable location for a cell phone tower due to the unfair financial burden placed on residents in the neighborhood of the proposed tower and the negative economic impact on the City of El Cerrito, and by extension all El Cerrito residents. Opinion surveys indicate that cell phone towers negatively impact quality of life and that proximity to a tower would decrease a property's value by ten to nineteen percent. Analysis of sales data shows that property values can decrease up to twenty-one percent after installation of a cell phone tower. Although expert opinions vary, the manager of a prominent real estate brokerage office in New York has called cell phone towers 'the kiss of death,' claiming that a property in close proximity to one can sell for twenty-five percent less than a comparable property without a tower. All of the available data suggests that installation of a cell phone tower would drastically negatively impact the residents nearby both economically and in terms of quality of life.

Introduction

As technology advances and the impetus for citizens to become increasingly mobile escalates, the proliferation of telecommunication infrastructure has become unavoidable. The citing of new cellular telephone towers has the propensity to become contentious because of the conflicting interests of local residents and telecommunications service providers. Although the concerns of local residents are often dismissed as self-serving not-in-my-backyard sentiment, all citizens have the right to defend their health, economic and emotional interests and these concerns should be seriously considered when the suitability of a site is assessed.

Herein, we examine the impact of installation of prominent cell phone towers on property values with the goal of assessing the probable economic impact of the proposed seventy-seven foot T-Mobile tower in the boy scouts parking lot (application # …) on both the residents and City of El Cerrito. Our research suggests that the boy scouts lot is not a favorable location for such a tower due to the unfair financial burden placed on residents in close proximity to the tower and the negative economic impact on the City of El Cerrito, and by extension all El Cerrito residents.

Data

There are several different types of data that can be analyzed to determine the probable effect of a cell phone tower on property values. Opinion surveys of homeowners and homebuyers, analysis of property sales data and expert testimony by certified appraisers should all be considered.

Opinion Survey Data

Bond and Wang (2005) conducted an opinion poll of residents of ten neighborhoods in Christchurch, New Zealand to assess public perceptions of cell phone towers and how proximity to a cell phone tower would likely effect their choices when investing in real estate. Eighty-three percent of respondents said that the location of a prominent cell phone tower would be taken into account if they were to consider moving. Ninety percent of residents in neighborhoods that had a cell phone tower reported that the presence of the tower negatively effected the enjoyment of their neighborhood, with health concerns and aesthetics being the leading cause for dissatisfaction. Eighty-three percent of respondents from neighborhoods without a cell phone tower reported that they would pay less for a property if it were near a cell phone tower, with forty-five percent being prepared to pay substantially less. The average survey respondent believed that proximity to a cell phone tower would decrease the value of a property by ten to nineteen percent.

Sales Data Analysis

There have been several studies that have examined sales data in neighborhoods where cell phone towers have been constructed and compared sales trends to sales data for neighborhoods without a cell phone tower. Interestingly, the results from such studies vary dramatically, from decreases in value of up to twenty-one percent to increases of up to twelve percent (Bond and Wang, 2005; Bond, 2007). In response to these findings, the logical questions are; (1) Are the reported trends really correlated to the construction of cell phone towers? And, (2) Why is there such a large variance in the local property market in response to cell phone tower construction? Next, we will attempt to answer these two questions.

In all studies examined the sales data was analyzed using multiple regression analysis in a hedonic framework, as is generally accepted for pricing models, (e.g. Court, 1939; Grillches, 1971; Rosen, 1974; Freeman, 1979), and allows for the identification of both linear and non-linear data trends. Authors of these studies hold advanced degrees from well-regarded universities and are published in peer-reviewed journals. For these reasons we assert that the model results are valid and represent an actual correlation between construction of cell phone towers and changes in the value of nearby properties.

The variance in the response of the local property market to cell phone tower installation may be explained by the socio-economic standing of the neighborhoods studied. Neighborhoods with low median household incomes, low initial property value and low education levels tended to show no correlation between inception of the cell phone tower and housing prices, or in some cases the cell phone tower actually increased the value of nearby properties (Bond and Wang, 2005; Bond, 2007). In contrast neighborhoods with high median household incomes, high initial property values and high education levels tended to be the hardest hit by installation of cell phone towers with housing prices dropping by 15%, 20% and 21% in three different comparatively affluent neighborhoods (Bond and Wang, 2005; Bond and Xue, 2004).

We hypothesize that cell phone towers have a greater negative impact on property values when they are cited in more affluent neighborhoods because high-earning families

tend to choose property based on lifestyle factors such as aesthetics and ambiance, whereas property choice for low-earning families is likely based on more basic needs such as square footage and proximity to public services. Water views have been shown to be an important attribute in house pricing in affluent neighborhoods, we suggest that a 'cell phone tower view' may function in the same way, although negatively.

The education level of potential home buyers may also effect the sales price of houses near cell phone towers because of the increased awareness of the potential negative health effects of living close to a cell tower. The survey results indicate that the general public perceive their to be health risks associated with living close to a cell phone tower, and more educated home buyers may be disproportionately aware of such risks. Even if there are no proven health risks associated with living near a cell phone tower, 'cancer-phobia' appears to be a strong enough fear to drive down property values in areas near electromagnetic wave emitting structures such as cell phone towers.

Interestingly, rental markets do not appear to be effected by the installation of cell phone towers regardless of the affluence of a neighborhood (Bond and Wang, 2005). We hypothesize that this may be due to a difference in the factors affecting the choices of renters versus buyers. Renters may be willing to withstand health risks and visual blight because they do not plan to live in an area for a long time. Home buyers on the other hand are generally planning on living in an area for a long time and becoming part of the neighborhood community, and therefore would be much more concerned by issues of long term health and aesthetics.

Testimony of Appraisers

The final type of data available is the expert witness testimony of professional real estate appraisers. Like the sales data, the opinion of certified appraisers varies dramatically. In 'BellSouth Mobility, Inc. vs. Gwinnett County, Georgia' (US District Court for the Northern District of Georgia) a certified appraiser submitted written testimony concluding that cell phone 'monopole' towers did not decrease property values. In direct contrast, the manager of a prominent real estate brokerage office in New York called cell phone towers 'the kiss of death,' and has claimed that a property in close proximity to one can sell for twenty-five percent less than a comparable property without a tower (Lorde Martin, 1995).

We suggest that the inconsistency in opinion of those who work in the real estate industry may be due to dissimilarities in the neighborhoods examined. As discussed above, it appears that property values are not affected dramatically in poorer neighborhoods, however they are substantially negatively affected in affluent neighborhoods.

Discussion

We have shown that the installation of cell phone towers can have a substantial negative impact on property values in affluent neighborhoods, what remains is to assess whether or not the area surrounding the proposed site in El Cerrito can be considered

affluent, and examine the probable economic impacts of cell phone tower installation there.

The median sale price of property in the City of El Cerrito as a whole was substantially higher than the state average in 2008 (about 135% of the state median). El Cerrito residents also excel in other 'affluence indicators' such as educational attainment and household income, with averages that are well above state averages, indicating that El Cerrito is an affluent City, and therefore the suitability of the proposed site is questionable.

Impact on City of El Cerrito Tax Revenue

Studies suggest that properties within a 1,000 ft radius of the cell phone tower will have the most dramatic decrease in resale value. Our geographical analysis found 273 private residences within this proximity. Analysis of recent sales data for this area indicates that the average sale price for a home within this 1,000 ft radius in 2008 was $854, 000. If we apply a conservative depreciation of 15% (many studies suggest actually depreciation would be closer to 20 – 25%) to the residences within the 1,000 ft radius it results in a total loss in value of $34, 971, 300 (i.e. almost thirty-five million dollars). Using a more realistic depreciation of 20% results in a total loss of $58, 285, 500.

El Cerrito residents pay about 1% of a property's value in tax each year. If the 273 private residences in The Arlington area depreciate between 15 – 25% the probable loss in tax revenue will be between $350, 000 to $583, 000 each year, which corresponds to about 1% of the adopted 2009-2010 El Cerrito City budget.

It should be noted that this estimate of the loss in tax revenue only takes into account properties that are within the 1,000 ft radius of the proposed tower. Many other properties will lose value because of the unpleasant view of the tower.

Conclusions

Installation of cell phone towers in residential neighborhoods has a dramatic negative impact on property values in affluent neighborhoods. Opinion surveys, analysis of market data and opinions of real estate specialists all suggest that property values in a neighborhood such as The Arlington area of El Cerrito would depreciate by about 20%, and perhaps as much as 25%. Considering only the properties within a 1,000 ft. radius of the proposed tower, this would represent a total loss in value of between about thirty-five to fifty-eight million dollars, and a tax revenue loss of about three hundred and fifty to five hundred and eighty thousand dollars each year.

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