



UNIVERSITY OF MASSACHUSETTS SCHOOL OF PUBLIC HEALTH AND HEALTH SCIENCES

Baseline Real Estate Conditions

Host Community Profile: Plainville

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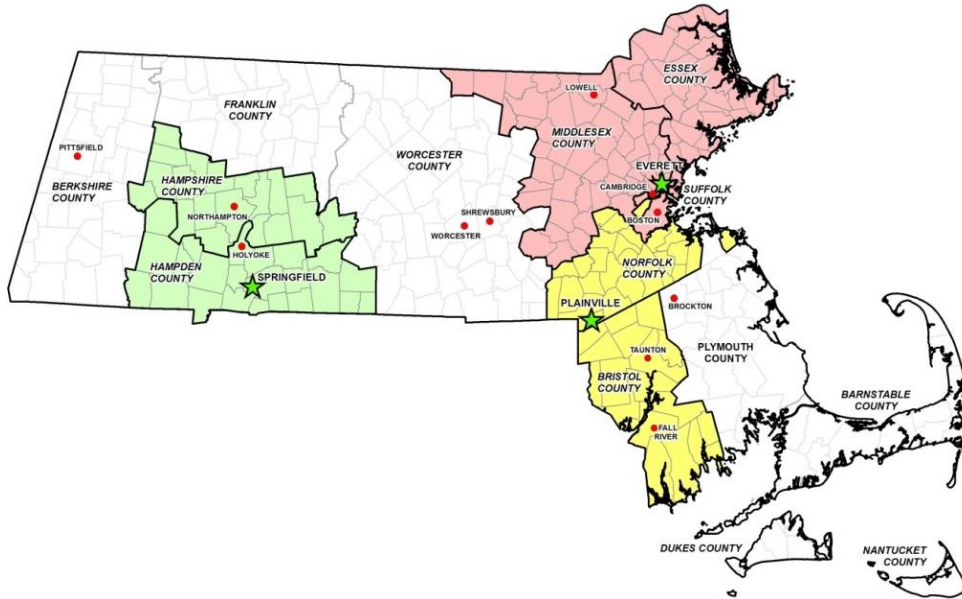
This report, produced by Dr. Henry Renski of the UMASS Amherst Center for Economic Development in conjunction with the Economic and Public Policy research group at the UMass Donahue Institute, provides a summary of recent trends in the residential, commercial and industrial real estate markets for Plainville and its surrounding communities. It serves as a companion to the Plainville Host Community Economic Profile report by the Donahue Institute that documents baseline conditions on a variety of economic, demographic and fiscal indicators. As with the Economic Profile report,ⁱ our analysis of Real Estate conditions covers several distinct concepts to paint a comprehensive picture of the local and regional real estate market prior to the introduction of casino facilities to the state. The report is divided into two major sections. The first covers the residential real estate market. The second covers the commercial and industrial real estate markets.

The purpose of this study is to document recent market conditions in the area prior to the expansion of the Plainridge raceway to include a slots parlor and other amenities.ⁱⁱ Our goal is to establish a baseline for measuring potential development impacts.ⁱⁱⁱ In the process, we will also evaluate different data sources as well as techniques for identifying possible impacts. When measuring the impacts of a major development, it is important to not only track trends in the host community but also to benchmark these changes against other areas that face similar market conditions, but are unlikely to be impacted by the development itself. Other events that have little or nothing to do with the specific development, such as changes in national and state economic cycles, can have a considerable impact on local market conditions. Without accounting for these external forces, one can easily mistake an apparent increase or decrease in property sales or values to the development. However, finding a suitable comparison group can be tricky, especially given practical data limitations. Communities with similar market conditions are often neighbors, and thus might be subject to spillover impacts. Conversely, communities at a distance might provide a false baseline of comparison because they are not subject to the similar external market forces or regulatory conditions.

For this report, we compare historic trends in Plainville to the Immediate Region (Norfolk and Bristol Counties) and the state (Figure 1). While inclusive of Plainville, both the Immediate Region and the state stretch beyond the likely sphere of influence of the Casino. Yet they are still subject to the similar influences of national business cycles and regional economic and demographic trends. Thus, the bulk of the impacts of the development are likely to be averaged-out. Still, we recognize that these are not ideal comparison groups, not that such a thing actually exists. One of the primary purposes of this baseline study is to ascertain just how well recent market trends in the state and region match the host community, and whether these can serve as a sufficient basis for comparison.

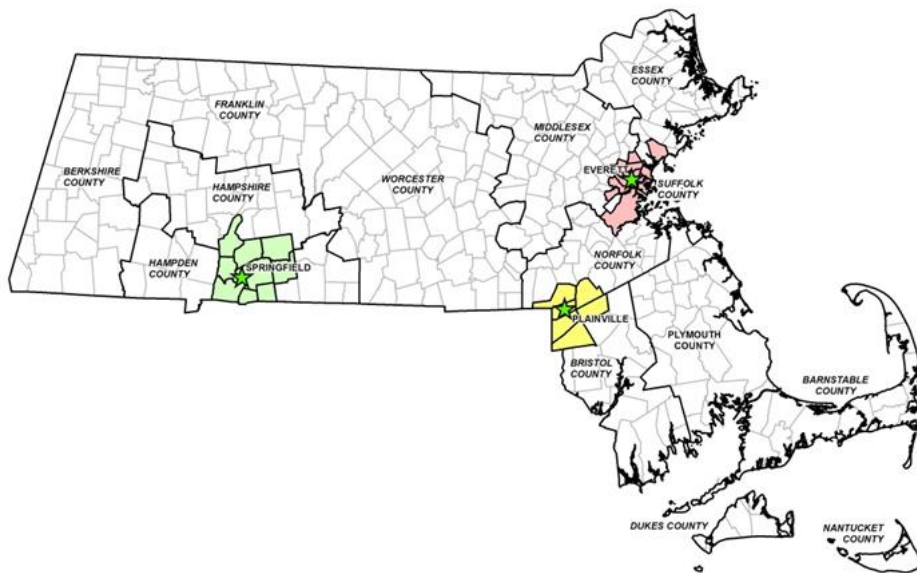
We would like to thank Jennifer Thompson, Plainville's Town Administrator, for her valuable review of our report.

Figure 1. Massachusetts Host Communities and Their Immediate Regions



The impact of a new or expanded casino facility may very well spill beyond the borders of its host community. Thus, in addition to Plainville, we also track baseline market conditions among nearby areas designated as “official surrounding communities” by the Massachusetts Gaming Commission. There are five such communities in the Plainville region (Figure 2), making it impractical to report specific trends for each within the limited confines of this report. Here we provide just a brief summary of changes over the entire period.

Figure 2. Massachusetts Host and Surrounding Communities



Summary of Baseline Findings

Residential Real Estate Indicators

- Plainville's residential real estate market is relatively small and predominantly comprised of single-family homes with a scattering of condominiums. Multi-family home sales are rare.
- Single-family homes in Plainville have typically been more expensive than both the state and Immediate Region. However, this gap has been steady closing with a slight gradual decline in real sale prices in Plainville. The typical sale price for Condominiums is below the state average, but comparable to the region.
- Condominium sales in Plainville slowed considerably between 2008 through 2010, while the state and region saw only slight declines in sales volume. Yet, the pace of recovery has been far more robust in Plainville in the years since.
- The Commonwealth of Massachusetts has considerable data on individual property sales, which permits a highly detailed analysis of localized real estate trends.
- There have been relatively few sales of single-family homes and condominiums near the Casino development site in recent years.
- We expect that if the Casino does have an impact on sales, it will be most apparent among properties that are closest to the site. Overall, we find little relationship between proximity to the proposed casino site and changes in home prices over the baseline period.
- According to the U.S. Census Bureau, gross monthly rents in Plainville are slightly higher than the state median and slightly higher than most other surrounding communities.
- CoStar lists Plainville rents as notably lower than the Immediate Region and Commonwealth. However, since 2010, Plainville rents have rising faster than both Region and State.
- Building permits are an important indicator of future development, but are highly variable from one year to the next. This makes it difficult to distinguish possible impacts from serendipitous events, such as the permitting of a single large development. In most years, no or few multi-family building permits were issued in Plainville.
- The value of single-family permits tends to be more stable than the number of permits. In Plainville, the real value of single-family permits declined for most of the study period.

Commercial and Industrial Real Estate Indicators

- Plainville has experienced an increase in the number of commercial buildings since 2008 and an even larger increase in the amount of commercial rentable building area. During the same period, industrial real estate has experienced a decline in both respects.
- Vacancy rates in Plainville have remained lower than those of the Commonwealth or the Immediate Region, although the industrial vacancy rate has been very volatile.
- Plainville, like Massachusetts as a whole, has seen its real lease rates for all commercial and industrial properties fall since 2008.

Residential Real Estate

Residential Property Sales

Property sales are among the most direct indicators of changing real estate market conditions. They are often used to measure the impact of new development on surrounding areas. A sustained rise in the number and market values of properties following the construction of a new casino may signify successful neighborhood revitalization, as investors are willing to buy properties at higher prices. Conversely, a decline in property values may indicate the negative impacts resulting from possible fears of increased, traffic, crime, noise, or other negative externalities.

Our analysis uses property sales reported by the Massachusetts Department of Revenue (DOR) Division of Local Services. The DOR reports all verified property sales in the Commonwealth. Although the DOR database includes property sales of all types, we only include those classified as “arms-length” transactions. This eliminates sales between family members and other situations where the sales price is not a pure reflection of market value. The DOR database further identifies sales by the predominant land use classification of the property. We focus on several general types, namely: single-family residential, multi-family residential, and condominiums. We ignore other types of residential land uses, such as mobile homes and vacant lots, as they are relatively rare.

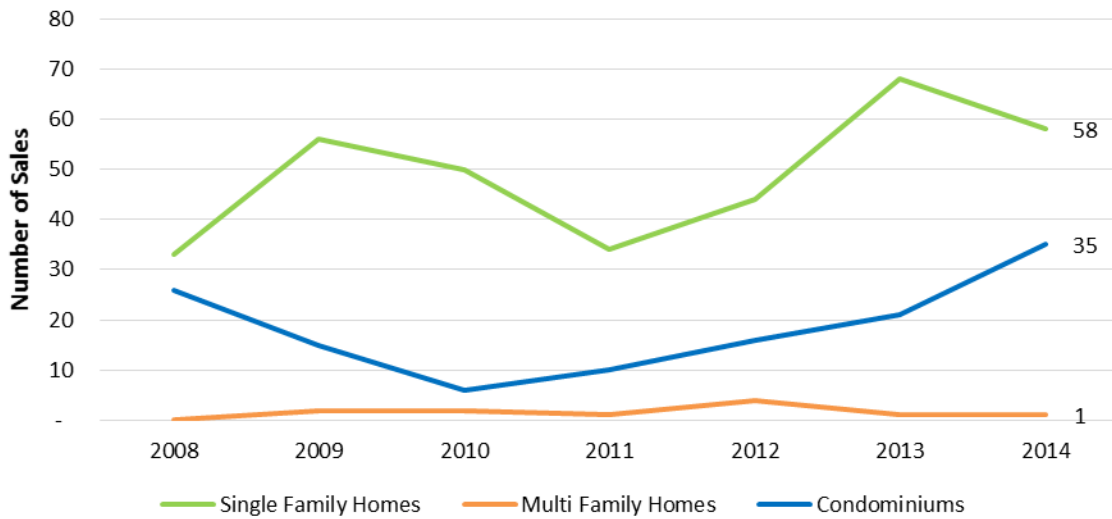
We use the DOR database to track the number and market value of property sales in Plainville compared to the Immediate Region and state, starting in 2008. Individual communities report this data to the DOR on a fiscal year basis, and for some there is up to a two-year lag. At the time of writing, most communities had reported for FY 2016, covering sales up to the fourth quarter of 2014. A few holdouts remain, but we will provide an update to this report as soon the new data comes in. We also take advantage of the detailed address data in the DOR database to examine sales trends at varying distances from the site of the casino: two miles, five miles, seven miles, and ten miles.

Residential Property Sales in Plainville

The Plainville housing market is rather small and dominated by the sale of single-family homes. Fifty eight homes sold during 2014, comprising 59 percent of all residential sales in the City (Figure 3). Multi-family homes are an almost negligible component of the Plainville housing market, with only one or two sales at the most in any given year. Condominium sales are more common, representing more than a third of all residential sales in 2014.

Because it is a small market, the number of home sales from one year to the next can be rather erratic. This makes it difficult to distinguish general trends from simple annual fluctuations. Single-family home sales were down in 2008 but rose sharply in 2009, only to drop again in 2010 and 2011. Sales picked up starting in 2012, peaking in 2013 with the sale of 68 single-family homes. Sales remained strong in 2014, although somewhat less than the 2013 peak. Recent condominium sales follow a steadier trend. The condominium market slowed considerably in 2008 and 2009, but has been rising steadily since and is now above pre-recessionary levels.

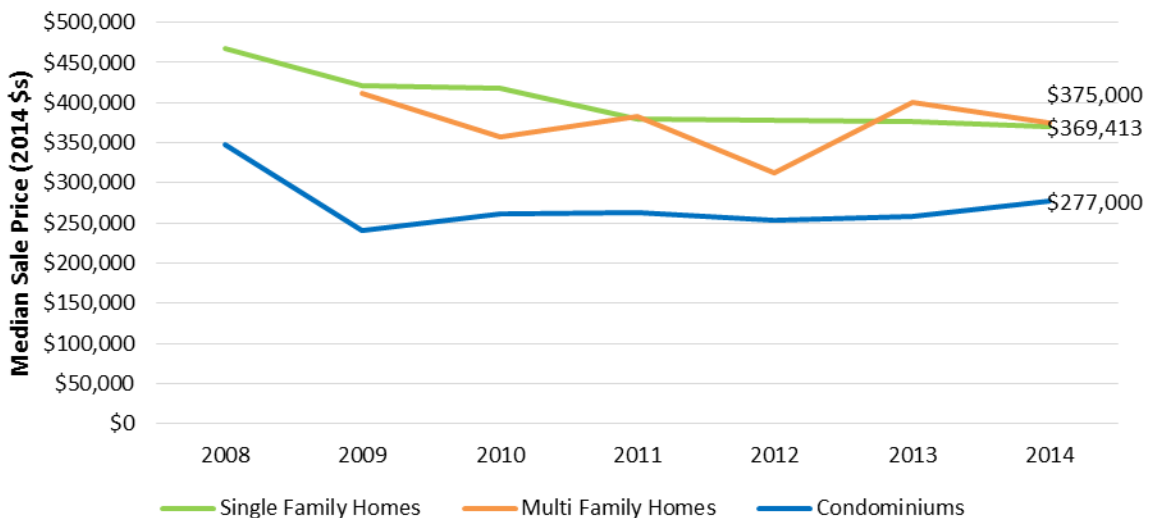
Figure 3: Plainville, Number of Residential Property Sales by Type



Source: MA Department of Revenue, Division of Local Services, LA-3 Real Estate Sales

Despite the broader economic recovery, the median sale price for single-family homes in Plainville has continued to decline in recent years and remains below pre-recessionary levels. However, the pace of decline in home values has slowed in recent years. In 2008, a typical Plainville single-family home sold for just under \$470,000 in 2014 dollars (Figure 4). In 2014, the median sale price was just below \$370,000. However, the small number of home sales in Plainville makes it difficult to determine whether declining sale prices are due to devaluation or simply the influence of more (or less) affordable homes coming onto the market. The median sale price for condominiums is also below pre-crash levels. In 2014, the typical condominium sold for \$277,000, close to \$70,000 less than the median real sale price in 2008.

Figure 4: Plainville, Real Median Sales Price of Residential Properties by Type (2014 dollars)

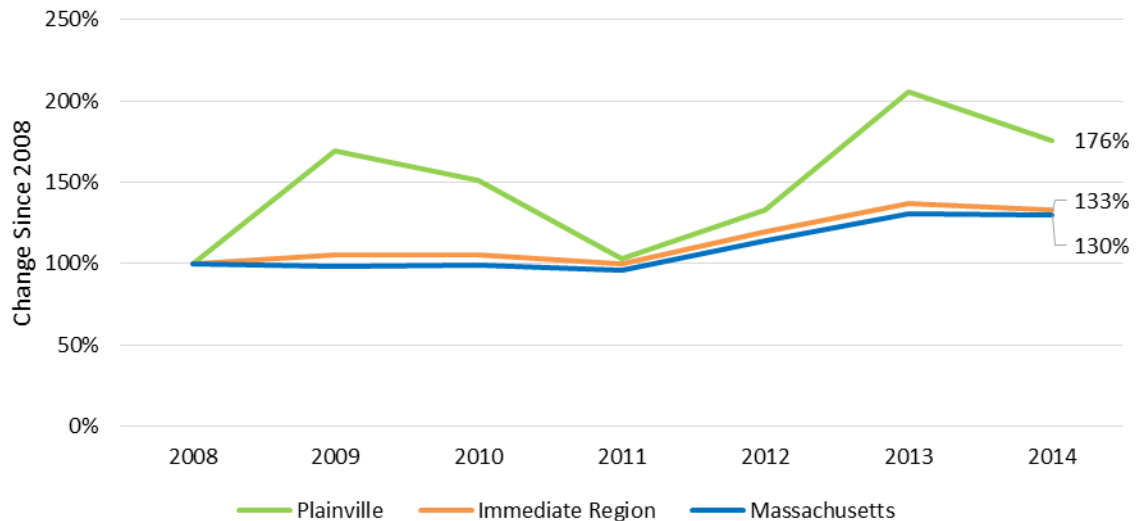


Source: MA Department of Revenue, Division of Local Services, LA-3 Real Estate Sales

Comparisons to the Region and State

The year-to-year sale of homes in Plainville is more variable than either its neighbors or the state as whole.^{iv} More specifically, 2009 was a strong year for single-family home sales in Plainville, but this was immediately followed by declining sales in 2010 and 2011 (Figure 5). Sales in the larger region and state were stable during this time with little change from the 2008 sales volume. The rebound in the housing market after 2011 was much stronger in Plainville, especially during the years of 2012 and 2013.

Figure 5: Single-family Home Sales, Change from 2008

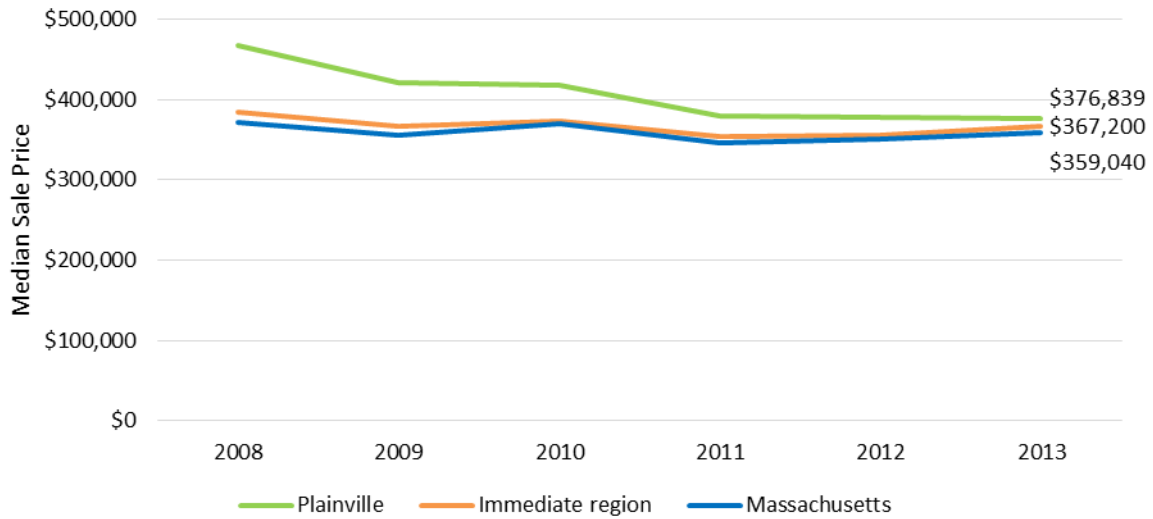


Source: MA Department of Revenue, Division of Local Services, LA-3 Real Estate Sales

Single-family homes in Plainville have typically been more expensive than both the State and Immediate Region. However, this gap has been steadily closing (**Error! Not a valid bookmark self-reference.**). In 2008, the median single-family home in Plainville sold for roughly \$100,000 more than the Commonwealth. That gap is now less than \$20,000. Sale prices in Plainville are now almost indistinguishable from the regional median. This apparent convergence is driven almost entirely by the steady decline in real dollar sale prices in Plainville. State and region sale prices have been near flat since 2008.

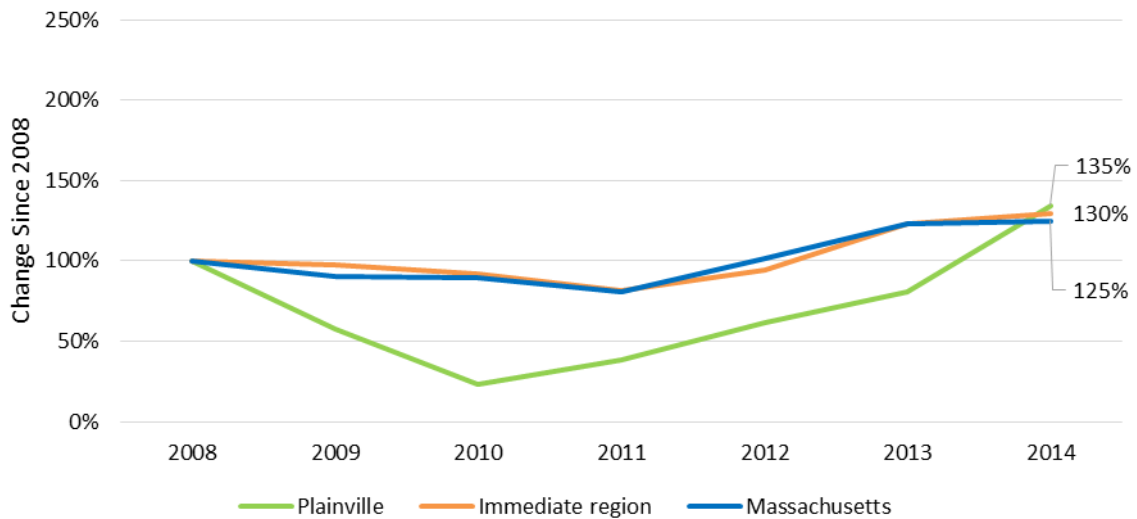
As mentioned previously and shown in Figure 3, multi-family home sales in Plainville are rare—often amounting to just one or two sales in a given year. Therefore, we do not provide a comparison of multi-family home sales to state and regional trends. There is, however, a sufficient market for condominium sales to permit comparison. The Great Recession of 2007-08 appears to have had a more profound impact on Plainville's condominium market relative to either the Immediate Region or the State (Figure 7). The pace of condominium sales in Plainville slowed to a crawl between 2008 and 2010, while the state and region saw only slight declines in sales volume during this time. Yet, the pace of recovery has been far more robust in Plainville in the years since.

Figure 6: Single-family Homes, Median Sale Price (2014 Dollars)



Source: MA Department of Revenue, Division of Local Services, LA-3 Real Estate Sales

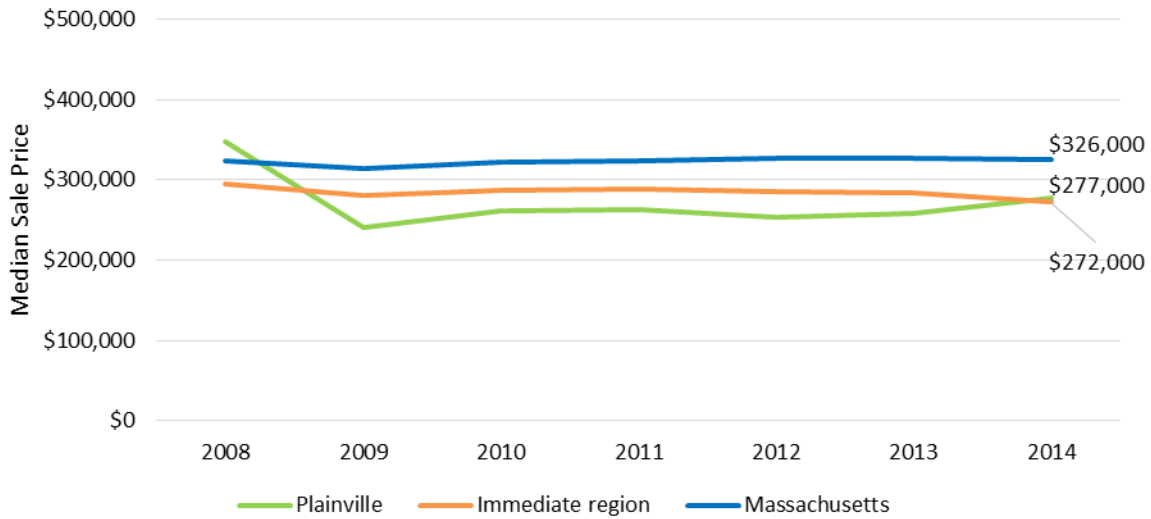
Figure 7: Change in Condominium Sales, 2008 to 2014



Source: MA Department of Revenue, Division of Local Services, LA-3 Real Estate Sales

The sale price of Plainville condominiums is on par with the Immediate Region. In 2014, the typical condominium sold for roughly \$277,000 in Plainville, only \$5,000 more than the region. Unlike single-family homes, condominium prices in both Plainville and the region are below than the state median—roughly \$55,000 less than the Commonwealth in 2014.

Figure 8: Condominiums, Median Sale Price (2014 Dollars)



Source: MA Department of Revenue, Division of Local Services, LA-3 Real Estate Sales

Residential Property Sales in Surrounding Communities

Like Plainville, the officially designated surrounding communities are dominated by single-family homes. Plainville is actually the smallest housing market among its immediate neighbors, whose 2014 single home sales range from 145 in Foxborough to over 300 in Attleboro, compared to just 58 single-family home sales for Plainville (Table 1). Plainville also has the largest portion of its recent residential sales in condominiums. With the exception of Wrentham, all of the surrounding communities surpass Plainville in the number of condominium sales over the study period. However, condominium sales represent a larger share of total annual home sales in Plainville. For example, Attleboro had 77 Condo sales in 2014, but this accounted for only 16 percent of all residential property sales in the community. North Attleborough comes closest to Plainville in terms of its mix of housing sales, with condominiums making up 25 percent of its 2014 residential sales—compared to 36 percent for Plainville. Wrentham is the least diverse, with single-family homes comprising more than 90 percent of all residential sales in 2014.

Plainville is roughly comparable to its surrounding communities in home market prices. Despite being higher than the state median, single-family homes in Plainville rank 4th in median sale price. Wrentham is the most expensive at nearly \$460,000; Attleboro is the most affordable at roughly \$280,000. Sales prices for single-family homes have declined for every surrounding community since 2008. Plainville had the fastest rate of decline at 21 percent between 2008 and 2014. North Attleborough came next, with a 14 percent rate of decline in real sale price from 2008 to 2014. For condominiums, Plainville is the second most expensive, only surpassed by Foxborough where the typical condominium sold for just over \$350,000 in 2014. Attleboro and Mansfield had the lowest median sale price for condominiums, both close to \$200,000 in 2014.

Table 1: Residential Sales Summary, Plainville and Surrounding Communities

Residential Sales Indicators	Single-family Homes			Condominiums		
	Sales (2014)	Median Sale Price (2014)	% Change in Real Median Sale Price 2008-2014	Sales (2014)	Median Sale Price (2014)	% Change in Real Median Sale Price 2008-2014
Massachusetts	41,325	\$360,000	-3%	20,102	\$326,000	0%
Plainville	58	\$369,413	-21%	35	\$277,000	-20%
Surrounding Communities						
Attleboro	332	\$279,500	-12%	77	\$207,750	-13%
Foxborough	145	\$390,000	-5%	39	\$354,900	-5%
Mansfield	171	\$420,000	-5%	43	\$197,000	-20%
North Attleborough	205	\$350,000	-14%	75	\$209,900	-1%
Wrentham	129	\$459,900	-7%	10	\$213,000	-15%

Source: MA Department of Revenue, Division of Local Services, LA-3 Real Estate Sales

Spatial Analysis of Residential Property Sales

The impact of new developments, even large ones such as Casinos, are often highly localized. Even dramatic changes in the immediate neighborhood may not necessarily register at the regional or community scale. This is especially true for larger communities where such impacts are often diluted by other activities. An analysis restricted to municipal boundaries also does not account for proximity. A development on the border of a host community may only register a muted “impact” at the municipal level, because its effects are essentially shared among several communities. Proximity can also be used to help distinguish development impacts from the background “noise” of other activities.

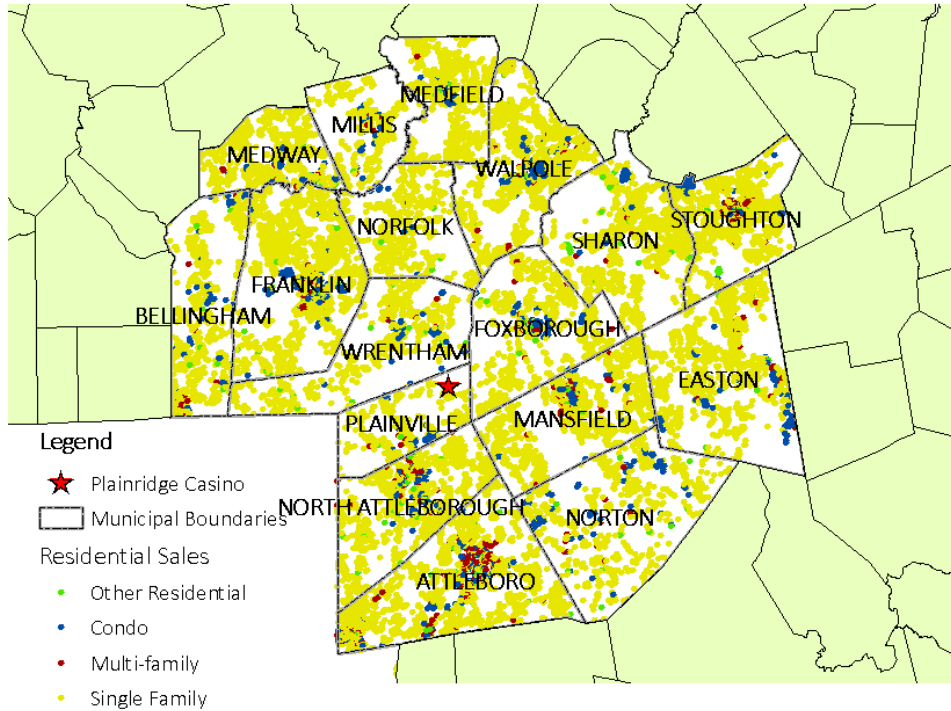
Whether positive or negative, it is safe to assume that the influence of the new development generally diminishes with distance—the further away, the less the effect on home values. Thus, comparing before and after changes at different distances can help us identify whether changing market conditions seem to be associated with the location of the new casino.^v

To get a better sense of the possible local impacts, we conducted an analysis of developmental impacts that directly accounts for proximity and distance. Of course, this type of spatial analysis requires considerably more data on the location of potentially impacted parties. Most of the data sources used in the community profiles are only available at the community or county level—thus precluding a more fine-grained spatial analysis. However, the DOR database that we use to track real estate trends includes information about specific property sales, including street addresses and parcel ID numbers for each sale.

With the aid of Geographic Information System (GIS) software and considerable effort, we identified the recent property sales in all Massachusetts communities within ten miles (straight-line) distance of the proposed casino site. Using a multi-stage matching process, we were able to locate nearly 99 percent of the listed sales down to the latitude and longitude coordinates of individual parcels.^{vi} Then we measured the distance of each sold parcel to the proposed casino site, and calculated the number of sales and the median sales price of properties at varied distances from the site.

Figure 9 shows the location of parcel sales in the Plainville region from 2008 to 2014, distinguished by major residential types. There were over 25,000 geo-referenced residential sales in the Plainville region during this period, making it difficult to surmise much about the spatial distribution of property sales solely from this figure. It is clear that single-family sales dominate the landscape. Attleboro, Franklin and Stoughton are the only nearby communities with a noticeable concentration of multi-family home sales. Condominium sales are fairly well spread throughout the region. It is also evident that there are few recent residential sales of any type immediately proximate to the Plainridge Park Casino.

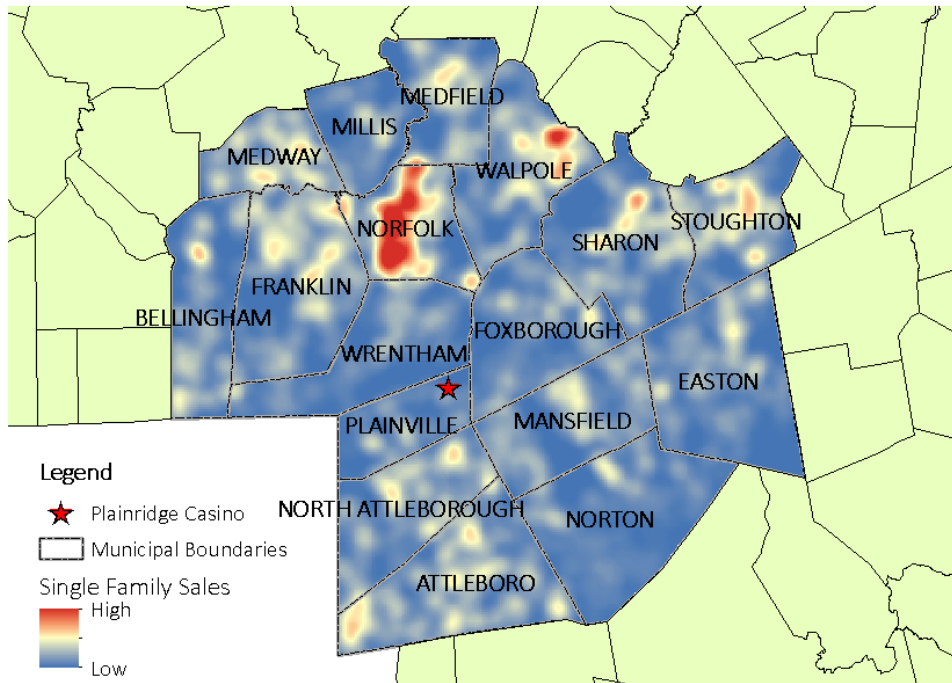
Figure 9: The Location of Real Property Sales by Land Use Type, 2008 to 2014



Source: MA Department of Revenue, Division of Local Services, LA-3 Real Estate Sales

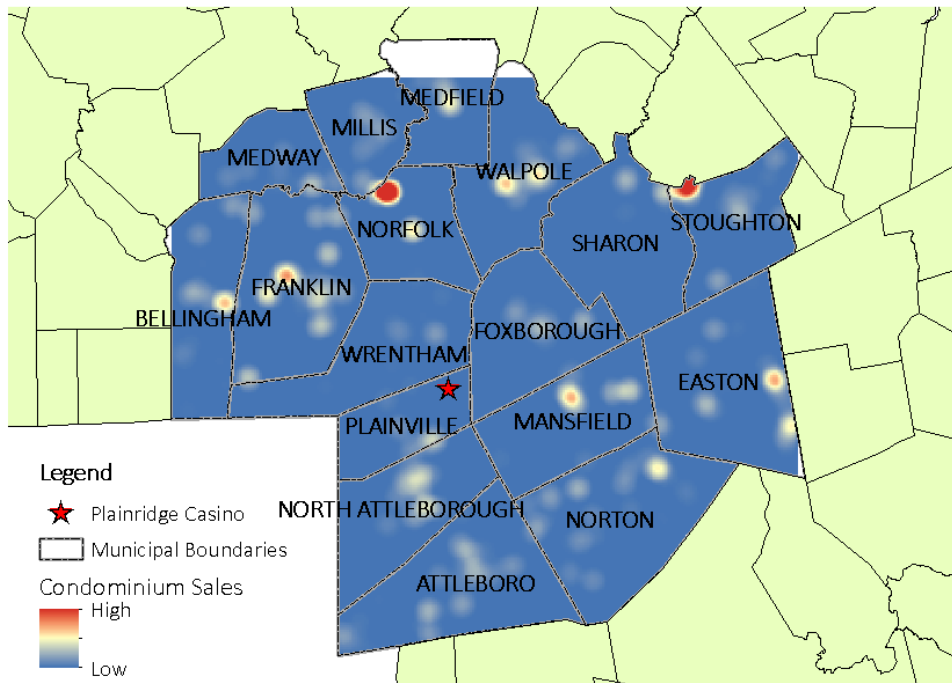
To get a better sense of the location of recent sales we conducted a hot-spot analysis to highlight areas where residential sales are particularly dense.^{vii} The density of single-family home sales is shown in Figure 10.^{viii} Condominiums are displayed in Figure 11. This analysis provides further evidence that single-family and condominium sales are relatively rare near the Casino development site. The highest concentrations of single-family homes sales are to the north, most notably in Norfolk, Walpole, Sharon and Stoughton. Lesser concentrations exist to the south in Attleboro and North Attleborough. Condominium sales are more scattered throughout the region, with notable concentrations in Norfolk, Stoughton, and Franklin.

Figure 10: Areas of Concentrated Single-family Home Sales



Source: MA Department of Revenue, Division of Local Services, LA-3 Real Estate Sales

Figure 11: Areas of Concentrated Condominium Sales

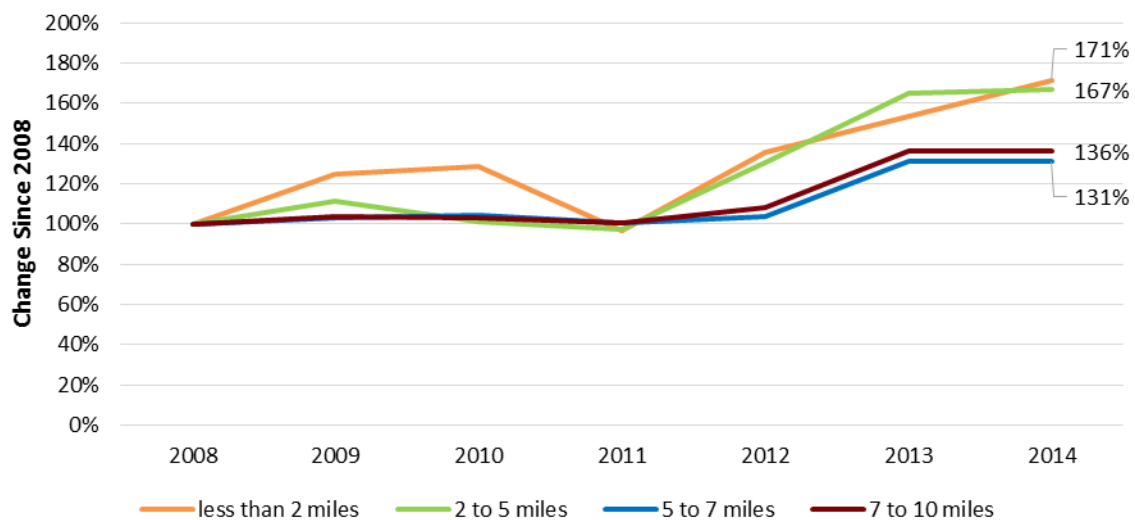


Source: MA Department of Revenue, Division of Local Services, LA-3 Real Estate Sales

While these types of “heat maps” are useful for identifying areas where recent sales activity is particularly high, they cannot directly answer questions of whether the casino had an impact on local markets. Nor can they answer questions regarding how far the impacts extend from the development site. To help shed light on these questions, we examined sales trends at different distances from the casino site: under two miles, two to five miles, five to seven miles and seven to ten miles. The apparent impacts of the casino can be identified by measuring changes in the historic trends before and after the construction of the casino. We expect the biggest impacts will be felt closer to the site.

Past trends in single-family sales volume appear to have little relation to distance from the Plainridge site – meaning that sales trends before the casino’s opening are generally comparable. There are some slight differences (Figure 12 and Table 2). Sales closer to the site (less than five miles) recovered a bit earlier and at a faster rate between 2011 and 2013, compared to those located further away. However, these differences are rather minor.

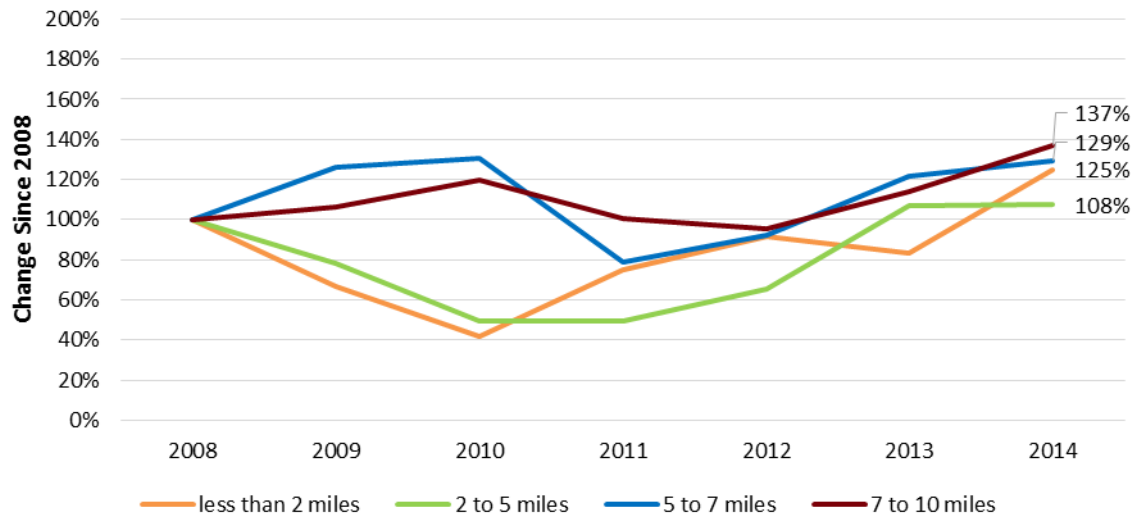
Figure 12: Single-family Home Sales by Distance to Casino, Change from 2008



Source: MA Department of Revenue, Division of Local Services, LA-3 Real Estate Sales

Trends in condominium sales are a bit more erratic (Figure 13). This is especially true between 2008 and 2010, when the number of condominium sales within five miles grew while those more than five miles declined. In more recent years, all seem to be converging toward a common trend of somewhat steady growth.

Figure 13: Condominium Sales by Distance to Casino, Change from 2008



Source: MA Department of Revenue, Division of Local Services, LA-3 Real Estate Sales

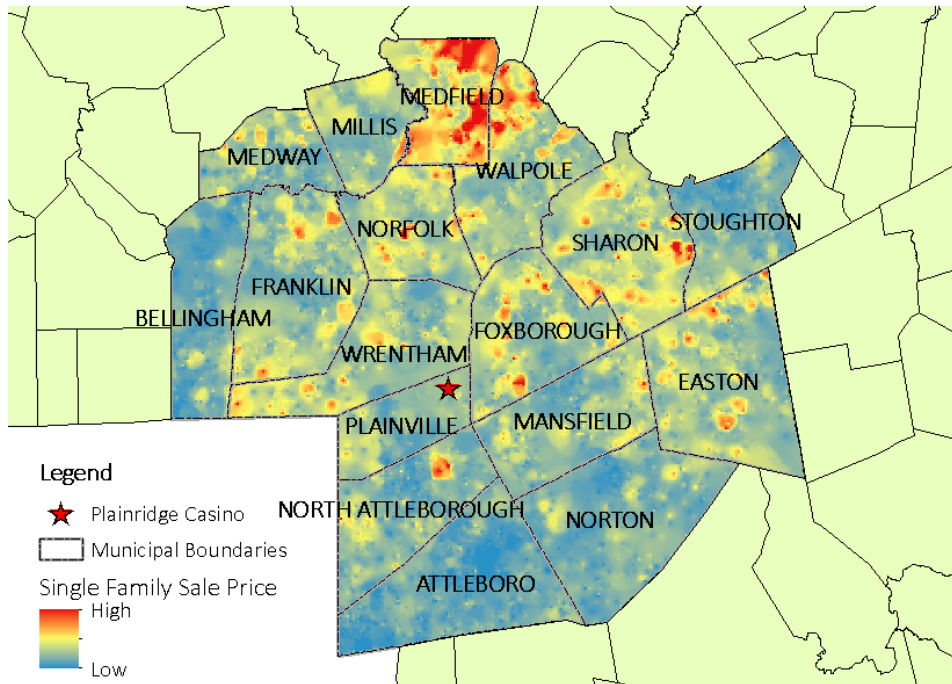
Table 2: Summary, Distance-Based Analysis of Sales Volume

Distance from Casino	2008	2009	2010	2011	2012	2013	2014	Percent Change 2008-2014	Total Change 2008-2014
Single Family Homes									
less than 2 miles	28	35	36	27	38	43	48	71%	20
2 to 5 miles	344	384	347	334	449	567	574	67%	230
5 to 7 miles	540	556	565	544	559	707	707	31%	167
7 to 10 miles	880	912	910	883	955	1,201	1,200	36%	320
Condominiums									
less than 2 miles	12	8	5	9	11	10	15	25%	3
2 to 5 miles	133	104	66	66	87	142	143	8%	10
5 to 7 miles	112	141	146	88	103	136	145	29%	33
7 to 10 miles	261	278	312	262	250	298	358	37%	97

Source: MA Department of Revenue, Division of Local Services, LA-3 Real Estate Sales

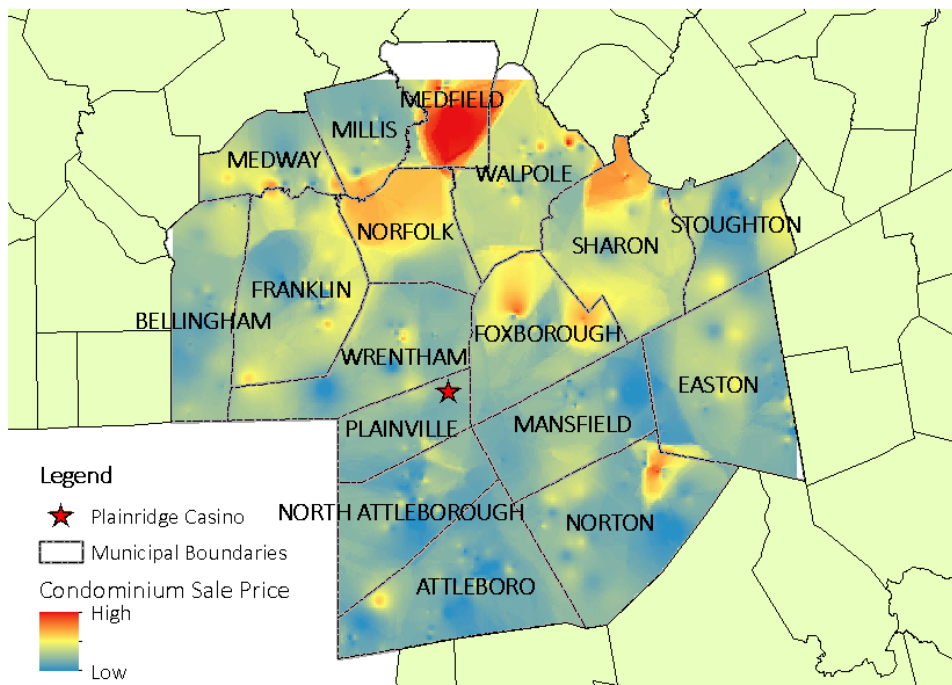
In addition to measuring localized changes in the volume of sales, our spatial analysis allows us to document changes in the price of recent home sales at a variety of spatial scales. We start by identifying hot spots (indicated in red) where the median sale price of homes is exceptionally high (Figure 14).^{ix} The largest concentrations of high priced single-family homes are in the northern reaches of the study region, namely, Medfield, Walpole and Norfolk. We also see scattered hot spots to the east, namely in the communities of Foxborough, Sharon and Easton. These same areas also tend to have more expensive condominiums (Figure 15). There are no major single-family or condominium hotspots in Plainville itself, likely due to the rather low density of sales.

Figure 14: Spatial Variations in the Sale Price of Single-family Homes, 2008 to 2014



Source: MA Department of Revenue, Division of Local Services, LA-3 Real Estate Sales

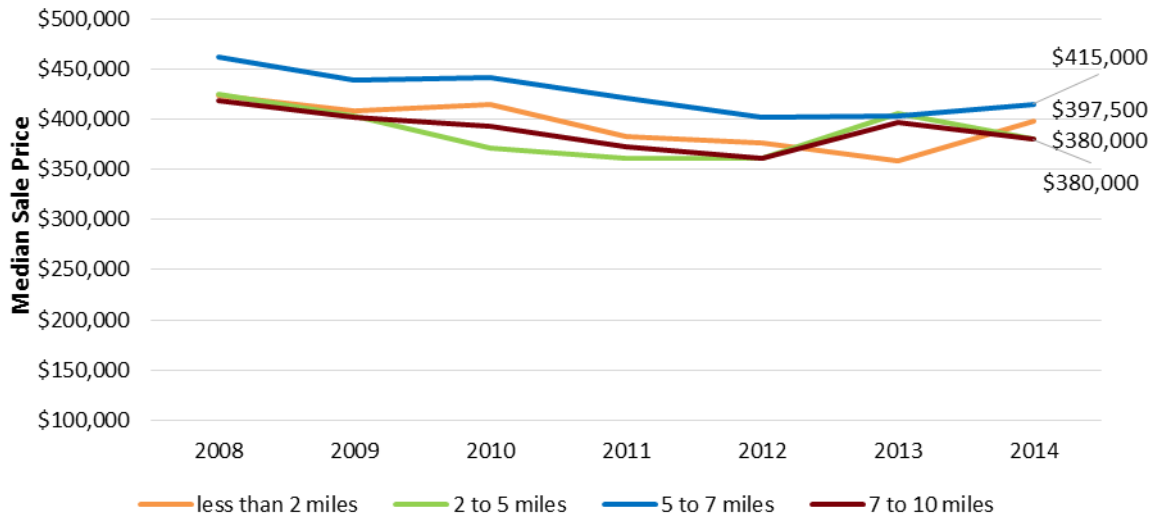
Figure 15: Spatial Variations in the Sale Price of Condominiums, 2008 to 2014



Source: MA Department of Revenue, Division of Local Services, LA-3 Real Estate Sales

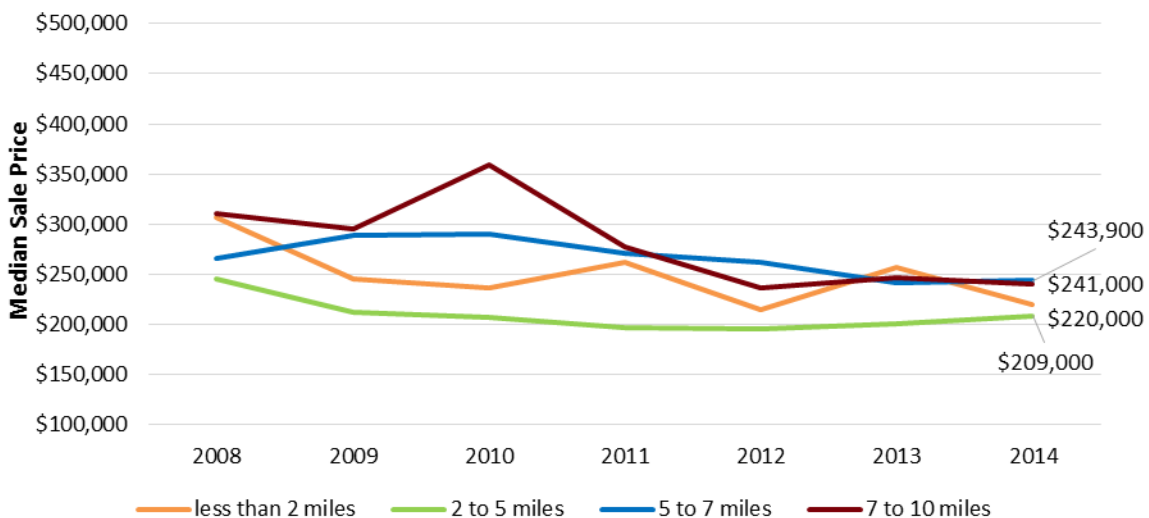
Distance from the Casino site matters little to differences in sales price. This is true for both single-family homes (Figure 16) as well as for condominiums (Figure 17). Single-family homes and condominiums closer to the site (< two miles) sell for just about the same as those at further distances. They also share a common trend, regardless of distance. The median sale prices for single-family units and condominiums declined slowly in the early years, but have leveled-off in recent years.

Figure 16: Single-family Homes, Median Sale Price (2014 dollars) by Distance to Casino, 2008 to 2014



Source: MA Department of Revenue, Division of Local Services, LA-3 Real Estate Sales

Figure 17: Condominiums, Median Sale Price (2014 dollars) by Distance to Casino, 2008 to 2014



Source: MA Department of Revenue, Division of Local Services, LA-3 Real Estate Sales

Table 3: Summary, Distance-Based Analysis of Median Sales Prices (2014 dollars)

Distance from Casino	2008	2009	2010	2011	2012	2013	2014	Percent Change 2008-2014	Total Change 2008-2014
Single Family Homes									
less than 2 miles	423,500	408,100	414,200	383,250	375,950	359,040	397,500	-6%	(26,000)
2 to 5 miles	425,288	402,600	371,690	360,938	360,500	405,450	380,000	-11%	(45,288)
5 to 7 miles	462,000	439,395	441,450	421,313	401,700	402,900	415,000	-10%	(47,000)
7 to 10 miles	418,000	401,445	393,490	372,750	360,500	396,670	380,000	-9%	(38,000)
Condominiums									
less than 2 miles	307,450	245,575	236,530	262,500	214,240	257,040	220,000	-28%	(87,450)
2 to 5 miles	245,300	212,300	207,100	196,875	195,700	200,940	209,000	-15%	(36,300)
5 to 7 miles	265,650	289,300	289,940	271,425	262,650	241,740	243,900	-8%	(21,750)
7 to 10 miles	310,750	295,625	359,101	277,174	236,849	246,330	241,000	-22%	(69,750)

Source: MA Department of Revenue, Division of Local Services, LA-3 Real Estate Sales

Overall, our examination of past trends in residential sales bodes well for our ability to detect possible changes in real estate values. The recession clearly had an impact on residential sale markets—temporarily depressing sales volume more than prices. Even so, past trends in sales volumes and values have remained relatively consistent, making it increasingly likely that they can be used to identify casino-related impacts as this analysis proceeds. This appears to be particularly true for the distance-based trends. There are, however, major differences by communities, and it is still unclear whether the State and Immediate Region provide a sufficient baseline of comparison and whether there are enough single-family home sales within a mile of the site to permit reliable analysis at this fine level of detail.

The Residential Rental Market

This section considers the potential impact of the Plainridge Casino on the rental market. Rentals are a relatively small component of the Plainville housing market. According to the latest estimates from the American Community Survey, rentals make up only 23 percent of occupied housing units in Plainville, compared to the statewide average of 37 percent. While below the state average, Plainville’s rental market is comparable to other communities in the area. Among the five surrounding communities, rental shares range from a low of 16 percent (Wrentham) to a high of 35 percent (Attleboro). The majority of Plainville renters (81 percent) live in multi-unit structures—such as apartment buildings with more than two units.

The data on rental market conditions is not as robust as property sales. The most comprehensive source is the American Community Survey (ACS) produced by the U.S. Census Bureau. While collected on annual basis, the ACS pools data across multiple years to ensure sufficient sample size for smaller geographies. The relevant data for most municipalities is only available in five-year chunks, the most recent release being data pooled from 2009 to 2013. Thus, this data cannot be used to track changes in market conditions on a year-to-year basis. It is, however, useful for providing a static picture of the rental market to use to validate or otherwise qualify rental data collected from other sources. Table 4 reports both contract rents, the amount that tenants pay each month to their landlords, as well as gross

rents, which attempts to account for the fact that some contract rents include utilities while others do not.

Table 4: Real Median Rents (monthly), 2000 and 2009/13 (2014 dollars)

Area	Contract Rent (\$)				Gross Rent (\$)			
	2000	2009-13 (ACS)	Change	Percent Change	2000	2009-13 (ACS)	Change	Percent Change
Plainville	\$938	\$1,017	\$78	8%	\$1,012	\$1,129	\$117	12%
Immediate Region								
Bristol County	\$804	\$947	\$143	18%	\$911	\$1,064	\$153	17%
Norfolk County	\$974	\$1,158	\$184	19%	\$1,084	\$1,290	\$207	19%
Massachusetts	\$829	\$955	\$126	15%	\$937	\$1,090	\$153	16%
Surrounding Communities								
Attleboro	\$727	\$839	\$112	15%	\$836	\$981	\$146	17%
Foxborough	\$1,007	\$1,195	\$188	19%	\$1,097	\$1,269	\$172	16%
Mansfield	\$930	\$1,001	\$70	8%	\$1,043	\$1,087	\$45	4%
North Attleborough	\$789	\$887	\$98	12%	\$888	\$1,003	\$115	13%
Wrentham	\$854	\$877	\$24	3%	\$952	\$979	\$27	3%

Source: U.S. Census Bureau, 2000 Decennial Census and the 2009-13 American Community Survey Five-Year Estimates

We focus on gross rents, which are likely more indicative of the true costs of rental housing. Gross monthly rents in Plainville are slightly higher than the state median, as well as most of its immediate neighbors—exceeded only by Foxborough among the five surrounding communities. However, Plainville is closer to the middle in terms of the increase in median gross rents. Between 2000 and 2009/13 real monthly gross rents in Plainville increased by \$117 dollars. This less than state as a whole, but notably higher than Wrentham and Mansfield.

Residential rent prices over time

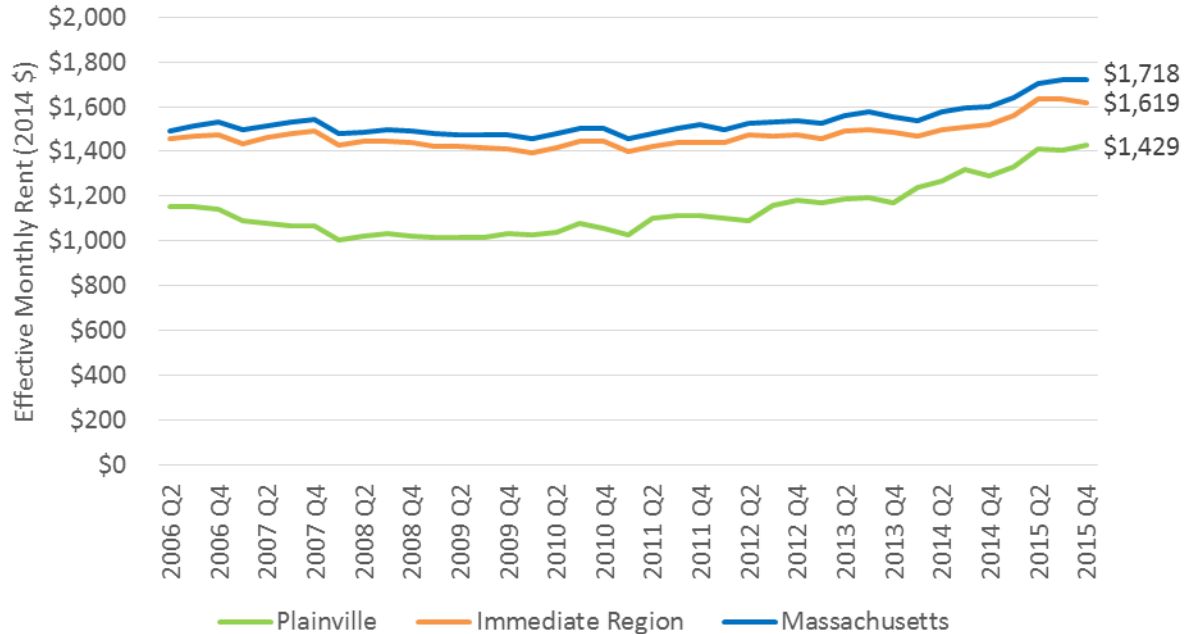
To track changes in the price of rental housing, we turn to a proprietary database provided by CoStar.^x CoStar boasts of itself as the nation’s largest provider of data on commercial properties. It is also the force behind the online rental listing service Apartments.com, arguably the largest and most comprehensive real-time source of data on national and local rentals. It reports average rents on a quarterly basis with almost no lag, making it ideal for closely monitoring changing market conditions. CoStar also reports both average “reported” rents and average “effective” rents. Reported rents are comparable to what the ACS calls contract rents. Effective rents are more akin to ACS-defined gross rents, because they attempt to account for the fact that some contract rents include utilities while others do not. Unless otherwise stated we focus our review on effective rents.

Knowing that CoStar is not based on a representative sample, we compared CoStar medians to comparable data from the ACS. Monthly effective rents as reported by CoStar are generally similar to monthly gross rents in the ACS. The CoStar monthly average (mean) effective rent from 2009 to 2013 was \$1,086 per unit, while the ACS reported a monthly median of \$1,128. Such small differences could

easily be explained by methodological differences (e.g., CoStar reports a mean and ACS reports a median). However, the statewide and regional averages reported by CoStar are vastly different from those in the ACS. ACS reports the 2009-2013 statewide median gross rent at \$1,090. The CoStar mean for this same period was just over \$1,500—a near \$400 difference. The gap may be explained by differences in the population covered by CoStar. CoStar is more reflective of rentals in multi-unit buildings, which may be more expensive. This does not appear to be the case; as the average statewide ACS rent for units in multi-unit structures is almost identical to the overall average. Another possibility is that ACS reports rental costs paid by households while CoStar collects rental data from listings. Presumably, it is more difficult to raise rents on existing tenants than on available units, such that tenants pay less than the going market rate. Although we lack the data to test this possibility, if true, then CoStar may actually be a more sensitive leading indicator of changes in rental markets than data gathered from household surveys.

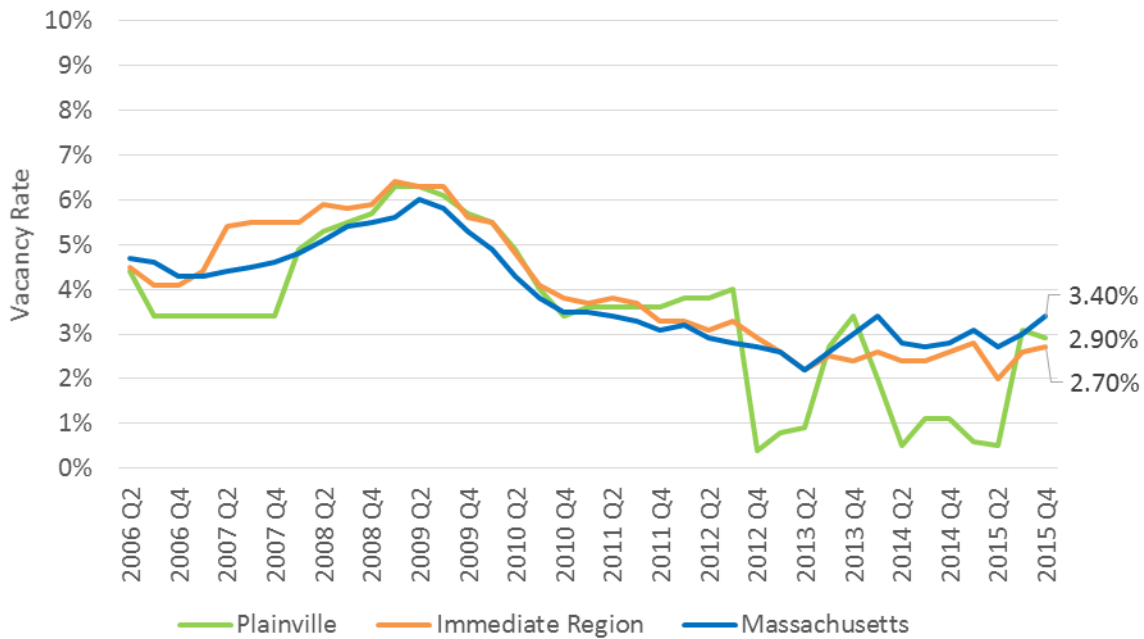
Assuming that CoStar provides a valid, although perhaps incomplete, indicator of changing rental market condition, we proceed with our investigation of recent trends in rental prices relative to the Immediate Region and State. Effective monthly rents in Plainville are lower than both state and regional averages (Figure 18). In the fourth quarter of 2015, CoStar reports the real effective monthly Plainville rents at \$1,429. However, since 2011 Plainville rents have been rising faster, and have narrowed the price gap with the state and region. Rising rents coincide with dropping rental vacancy rates (Figure 19). While more volatile, rental vacancy rates in Plainville are in line with the State and Immediate Region—all of which are very low (<4 percent).

Figure 18: Effective Monthly Rents, Plainville vs. the Immediate Region and State, 2006 to 2015



Source: The CoStar Group Inc.

Figure 19: Rental Vacancy Rates, Plainville vs. the Immediate Region and State, 2006 to 2015



Source: The CoStar Group Inc.

Building Permits

The final section of our analysis of baseline residential real estate conditions examines recent trends in residential building permits. Building permits are an important prerequisite for new development. Municipal officials, demographic forecasters and real estate analysts alike monitor building permit applications in order to get a sense of changing population trends two or three years in advance.

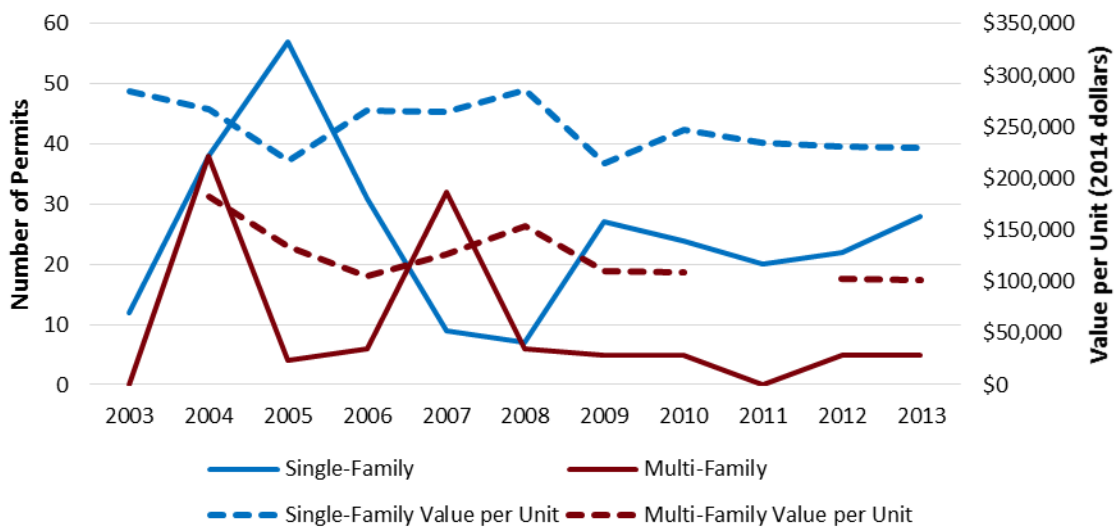
The data on building permits comes from the U.S. Census Bureau’s Manufacturing and Construction Division. For every individual community in Massachusetts, the Census Bureau reports the number of permits and their approximate value. However, the survey only covers residential permits, although it does distinguish single- from multiple-family permits, distinguished by the number of individual housing units covered under the permit. These figures should be considered estimates, and not a complete count. Communities often do not report their permits, in which case the Census Bureau imputes (i.e. makes a statistical estimate of) the missing values using past values and other related variables.

One must exercise particular caution when considering building permit trends, especially at the town level. Even with imputation, the number of building permits issued can vary greatly from year to year. A single-large scale development can create abrupt bumps and dips in annual permitting trends. Permits, like the real estate market more generally, are also sensitive to broader economic conditions and business cycles—making it difficult to establish a regular “baseline” trend that can later be used to measure impacts. With these important caveats in mind, we proceed with our examination of recent trends.

The number of residential permits in a small community, such as Plainville, can differ greatly from year to year. We see this clearly in Figure 20 where the number of both single-family and multi-family

permits oscillates widely. This is particularly true for multi-family residential permits, where the town issues no or just one multi-family permits in some years, followed by a jump to 30 or 40 permits the next. The monetary value of issued permits tends to be more stable than the number of permits, although the small number of permits issued in some years makes this data highly sensitive to outliers.^{xi} The average value of single-family permits has declined over the study period, from an average of \$284,338 in 2003 to \$229,364 to \$229,364 in 2013. The average per unit value for multi-family permits is much lower than for single-family homes. Multi-family units also experienced a decline in value by roughly \$52,000 over the ten-year study period.

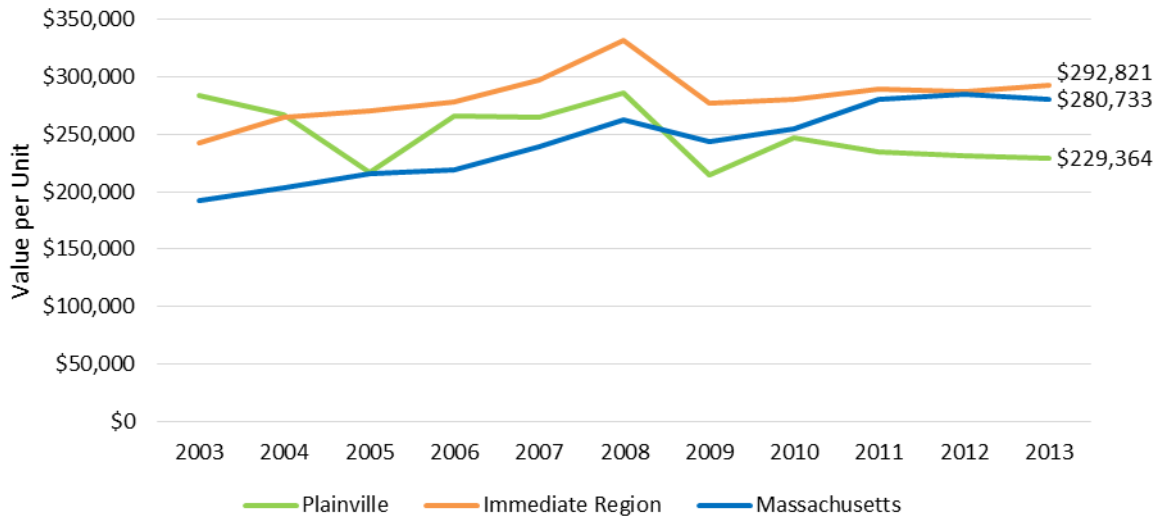
Figure 20: Plainville, Number and Per Unit Value of Residential Building Permits



Source: U.S. Census Bureau, Residential Construction Branch

To help put these trends into context, we compare the annual change in the value of residential building permits against regional (i.e. Norfolk and Bristol Counties) and statewide trends. The number of permits was deemed too volatile to warrant comparison. Over the past ten years, the per-unit value of single-family permits in Plainville has generally been between regional and statewide averages, with the region typically surpassing the state (Figure 21). However, this changed beginning in 2009, when permit values in the state began to rise, while values in Plainville and the region held steady. As of 2013, average single-family permit values in the state and region differ by a mere \$12,000, both of which exceed the town average by over \$50,000.

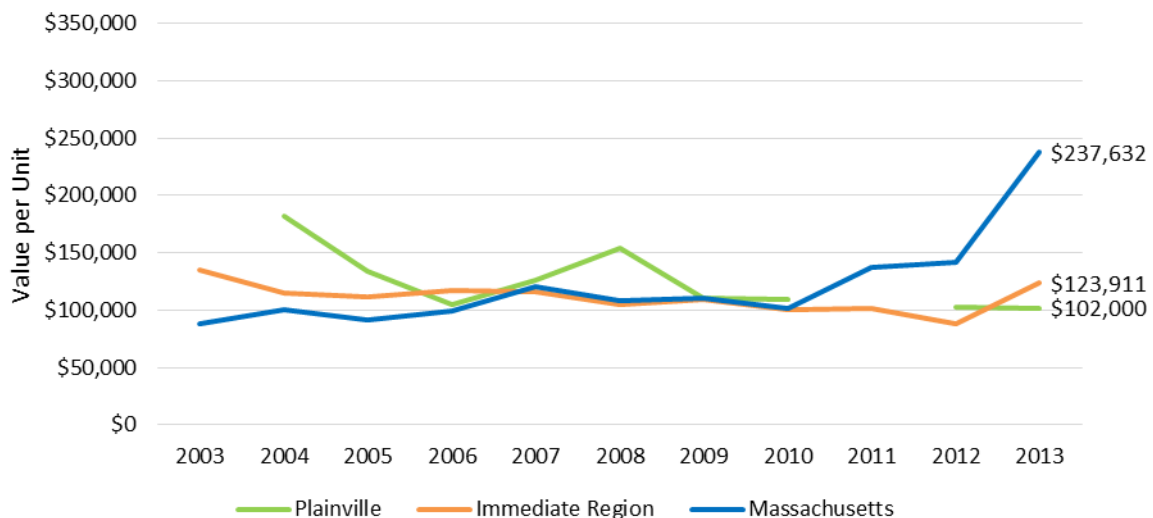
Figure 21: Average Value of Single-family Building Permits from 2007



Source: U.S. Census Bureau, Residential Construction Branch

Despite its higher volatility, the value of multi-family permits in Plainville has generally matched the region – hovering close to the \$100,000 mark per unit in recent years (Figure 22).^{xii} Both tended to slightly exceed the statewide average up until 2010, when multi-family permit values for the state began to rise while Plainville and the rest of the Immediate Region remained essentially flat. As we found in our separate analysis of the Everett region, the massive state-level growth in the value of multi-family permits has largely been the result of growth in the Boston region, which dominates the state’s stock of multi-family housing construction.

Figure 22: Average Value of Multi-family Building Permits, 2007 to 2013



Source: U.S. Census Bureau, Residential Construction Branch

Table 5 provides a summary of building permit activity in Plainville and its surrounding communities. Again, the irregular nature of building permits confounds consistent comparisons at the municipal level.

Most of the officially designated surrounding communities did not even issue permits for multi-family homes in many years. However, we do find that the value of single-family permits in Plainville falls squarely in the middle of its neighbors. Attleboro has the lowest average value for single-family permits, and Foxborough has the highest. Over the past ten years, the value of single-family permits in most area communities declined; only Attleboro and Foxborough saw a net increase in real permit value. The decline was particularly strong in Mansfield, which lost roughly half its average permit value between 2003 (where it was close to \$460,000) and 2013.

Table 5: Building Permit Summary, Plainville and Surrounding Communities

Area	Single Family Building Permits				Multi Family Building Permits			
	Number (2013)	% Change in Number 2003-2013	Value (2013)	Change in Value 2003-2013	Number (2013)	% Change in Number 2003-2013	Value (2013)	Change in Value 2003-2013
Massachusetts	7,100	-46%	\$280,733	\$88,529	7,469	3%	\$237,632	\$149,597
Plainville	28	133%	\$229,364	-\$54,974	5	n/a	\$102,000	n/a
Surrounding Communities								
Attleboro	34	-67%	\$156,128	\$5,988	22	5%	\$74,506	-\$36,567
Foxborough	27	-25%	\$321,383	\$4,680	0	n/a	\$0	n/a
Mansfield	28	12%	\$224,586	-\$244,716	0	n/a	\$0	n/a
North Attleborough	50	-53%	\$218,239	-\$95,960	0	n/a	\$0	n/a
Wrentham	47	4%	\$262,639	-\$10,712	0	n/a	\$0	n/a

Source: U.S. Census Bureau, Residential Construction Branch

In conclusion, we find that the data on building permits, while having some value in helping us understand the changing conditions in residential construction, may be too erratic and fraught with estimation ambiguities to identify possible development impacts of Casinos. This is particularly true for multi-family permits, which are rare in the Plainville region. We will continue to monitor and track single-family building permits moving forward, but will couple our analysis with sufficient warnings and caveats.

Commercial and Industrial Real Estate

The market for commercial and industrial real estate is another important indicator of the health and nature of an area's economy. This section of the report will analyze Plainville's commercial and industrial real estate inventory, how that space is utilized, and its price. We use data from CoStar, a commercial real estate analytics firm, in this section to provide information on several indicators that are not generally tracked in publicly available data sources, such as net absorption and lease rates per square foot. CoStar data are available for all of Massachusetts on a quarterly basis from 2007 to present^{xiii}. This analysis will cover the seven year period between the end of the last quarter of 2007 and the last quarter of 2014.

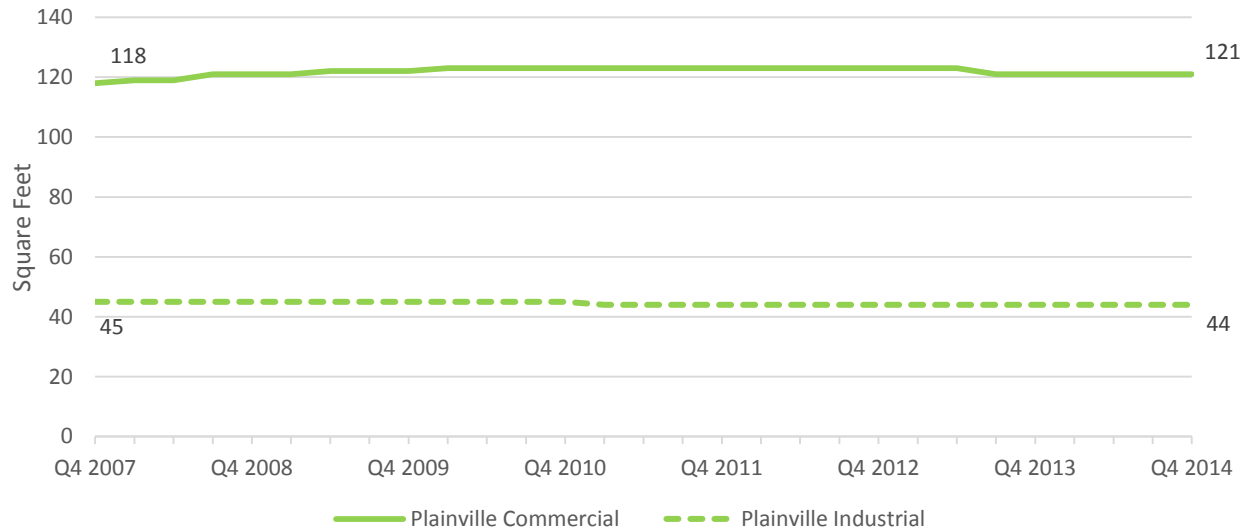
This section of the report is divided into three sub-sections, each of which addresses a key concept for evaluating a community's real estate market and touches on several metrics related to that concept. The first section addresses inventory, meaning the number of buildings in the community, and seeks to demonstrate the size of a community's real estate market dedicated to business activities. The second section addresses vacancy and absorption, two important ways of analyzing how this space within a community is utilized. The final section addresses lease rates and sheds light upon the market prices paid for commercial and industrial space within a community. When taken as a whole, these measures describe the nature of Plainville's commercial and industrial real estate market in the period immediately preceding the development of the Plainridge Park Casino in Plainville.

Inventory

The city of Plainville covers 11.5 square miles (0.5 miles of which are water) and contained 165 commercial and industrial buildings at the end of 2014. Over the seven-year study period, Plainville's commercial building stock rose from 118 to 121 buildings, while its industrial building stock fell from 45 to 44 buildings (Figure 23).

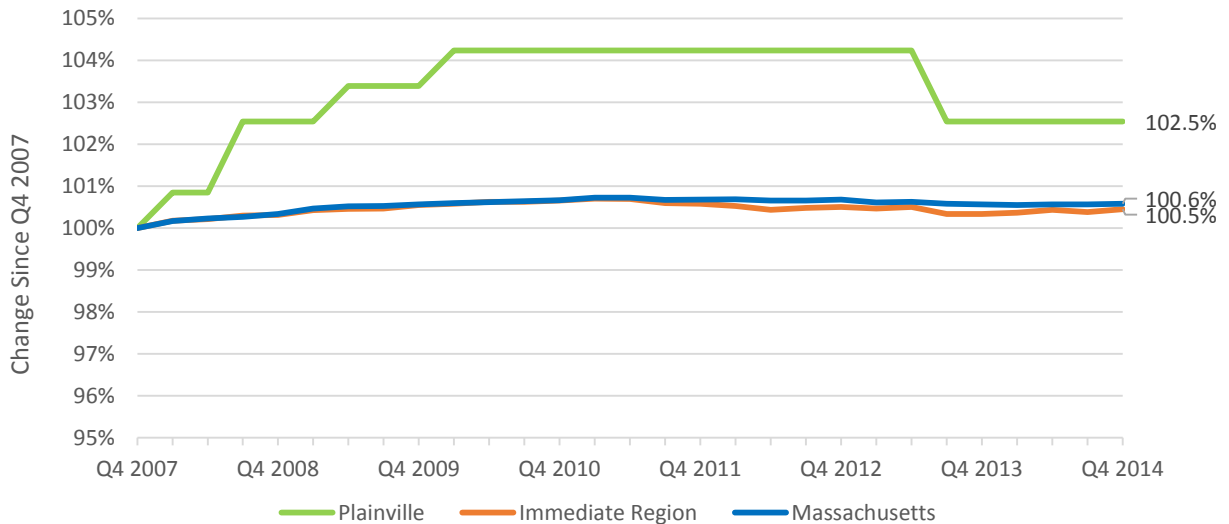
The change in the number of buildings in Plainville is interesting in the context of its Immediate Region^{xiv} and the Commonwealth as a whole. Plainville's 2.5 percent increase in commercial building stock was considerably greater than the more modest increases experienced by the Immediate Region and the state (Figure 24). It also shows that Plainville's commercial building growth would be even greater, at 4.2 percent, if it were not for the loss of two commercial buildings in the third quarter of 2012.

Figure 23: Plainville Number of Buildings



Note: Data used in this section are quarterly data.
 Source: *The CoStar Group Inc.*^{xv}

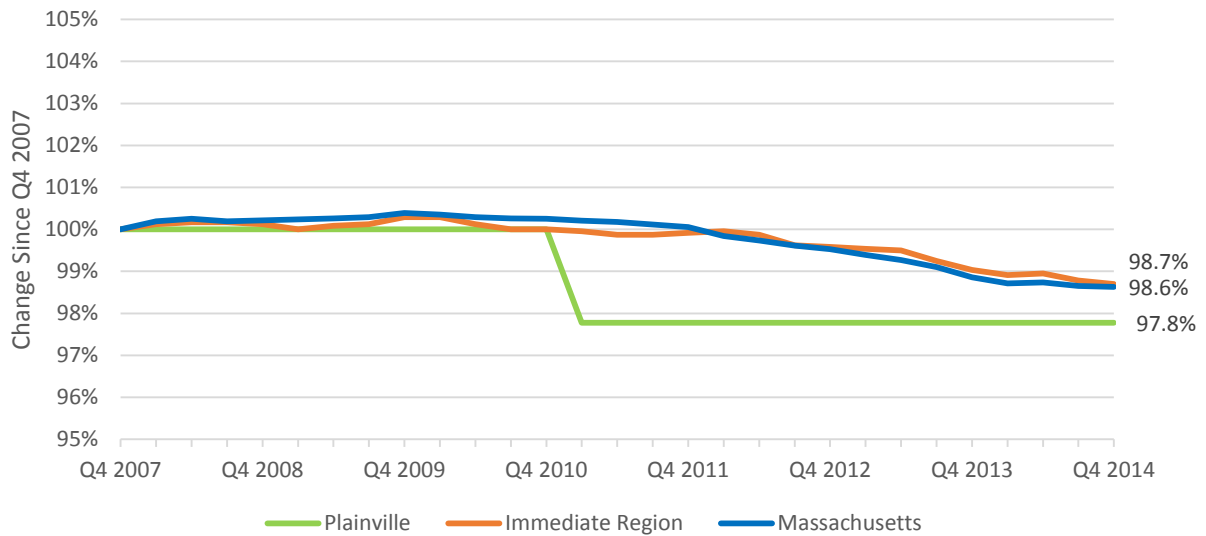
Figure 24: Number of Commercial Buildings, Change from Q4 2007



Source: *The CoStar Group Inc.*

While the industrial building inventory of Plainville declined by only one building during the study period, the total industrial building inventory is small enough that the change amounted to a 2.2 percent decrease in the total number of industrial buildings (Figure 25). Both the Immediate Region and the Commonwealth also saw their industrial building inventory decrease over the seven year study period, particularly since 2011, but at a more modest rate than Plainville. This also corresponds with the timing the single industrial building was removed from Plainville’s inventory. There was no change in Plainville’s inventory prior to or after the first quarter of 2011.

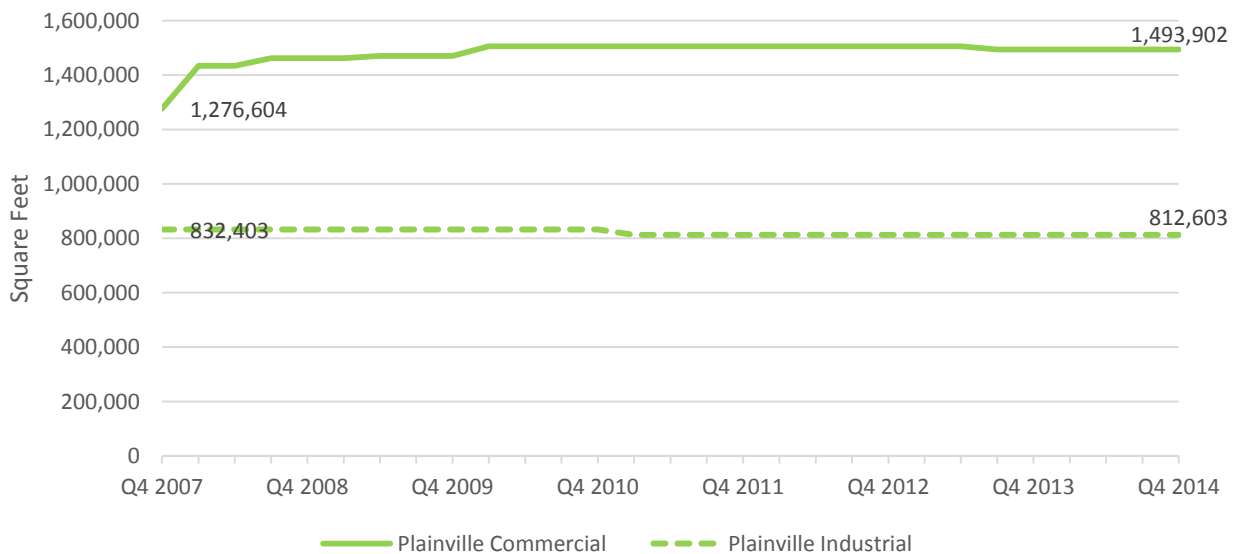
Figure 25: Number of Industrial Buildings, Change from Q4 2007



Source: The CoStar Group Inc.

Buildings can vary dramatically in their size and significance to an area, so another way to examine an area’s building inventory is by looking at rentable building area (RBA). Rentable building area is defined as the usable area (measured in square feet) in a geography’s building stock, including their share of associated common areas.

Figure 26: Plainville Rentable Building Area



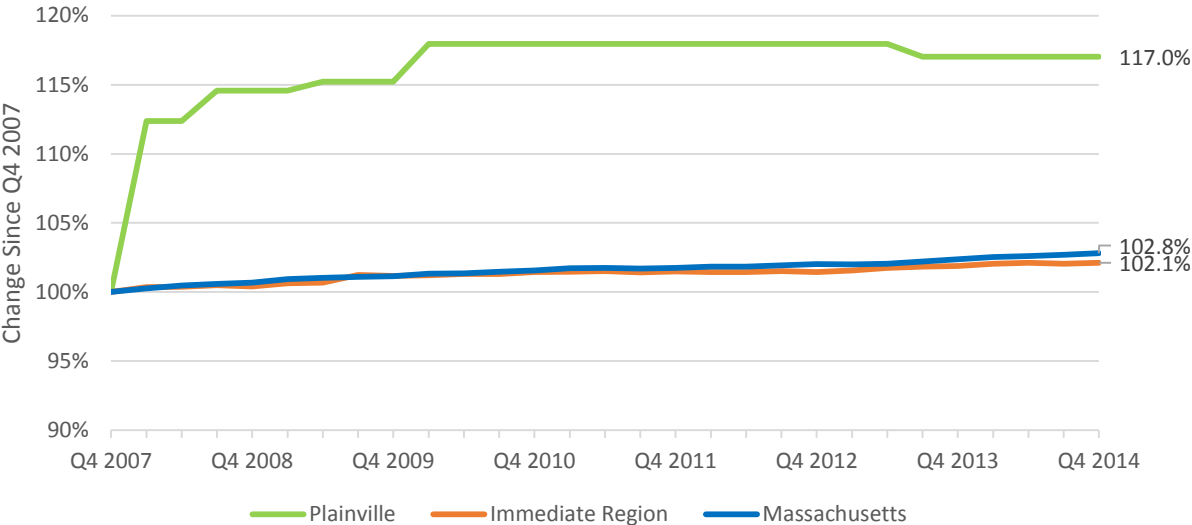
Source: The CoStar Group Inc.

In Plainville commercial buildings comprise a larger share of the city’s rentable building area as well as a larger share of the total number of buildings (**Error! Reference source not found.**). Plainville added considerable capacity to its commercial RBA between 2007 and 2012, and has only seen a small decline

since. Meanwhile, Plainville’s industrial RBA was virtually unchanged over the study period, with the exception of a small drop in 2011 with the removal of a single building from the industrial inventory. While the RBA within a single building can change, these shifts coincide with changes in the Plainville’s building inventory and probably reflect new construction or demolition of older buildings.

Plainville’s commercial RBA rose to 117 percent of its 2007 level, a much more pronounced rise than its stock of commercial buildings (Figure 27). Newly constructed buildings are likely larger than the average size of existing commercial buildings in Plainville, since RBA rose faster than the number of buildings. In both Massachusetts and the Immediate Region, commercial RBA has also risen faster than the increase in the number of buildings, and at a steady rate of increase since the end of 2007.

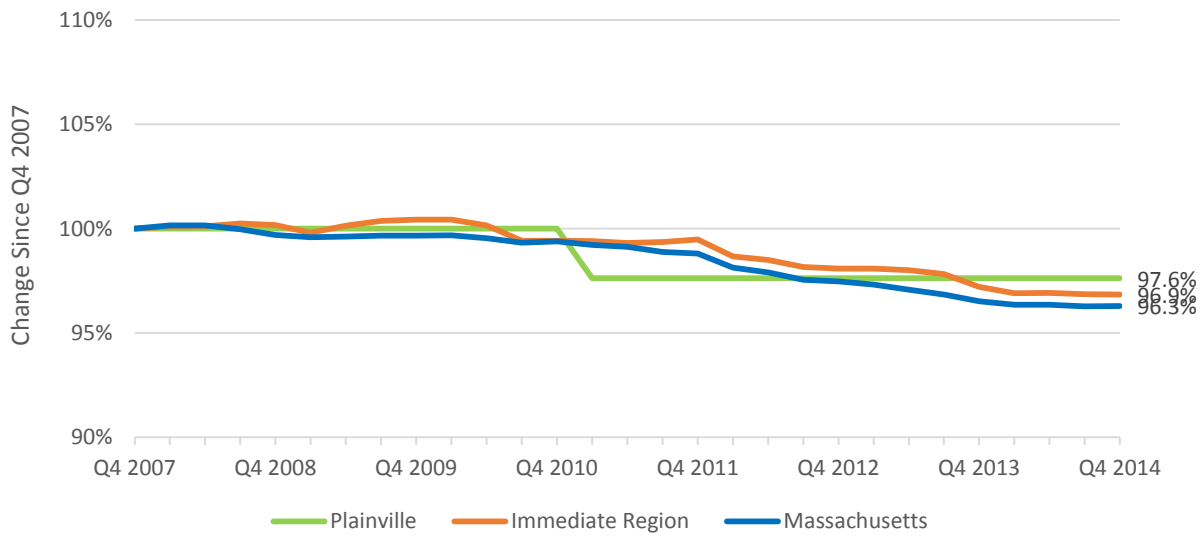
Figure 27: Commercial Rentable Building Area, Change from Q4 2007



Source: The CoStar Group Inc.

Like its industrial building inventory, industrial RBA in Plainville fell between the last quarters of 2007 and 2014, due to the single year drop in 2011. Plainville’s decrease in industrial RBA is less pronounced than the changes experienced by the Immediate Region or the Commonwealth, both of which declined steadily in the second half of the study period. In both the Immediate Region and State, the decline in industrial RBA exceeded the rate of decline in industrial buildings, suggesting that it is predominantly larger industrial buildings that have either been taken off the market or demolished.

Figure 28: Industrial Rentable Building Area, Change from Q4 2007



Source: The CoStar Group Inc.

Surrounding Community Building Counts and Rentable Building Area

Table 6: Inventory details the changes in the number of buildings and RBA for Massachusetts, Plainville, and those communities that have been designated as official surrounding or neighboring communities by the Massachusetts Gaming Commission. At 2.5 percent, Plainville is one of three communities in the area to exceed the Commonwealth’s growth rate in commercial buildings, although it lags behind Foxborough and Wrentham. Among the remaining communities, Attleboro and Mansfield experienced declines in the number of commercial buildings while North Attleborough experienced no change. Plainville, Foxborough, and Wrentham are also the only three communities to exceed the Commonwealth in terms of RBA growth, and Plainville experienced the greatest growth at 17 percent. Mansfield and North Attleborough experienced very little growth in RBA and lagged behind Massachusetts as a whole, while Attleboro was the only community to experience negative RBA growth.

For industrial properties, Plainville joins Attleboro, North Attleborough, and Wrentham in experiencing a loss in industrial buildings. All three lost a greater share of their industrial building stock than the Commonwealth as a whole. Only Mansfield added to its industrial building inventory, while Foxborough saw no change. Foxborough and Mansfield are also the only two communities to experience growth in industrial RBA. Among the communities that lost industrial RBA, only Wrentham experienced a greater percentage loss of RBA than the Commonwealth as a whole.

Table 6: Inventory, Plainville and Surrounding Communities

Area	Commercial				Industrial			
	Number of Buildings (Q4 2014)	Percent Change, Q4 2007- Q4 2014	Rentable Building Area (Square Feet, Q4 2014)	Percent Change, Q4 2007- Q4 2014	Number of Buildings (Q4 2014)	Percent Change, Q4 2007- Q4 2014	Rentable Building Area (Square Feet, Q4 2014)	Percent Change, Q4 2007- Q4 2014
Massachusetts	46,620	0.6%	942,748,021	2.8%	10,450	-1.4%	404,629,714	-3.7%
Plainville	121	2.5%	1,493,902	17.0%	44	-2.2%	812,603	-2.4%
Surrounding Communities								
Attleboro	310	-1.9%	4,826,466	-0.6%	116	-0.9%	5,290,325	-0.8%
Foxborough	182	4.0%	4,893,952	4.9%	46	0.0%	1,210,674	2.1%
Mansfield	189	-1.0%	3,834,101	0.1%	50	2.0%	5,339,727	7.0%
North Attleborough	186	0.0%	4,248,368	0.2%	63	-1.6%	1,341,648	-0.8%
Wrentham	65	10.2%	1,219,917	10.2%	27	-10.0%	365,549	-34.1%

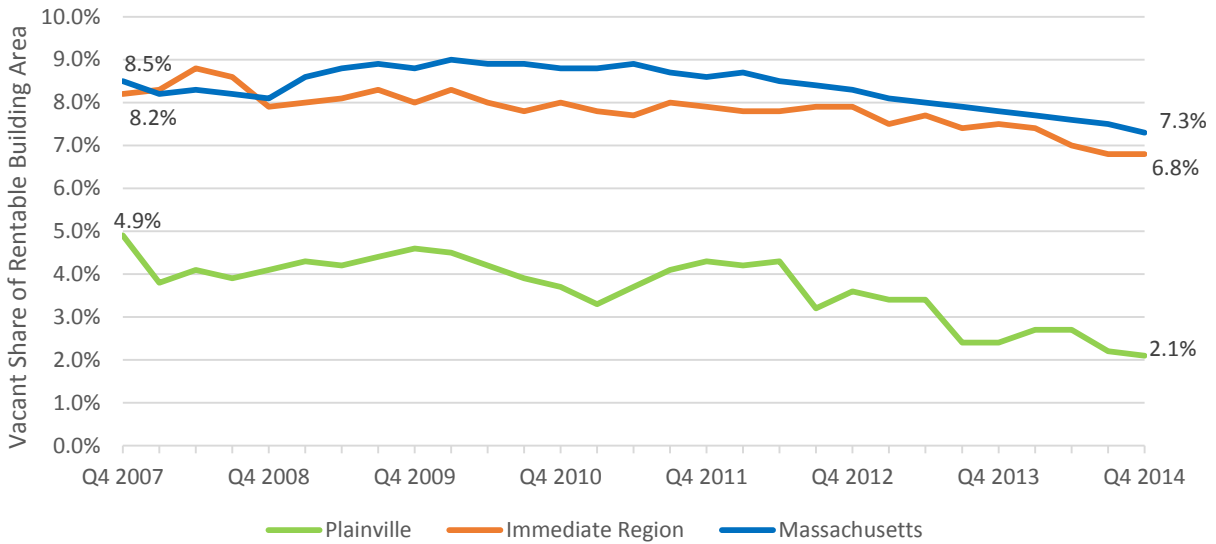
Source: The CoStar Group Inc.

Vacancy and Absorption

Our next set of metrics considers how available commercial and industrial space is being utilized. First, we consider vacancy rates. Vacancy rate is the percentage of rentable building area (not buildings) that is not currently in use. Vacancy rates as calculated by CoStar may not take into account abandoned buildings that are not on the real estate market, so actual vacancy rates in certain distressed communities may be higher than in these figures and tables. Since Plainville is a small community with 121 commercial buildings and only 44 industrial buildings in 2014, even minor changes in supply and demand can cause relatively large fluctuations in vacancy rates from year to year.

Plainville has lower commercial and industrial vacancy rates than the state. Its 2014 vacancy rate is less than a third of the both Immediate Region's and the State (Figure 29: Commercial Vacancy Rates and Figure 30). Furthermore, Plainville's commercial vacancy rate has been consistently below the state and Immediate Region throughout the study period, suggesting an intensive use of commercial space in Plainville. The commercial market has gotten even tighter in recent years. Plainville's commercial vacancy rate fell from 4.9 percent in the fourth quarter of 2007 to 2.1 percent in the fourth quarter of 2014.

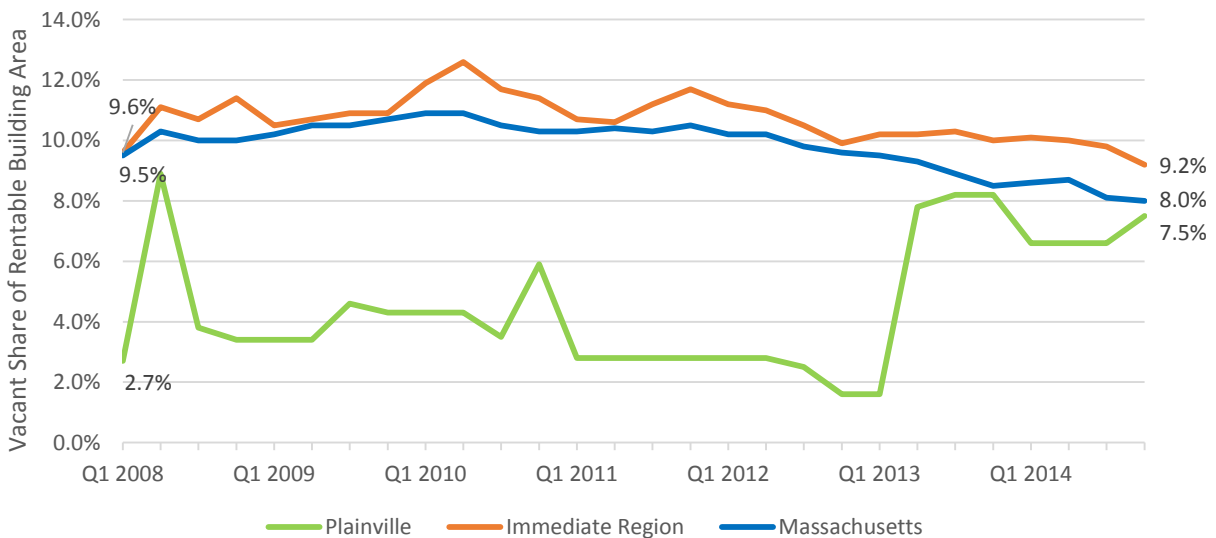
Figure 29: Commercial Vacancy Rates



Note: Vacancy rate is calculated as the share of unused rentable building area.
 Source: The CoStar Group Inc.

Plainville’s industrial vacancy rate is more volatile than the commercial vacancy rate, but has remained lower than in the Immediate Region or the Commonwealth as a whole throughout the study period (Figure 30). Aside from a temporary spike in 2008, Plainville’s industrial vacancy rate declined for most of the study period to a low of less than two percent in 2013. Vacancy rates spiked again in 2013 and have remained at a level between six and eight percent since.

Figure 30: Industrial Vacancy Rates



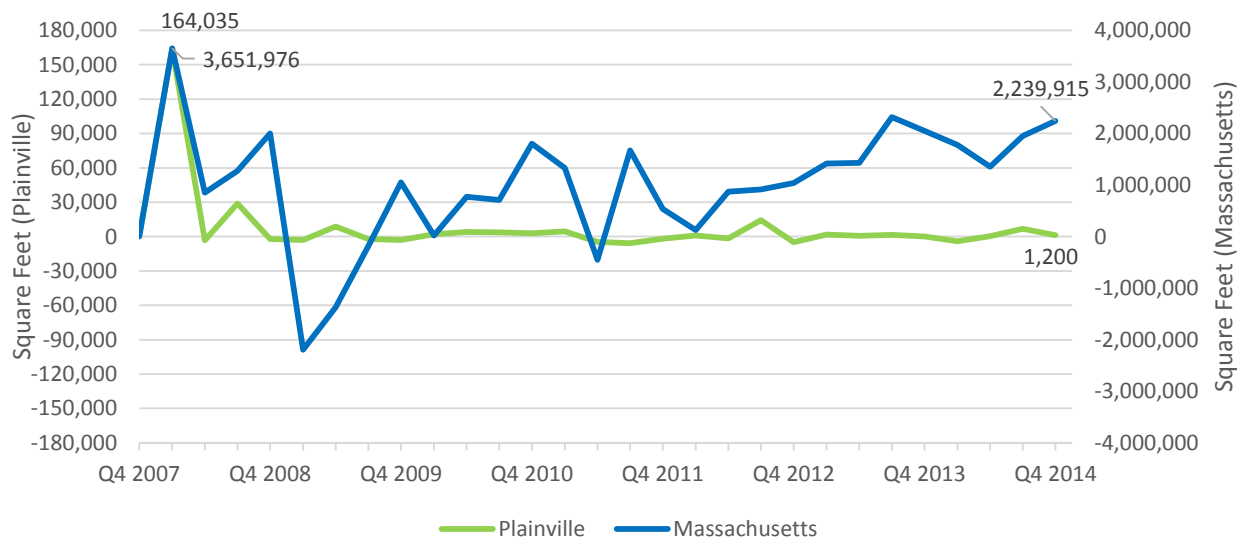
Source: The CoStar Group Inc.

Next, we consider net absorption. Net absorption is defined as the net change in occupied space in an area’s rentable building area from one quarter to the next. It measures the difference between newly

occupied rentable building area and the rentable building area that was vacated since the last period. Because net absorption is presented in terms of square feet, not as a share of rentable building area, it captures changes in the market that may not be detected by the vacancy rate alone. For example, a vacant building that is taken off the market entirely would cause a fall in the vacancy rate, but no corresponding change in net absorption. Analysts typically consider several consecutive quarters of high positive net absorption as indicative of shrinking supply of available space which sends a signal to developers that the market is ripe for construction.

Net absorption is measured on a quarterly basis, so each point measures the net change in occupied rentable building area during that quarter. Zero net absorption indicates no change from the previous quarter. In Plainville, commercial net absorption has hovered fairly close to zero in most quarters since a positive spike in the first quarter of 2008 (Figure 31). Overall, the trend in Plainville has been positive, with 17 of the 28 periods showing quarterly gains in occupied RBA and a net increase of 210,060 square feet in occupied RBA since 2007. Massachusetts saw much more significant trends during this same period, with 24 of the 28 quarters showing positive net absorption and an increase of roughly 29 million more square feet of occupied commercial RBA since the fourth quarter of 2007.

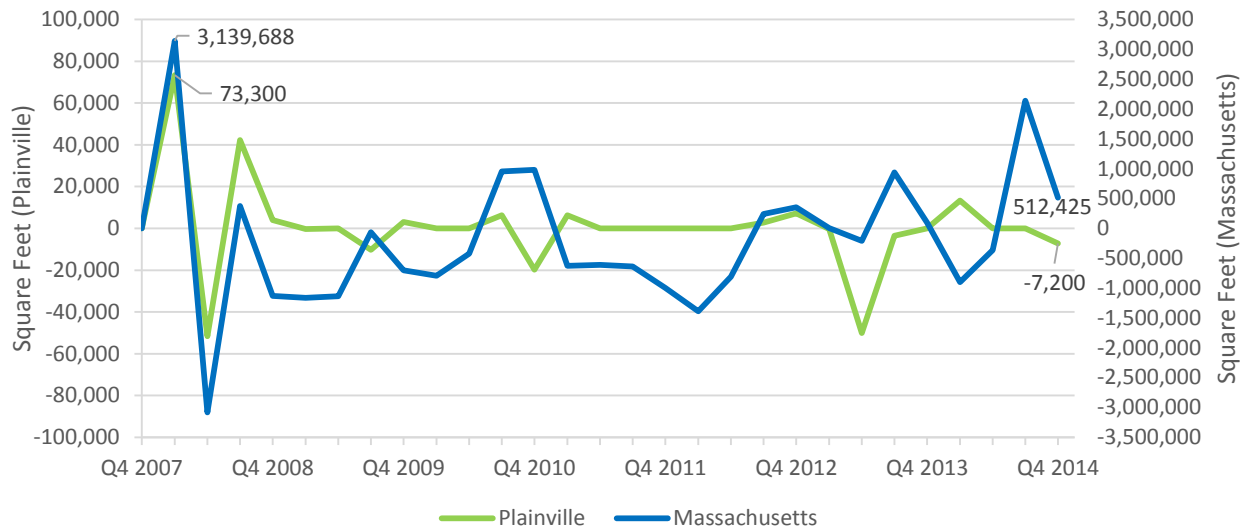
Figure 31: Commercial Net Absorption



Source: The CoStar Group Inc.

Most quarters saw no change in net absorption for industrial properties in Plainville (**Error! Not a valid bookmark self-reference.**). Plainville’s net absorption changed in only 17 of 24 quarters, with nine of those being positive shifts and eight being negative. This is to be expected given the small number of industrial buildings in Plainville. It also stands in contrast to the industrial net absorption of Massachusetts, which saw 11 positive quarters and 17 negative quarters. By the end of 2014, Plainville had 15,200 more square feet of occupied industrial RBA, while Massachusetts lost over five million square feet.

Figure 32: Industrial Net Absorption



Source: The CoStar Group Inc.

Surrounding Community Vacancy and Absorption Rates

Table 7: Vacancy and Absorption compares the commercial and industrial vacancy rate and net absorption in Plainville to nearby communities that are designated as official surrounding or neighbor communities by the Massachusetts Gaming Commission. For commercial properties, Plainville’s vacancy rate of 2.1 percent is the lowest in the Immediate Region and is less than one third of Massachusetts’ vacancy rate in 2014. Every town except Wrentham had a 2014 vacancy rate below the state level. Plainville, Attleboro, Foxborough, and Mansfield all had larger decreases in commercial vacancy rates than the state, while North Attleborough, and Wrentham had exceptionally large increases in the vacancy rate. Plainville also had the second largest increase in net absorption for the immediate area, exceeded only by Foxborough. Foxborough also had the largest decrease in vacancy rates over the study period.

Plainville’s industrial vacancy rate is fairly close to the state average. Among its neighbors, only Attleboro has a higher industrial vacancy rate. All other surrounding communities were far below the state vacancy rate. Plainville, Foxborough, Mansfield, and North Attleborough all experienced falling industrial vacancy rates and positive net absorption, while Attleboro saw a rising rate and negative net absorption. Wrentham’s dramatic fall in industrial vacancy rates and net absorption can be explained by its corresponding fall in industrial inventory.

Table 7 also presents an alternative concept of vacancy rates, taken from Valassis Lists, a direct mail marketing firm, which supplies United States Postal Service vacancy data to the web-based mapping company PolicyMap. As mentioned above, CoStar’s vacancy rates capture properties which are currently on the market but not occupied. Commercial or industrial buildings that have been abandoned altogether, or whose owners have chosen not to put them on the market, are not included. Valassis’ vacancy rate measures the share of vacant addresses. It considers all buildings, but is based on a share of buildings and not square footage. Nor does it distinguish commercial from industrial properties.

While they are not directly comparable, when viewed together both CoStar and Valassis help to provide a more complete view of vacancy in the host and surrounding communities.

Unfortunately, Valassis data is not available for all communities and some small towns, including Plainville, North Attleborough, and Wrentham, are omitted. What can be said is that two of Plainville's closest neighbors, Foxborough and Mansfield, have Valassis vacancy rates considerably lower than the state average of 16.1 percent, while the less affluent Attleboro has a rate somewhat higher than that of the state.

Table 7: Vacancy and Absorption

Area	Commercial			Industrial			Valassis Vacancy Rate, All Businesses, Q4 2014
	Vacancy Rate (Q4 2014)	Percent Change, Q4 2007-Q4 2014	Net Absorption (Q1 2008-Q4 2014)	Vacancy Rate (Q4 2014)	Percent Change, Q4 2007-Q4 2014	Net Absorption (Q1 2008-Q4 2014)	
Massachusetts	7.3%	-14.1%	28,970,307	8.0%	-20.8%	-5,300,347	16.1%
Plainville	2.1%	-57.1%	210,060	7.5%	-34.8%	15,200	N/A
Surrounding Communities							
Attleboro	4.6%	-56.2%	183,919	14.4%	5.1%	-75,712	21.9%
Foxborough	4.1%	-56.8%	443,565	0.0%	-100.0%	364,996	8.3%
Mansfield	3.7%	-45.6%	110,430	3.8%	-68.9%	754,806	10.6%
North Attleborough	7.1%	69.0%	-114,929	4.8%	-47.8%	49,151	N/A
Wrentham	10.8%	730.8%	-2,224	2.3%	-77.2%	-141,485	N/A

Notes: Vacancy rate is defined as the share of unused rentable building area. Net absorption is the net change in occupied space in a geography's rentable building area.

Data in this table are annual averages of quarterly data.

Source: The CoStar Group Inc.

Lease Rates

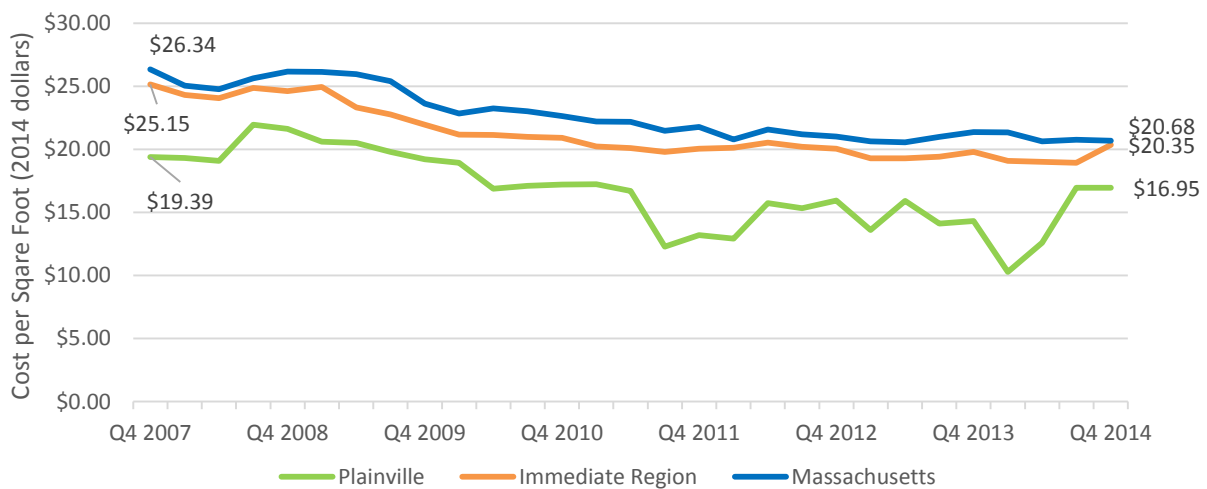
Price is another important factor in an area's real estate market. While there are a number of factors that determine what price property owners can charge in rent for their space, it makes sense that areas with higher lease rates are those that are seen as more desirable by businesses and organizations seeking space to rent. However, there are a few caveats. First, some organizations own the real estate that they occupy, and those properties are not included in the CoStar lease rate data. Second, individual buildings may possess characteristics that make them particularly valuable to certain types of businesses and organizations. This can make a direct comparison difficult. In this respect, the difference in lease rates between municipalities may say as much about the industry mix and business activities of those municipalities as it does about their relative economic health.

We analyze lease rates separately for industrial and commercial space, dividing commercial leases into two groups: office and non-office real estate. This is because there are often significant differences in the lease rates between office and non-office real estate.^{xvi} Office commercial real estate often includes the offices of professional service firms, lawyers, doctors, and government buildings, etc., while non-office commercial real estate includes restaurants, retail stores, sports and entertainment facilities,

transportation facilities, and many other types of real estate. Lease rates for industrial real estate are also presented.

Office real estate in Plainville leases at a lower rate than both the State and the Immediate Region, as has been the case for seven years (Figure 33). It current stands at roughly \$3.50 less per square foot than the Immediate Region. Commercial lease rates are also more volatile in Plainville over the study period, which is not surprising given the relatively small number of commercial properties in Plainville. Real (inflation adjusted) commercial lease rates have been steadily declining for all three areas, although rising lease rates in Plainville and the Immediate Region in 2014 have resulted in some convergence with the generally higher state average of \$20.68 per square foot.

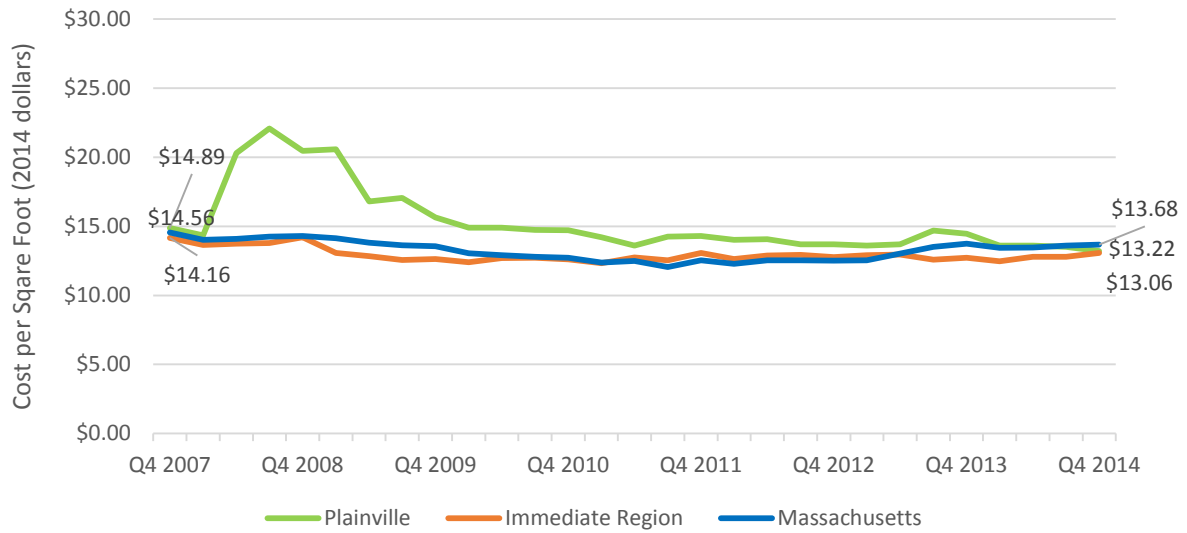
Figure 33: Office Commercial Lease Rates (2014 dollars)



Source: The CoStar Group Inc.

Lease rates for non-office commercial properties in Plainville are nearly identical with both the Immediate Region of Massachusetts (Figure 34). In the fourth quarter of 2014, the three differed by only 68 cents per square foot. Historically, non-office rates in Plainville have been slightly higher (and more volatile) than both state and region. However, the three have converged in recent years with non-office lease rates increasing slightly for the state and region, while Plainville's have held steady.

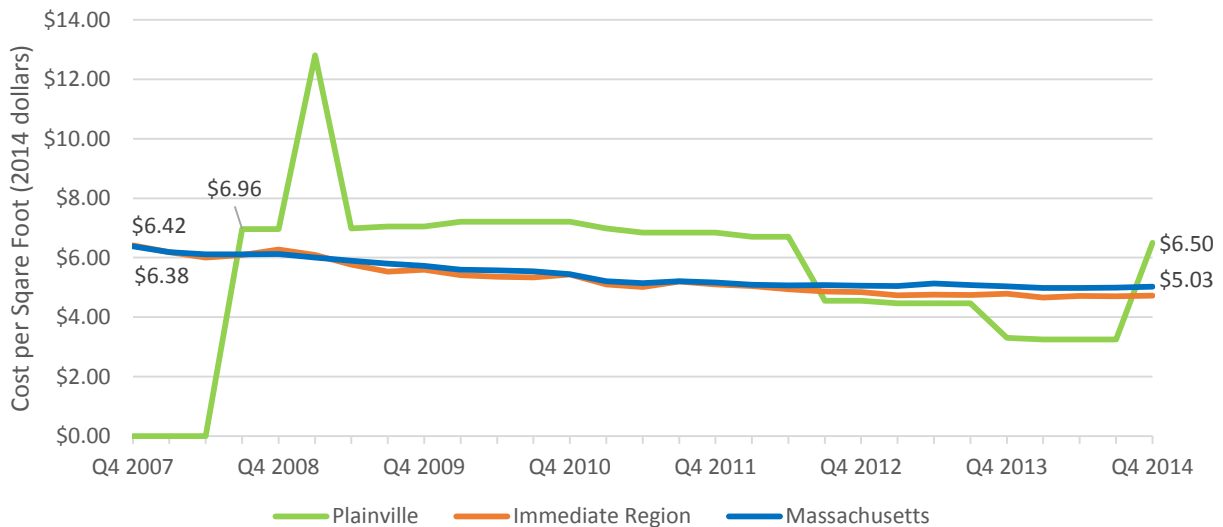
Figure 34: Non-Office Commercial Lease Rates (2014 dollars)



Source: The CoStar Group Inc.

Industrial lease rate data for Plainville are not available prior to the third quarter of 2008, when the figure stood at \$6.96 per square foot. This rate remained slightly higher than rates for Massachusetts and the Immediate Region until 2012, when it dropped to under five dollars per square foot—just below the state and region. By the fourth quarter of 2014, it had recovered to \$6.50 per square foot.

Figure 35: Industrial Lease Rates (2014 dollars)



Source: The CoStar Group Inc.

Surrounding Community Lease Rates

At \$16.95 per square foot, Plainville joins four of its five surrounding communities (all but Mansfield) in falling below the state commercial office lease rate of \$20.68. It also joins four of its neighbors in having experienced a decline in commercial office lease rates, with only Wrentham showing an increase in rates. Plainville's commercial non-office lease rate of \$13.22 is closer to the Commonwealth's rate of \$13.68 than any of the surrounding communities. Attleboro, North Attleborough, and Wrentham have lower commercial non-office rates while Foxborough and Mansfield are higher. Foxborough and Mansfield are the only two communities where commercial non-office lease rates have risen since 2007. Plainville and Wrentham are the only two communities in the area to have industrial lease rates that currently exceed the Commonwealth average. With the exception of Foxborough, all area communities saw a net decline in their industrial lease rates since 2007. Plainville experienced the smallest decline of the five at 6.6 percent.

Table 8: Lease Rates, Plainville and Surrounding Communities

Area	Commercial Office		Commercial Non-Office		Industrial	
	Lease Rate Per Square Foot (Q4 2014)	Percent Change, Q4 2007-Q4 2014	Lease Rate Per Square Foot (Q4 2014)	Percent Change, Q4 2007-Q4 2014	Lease Rate Per Square Foot (Q4 2014)	Percent Change, Q4 2007-Q4 2014
Massachusetts	\$20.68	-21.5%	\$13.68	-6.0%	\$5.03	-21.2%
Plainville	\$16.95	-12.6%	\$13.22	-11.2%	\$6.50	-6.6%*
Surrounding Communities						
Attleboro	\$15.04	-16.4%	\$9.08	-28.9%	\$2.24	-52.5%
Foxborough	\$19.37	-21.4%	\$15.21	30.0%	\$5.10	0.4%
Mansfield	\$21.28	-6.2%	\$24.40	82.8%	\$5.02	-19.8%
North Attleborough	\$13.65	-40.6%	\$9.90	-29.0%	\$4.83	-31.4%
Wrentham	\$20.44	95.7% ¹	\$10.25	-34.7% ²	\$6.53	-41.3%

Notes: Lease rates are presented in real 2014 dollars. Data in this table is annual averages of quarterly data.

Industrial lease rate data for Plainville is not available before Q3 2008. This is the calculation from the earliest available point.

¹Commercial office lease rate data for Wrentham is not available before Q4 2008. This is the calculation from the earliest available point.

²Commercial non-office lease rate data for Wrentham is not available before Q3 2009. This is the calculation from the earliest available point.

Source: *The CoStar Group Inc.*

Endnotes

ⁱ Host community economic profiles can be found on the SEIGMA website at: <https://www.umass.edu/seigma/node/172>

ⁱⁱ Most of the indicators used in this study cover the period up to the end of 2014, several months prior to the formal opening of Plainridge in June of 2015. There are several exceptions where more recent data is available, most notably in our analysis of residential rents and commercial/industrial inventory. In these cases we note the timing of the casino opening, although we choose to primarily focus on the analysis of baseline condition and not preliminary impacts. The analysis of impacts will be addressed in future reports.

ⁱⁱⁱ This baseline focuses on official host communities as of winter 2015, pending host community agreement ratifications in Region C.

^{iv} Full 2014 data is not yet available for the all communities in Massachusetts. However, only a few communities remain and are expected to report very soon in the new year. We will update this information as soon as the new data is available--prior to the official release.

^v The data required for a detailed spatial analysis of development impacts also readily lends itself to more sophisticated forms of statistical modeling, such as hedonic regressions and interrupted time series analysis with spatial decay effects. We intend to pursue some of these more advanced methods once a sufficient time period has elapsed after the opening of the casino.

^{vi} The location matching process involves joining the DOR L-3A database to GIS databases of individual parcels produced by MassGIS and the Boston Redevelopment Authority. These GIS databases are based on digitized parcel maps, which are linked to assessors data, and can be used to identify the latitude and longitude coordinates of every matched parcel. The vast majority (roughly 98 percent) of all sales were located to parcels in this first round. The remaining sales are located through street address matching. Our final match rates were well in excess of 99%, an amazingly high match rate for this type of work.

^{vii} The hot spot analysis is based upon the kernel density estimation technique, which calculates the density of activity falling within one km of a fine grid of points across the entire study area.

^{viii} Although we only examine sales for the entire 2008 to 2014 period as a whole in this report, similar forms of hot-spot analysis could be used to examine changes in the density of home sales over time. This might be useful to help document possible changes in the geography of home sales before and after the casino construction.

^{ix} More specifically, we use a technique called Interpolated Distance Weighting (IDW) to estimate a smooth, continuous surface of property sales appreciation across the study region.

^x While expansive, detailed and timely, CoStar is not a representative sample as is the ACS. Furthermore, CoStar is somewhat opaque in describing its data collection and estimation methods, so it is difficult to identify possible biases in the data or how sensitive the reported data is to changing market conditions at the ground level. We do know that CoStar primarily lists rentals in multi-unit structures managed by property management services, a.k.a. apartment buildings, and likely misses rentals of single-family homes. This may create a considerable bias and undercounting in communities, such as Plainville, where multi-unit apartment buildings are relatively rare. With these caveats in mind, we proceed with our baseline tracking of rents in Plainville and surrounding communities.

^{xi} We measure the value of residential permits as the total value of permits divided by the number of units (not permits). This makes it easier to compare values when grossly different numbers of units are covered under a single permit.

^{xii} There were no multi-family permits issued in either 2003 or 2011, thus the median value for those years is left blank.

^{xiii} For more information about CoStar Group Inc. and the CoStar database, please visit <http://www.costar.com/>. The data used for this analysis is not available for download without a CoStar subscription.

^{xiv} For these purposes, Plainville's immediate region is defined as all of the communities in Bristol and Norfolk counties.

^{xv} CoStar Group Inc. updates their commercial real estate database on a daily basis. For this analysis conducted in 2015, UMDI is analyzing up to the last quarter of calendar year 2014. For the purposes of this analysis, commercial real estate is any real estate that CoStar defined as Office, Retail, Flex, Hospitality, Health Care, or Sports & Recreation. Industrial real estate is any real estate that CoStar defines as Industrial. These definitions were chosen to best approximate MA DOR classifications using CoStar real estate categories.

^{xvi} CoStar's full definition of an office building reads as follows: "The primary intended use of an office building is to house employees of companies that produce a product or service primarily for support services such as administration, accounting, marketing, information processing and dissemination, consulting, human resources management, financial and insurance services, educational and medical services, and other professional services. Office buildings are characterized by work efficient floor plans, work areas, comfortable heating and cooling, cabling for phones and computers, and other conveniences that allow people conduct business. The interior finish and the structural design of the building supports the activities of the employees. Office buildings are typically configured for high density use, with a ratio of people to square footage in the 150 to 300 or more range and less than 25 percent of the demised floor space allocated to industrial or retail use. Some physical characteristics of a building may assist in classifying the property as "office" if the property's use is not apparent."