

THE IMPACT OF AFFORDABLE HOUSING ON HOUSING & CRIME IN ORANGE COUNTY

John Hipp, Clarissa Iliff, Emily Owens, George Tita and Seth Williams
Department of Criminology, Law and Society
School of Social Ecology
University of California – Irvine

Produced by the Livable Cities Lab



**L I V A B L E
C I T I E S L A B**

INTRO

Orange County is facing a critical housing shortage. It is estimated that 65,000 housing units are needed to meet current demand (Orange County Business Council <https://ocbc.org/whos-really-blame-ocs-housing-affordability-crisis/>). This shortage cuts across all categories of housing but is especially acute within the affordable housing sector. There are a number of reasons why the supply of affordable housing is not keeping up with demand. Some are recent, such as increasing material and labor costs along with a disruption in the supply-chain. Some are more endemic, such as long lead times and the high costs associated with the permitting and approval process. The fear that affordable housing will destroy local property values and/or increase crime remains one of the more entrenched barriers to development.

Careful research has shown this not to be the case across a diverse set of communities in America (Galster 2002; Center for Housing Policy 2009; Albright, Derickson and Massey 2013). Two recently published articles found the same: Stacy and Davis (2022) looked at the impact on property values in Alexandria, VA and found a small but statistically significant positive impact on property values, Similarly Voith et al. (2022) have positive spillover effects on surrounding property values in Chicago, IL and Cook County, IL. Closer to home, study participants in San Diego, CA reported having serious concerns over the siting affordable housing in their community, believing that it would both increase crime and reduce property values. But again, no empirical evidence was found to warrant such concerns (Abdel-Samad, et al. 2020.) However, some remain unconvinced of results from other places arguing that, in this case, Orange County, is sufficiently different that such research sheds no light on the local reality.

This research does not and cannot comment on the complexities of why it takes so long to build housing, or why it is so expensive. This research examines two simple questions: First, what happens to local housing values following the placement of affordable housing in Orange County? Second, what happens to local levels of crime following the placement of affordable housing in Orange County?

DEFINING AFFORDABLE HOUSING

The category of housing defined as “affordable housing” for the purpose of this research is described as rental housing units that serve Orange County households that fall within the 30%-120% Average Median Income (AMI) category. This equates to an annual income of roughly \$26,000 - \$83,000 based on 2019 standards. Our data includes housing units that serve special needs populations, homeless, disabled, other, that might fall below the 30% AMI threshold including housing for what is generally described as permanent supportive housing units. Emergency, temporary, transitional and other specialized categories of shelter/housing is excluded from our study.

WHERE IS AFFORDABLE HOUSING IN ORANGE COUNTY?

We worked closely with the local housing authorities (County, Anaheim, Garden Grove, and Santa Ana) in order to locate affordable housing. The City of Irvine and several other public sources maintain publicly accessible lists that identify affordable housing opportunities

throughout the County or within specific jurisdictions. The list we created was shared with local developers of affordable housing including American Family Housing, Community Development Partners, Jamboree Housing, and National CORE to review the database of affordable properties.

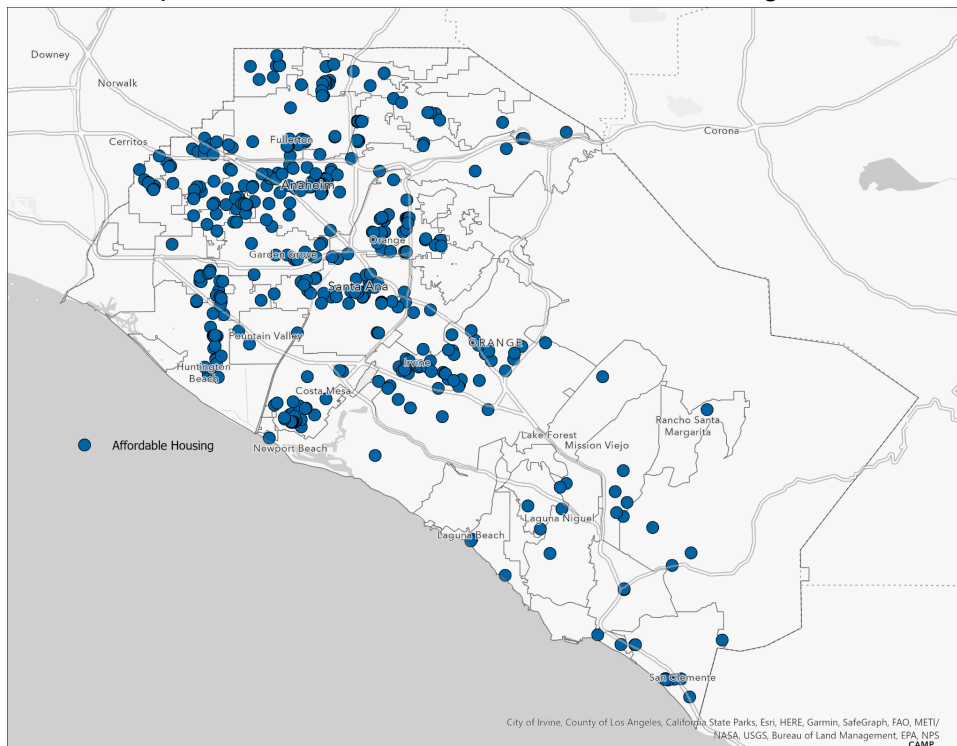
This resulted in additional locations being added to our master list. Finally, the list was augmented by conducting a web search for housing that accepted income-based housing vouchers from other sites including <https://affordablehousingonline.com/>.

The augmented list was again vetted by our partners in the Housing Authority and Development community resulting in a list of 371 distinct affordable housing units used in the data analysis.

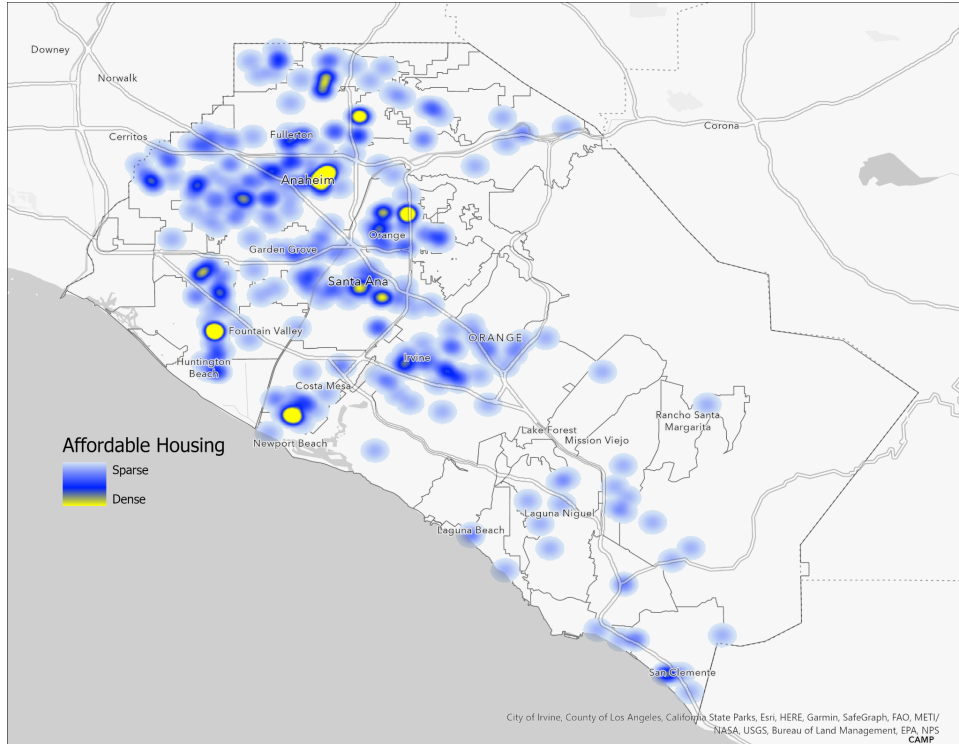
Map 1 displays the location of each unit and Map 2 uses the locations to demonstrate the density of affordable housing throughout Orange County. Affordable housing is located in most populated areas of the county, but areas of density emerge primarily in the northern sections of the county.

The density map is an effective way to support the importance of the effort to “de-concentrate” affordable housing away from highly impacted areas.

Map 1 – Locations of Individual Affordable Housing Units



Map 2- Kernel Density Map of Affordable Housing



DEMOGRAPHIC AND ECONOMIC DATA

Table 1 presents demographic and economic measures from the 2010 American Community Survey at the level of census block groups for both places with affordable housing and those without. On average, places with affordable housing have a larger Hispanic population, lower median household income, fewer homes valued over \$750,000. However, 18%, or nearly 50 of the census block groups with affordable housing, are places where average home values are \$750,000 or greater.

Still, as shown by both the maps and the summary data, affordable housing is located in areas on the lower end of the economic scale and whose residents are disproportionately members of groups that do not identify as Non-Hispanic White.

TABLE 1 – Social and Economic Characteristics of Orange County Block Groups (2010)

	Without Affordable Housing		With Affordable Housing	
	Average	SD	Average	SD
Hispanic (%)	28.98%	0.25	46.42%	0.28
Non-Hispanic White (%)	47.29%	0.26	30.20%	0.22
Non-Hispanic African American (%)	1.50%	0.03	2.13%	0.03
Non-Hispanic Asian (%)	18.73%	0.17	18.06%	0.16
Non-Hispanic Two or More Races (%)	2.86%	0.03	2.29%	0.03
Non-Hispanic Other (%)	3.29%	0.03	2.91%	0.03
Median Household Income	\$104,063	\$42,648.58	\$71,645.95	\$30,586.66
Moved in the Last Year (%)	11.34%	9.20%	13.09%	9.88%
Average Household Size, Overall	3.07	0.85	3.23	0.91
Average Household Size, Owner	3.03	0.89	3.36	1.10
Average Household Size, Renter	3.34	1.23	3.16	1.05
Median Rent	\$2,018	\$568.93	\$1,559	\$376.00

English-Only Speaking (%)	59.90%	24.64%	43.27%	23.28%
Value Under \$100,000	3.76%	10.96%	8.38%	21.13%
Value (\$100,000 - \$150,000)	0.95%	4.22%	1.61%	7.81%
Value (\$150,000 - \$200,000)	1.02%	4.15%	1.21%	4.58%
Value (\$200,000 - \$300,000)	3.66%	10.30%	4.96%	10.85%
Value (\$300,000 - \$400,000)	6.76%	11.59%	9.65%	15.96%
Value (\$400,000 - \$500,000)	11.85%	15.66%	15.81%	18.26%
Value (\$500,000 - \$750,000)	35.94%	25.89%	39.74%	27.20%
Value (\$750,000 - \$1,000,000)	19.84%	21.25%	11.11%	15.99%
Value (\$1,000,000 - \$1,500,000)	8.95%	14.62%	4.42%	11.35%
Value (\$1,500,000 - \$2,000,000)	3.01%	7.84%	1.04%	4.20%
Value (\$2,000,000+)	4.25%	13.21%	2.07%	8.72%
Number of Block Groups	1548		271	

HOUSING VALUES

WHAT DID WE DO?

In order to evaluate claims that affordable housing will reduce local property values, we obtained data on all residential home sales in Orange County between 2001 and 2020. We focused our analysis on homes sold within two miles of affordable housing developments and within three years before or after the development’s opening date. We focused on neighborhoods where we observed active development of affordable housing from 2001 to 2020 - every neighborhood in our sample had homes sold both before and after the opening of an affordable housing development. There were a total of 1,158,258 residential properties bought and sold around 229 affordable housing developments in our analysis sample.

We focused on two measures of home values: the total sales price, and the price per square foot. We also made two adjustments to these values in order to make meaningful comparisons before and after the affordable housing development opened. First, we adjusted the value of the sales price to account for inflation, translating all prices into 2020 values. Second, we conducted a statistical procedure to separate the impact of the affordable housing development from other changes in the Orange County housing market that are unrelated to any specific neighborhood conditions. This is particularly important given the influence of the 2008 recession, when median home values fell to 57% of their 2005 value, and the post-2018 period where the yearly growth rate in median home sales price has doubled, in real terms, every year.

In practice, this involves identifying all homes located more than three miles from any affordable housing site in our sample. We then estimated the average sales price, and price per square foot, of these homes in each of the 228 months from Jan 2002 to December 2021. Finally, we returned to our analysis sample, and subtracted the relevant average “more than three miles away” sales price from each price of each home sold within 2 miles of an affordable housing development in order to create an “adjusted sales price.” Changes in this adjusted sales price reflect the change in local home values around affordable housing that do not depend on changes in the overall tightness of the Orange County housing market.

WHAT DID WE FIND?

Based on this adjusted home value, we find that, on average, the observed sales price of the homes nearby (as shown in Figure A1) increased following the citing of affordable housing. Within one-fifth ($\frac{1}{5}$) of a mile of the development, the observed home sales price increased by about \$15,800 (when considering average home size, this is roughly \$9.45 per square foot). Similarly, among homes sold about $\frac{1}{2}$ mile away, the observed increase in sales price was about \$14,200 (or \$5.56 per square foot), whereas homes sold one mile away increased by \$13,500 (or \$2.99 per square foot). This is generally not consistent with concerns about affordable housing depression home values.

Figure H1 shows the relationship between affordable housing and local home sales prices in more detail, tracing the average home sales price before and after an affordable housing site opens, adjusted for county housing trends, for homes adjacent to, and further away from, the development site.

Prior to the development, homes less than $\frac{1}{5}$ of a mile from the development site were sold for at least \$30,000 below typical Orange County prices, and values increased by about \$10,000 for every tenth of a mile further from the location. Homes sold between one and 2 miles from the site of a future affordable housing project were similar in value to the rest of Orange County. In the three years following the opening of the affordable project, however, homes within $\frac{1}{5}$ of a mile of the site all increased in value, with the biggest increase observed in the homes closest to the project. We observe a general increase of roughly \$10,000 in home values within 1.5 miles of the development, which slowly tapers off as we move further and further away.

Real estate professionals often focus on price per square foot to reflect the desirability of housing, which directly accounts for the impact of living space on total sales price. Figure H2

converts figure H1 into price per square foot. We conclude that this more robust measure of home value does not suggest that affordable housing depresses neighborhood quality. Homes immediately adjacent to affordable housing projects increase in value by roughly \$15 per square foot, and by approximately \$2-\$5 per square foot about $\frac{2}{3}$ of a mile away. We observe no substantial or consistent difference in the price per square foot on homes sold more than $\frac{3}{4}$ of a mile from affordable housing.

DOES THE NEIGHBORHOOD MATTER?

Placing affordable housing in already affordable neighborhoods may impact the local environment in a different way than affordable housing introduced into a higher income neighborhood. In order to evaluate claims that affordable housing may be particularly detrimental to the quality of higher income places, we examined the neighborhood poverty rates in around all successfully places affordable housing developments in Orange County, and selected the developments in the top 25% of poverty rates (the highest poverty rates) and the bottom 25% of poverty rates (the lowest poverty rates). On average, affordable housing developments places in the top 25% were in neighborhoods with a 26% poverty rate, and places in the bottom 25% had a 6.2% poverty rate.

We then repeated our analysis of overall adjusted sales price and adjusted price per square foot in neighborhoods with the lowest and highest levels of poverty where affordable housing has been placed. As shown in figures H3 and H4, opening affordable housing in places with higher poverty rates has a modest positive impact on the value of surrounding homes. Relative to the rest of Orange County, the affordable housing opened in the highest poverty rate places was associated with a \$15 increase in price per square foot in the immediate vicinity of the development, which falls to a roughly \$5 increase in price per square foot up to two miles away.

Figure H5 reveals that, on average, home values increase in more affluent in areas following the opening of affordable housing. The only exception is the for homes that are adjacent to affordable housing and sold in the three years after a development opens, sold for about \$15,000 less than homes sold in the three years before. However, Figure H6 reveals that this decrease in sales price is offset by an increase in price per square foot of \$15. Thus, the supposed negative impact on sales price is simply an artifact of the size of the homes that sold before versus after the opening of affordable housing. While the houses that sold prior to the opening were larger, the homes that sold following were smaller but more valuable as measured by square footage. The increase in value per square foot is found across the study area. The \$15 increase in the sales price per square foot of nearby homes decreases to a roughly \$3 increase in price per square foot, relative to the rest of the county, more than $\frac{2}{3}$ of a mile away.

Overall, the data on actual home sales do not support the claim that affordable housing depresses local home values. We also do not find evidence that placing affordable housing in relatively wealthier neighborhoods has a substantially different effect on the price per square foot of nearby homes than affordable housing in higher poverty neighborhoods. Homes that have the highest increase in value are located within $\frac{2}{3}$ of a mile of the opening affordable housing development.

CRIME

WHAT DID WE DO?

We made a significant effort to collect crime data from as many cities in the county as possible. The earlier crime data for this study were collected as part of the Southern California Crime Study (SCCS) (<https://ilssc.soceco.uci.edu/southern-california-crime-study/>). In that study, the researchers made an effort to contact each police agency in the Southern California region[1] and request address-level incident crime data for the years 2005-2012.[2] Many of the agencies were willing to share their data with us. The data come from crime reports officially coded and reported by the police departments.

We classified crime events into six Uniform Crime Report (UCR) categories: homicide, aggravated assault, robbery, burglary, motor vehicle theft, and larceny. Crime events were geocoded for each city separately to latitude–longitude point locations using ArcGIS 10.2, and subsequently aggregated to blocks. The average geocoding match rate was 97.2% across the cities. These data have been used in several prior studies (Kubrin and Hipp 2016; Hipp and Kubrin 2017).

The LCL research team and its partners from the Orange County United Way and Jamboree Housing then made attempts to update the original data set by reconnecting with all local law enforcement agencies in Orange County. The data request mimicked the original request for crime times and locational data. The research team used the same process to geocode the data, though many agencies provided data that was already geocoded to the precise location of the event. Table 2 presents the agency and years from which we have the crime data.

Table 2. Crime Data by Year and Law Enforcement Agency

City Name	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
Aliso Viejo	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Anaheim								X	X	X	X	X	X	X	X	X	X	X	X	X	
Brea											X	X	X	X	X	X	X	X	X	X	X
Buena Park									X	X	X	X	X								
Costa Mesa															X	X	X	X	X	X	X
Cypress																					X
Dana Point	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Fountain Valley																X	X	X	X	X	X
Fullerton							X	X	X	X	X	X	X	X							
Garden Grove						X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	
Huntington Beach						X	X	X	X	X	X	X	X	X		X	X	X	X	X	X
Irvine				X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
La Habra					X	X	X	X	X	X	X	X	X								
La Palma														X	X	X	X	X	X	X	X
Laguna Beach									X	X	X	X	X	X							
Laguna Hills	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Laguna Niguel	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Laguna Woods	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Lake Forest	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Los Alamitos																					
Mission Viejo	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Newport Beach	X	X	X	X	X	X	X	X	X	X	X	X	X	X							
Orange									X	X	X	X	X	X							
Placentia																				X	X
Rancho Santa Margarita	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Rossmore	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
San Clemente	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
San Juan Capistrano	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Santa Ana	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Seal Beach	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X						
Stanton	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Tustin						X	X	X	X	X	X	X	X	X							
Villa Park	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Westminster							X	X	X	X	X	X	X	X	X	X	X	X	X	X	X
Yorba Linda	X	X	X	X	X	X	X	X	X	X	X	X	X								

After aggregating the crime data to census blocks, we joined the data to the locations for affordable housing placement. We computed the distance around each housing placement and determined the distance of each block from the housing up to one mile. Based on the year of the housing placement, we determined the amount of crime within a block during the year of placement, and then each of the three years before and after placement.

Our analyses compared the amount of crime in blocks both before and after the housing placement. We assessed these differences for two violent crimes: aggravated assault and robbery. We also assessed these differences for three property crimes: burglary, motor vehicle theft, and larceny (theft). For these analyses, we determined which blocks were within three different buffers of the housing placement: within 1/5 of a mile; between 1/5 and 1/2 mile; and between 1/2 and 1 mile.

[1] We define the region as including five counties: San Bernardino, Riverside, Los Angeles, Orange and San Diego.

[2] 61.8% of the cities have data for all or seven of the eight years in this range. For remaining cities, coverage varies year to year.

WHAT DID WE FIND?

Regarding the two violent crimes, we found no evidence of an increase after the placement of housing. In Figure C1 we see that the number of aggravated assaults in blocks within 1/5 of a mile actually decline very slightly after placement, whereas there is effectively no difference at longer distances. In Figure C2 for robberies, the number of robberies actually slightly declines after placement at all distances from the housing. Turning to the property crimes, Figure C3 for burglaries tells the same story: the number of burglaries after placement actually slightly declines at all distances from the housing. The one exception is in Figure C4, where the number of motor vehicle thefts slightly increases after placement at all distances. This is a very modest effect, as the average block experiences an additional 1/10 of a motor vehicle theft after placement. In Figure C5 there is no change in larcenies after placement within 1/5 of a mile, and very slight increases at longer distances.

DOES NEIGHBORHOOD MATTER?

We also assessed whether the poverty level of the neighborhood impacted the relationship between affordable housing placement and changes in crime. For these models we aggregated the violent crimes into one measure, and the property crimes into another. In Figure C6 we see no evidence that violent crimes increase after placement in high poverty neighborhoods. There are actually slightly fewer violent crimes within 1/5 of a mile, and little difference at longer distances. There is some evidence of an increase in property crime in high poverty neighborhoods after placement as seen in Figure C7. The average block within 1/5 mile has about one more property crime every two years, and blocks from 1/5 to 1/2 mile have about one more property crime every three years.

In low poverty tracts, it appears that there is little change in crime after placement of housing. Figure C8 shows that there is actually a very slight drop in violent crimes within 1/5 to 1/2 mile of housing after placement, but no difference at other distances. In Figure C9 we see that for blocks within 1/5 mile of a placement there is about 0.1 more property crimes per year—that is, one more property crime every 10 years. There is no change for blocks from 1/5 to 1/2 mile, and blocks from 1/2 to 1 mile have about one more property crime every 5 years.

CONCLUSIONS

The siting of affordable housing does not negatively affect housing prices in Orange County. In fact, we see modest increases in both sales prices and price per square footage county wide, with the most pronounced impact in places categorized with higher rates of poverty.

The siting of affordable housing reduces most types of crime, especially violent crime. The overall impact is best described as “null”, as the changes in crime are measured in a fraction of a single crime per year.

Prior to collecting and analyzing the data, we completed a literature review of similar studies conducted in other parts of the United States. The results from our analysis for Orange County add to what has been found elsewhere: The placement of affordable housing does not negatively impact the surrounding community, and in many ways, it enhances both local property values and increases public safety.

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Figure A1 – Summary of Housing Overall Housing Prices and Distance to Affordable Housing

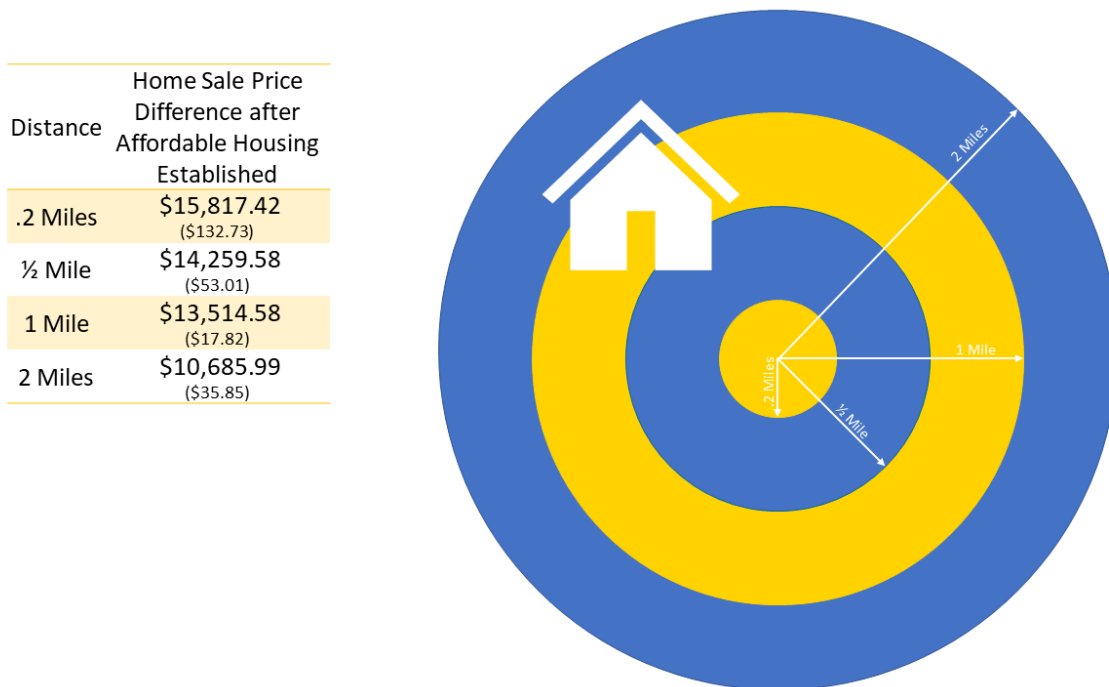
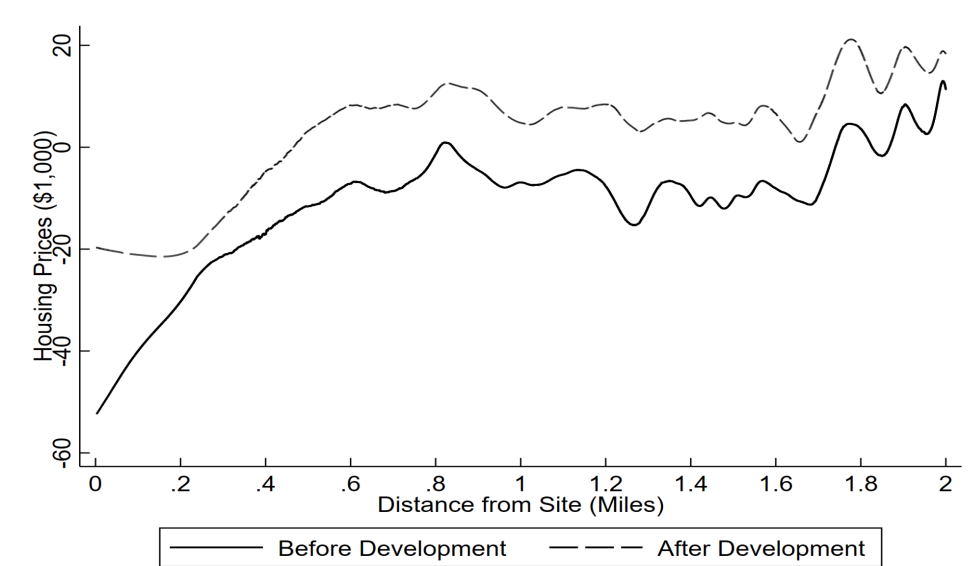
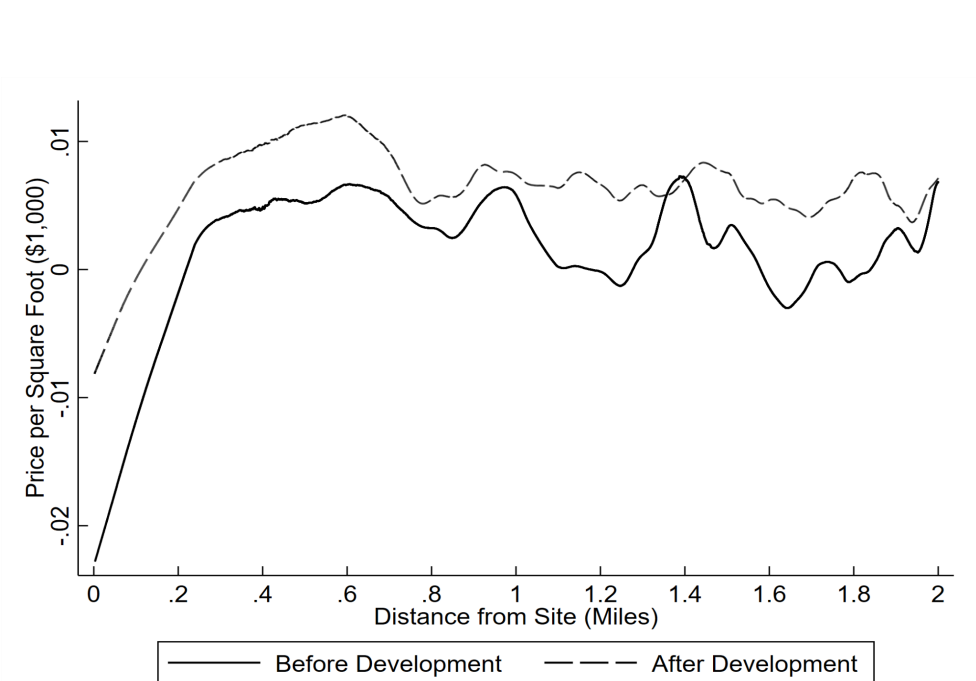


Figure H1. Overall Housing Prices



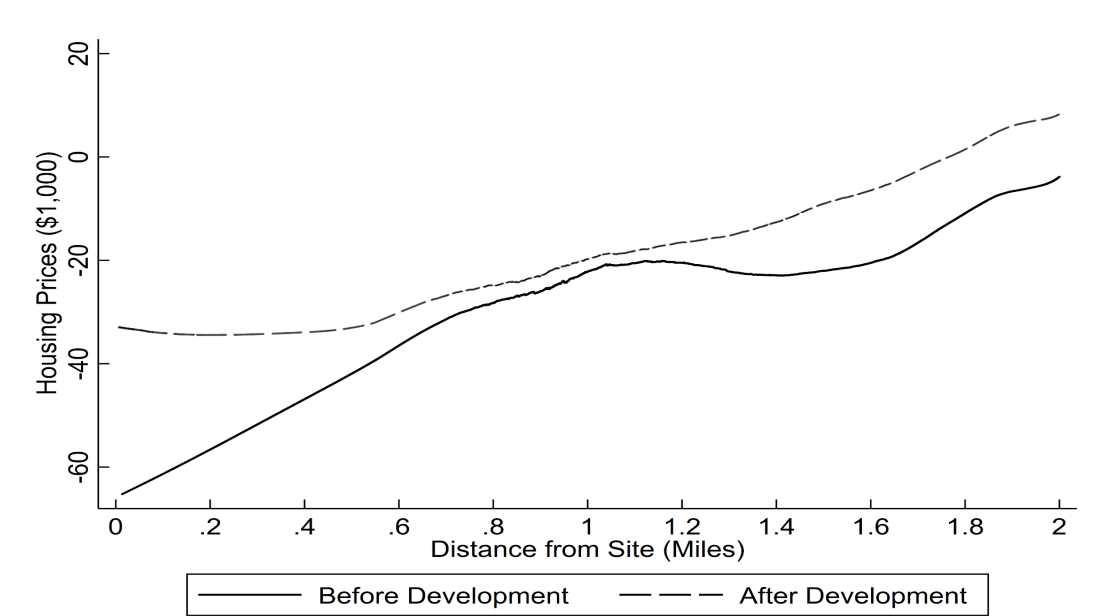
Results from local polynomial regressions (bandwidth=0.1 miles) of residualized price on distance to site, \$2020

Figure H2. Price Per Square Foot Overall



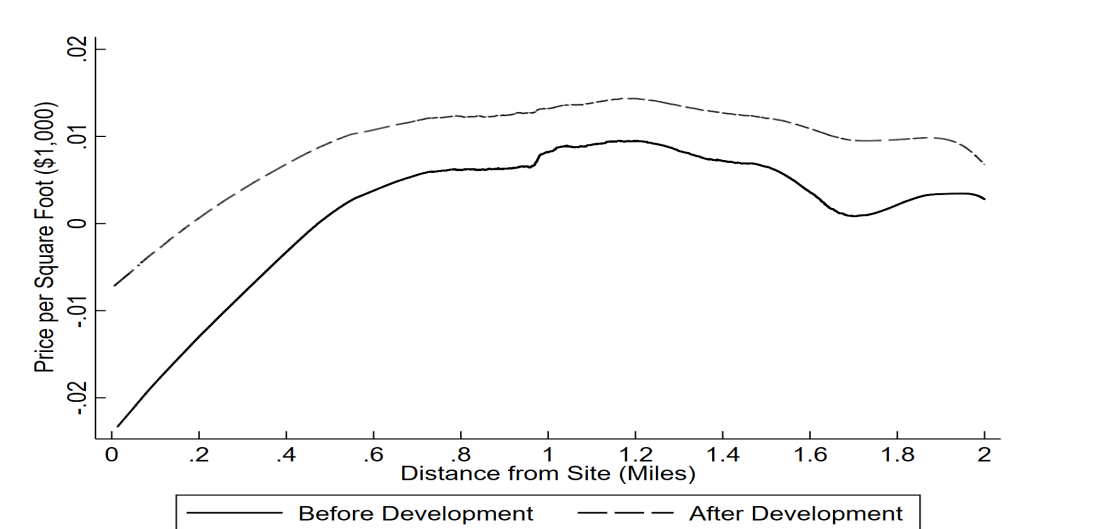
Results from local polynomial regressions (bandwidth=0.1 miles) of residualized price on distance to site, in \$2020

Figure H3 - Housing Prices – High Poverty Tracts



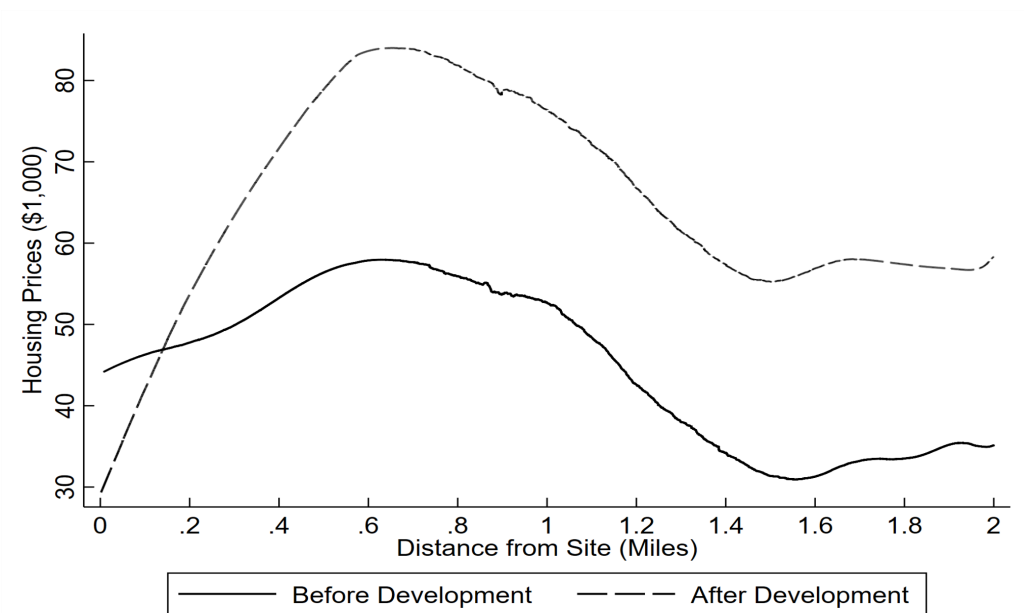
Results from local polynomial regressions (bandwidth=0.1 miles) of residualized price on distance to site, \$2020

Figure H4 - Price Per Square Foot - High Poverty Tracts



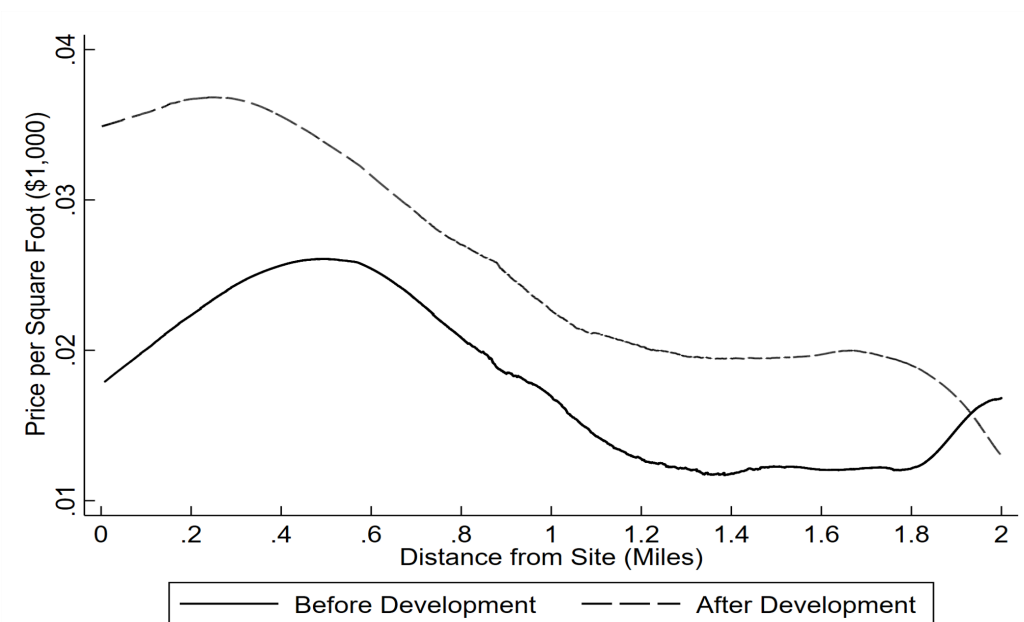
Results from local polynomial regressions (bandwidth=0.1 miles) of residualized price on distance, \$2020

Figure H5 - Housing Prices – Low Poverty Tracts



Results from local polynomial regressions (bandwidth=0.1 miles) of residualized price on distance to site, \$2020

Figure H6 - Price Per Square Foot - Low Poverty Tracts



Results from local polynomial regressions (bandwidth=0.1 miles) of residualized price on distance to site, \$2020

Figure C1 – Aggravated Assaults, Overall

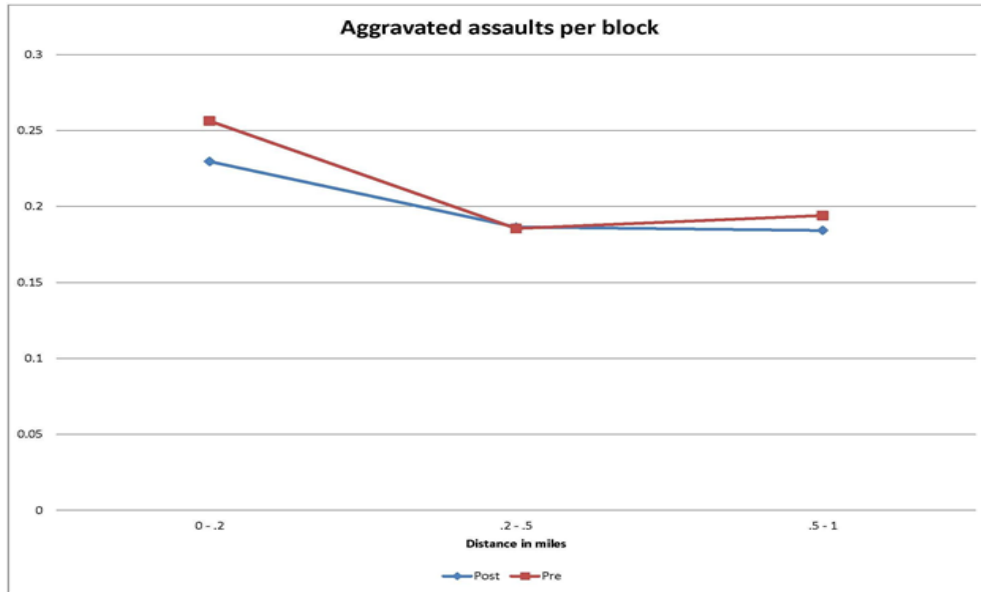


Figure C2 – Robberies, Overall

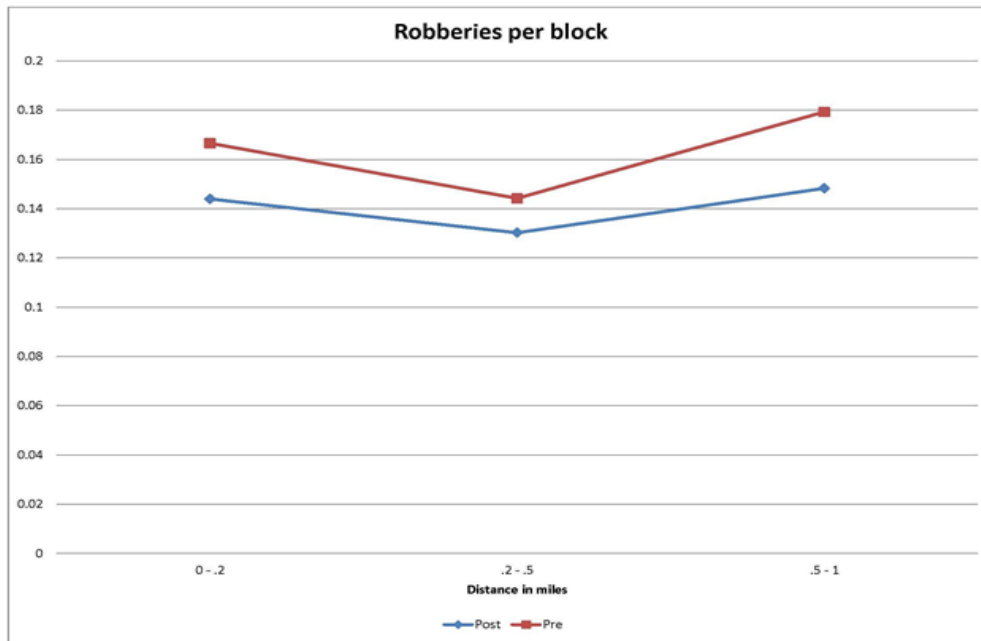


Figure C3 – Burglaries, Overall

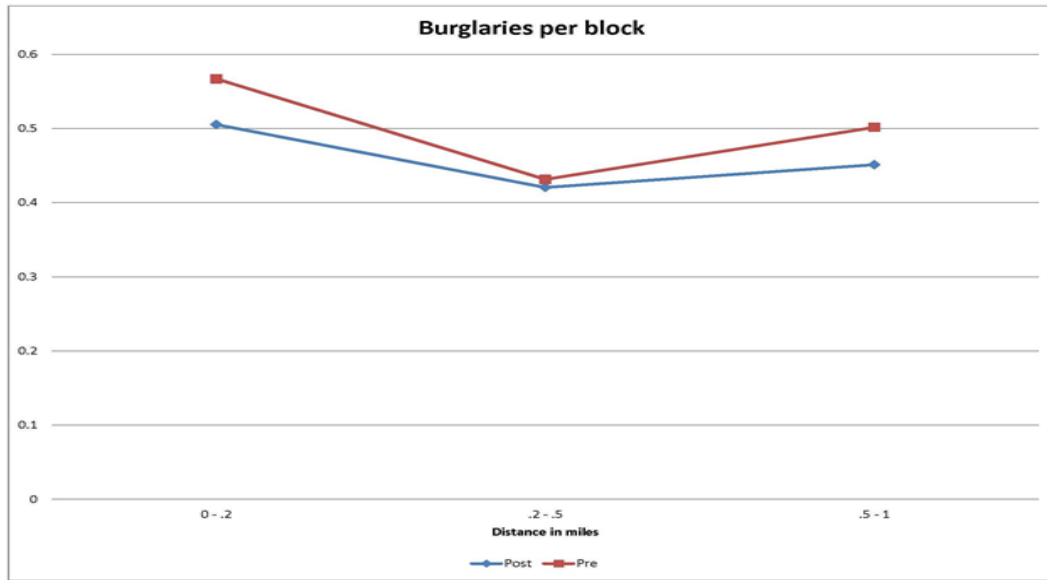


Figure C4 – Motor Vehicle Theft, Overall

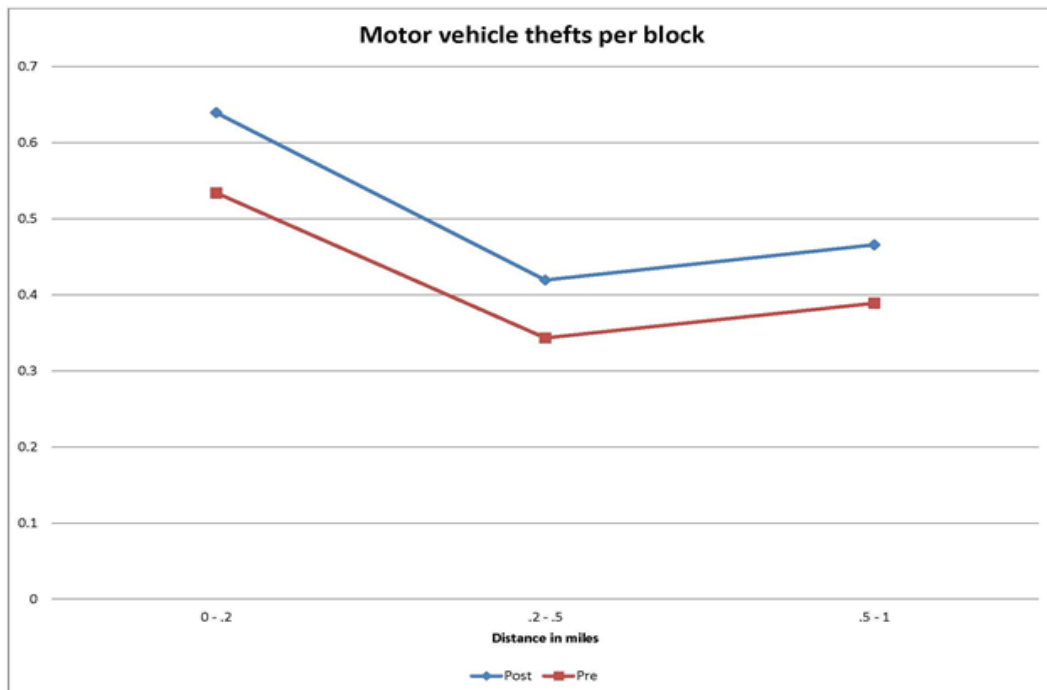


Figure C5 – Larceny, Overall

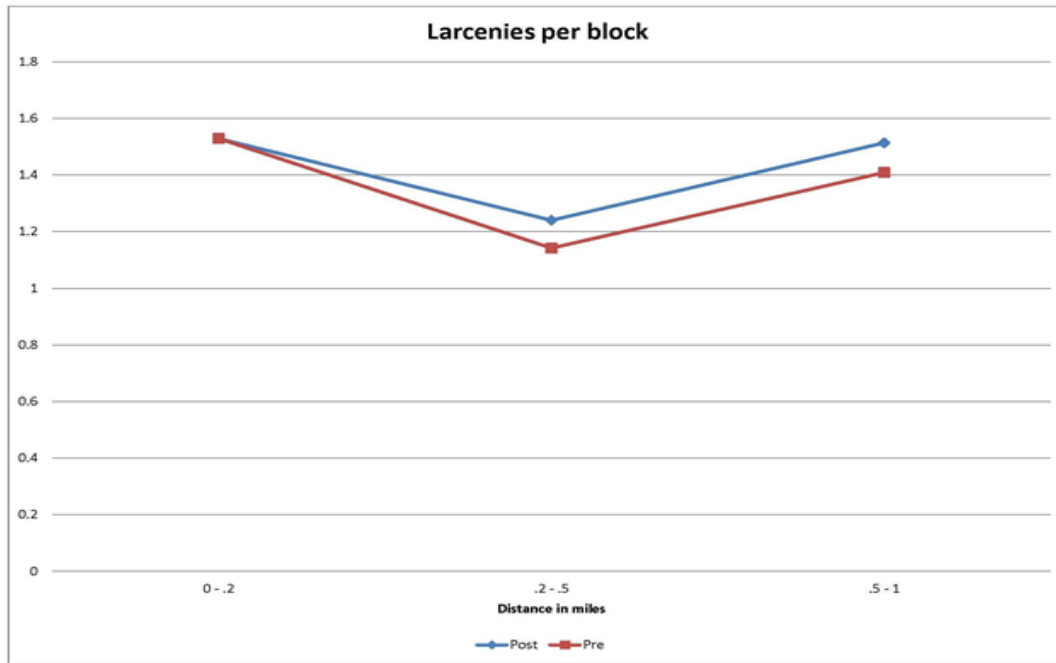


Figure C6 – Violent Crimes in Higher Poverty Places

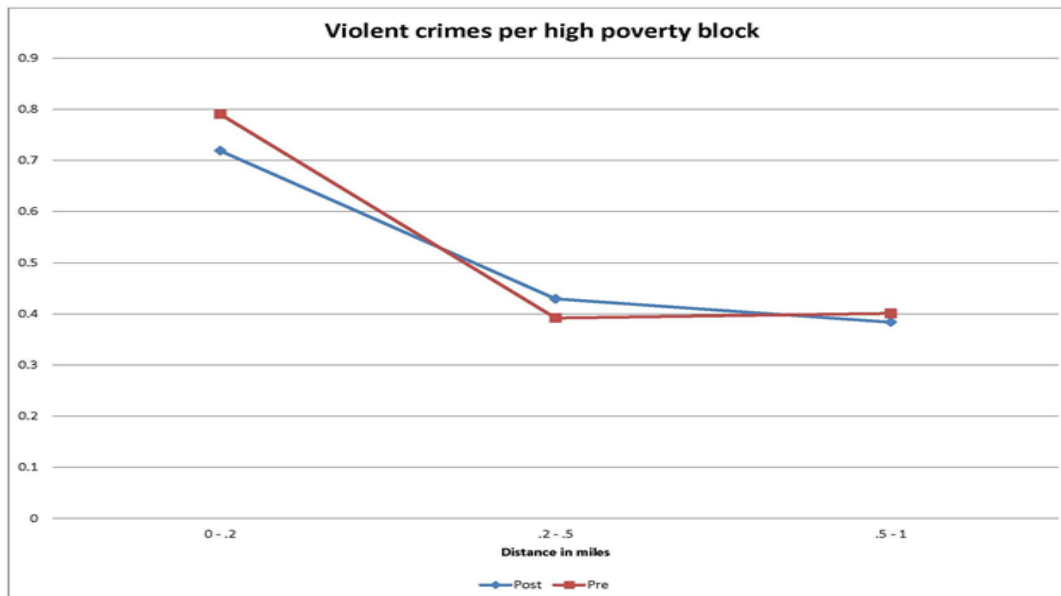


Figure C7 – Property Crimes in Higher Poverty Places

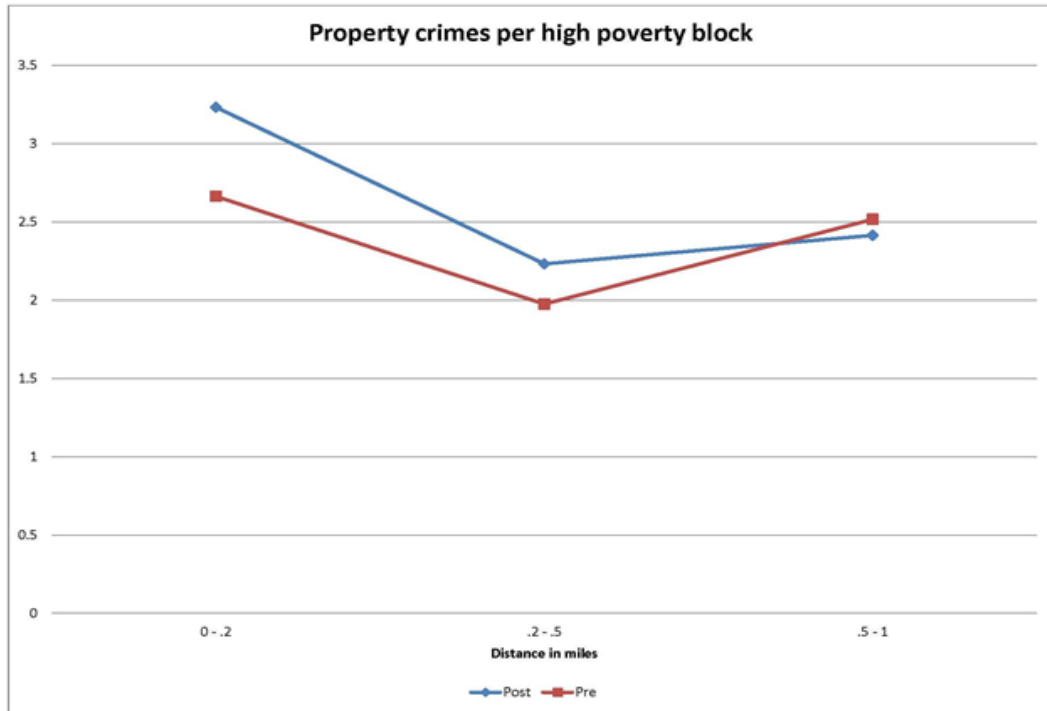


Figure C8 – Violent Crimes, Lower Poverty Places

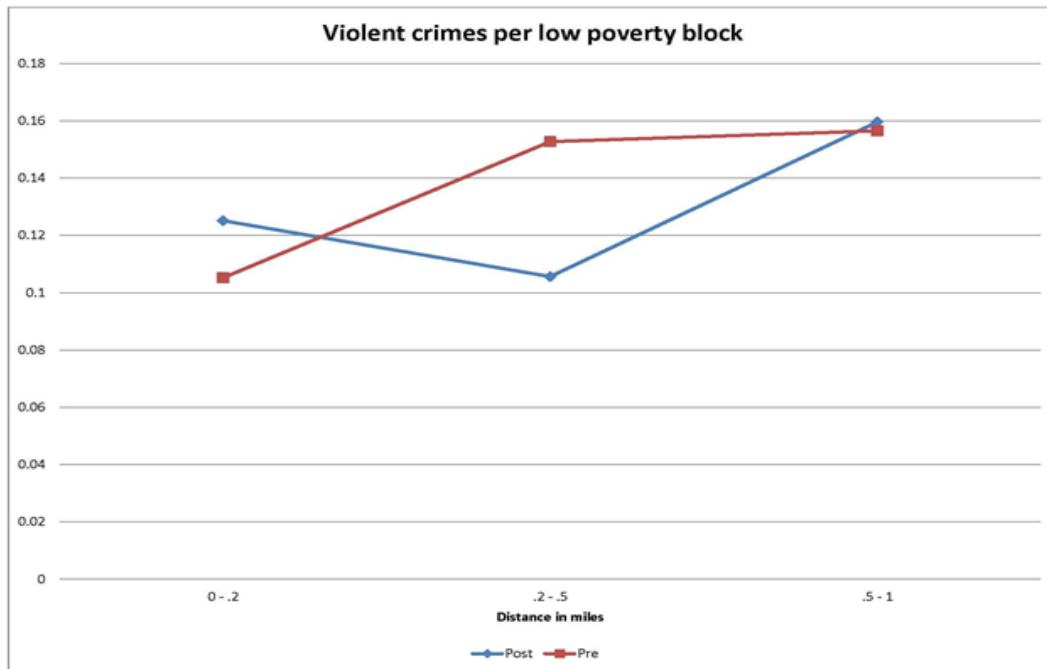


Figure C9 – Property Crimes, Lower Poverty Places

