Title
Does Redevelopment-Related Investment in Downtown Have a Positive Influence on the Surrounding Neighborhoods?

Audience
This report is primarily targeted at planners, developers, policy makers, non-profit organizations, and skeptical residents who are evaluating redevelopment plans for medium-to-large cities with extensive blight. All of the audience members targeted should, and hopefully will, participate in redevelopment plans to ensure that a strategy is chosen that will have a broad positive impact on the quality of life for the residents of neighborhoods in and around redevelopment areas.

Policy makers and planners will ideally represent the best interests of the city under redevelopment, while residents and non-profits will provide a check-and-balance role with actual knowledge from their experiences living in the city and working with the community. All of these interested parties must be aware of the potential positive and negative impacts of their approved legal plans.

Developers will ultimately implement the projects while taking a significant financial risk on behalf of their investors and lenders. It is also in the developer’s best interest to understand the results of redevelopment on the larger community in order to better communicate risk and reward factors to their investors and lenders.

Background
Oakland, California, is the third largest city in the San Francisco Bay Area with a population of almost 400,000 (U.S Census Bureau 2000). It is the closest city to the east of San Francisco, with a direct connection via the Bay Bridge and the Bay Area Rapid Transit (BART) rail system. In recent years, Oakland has become a key component in the travel and goods movement industry. The city hosts an international airport that will be completing a renovation project in 2009 to support a projected 16 million annual passengers, up from 8 million in 1999 (Airport-Technology.com), and was ranked fifth in the total number of daily departing Southwest Airlines’ flights from U.S. airports in 2007 (Southwest Airlines 2007). Oakland is also home of a fast growing container shipping port that is not only the largest in Northern California, but the fourth largest in the United States (Raine 2006). Additionally, Oakland hosts a professional football, baseball, and basketball team.

Despite the importance of Oakland within the region, it is not a true destination of visitors or new residents coming to the Bay Area. The two larger cities in the Bay Area are San Francisco and San José: San Francisco could easily be considered the “headliner” of the region and San José is the widely known “Capitol of Silicon Valley.” Oakland, on the
other hand, continues to have a very bad reputation for being run-down, crime-ridden, and dangerous. In fact, Oakland was recently ranked eighth on the “most dangerous” U.S. cities list by Morgan Quitno Press (Morgan Quitno Awards: 13th Annual America’s Safest (and Most Dangerous) Cities 2006).

Oakland, along with many other middle-sized, aging cities in the United States has been struggling to find a successful recipe to improve both its image and the quality of life for residents. Unfortunately, cities like Oakland do not garnish support from the international appeal that has reinvigorated cities such as San Francisco, New York City, and Chicago. To further economic growth, improve public safety, and become an attractive destination for visitors and new residents, Oakland has chosen to take extensive advantage of the California redevelopment program laws, which use tax increment financing (TIF) to pay for the necessary capital investments to remove blight. Creating a redevelopment area is a popular approach to entice developers to invest in these risky, blighted neighborhoods. TIF has often been a controversial policy, however. When a redevelopment project area is established, the property tax base at the time of establishment is frozen; all additional property taxes above that base, or “tax increment,” that are generated by new developments and a safer, more attractive environment are reinvested in the redevelopment area (Weber and Goddeeris 2007). Without TIF laws, the growth in property tax revenues that usually occur with capital improvements and new developments would be distributed among all public districts that generally share property tax revenues, including the state, county, and special districts, as well as the city at large.

Oakland has delineated ten redevelopment project areas in the city; the downtown, or “Central District” is one of these project areas. The Central District is the oldest redevelopment project area in the city, designated in 1969. Until recently, however, the efforts to reinvigorate the area appear to have been fruitless.

While all of Oakland’s redevelopment project areas have experienced some investment within the last ten or more years, the Central District has been observably extensively redeveloped. During the late 1980s through the present, the Central District has seen the addition of new high rise office space (including both a new state and federal building), a Marriot Hotel with a convention center, the renovation of the City Hall complex, a new City Center with retail and office space, and extensive renovation and façade improvements on historic buildings (Oakland History Timeline; Redevelopment: Central District). One key program that has had an obvious impact on the landscape of this area in the last few years has been the addition of new, high-density, luxury condominiums and lofts driven by the “10K Housing Initiative.” This program was launched in 1999 by then-mayor Jerry Brown; the goal of the program was to bring 10,000 new residents to the Central District. These dwelling units largely consist of market-rate housing, often including only the minimum requirements for affordable housing inclusion (Redevelopment: Central District).
**Research Question**

Did the extensive redevelopment of the Central District of Oakland from 1990 to 2005 lead to an increase in the housing prices of surrounding single-family residences? If so, did the rate of price appreciation decrease as the distance to the Central District increased?

**Relevance**

“The California Community Development Act of 1945 enables any city or county [in the state] to establish a redevelopment agency to combat blight” (Dardia 1998, 2). The intent of the legislature was to improve the quality of life for California residents living in deteriorating areas. The jurisdiction’s redevelopment agency is allowed to capture any increment in the property tax revenues emanating from the redevelopment area. The logic behind this practice is that the increase in property taxes would not have occurred but for the work done by the redevelopment agency in the redevelopment area. In summary, tax increment financing, or TIF, enables the reinvestment of property tax revenues within a designated redevelopment district for revenue generated above the property tax base at the time the district was designated (Weber and Goddeeris 2007, 1). Without TIF the increasing property tax revenues would be shared among public agencies. Because of the favorable tax treatment, California cities have made considerable use of TIF districts. In 2007 80% of the cities and 45% of the counties in California had redevelopment agencies and there were almost 800 redevelopment project areas in the state; TIF revenues generate approximately $3 billion in annual funding for redevelopment activities (California Redevelopment Association).

Despite the extensive use of TIF-enabled redevelopment throughout California, a review of extant literature on the effects of these investments on private property values, namely single-family residences, suggests that California has not been the market under study for a published empirical study. Although “the first considerable use of TIF began in California with the passage of legislation in 1952 authorizing the use of TIF” many other states have since adopted similar TIF policies (Byrne 2006, 317). In fact, a literature search identified studies focusing on the cities of Chicago (Byrne 2006, Weber, Bhatta, and Merriman 2007), New York City (Ellen et al. 2001), and Richmond, Virginia (Galster, Tatian, and Accordino 2006), as well as the state of Indiana (Man and Rosentraub 1998), but not one study on a western U.S. metropolitan area.

As there is no available empirical research conducted in the western U.S., a study of the effects of TIF and redevelopment on private citizens in the San Francisco Bay Area would be a great asset to California planners. This study will provide valuable insight in two ways: First, the spirit of the redevelopment laws to remove urban blight and the public willingness to reinvest the tax increment in the infrastructure of blighted urban neighborhoods was to improve the quality of life for citizens living in and near the blighted neighborhoods. An implicit measure of improvement in household quality of life is increased residential property values. Second, positive spillover effects in neighborhoods surrounding a redevelopment district signify that the extensive investments in redevelopment have a larger benefit for an area. An empirical study of the effects of TIF districts on the single-family residences in neighborhoods surrounding
redevelopment areas will be a useful tool to evaluate the effectiveness of a widely used California policy.

The City of Oakland is an interesting subject for this type of study. Although it is a metropolitan center with a distinct downtown, an international airport and shipping port, as well as an array of other urban amenities, much of the existing residential development has a sprawling suburban feel. In fact, many of Oakland’s ten redevelopment areas include large sections of older suburban-style single-family housing tracts. This range of development makes Oakland a good case study for the effects of redevelopment in western metropolitan centers where there is a substantial base of single-family residential dwellings.

Despite the designation of multiple project areas, Oakland has devoted extensive efforts toward the redevelopment in the Central District, while the other areas have received spotty redevelopment investments. This strategy of targeted investment in the Oakland Central District has a similar feel to a strategy that Richmond, Virginia adopted in 1998 called Neighborhoods in Bloom (Galster, Tatian, and Accordino 2006, 459). Richmond determined that, rather than spreading redevelopment investment throughout the city in small portions, devoting a higher level of investment in fewer neighborhoods would create a “tipping point” that would induce a higher level of private redevelopment investment in these same neighborhoods. “The explicit goal was to achieve a critical mass that stimulated self-sustaining private market activity” (Galster, Tatian, and Accordino 2006, 458). To implement this strategy, Richmond identified the most blighted public housing projects in the city and then concentrated investments from public and non-profit funds on those specific projects while also prioritizing other capital improvement projects in those neighborhoods. Galster, Tatian, and Accordino performed an empirical study on the effects of this strategy and found that “the average sales price [of homes] in the target areas increased 10.85% per year faster than prices of comparable homes in the city overall” after this concentrated redevelopment took place (Galster, Tatian, and Accordino 2006, 463).

The study on Richmond, Virginia was not able to determine whether adjacent communities experienced positive spillover effects from [the targeted] strategy, however (Galster, Tatian, and Accordino 2006, 465). The study being proposed here, on the other hand, will explicitly evaluate the existence of spillover effects of redevelopment in Oakland and provide a basis for the expectations of both planning-oriented professionals and citizens who are involved in and affected by redevelopment activities in the western United States. Additionally, if positive spillover effects are found, the study will provide support for targeted investment strategies.

**Hypothesis**

I believe that the extensive redevelopment of the Central District of Oakland from 1990 to 2005 had a more significant impact on the housing prices in surrounding neighborhoods, when compared to neighborhoods further from the Central District. Overall, the effects of redevelopment are expected to be positive on all housing prices.
A study of property value growth from 1990 to 1993 within TIF districts in Chicago found that a larger district boundary, “industrial areas close to the CBD,” and “non-minority areas of a city” have a higher rate of success in raising property values (Byrne 2006, 327). Based on Byrne’s study, the Oakland Central District is a good, although not perfect, example of where to use TIF to generate successful redevelopment activities.

In order for the redevelopment efforts in the Central District to spillover and improve the quality of life for a larger segment of citizens, however, housing values in neighborhoods surrounding the Oakland Central District would also need to appreciate. A 2000 study of the neighborhood characteristics most likely to attract private redevelopment activity in Chicago found that “older, low-density houses in older, moderate-density neighborhoods are most likely to be renovated…. Improvement is more likely in areas that are close to downtown and well-served by mass transit” (Helms 2000, 496). Observations of the neighborhoods surrounding the Oakland Central District are that there are many neighborhoods that fit this description.

Several other studies of the effects of redevelopment on the housing values in close proximity to new development have found positive effects on housing values. A study of house price appreciation in New York City as it related to new, for-sale, affordable housing developments from 1980 to 1999 found positive spillover effects with proximity to the new developments. The study found that, before redevelopment activities, homes within 500 feet of the projects studied sold, on average, for 8.8% less than comparable homes within the same zip code; “after completion [of the project] the gap immediately shrinks … to just 1.6% …” (Ellen et al. 2001, 203). The study also found increased house price appreciation of homes within 1000 feet within two years and 2000 feet within three years of the completion of the new developments (Ellen et al. 2001, 203). A 1998 study of Indiana cities with TIF districts found that “TIF program[s] stimulate property value growth in the TIF district and surrounding communit[ies]” (Man and Rosentraub 1998, 542). Indiana, however, did not require blight to declare a TIF district, enabling the process to be used for any city that is attempting to spur economic development activities (Man and Rosentraub 1998, 532).

In a similar study to the one proposed here, a 2007 study of Chicago single-family home sales between 1993 and 1999 found that “proximity to any TIF district [had] a statistically significant influence on the rate of appreciation in [that] sample” (Weber, Bhatta, and Merriman 2007, 275). The study also found that “proximity to commercial and industrial TIF districts reduce[d] predicted appreciation” (Weber, Bhatta, and Merriman 2007, 276) and proximity to “a mixed-use TIF district … stimulate[d] appreciation” (Weber, Bhatta, and Merriman 2007, 278). The fifteen year look at the Oakland Central District may tell an interesting story of house price appreciation effects, as the 1990s were focused on adding commercial and office development while the more recent past has focused on a mixed-use component.

**Methods**

The proposed study will first examine the cumulative redevelopment of the Oakland Central District from 1990 to 2005 to establish a picture of “triggers” in the available
amenities that may have made residential properties in and around the Central District more desirable. Examples of “triggers” would be a cumulative amount of increased office space, retail space, redeveloped parcels, mixed-use buildings, or new housing units.

Second, the study will perform a hedonic regression analysis on the effect that proximity to the Oakland Central District had on housing prices in the surrounding neighborhoods. Hedonic regression analysis is a popular research tool used in studies that wish to objectively estimate the impact of a single factor on housing prices. “Hedonic prices are defined as the implicit prices of attributes and are revealed to economic agents from observed prices of differentiated products and the specific amounts of characteristics associated with them” (Rosen 1974, 34). As explained in a study that used hedonic regression analysis to evaluate the effect of impact fees on housing prices:

The implicit prices of the components of the bundle of housing service rendered by housing units of varying types, sizes, qualities and locations can be estimated by regressing the observed sales prices of housing against these contributing factors. In order to isolate the effects of the impact fees on housing prices, we control for an array of structural and location factors (Mathur, Waddell, and Blanco 2004,1306).

The results of the regression analysis will illustrate changes in the housing market over the period of study; the results will be compared to the findings on cumulative redevelopment, as described in the next two sections.

1 – Assessing Cumulative Redevelopment in the Central District
One probable reason that the redevelopment of the Oakland Central District will positively affect the single-family home prices surrounding the Central District is the extensive growth in the availability of amenities in the Central District. Brueckner, Thisse, and Zenou (1999) compared Paris to American cities, in general, and found that available amenities are the defining factor in retaining wealthier residents in the city or losing them to the suburbs. This study categorized amenities as natural, historical, and modern (Brueckner, Thisse, and Zenou 1999, 94).

Although Oakland may suffer from extensive blight, it is actually rich in natural and historical amenities. Natural amenities are well distributed throughout the city, but the Central District is adjacent to both Lake Merritt and a public waterfront and marina in Jack London Square. Oakland also has a rich estuary system along the east side of the city, as well as a number of large parks surrounding the city, including Joaquin Miller Park, Anthony Chabot Regional Park, and the Morcom Rose Garden. The city also has many historical amenities largely located in the Central District, including the Fox and Paramount theatres, the Tribune Tower, and Preservation Park (a small collection of restored historic homes that now house local businesses, museums, etc). Oakland has long struggled to retain many modern amenities in the Central District, however, experiencing high turnover on restaurants and other retail establishments and often having many vacant storefronts. As the redevelopment of the Central District has become more extensive, restaurants and retail establishments appear to be achieving a higher level of success.
A study on whether access to rail transit stations was capitalized into housing prices in Alameda County, California (where Oakland is located) showed that residents in this region do value local modern amenities. The study found that in 1990 there was a “price premium associated with (street) distance to the nearest BART station [of] $2.29 per meter” (Landis, Guhathakurta, and Zhang 1994, 31). Also, the observable amenity of a view of the San Francisco Bay, as well as convenient access to regional parks, has historically attracted wealthier residents to properties in the Oakland Hills.

Under Brueckner’s theory, the modern amenities accumulating in the Central District of Oakland should be capitalized into the housing prices of residences with convenient access to these amenities. By examining the accumulation of these modern amenities from 1990 to 2005 in the Central District, this study will identify potential redevelopment triggers that may also result in positive spillover effects to neighborhoods that surround the redevelopment.

Data: Locations and year of completion of large or seemingly influential new developments and businesses in the Oakland Central District.

Reason: Describes the changes in the Central District on a year-by-year basis to determine how/what type of redevelopment projects influenced spillover effects near the Central District and if there where specific times when cumulative redevelopment triggered a jump in house price appreciation.

Procedure: Collect data on developments and business permits in the Central District from 1990 to 2005 from the City of Oakland Community and Economic Development Agency.

Method of Analysis:
- A series of photographs, tables, and GIS maps of annual and cumulative development during the period under study.

2 – Hedonic Regression Analysis of Housing Price Appreciation:
As discussed above, hedonic regression analysis is a common method used to examine the changes in housing prices as related to a specific market factor, while controlling for the variety of differences among the houses included in the sample. A different method used to similarly examine changes in housing prices is a repeat-sales analysis. The repeat-sales method only analyzes properties that have sold more than once during the period under study, using the change in price of a particular parcel as a basis to explain the market factor being studied. A comparison of the hedonic regression and repeat-sales analysis method determined that “repeat-sales price indices … suffer from sample selection bias and nonconstancy of implicit housing characteristic prices, and they are quite sensitive to small sample problems … [when performed on] municipality-level data sets” (Meese and Wallace 1997, 64).

Of the literature reviewed for this study which examined the effects of redevelopment and TIF districts on property values, Byrne (2006), Ellen et al. (2001), Galster, Tatian, and Accordino (2006), and Man and Rosentraub (1998) used a hedonic regression
analysis, while Weber, Bhatta, and Merriman (2007) used a repeat-sales analysis. The Landis, Guhathakurta, and Zhang (1994) study on the capitalization of an amenity (proximity to a rail station) in the Oakland region also used a hedonic regression analysis.

The study proposed here will use a hedonic regression analysis to explain the relationship between the single-family homes sold between 1990 and 2005 and the effect that proximity to the Oakland Central District had on their sale prices, using the hedonic model to control for all other housing characteristics. The findings by Meese and Wallace (1997) that repeat-sales analyses provide less reliable results when conducted on a small area are one reason that this study will utilize hedonic regression analysis. A second reason for this decision lies in the fact the proposed study is attempting to identify a perceived improvement in quality of life surrounding a redevelopment area, as capitalized in housing prices. I believe that a repeat-sales analysis would largely identify properties that were purchased speculatively or had problems in their inherent characteristics that did not retain owners, rather than properties purchased for the perceived value of access to a redeveloping area.

Data 1: Alameda County Assessor’s data on single-family residence sales within 3 miles from the Central District border in Oakland from 1990 to 2005.

- **Reason:** Provides actual sales price, year and date of sale, parcel location, and other information on the building.

- **Procedure option:** Obtain relevant data from the Alameda County Assessor; the data will cost $300 for every 10,000 addresses and I will submit an application to the San Jose State University College of Social Sciences for a grant to purchase the data.

Data 2: 1990 and 2000 Census data at census block group level for the Central District and surrounding neighborhoods.

- **Reason:** Develops a description of neighborhoods, as described by the residential make-up, in order to control for demographic and neighborhood differences in the hedonic model.

- **Procedure:** Use the Central District boundaries provided on-line by the City of Oakland and the on-line US Census data for 1990 and 2000 to collect the relevant data.

Method of Analysis:

- A hedonic regression model similar to that used in the “Capitalization of Transportation Investments into Single-Family Home Prices” (Landis 1994, 7-10).

This model will explain the relationship between the sale price of single-family homes sold between 1990 and 2005 and their proximity to the Oakland Central District. Based on the Landis description, the model can be described as:

$$ \text{Single-Family Home Sales Price}(i) = F\{\text{Home attributes}(i), \text{Neighborhood quality variables}(i), \text{Proximity to Central District}(i)\}, $$
where \((i)\) represents each individual home sale in the model (Landis, Guhathakurta, and Zhang 1999, 7).

**Model Variables:**

**Census Data**

1. MEDINC1990 – median household income in 1990
2. MEDINC2000 – median household income in 2000
3. CHG_MEDINC – percent change in median household income from 1990 to 2000
4. PCT_OWNER1990 – percentage of homeowners in 1990
5. PCT_OWNER2000 – percentage of homeowners in 2000
6. CHG_PCT_OWNER – change in percentage of homeowners from 1990 to 2000
7. PCT_BELPOV1990 – percentage of residents below the poverty rate in 1990
8. PCT_BELPOV2000 – percentage of residents below the poverty rate in 2000
9. CHG_PCT_BELPOV – change in percentage of residents below the poverty rate from 1990 to 2000
10. PCT_ASIAN1990 – percentage of Asian residents in 1990
11. PCT_ASIAN2000 – percentage of Asian residents in 2000
12. CHG_PCT_ASIAN – change in percentage of Asian residents from 1990 to 2000
15. CHG_PCT_BLACK – change in percentage of African-American residents from 1990 to 2000
16. PCT_HISP1990 – percentage of Hispanic residents in 1990
17. PCT_HISP2000 – percentage of Hispanic residents in 2000
18. CHG_PCT_HISP – change in percentage of Hispanic residents from 1990 to 2000
19. PCT_WHITE1990 – percentage of Caucasian residents in 1990
20. PCT_WHITE2000 – percentage of Caucasian residents in 2000
21. CHG_PCT_WHITE – change in percentage of Caucasian residents from 1990 to 2000

**Assessor Data**

22. YEARSOLD – year the property was sold
23. WINTER – Dummy variable to indicate if the property was sold in December, January, or February (1 if yes, 0 if no)
24. SPRING – Dummy variable to indicate if the property was sold in March, April, or May (1 if yes, 0 if no)
25. SUMMER – Dummy variable to indicate if the property was sold in June, July, or August (1 if yes, 0 if no)
26. FALL – Dummy variable to indicate if the property was sold in September, October, or November (1 if yes, 0 if no)
27. SQFT – square footage of living space
28. LOTSIZE – square footage of lot size
29. AGE – age of building
30. BDRMS – number of bedrooms
31. BATHS – number of baths
32. PROXIMITY_CD – proximity to Oakland Central District boundaries (measured in feet)
33. BART – distance from a BART station
34. ACORN_RDA – Dummy variable indicating if address is in the Acorn redevelopment area (1 if yes, 0 if no)
35. BROADWAY_RDA - Dummy variable indicating if address is in the Broadway/MacArthur/San Pablo redevelopment area (1 if yes, 0 if no)
36. CCEAST_RDA – Dummy variable indicating if address is in the Central City East redevelopment area (1 if yes, 0 if no)
37. COLISEUM_RDA – Dummy variable indicating if address is in the Coliseum redevelopment area (1 if yes, 0 if no)
38. OAKCNTR_RDA – Dummy variable indicating if address is in the Oak Center redevelopment area (1 if yes, 0 if no)
39. OAKKNOLL_RDA – Dummy variable indicating if address is in the Oak Knoll redevelopment area (1 if yes, 0 if no)
40. OAKBASE_RDA – Dummy variable indicating if address is in the Oakland Army Base redevelopment area (1 if yes, 0 if no)
41. STANFORD_RDA – Dummy variable indicating if address is in the Stanford/Adeline redevelopment area (1 if yes, 0 if no)
42. WESTOAK_RDA – Dummy variable indicating if address is in the West Oakland redevelopment area (1 if yes, 0 if no)

Report Outline
1) Introduction (4.5)
   a) Background (.6)
   b) Research Question (.2)
   c) Relevance (2.5)
   d) Intended Audience (.2)
   e) Methods Overview (.5)
   f) Report Structure (.5)
2) History of Development in Oakland Central District from 1990-2005 (10, inc. maps and photos)
   a) 1990 to 1999: The Addition of Office Space and Other Commercial Amenities
   b) 2000 to 2005: The Addition of Market-Rate Housing and New Residential-Serving Retail
3) Literature Review (10)
   a) Capitalization and Spillover Effects of Amenities (4)
   b) Neighborhood Diversity and Gentrification (3.5)
   c) Discussion of Hedonic vs. Repeat-Sales Studies (2.5)
4) Empirical Study (15, inc. maps)
   a) Testable Hypothesis
   b) Presentation and Discussion of Housing Price Data
c) Description of Hedonic Model
   i) Assessors Data Used in Building Model
   ii) Census Data Used in Building Model

d) Discussion of Regression Results

5) Conclusions (4)
   a) Findings of the Study
   b) Limitations of the Study
   c) Policy Implications
   d) Potential for Future Studies
References

Items Cited in Proposal


Items I Have Read


——. Redevelopment. City of Oakland.  


**Items I Plan to Read**


# Schedule of Tasks

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Project or Task</th>
<th>Done</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aug</td>
<td>20</td>
<td>Preliminary Proposal with annotated bibliography</td>
<td>X</td>
</tr>
<tr>
<td>Sept</td>
<td>4</td>
<td>Draft #1 of Research Proposal</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Review literature it w/Hedonic models and identify variables for this study</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>Draft #2 of Research Proposal</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>24</td>
<td>Draft #1 of IRB Application</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>Final Research Proposal submitted (date amended per discussion w/Shishir)</td>
<td>X</td>
</tr>
<tr>
<td>Oct</td>
<td>4</td>
<td>Draft #1 of Literature Review</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Collect Census boundary and parcel-level GIS files</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>5</td>
<td>Contact Alameda County Assessors Office to understand the selection and purchase process for parcel sales data</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>Initiate contact with Oakland Central District RDA regarding best process to identify developments from 1990 to 2005</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>Draft Social Science Research Grant Application to Shishir for review</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>12</td>
<td>Revised IRB Application for final review before printing</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>15</td>
<td>Final Social Science Research Grant Application deadline (funding to purchase parcel information from Alameda County Tax Assessor)</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>Final IRB Application</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>22</td>
<td>Final definition of Central District Mapping project (in conjunction with URBP 278)</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>28</td>
<td>Revised Final Research Proposal (updated per final feedback from Shishir)</td>
<td>X</td>
</tr>
<tr>
<td></td>
<td>29</td>
<td>Final Literature Review</td>
<td></td>
</tr>
<tr>
<td>Nov</td>
<td>1-16</td>
<td>Conduct 1st interviews (if deemed important)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2-18</td>
<td>Collect Central District development information and develop maps of development history (in conjunction with URBP 278)</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17-30</td>
<td>Refine maps and write “History of Development …” section</td>
<td></td>
</tr>
<tr>
<td>Dec</td>
<td>1-9</td>
<td>Develop “Introduction” from Final Research Proposal; Refine Literature Review based on new information found through semester</td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>Submit Draft sections: Introduction, History of Development, Literature Review</td>
<td></td>
</tr>
<tr>
<td>Semester break</td>
<td>Collect Census data and purchase parcel data (if needed); begin preparing data for regression testing</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Feb</td>
<td></td>
<td>Attend Econometrics class to better understand regression testing</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Review hedonic model and sales data for collinearity issues</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Run regression tests and interpret results</td>
<td></td>
</tr>
<tr>
<td>Mar</td>
<td>1-16</td>
<td>Draft Empirical section and Conclusions</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17</td>
<td>Draft #1 of full report to Shishir</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31</td>
<td>Shishir to provide Draft #1 feedback</td>
<td></td>
</tr>
<tr>
<td>April</td>
<td>14</td>
<td>Draft #2 of full report to Shishir</td>
<td></td>
</tr>
<tr>
<td></td>
<td>21</td>
<td>Shishir to provide Draft #2 feedback</td>
<td></td>
</tr>
<tr>
<td>May</td>
<td>2</td>
<td>Final Report</td>
<td></td>
</tr>
</tbody>
</table>