

# **Assessing the Impact of Gambling on Public Safety in Massachusetts Cities and Towns**

*Analysis of changes in police data after two years of operation at Plainridge Park Casino*

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## Important notes

This report was prepared for the Massachusetts Gaming Commission and Plainville-area police agencies by a contracted consultant. Although both the Commission and the chief executives of the agencies were allowed to review, comment, and offer alternate viewpoints, the final conclusions are the consultant's and do not necessarily reflect the views of the Gaming Commission nor the contributing police agencies.

Many statistics are offered in this report that show increases and decreases in certain categories in Plainville and surrounding communities. In all cases, when aberrations have appeared, I have done my best to analyze them and determine their cause. Until analyzed, statistics that indicate notable increases or decreases in activity are simply *indicators* worthy of further analysis, and not proof of any particular "cause" of the changes. **No statistic offered in this report should be taken, by itself, as proof of a casino relationship.** Anyone who cites or reports the statistics without a thorough consideration of additional factors is using this report irresponsibly.



# Executive summary

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## Briefest summary possible

Plainridge Park opened at the end of June 2015. Since that time, it has reported a number of crimes and calls for service commensurate with facilities of similar size and number of visitors. As for the surrounding community (including six towns), the totality of the evidence shows little impact on most crimes and calls for service. The types of calls for service to increase are those highly correlated with the number of cars and visitors to a community, such as traffic issues and reports of lost property and suspicious activity. One potential crime increase concerns the use of stolen credit cards in the area, but this did not persist past the first year. The analysis is complicated by changes in reporting practices at several of the participating agencies.

## About this report

- The primary purpose of this report is to conduct an analysis of the increases and decreases in activity in the communities surrounding Plainridge Park since the casino opened and to identify which changes in activity might be attributable to the casino.
- Data was collected from the records management systems of Plainville, Attleboro, Foxborough, Mansfield, North Attleborough, and Wrentham since 2010. The period of 1 July 2015 through 30 June 2017 (2 years post-casino) was compared to the same periods of previous years. Both crimes and non-crime calls for service were included.
- Overall crime was down in the communities, but there were significant variations across communities and across crime categories within individual communities.
- Any significant increases were analyzed in more detail with both quantitative and qualitative data. Rarely was I able to establish a casino relationship, and the general sense from the participating agencies was that they did not feel that Plainridge Park had contributed significantly to crime or calls for service. Two agencies cited a heroin epidemic as more likely causing their crime increases.
- To determine likelihood of a casino relationship, I used a rubric of my own design that analyzes the data for several variables: logical connection to a casino, complementary increases in other communities, complementary increases in similar crimes, evidence of increased participation from individuals outside the local area, spatial proximity to the casino, comparison to control communities, and specific mention of the casino or gambling in the police reports.
- Some of the variances can be explained by changes in reporting practices, particularly in North Attleborough.

## Major findings

- During Plainridge Park's first two years of operation, the Gaming Enforcement Unit reported 2,906 "incidents" at the casino, of which 504 incidents were actual crimes. Trends include thefts of gaming credits, drug use and distribution in the parking areas, angry and intoxicated patrons, and thefts of personal property.
- The casino directly (i.e., incidents on casino property) led to a 10% increase in property crime (+41 incidents), a 12% increase in total crime (+80 incidents), and a 3% increase in calls for service (+436 incidents) for the Plainville Police Department.
- Statistics at the casino are similar to those at the top call-for-service locations in other communities (see page 21). I have not yet had a chance to study its similarity to other casinos specifically.

- Based on a totality of the quantitative and qualitative evidence, my judgement is that the following trends in the surrounding community are “likely” to be related to the presence of Plainridge Park:
  - Increases in credit card fraud in multiple communities during the first year. (The trend abated in the second year.)
  - At least part of an increase in traffic collisions in the area, including those reported to the State Police
  - An increase in “lost property” reports in Plainville
  - An increase in “suspicious activity” reports in Plainville
  - An increase in traffic complaints in Plainville
- There was a general increase in crimes at hotels, convenience stores, and gas stations that might show a PPC influence on some of the crimes.
- There were other increases among the six communities but evidence cast doubt on a Plainridge Park relationship or directly implicated other factors.
- Analysis was complicated by changes in reporting practices in some of the communities.
- Total arrests and other charges were down significantly in the area, particularly for liquor-related offenses at the major event venues. Even controlling for liquor-related offenses, arrests were down (though not significantly) in most communities.
- There were 152 arrests at Plainridge Park specifically during its first two years of operation.
- No increase was seen in state police crime statistics, excepting incidents at Plainridge Park specifically.

# Background, purpose, and methodology

The present report is one of a sequence commissioned by the Massachusetts Gaming Commission and prepared by a crime analysis consultant. It is part of a larger initiative to assess the social and economic impacts of gambling in Massachusetts.

More than two years have passed since the opening of Massachusetts’s first casino, Plainridge Park in Plainville. Previous reports assessed the casino’s impact on crime and other police activity at 3-month, 6-month, 12-month, and 18-month intervals. This report builds up on the trends, themes, and lessons from the previous reports and offers the most comprehensive review yet.

Analysis in this report was performed by extracting data from the CAD and RMS systems of the six participating communities and comparing levels after the opening of Plainridge Park to levels in previous time periods. As such, it has the limitations of this kind of research, including the inability to prove—through statistics alone—that Plainridge Park was the direct cause of any of the increases seen in crime figures. To compensate for this, I have undertaken a detailed *qualitative* analysis of any major increases—looking directly at the crime reports for those offenses and exploring their contexts with personnel at the six agencies. I have also compared changes in the Plainville area to several comparison communities and to the Commonwealth as a whole.

## Reports on changes in crime and police activity issued by this project

Issued	Report	Notes
August 2015	Report on baseline activity at Plainville area agencies	Established statistical measures for post-casino comparison
November 2015	Evaluation of change in police data after the first three months of Plainridge Park	Noted initial increase in credit card fraud
April 2016	Analysis of changes in police data after the first six months of operation at Plainridge Park Casino	Identified traffic-related calls for service as likely related to PPC. Noted increases in fraud-related crimes.
December 2016	Analysis of changes in police data after the first year of operation at Plainridge Park Casino	Continued to note increases in traffic-related calls; established credit card fraud increases as “likely related.”
July 2017	Analysis of changes in police data after the first 18 months of operation at Plainridge Park Casino	First report to include contributions from Foxborough.
December 2017	Analysis of changes in police data after the first 2 years of operation at Plainridge Park Casino	This report. Most comprehensive so far.
April 2018	Analysis of changes in traffic collisions in Plainville area using statewide comparison data	Will look deeper at traffic issues including any increase in alcohol-related crashes.
June 2018	Report on baseline activity in Springfield-area agencies	First report in preparation for MGM casino.

## Background

In 2014, the Massachusetts Gaming Commission, in an effort to better assess the impacts of new gaming facilities across the state, commissioned a series of efforts to study, assess, and prepare for the social and economic impacts of gambling. Primary work in this area is being done by the Social and Economic Impacts of Gambling in

Massachusetts (SEIGMA) study at the University of Massachusetts Amherst School of Public Health & Health Sciences, drawing upon research and experiences in many other states. For public safety issues specifically, however, the MGC felt it best to contract with someone with direct experience analyzing the crime, call-for-service, and collision records collected daily by Commonwealth police agencies.

Many studies had attempted to study the effects of gambling on rates for serious crimes, aggregated annually, but hardly any studies have attempted to analyze more specific and minute changes in public safety activity following the opening of casinos, including variations by hour, month, and season, changes in patterns and hot spots, and changes in non-crime activity such as traffic collisions and calls for service. The MGC was interested in the answers to these questions—in analyzing public safety at a level of detail that would directly help police agencies anticipate and respond to emerging and changing issues.

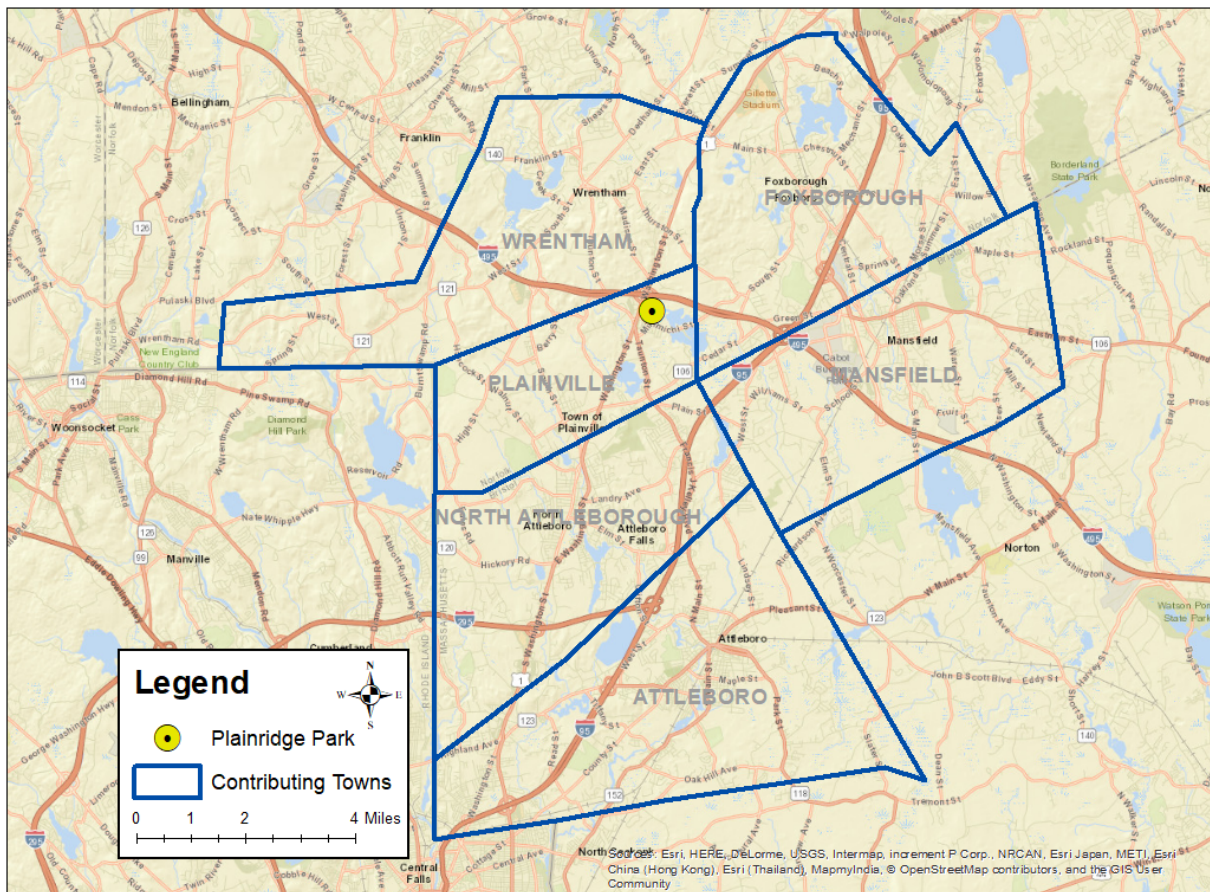


Figure 1: The area covered by this report includes Plainville, North Attleborough, Attleboro, Wrentham, Mansfield, and Foxborough.

## Nature of this analysis

This analysis draws upon both quantitative and qualitative methods to reach conclusions about changes in crime and calls for service in the Plainville area after the opening of Plainridge Park. Statistics are offered, with crime in the area compared to both past figures in the same area and changes in comparison communities. But nothing rests purely on quantitative evidence, and I make no effort to assign probability values to these statistics. Instead, I use the statistics as indicators to determine what categories of activity to investigate more thoroughly with qualitative methods, including reviews of police narratives and discussions with officers and analysts at the participating agencies. My ultimate conclusions are an analytical judgement that considers both these qualitative



and quantitative factors. Instead of applying an artificial statistical threshold to accept or reject the likelihood of a casino relationship, I place that likelihood on a scale that considers several factors, discussed below.

## Methodology

Data used in this report was extracted from the individual records management systems of the Plainville, Attleboro, Foxborough, Mansfield, North Attleborough, and Wrentham Police Departments. I first established an ODBC connection to each of these agencies' records management and computer-aided dispatch databases (Plainville, Wrentham, and North Attleborough use the Pamet records management system; Mansfield and Foxborough use IMC; and Attleboro uses QED). I then connected to the databases via Microsoft Access, and used a series of "make table" queries to copy the data into Access data tables. I then copied the Access databases to my own computer, password-protecting them in the process, but leaving the originals on the agencies' networks so they could be updated by designated agency members as needed.

I combined the agencies' individual data tables into a series of "master" tables. This required translating each dataset into a common set of codes. The uniformities imposed by the NIBRS reporting system and the Massachusetts crash reporting system facilitated the translation of those tables; it was a bit more difficult for CAD tables, which have no uniform data structure from system to system or even among agencies using the same system.

incnum	agency	dtreceived	IncidentType	OrigIncidentType	Street
15-15178	Mansfield	07/12/2015 18:38:00	Crime Enforcement		SCHOOL ST
2015000005935	Wrentham	07/12/2015 18:37:43	Traffic Collision		Washington Street
2015000018989	North Attleboro	07/12/2015 18:32:58	Domestic Dispute	Domestic	SOUTH WASHINGTON S'
15072062	Attleboro	07/12/2015 18:31:54	Building Check	SEC CHK	OAKHILL AVE
2015000005934	Wrentham	07/12/2015 18:30:42	Disorderly		Premium Outlet Boulev
2015-0H3-003706	MSP	07/12/2015 18:30:00	Fire	Fire	RT 495 North, South of E
2015000003935	Plainville	07/12/2015 18:27:02	Lost Property	Lost and Found	Bacon Square
2015000005933	Wrentham	07/12/2015 18:26:57	Medical		Washington Street
2015000018988	North Attleboro	07/12/2015 18:26:12	Building Check	Building Check	HOMEWARD LN
15-15177	Mansfield	07/12/2015 18:26:00	Crime Enforcement		SOUTH MAIN ST
2015000005932	Wrentham	07/12/2015 18:25:54	General Service		Premium Outlet Boulev
2015000018987	North Attleboro	07/12/2015 18:25:29	Investigation	Investigation	SOUTH WASHINGTON S'
15-15176	Mansfield	07/12/2015 18:17:00	Traffic Enforcement		MAPLE ST
2015-0H3-003705	MSP	07/12/2015 18:16:00	Road Conditions	Debris in Road	RT 295 South, South of E
15072061	Attleboro	07/12/2015 18:14:43	Suspicious Activity	SUSP PERS	PLEASANT ST
2015000018986	North Attleboro	07/12/2015 18:11:41	Traffic Collision	Accident NO/PI	CUMBERLAND AV

Figure 2: Data combined into a master call-for-service table.

## Interpreting the statistics in this report

This report compares two years of activity post-Plainridge Park to the average of activity prior to the opening of Plainridge Park. I offer statistics for the two individual years and then an average of the two years, with associated measures of change. In all cases, the year given is the time period **ending** on 30 June of that year. For instance, statistics for "2017" are for the period 1 July 2016–30 June 2017.

The report measures changes against an **average** (mean) number of incidents in terms of the number of **standard deviations** from the average. Change is measured not in percentages, which is somewhat meaningless, but in **z-scores**.

The z-score represents the number of standard deviations from the average above or below which the post-Plainridge Park figure falls. Consider the average and standard deviation together as creating a series of “windows” in which we might expect a certain percentage of the cases to fall. In a normal distribution, 68% of observations will fall within a 1 standard deviation “window” and 95% will fall within (roughly) a 2 standard deviation window. Since we have only 5 years of past data, these specific percentages don’t hold, but they come close. In the table below, for instance, we would expect at least 3 of the past 5 years of disabled vehicle calls to fall between 47.56 (57.8-10.24) and 68.04 (57.8+10.24), and they do. We would expect all of them (or, occasionally, all but one) to fall within two standard deviations: 37.32 to 78.28. Again, they do<sup>1</sup>.

Crime Type	2011	2012	2013	2014	2015	Pre Avg.	St. Dev.	2016	2017	Post Avg.	Z
Alarm	194	224	173	197	241	205.8	23.93	226	215	230.5	0.61
Disabled Vehicle	48	46	67	72	56	57.8	10.24	85	99	92.0	3.34
Disorderly	91	82	87	89	105	90.8	7.70	97	72	84.5	-0.82
General Service	240	187	152	169	205	190.6	30.39	196	183	189.5	-0.04

When a score for 2016–2017 is well above 1 standard deviation, as in the case of disabled vehicles here, two things are possible:

1. It is simply a random fluctuation. This is unlikely, but possible. In this case, we would only expect a z-score this high by random chance about 1% of the time, but given that we have hundreds of statistics in this report, such statistical flukes are bound to happen occasionally.
2. Some new factor has influenced the statistic to be unusually high in 2016–2017. In such cases, the factor *could* be the presence of Plainridge Park. But it could also be dozens of other factors, including other new businesses, significant economic and demographic changes, changes in weather, or changes in police policies and practices. **High z-scores indicate categories worthy of further study, but only a more detailed analysis can establish the likelihood of a casino relationship.** I have conducted that more detailed analysis with each of the significantly-increased crimes and calls for service in this report, and have reported on the results.

For the purposes of triaging further analysis, I have considered an increase *significant* if the z-score was greater than +1.75 in a given year and greater than +1.50 for the average of the two years combined. In a normal distribution of data, such an increase would be expected by random fluctuation only 4% of the time for individual years and 6% of the time for the combined average. There are, however, instances, in which I took the time to analyze less significant changes if some other factor was at work, including consistency across multiple agencies.

## Determining likelihood of a casino relationship

As we will see in the historical review, past studies have generally limited themselves to a purely quantitative determination of whether a casino was a contributory factor in a crime increase. This study—which blends quantitative and qualitative approaches—is not content to use statistics alone to determine the likelihood that any

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<sup>1</sup> Statisticians may object that we do not have enough past observations to establish a normal distribution, or for the significance levels associated with various z-scores to hold. These are valid criticisms. Unfortunately, there is no way out of the conundrum. It would be absurd to reach back dozens of years to collect enough annual totals to establish the true shape of the distribution, even if the agencies had such historical data, because we would be comparing 2016 with periods with radically different demographic and economic profiles for the jurisdiction. At the same time, seasonal variations in crime and calls for service make it unwise to use the month as the unit of analysis simply to obtain more variables. Our goal here in using the z-scores is not primarily to establish statistical significance but to identify combinations of incident types and geographic areas worthy of further study to identify potential casino relationships. For such purposes, the z-score is a useful triaging tool. The ultimate decision as to a casino relationship is made after a multi-factored analysis that considers both quantitative and qualitative data.

increase in activity was “caused” by the presence of Plainridge Park. Instead, I have created a model to better explain causality when increases are observed. The model demands a more in-depth analysis of the individual cases that make up “increased” activity during the study period, including a qualitative analysis of police narratives.

The model considers seven factors:

1. *Whether the type of activity increasing has a logical relationship to a casino.* Causality is more certain when it “makes sense” that such a crime or other activity would increase in the surrounding area in a particular way. Since casinos draw a large number of people to an area, and since cash plays a large role in their operation, there are very few crimes that would not fit this definition, but it’s still worth considering. An increase in theft or traffic issues has a logical connection to a facility like a casino; an increase in harassing telephone calls or animal complaints does not.

2. *Whether more offenders and victims are from outside the local area.* If there is a relationship between an observed increase in activity and the presence of Plainridge Park, one would expect a corresponding increase in the percentage of victims and offenders from outside the immediate community, as the majority of casino patrons are from outside the local community.

3. *Whether multiple agencies are reporting an increase in the same category.* If only one agency reports a major increase in a particular crime and call for service, the cause is more likely to be related to another factor specific to that jurisdiction than to Plainridge Park. Complementary increases reported by multiple agencies strengthen the likelihood of a casino relationship.

4. *Whether related offenses also report increases.* Some crime and call-for-service categories are closely related to each other, so that a factor that influences one is likely to influence the others. If the casino were to cause an increase in traffic collisions, for instance, we might expect a corresponding increase in disabled vehicles, traffic complaints, and other traffic related calls for service. An increase in a single category without increases in complementary categories is more likely to suggest a fluke specific to that category than a casino relationship.

5. *Whether the spatial distribution of offenses is related to the casino location.* For certain crimes and calls for service, if the presence of the casino caused their increase, we would expect to see a spatial distribution of incidents either near the casino or on routes to and from the casino. An increase in “disorderly conduct” in a residential neighborhood 15 miles from Plainridge Park is less likely to be caused by the casino than an increase in such activity at hotels and restaurants within 1 mile of the casino.

6. *Whether the casino is specifically mentioned by victims and offenders involved in cases.* If an increase in activity is causally tied to the casino, we would expect a certain percentage of victims to say that they were in town to visit the casino, or a certain percentage of offenders (if arrested) to admit that their crimes had something to do with the casino. If we cannot find any such evidence across multiple offenses, a casino relationship is less likely.

7. *Whether comparison agencies have failed to report a similar increase.* Consideration of this factor has only been possible for the first time with this report, since there is generally a one-year lag between the end of a year and the availability of statewide crime data for multiple jurisdictions. Note that we cannot consider this factor with non-crime calls for service since there is no standardized reporting of this data on a statewide basis.

The table below summarizes the factors in this model and provides hypothetical examples of when they might argue for or against a casino relationship. The “hypothetical examples” provided are just that—those particular increases were not actually observed.

Factor	Hypothetical example (likely to be related) <sup>2</sup>	Hypothetical opposite (not likely to be related)
Type of crime is logically tied to activity at casino (LOG)	Increase in robberies in surrounding area	Increase of thefts of property at schools
More offenders and victims are from outside the local area (COM)	Increase in domestic dispute and violence calls at area hotels	Increase in domestic dispute and violence calls at area homes
Same category is increasing in multiple agencies (REG)	3 of 5 communities see increase in thefts from cars	1 community reports increase in burglary while 4 report decreases
Complementary increases in related offenses (REL)	Theft, robbery, and fraud all increase in area	Only identity theft increases in area
Increase is spatially related to location of casino (MAP)	Traffic collisions increase on Route 1 in Plainville, N. Attleborough	Traffic collisions increase on residential streets in Attleboro
Casino is specifically mentioned by offenders/victims (NAR)	Drunk drivers mention they were last drinking at casino	Serial burglar admits to stealing for heroin
No similar increase in comparison communities (OTH)	Burglary is up 10% in the Plainville area but down 5% across the state	Shoplifting increased 15% in the Plainville area but also increased 15% in three control areas

Application of this model helped us reach a conclusion as to whether the likelihood of an increase in crime or calls for service was related to the presence of Plainridge Park. However, the model is not *quantitative* and the determination of the likelihood of a casino relationship is not simply a matter of adding up the number of factors present. For certain incident types, one factor may outweigh the others. For instance, the spatial relationship is fairly important in considering the likelihood that an increase in traffic collisions is related to Plainridge Park, but it is less important for property crimes and hardly important at all for family violence.

Throughout the report, I have tagged each observed increase with an assessment on a scale indicating the likelihood of a relationship to Plainridge Park. The definitions of these assessments are:

- **Not Related:** Although the incident type increased, I was able to exhaustively review each individual case. None indicated that the offenders or victim had any association with Plainridge Park or were in the area to use Plainridge Park, and the sum of the cases posed an alternate explanation for the increase.
- **Unlikely:** After a review of all cases or a sample of cases, overall there were not enough factors to suggest a Plainridge Park relationship, and/or there was a compelling alternate explanation for the increase.
- **Uncertain:** There were some signs that might indicate a casino relationship, but the totality of factors was not compelling or sufficient data did not exist.
- **Likely:** A totality of the evidence suggests Plainridge Park as the most likely explanation for at least some of the increase, but we may still lack direct evidence.
- **Certain:** The evidence shows a direct and compelling causal relationship with Plainridge Park, including statements from participants that they patronized the casino.

**In the end, the determination of the “likelihood” of a casino relationship is an *analytical judgement* that considers both qualitative and quantitative factors.**

<sup>2</sup> I emphasize that these examples are all hypothetical. None of them reflect trends that actually happened in the area after Plainridge Park opened. They are simply examples of things that, if true, would trigger the associated factor.

## Limitations and threats to validity

Crime figures fluctuate constantly in most agencies, and any given year often produces statistically significant increases. Such changes are sometimes simple to explain by changes in the jurisdiction or police strategies and practices, but equally as often they confound explanation. In the case of the Plainville area post-Plainridge Park, there are several additional factors that may be influencing the data. The identified ones are as follows:

1. *Greater attention to accuracy in crime coding.* Three of the participating agencies—Attleboro, North Attleborough, and Mansfield—replaced or hired new personnel in charge of coding offenses. North Attleborough appointed a new person to maintain the accuracy of their crime reports (and related data) in September 2014; Mansfield hired a new crime analyst in September 2015; and Attleboro hired a new crime analyst early in 2016. All three individuals found problems with the way many offense reports had been coded and classified before their employment and took steps to improve the data. Unfortunately, these improvements mean that more recent data is difficult to compare to past data. Specific issues are discussed in the relevant sections below.

2. *A surge in the opiate epidemic.* This trend is difficult to quantify, but many police agencies and communities in the northeast United States are reporting significant increases in crime related to heroin and other opiates. Widely reported in the media,<sup>3</sup> this resurgence seems to have begun in late 2014 and has manifested itself in an increase in overdoses and heroin-motivated crime. In speaking about several of the increases in his town, a Wrentham Police lieutenant told me that he “would assume they are more related to the opiate epidemic than to the casino.”

3. *Low fuel prices.* With thousands of new visitors to an area, we expect increases in traffic-related incidents, including collisions and complaints. These factors, however, are also influenced by the number of miles driven by the population, which in turn is influenced by fuel prices. Such prices began a precipitous decline in June 2015, just as Plainridge Park opened, and continued to decline through the year, not hitting bottom until February 2016. This decrease likely contributed to an overall increase in driving in Massachusetts for that period, which in turn may have contributed to an increase in traffic-related issues. Prices had returned to pre-PPC averages by June 2016.

4. *A mild winter.* An old adage says that “rain is the best policeman.” The same might be said of snow. Across the country, agencies observe a strong negative correlation between temperature, precipitation, and crime: as the thermometer goes down and rain and snow go up, crime decreases. This is partly because no one, even a criminal offender, wants to be out in the cold and wet, but it’s also because bad weather reduces the opportunity for crime in the first place. If people stay home during snowstorms, their cars can’t be stolen or broken into, nor their pockets picked, nor their houses burglarized. Changes in weather patterns can have odd effects on traffic-related incidents; the reduced danger inherent in driving without snow and ice on the roads is balanced by an increase in overall traffic. The northeast had one of the mildest winters in recorded history in 2015–2016 (particularly compared to the year before).

5. *Incomplete data from North Attleborough for 2017.* At the time that this report needed to be written, North Attleborough had not finished coding its criminal incidents for May and June of 2017, the last two months in the 24-month period. To avoid having to exclude North Attleborough from analysis, crime totals were estimated for those months based on call-for service data. The estimates were based on the following logic:

- For the previous two-year period, 84% of “shoplifting” calls for service led to an offense of “shoplifting.”
- There were 13 calls for service for “shoplifting” in May and June of 2017.
- Thus, we estimate  $13 \times 0.84 = 10.92$ , or 11 shoplifting offenses for those two months.

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<sup>3</sup> See, for instance: Seelye, K. Q. (2016, March 6). Heroin epidemic increasingly seeps into public view. *The New York Times*. Retrieved March 20, 2016, from <http://www.nytimes.com/2016/03/07/us/heroin-epidemic-increasingly-seeps-into-public-view.html>; Leonard, K. (2015, July 7). Heroin use skyrockets in U.S. Retrieved March 20, 2016 from U.S. News and World Report: <http://www.usnews.com/news/blogs/data-mine/2015/07/07/heroin-use-skyrockets-in-us-cdc-says>

The same math was repeated for every combination of call for service category and final offense, leading to a total estimate of 120 crimes for the two months. The average number of reported crimes in North Attleboro for any given two-month period in the previous six years is 115, so the estimated total seems commensurate with past patterns, and I am confident that the estimation method did not significantly affect the findings for North Attleborough or for the total number of offenses in the area.

## **Discussions with agency representatives**

Throughout the life of this series of reports, the Massachusetts Gaming Commission has repeatedly convened meetings with the police executives in the Plainville area to review the results of these analyses and receive their comments and feedback. No information about changes in the area is published without giving the local chiefs a chance to comment first. Their feedback has been incorporated into each version of the report. General agreement with these findings has been widespread, and where anyone has disagreed or offered an alternative perspective, it has been noted in this report.

## **Acknowledgements**

The analysis in this report would not have been possible without the cooperation and good will of the police executives and personnel in the Plainville area. Each executive evinced a sincere commitment to objective analysis of data and unfettered cooperation in providing that data. We owe a debt of gratitude to Chief James Alfred and Officer William McEvoy of the Plainville Police Department; Chief Kyle Heagney, Sergeant Kevin Blackwell, and crime analysts Lisa Schultz and Anthony Stevens of the Attleboro Police Department; Chief William Baker, Lieutenant Michael Grace, and Lieutenant Allan Haskell (ret.) of the Foxborough Police Department; Chief Ronald Sellon and crime analyst Erika Baburins of the Mansfield Police Department; Chief John Reilly, Captain Joseph DiRenzo, dispatcher Julie Cannata, and assistant IT director Steve Almeida of the North Attleborough Police Department; Chief James Anderson, Lieutenant George Labonte, and IT administrator Darrell True of the Wrentham Police Department; and Lieutenant Brian Connors and Lieutenant Matthew Murphy of the Massachusetts State Police.

## **About the author**

Christopher W. Bruce is a career crime analyst with previous service at the Cambridge Police Department (1994–2001) and the Danvers Police Department (2001–2010). He was president of the Massachusetts Association of Crime Analysts from 2000 to 2004 and has served in three roles in the International Association of Crime Analysts: vice president of administration (2000-2006), president (2007-2012), and vice president of membership (2016-present). He has served as an instructor in criminal justice and crime analysis topics at Suffolk University (2001–2010), Westfield State University (2009–2010), the University of Massachusetts Lowell (2009–2010), Middlesex Community College (2007–2011), Tiffin University (2006-present), and Western Oregon University (2010-present).

Christopher is an internationally-recognized expert in police data systems and police data analysis. He currently consults with the U.S. Department of Justice, Bureau of Justice Assistance; the U.S. Department of Justice, Office of Justice Programs; the U.S. Department of Transportation, National Highway Traffic Safety Administration; and the International Association of Directors of Law Enforcement Standards and Training. He is the contracted analytical director for NHTSA's Data-Driven Approaches to Crime and Traffic Safety (DDACTS) program, and a subject matter expert for BJA's Smart Policing Initiative and its National Training and Technical Assistance Program.

# Historical review

Before 1979, when the Seminole Tribe opened a high-stakes bingo hall on reservation land near Fort Lauderdale, Florida, the question of whether casinos impact crime and disorder in surrounding communities was largely moot. The only large-scale casino gambling in the United States was concentrated in Las Vegas, Reno, and Atlantic City—cities that had grown up (or, in the case of Atlantic City, re-organized) around the presence of casinos, and in which it would have been impossible to separate crime and disorder caused by gambling from that caused by general tourist activities.

In 1976, *Bryan v. Itasca County* (426 U.S. 373) established that the state does not have the right to regulate activities on Native American land in absence of a specific United States law allowing them to do so. The ruling thus established a legal foundation for organized gambling on reservations and tribal lands. Early attempts by Native Americans were met with police raids and prosecution, but a series of court rulings found in favor of the tribes and ended the debate. By the mid-1990s, more than three dozen Indian casinos dotted the United States, many of them quite close to urban areas and thus likely to impact surrounding communities.

Casinos proved so profitable for Native American communities that states and communities began to look to gaming for sources of tax revenue and general economic growth. In 1989, South Dakota became the first state outside Nevada and New Jersey to legalize gambling when they allowed a commercial slot casino in Deadwood. Iowa legalized riverboat gambling the same year. Colorado and Illinois followed in 1990; Missouri and Louisiana in 1991; Mississippi in 1992; and Indiana in 1993.<sup>4</sup> As of the time of this writing, 23 U.S. states allow some form of commercial casino gambling, and an additional 18 have some form of tribal gambling.

With this growth has, of course, come concerns about the impact of casinos, both at the individual level (alcoholism, compulsive gambling, and mental health) and the societal level (community crime, traffic issues, and the non-gaming economy). These fears, though not unfounded, were exacerbated by historical ties between gambling and organized crime as well as general mores in the United States that historically regarded gambling as a “vice.” During the height of the Native American gaming debate, the president of the American Sheriffs Association said that gambling on Indian reservations would “open up new havens for organized crime in Indiana lands all over the country”; and an assistant U.S. Interior Secretary remarked that gambling is “known to be fraught with evil.”<sup>5</sup> Concerns over crime increases have been raised in every state considering the establishment or expansion of casino gaming, all the way through the Massachusetts legislation of 2011 and the subsequent repeal referendums.

Not until the 1980s could these fears be confirmed or refuted with quasi-experimental studies and hard data. Among the first to study the relationship between casinos and urban crime was Niagara University researcher Jay Albanese. Using crime totals reported by the Atlantic City Police Department to the U.S. Federal Bureau of Investigation between 1978 and 1982, he found that although “index” crimes (murder, rape, robbery, aggravated assault, burglary, theft, and auto theft) increased significantly over the period, these increases disappeared when he controlled for population increases during the same period. While the growth of casinos had undoubtedly led to the population increases as well, on a *per capita* basis, crime did not significantly increase. “Based on this analysis of the Atlantic City experience,” he concluded, “the advent of casino gambling has no direct effect on serious crime.”<sup>6</sup>

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<sup>4</sup> For most of this summary, I am indebted to Fenich, G. G. (1996). A chronology of (legal) gaming in the U.S. *Gaming Research & Review Journal* 3(2): 65–78.

<sup>5</sup> Indian gambling may attract organized crime, foes say. (1987, June 19). *The Spokane Chronicle*, p. 12.

<sup>6</sup> Albanese, J. S. (1985). The effect of casino gambling on crime. *Federal Probation* 49(2): 39–44.

Studies since Albanese's have been mixed however, often even in the same study. For instance, a 2001 study by Ohio State University PhD candidate Jeremy M. Wilson found that after the passage of Indiana's riverboat gambling legislation, the considered crimes—including FBI index offenses, public intoxication, drunk driving, disorderly conduct, and prostitution—did not increase at all in one city (Hammond), but aggravated assaults and thefts increased in the area around another (Rising Sun).<sup>7</sup> For every study indicating that casinos have caused an increase in crime in one area, an opposite study shows no increase in another.

Only as the body of literature has grown is it possible to discern key differences in the study areas. A "casino" is not the same thing across all geographies and demographics. There are variances in the types of casinos, size of casinos, types of gaming offered at casinos, other types of amenities and recreation offered at casinos, and the nature of the geography in which they are built, from dense, impoverished urban areas to the (literal) middle of the woods. Differences between the means of accessing the casinos, the surrounding road network, and the existing crime rate all have potential parts to play in any increases or decreases in crime and other social harms. Thus, when one body of researchers concludes that a neighborhood casino had no increase on crime in Philadelphia (see the Johnson and Ratcliffe study below), but another group says that video gambling terminals led to an additional 1,450–4,100 violent and property crimes in Chicago over four years<sup>8</sup>, the results are not necessarily in conflict. The nature of casino gambling differs from diffused video gambling terminals, and Chicago and Philadelphia are different cities with different histories, geographies, and demographics.

As part of its efforts to investigate the impact of casinos on crime, disorder, and traffic issues, Massachusetts will offer several very different testing grounds, including a slots-only parlor directly off a highway in a moderate-to-low populated area of the state (the subject of the present study), a full-service casino in an urban area easily accessible by public transportation, and a full-service casino in a city with higher-than-average poverty and crime rates. It is possible that each location will generate vastly different results. Acknowledgement of these complex variables came in a 2003 study by B. Grant Stitt, Mark Nichols, and David Giacomassi. Studying both Part 1 ("index") and Part 2 crimes across six casino communities and six non-casino communities, the researchers found widely varying results, from significant increases in casino communities to significant decreases. They ultimately conclude that "crime does not inevitably increase with the introduction of a casino" and "the effects of casinos on crime appear to be related to a variety of variables which are only poorly understood."<sup>9</sup>

Studies have also highlighted the danger of drawing conclusions too quickly. A landmark 2006 study by Earl L. Grinols and David B. Mustard, again using FBI part one crime statistics, this time comparing more than 3,000 casino and non-casino counties, found that the opening of casinos initially correlated with a decrease in crime, followed by a year of stability, followed by several years of increases. The findings suggest that the community—including the criminal community—takes time to adapt to the presence of the casino.<sup>10</sup> This has implications for the Massachusetts project and suggests that repeated evaluations in subsequent years are necessary to truly assess the impact of casinos. No long-term conclusions should be drawn from a single-year study.

Throughout the history of casino-crime impact research, one major weakness has been the inability to analyze data beyond summary figures reported by police agencies annually to the FBI. Knowing that a community had 150 robberies in a given year tells us far less than having individual records of all 150 robberies, including time, location, victim, offender, and *modus operandi* factors. The former allows us to determine the presence of general increases and decreases; the latter allows us to identify *patterns* within the data. Researchers have generally failed

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<sup>7</sup> Wilson, J. M. (2001). Riverboat gambling and crime in Indiana: An empirical investigation. *Crime and delinquency* 47(4): 610–640.

<sup>8</sup> Bottan, N. L., Ham, A., & Sarmiento-Barbieri, I. (2017). Can't stop the one-armed bandits: The effects of access to gambling on crime. Retrieved from [https://papers.ssrn.com/sol3/papers.cfm?abstract\\_id=3020332](https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3020332)

<sup>9</sup> Stitt, B. G., Nichols, M., & Giacomassi, D. (2003). Does the presence of casinos increase crime? An examination of casino and control communities. *Crime & Delinquency* 49(2): 253–284.

<sup>10</sup> Grinols, E. L., & Mustard, D. B. (2006). Casinos, crime, and community costs. *The Review of Economics and Statistics* 88(1): 28–45.



to collect such incident-level data for three reasons: 1) the inability of many police agencies to extract the necessary data from their data systems; 2) the need to obtain cooperation from the agencies even if they had the ability; and 3) the difficulty involved in combining the data from multiple police agencies into a common format.

Perhaps the only study to have collected such specific data, allowing the researchers to look at individual crime locations instead of city- or county-level statistics, was conducted in 2014 by Lallen T. Johnson and Jerry H. Ratcliffe. Looking at crime incident data in the Fishtown neighborhood of Philadelphia 96 months after the opening of SugarHouse Casino, they found no effect on violent street crime, vehicle crime, drug crime, or residential burglary in the surrounding community—in fact, most of these crimes actually decreased, suggesting a possible diffusion of benefits from the extra police and security presence at the new facility. Vehicle crime in the neighborhoods surrounding Fishtown increased, however, suggesting a possible displacement effect.<sup>11</sup> The researchers were able to collect such detailed information because they had a longstanding personal relationship and research partnership with the Philadelphia Police Department and a familiarity with its data systems. It is on this type of study that we have modeled the present project—at least in terms of data collection—pulling incident-level data on crimes and calls for service from the data systems of the contributing police departments, thus giving us the ability to answer far more questions than simply “how many.”

Another major deficiency in previous casino research is any establishment of the relationship between crime and casinos *as casinos* and not simply as large entertainment venues that draw thousands of visitors. In other words, even studies that show an increase in crime after the introduction of a casino do not necessarily establish that gambling itself is a factor in those increases. Routine activities theory suggests that any facility that draws people to an area—shopping centers movie theaters, hotels, restaurants and bars, sports complexes—creates more potential interactions between offenders and victims, both at the facility and in the surrounding area. A study showing that crime in a city or county increased after the introduction of a casino answers only one question; the other question is whether crime would have also increased if the city had built a minor-league sports stadium instead.

The aforementioned Grinols and Mustard study surveyed previous research and identified two mechanisms by which crime might decrease (pp. 31-32)—improved wages and improved physical development—and five mechanisms by which crime might increase: (1) suppression of other types of development, (2) the presence of large amounts of cash among both the business and the patrons, (3) compulsive gamblers committing illegal acts to finance gambling, (4) attraction of visitors likely to commit crime or become victims of crime (the “routine activities” argument above), and (5) changes in the underlying labor force. Of these factors, only #2 and #3 are specific to casinos, and only #3 is truly *unique* to casinos. (#2 is less of a factor in an age of electronic currency; the image of a successful gambler leaving a casino with \$30,000 cash in satchel is by now an outdated cliché.) Thus, demonstrating a causal relationship between crime and the gambling nature of casinos would have to focus on offenders themselves, identifying those of whom are compulsive gamblers, and assessing the extent of their criminality compared to the population at large. Such a study is possible in Massachusetts, but as Grinols and Mustard point out, it takes time for compulsive gambling to develop within a population, and thus to influence crime.

Finally, partly because of the inability of previous researchers to collect incident-level data from police agencies, previous studies have tended to focus solely on crime and not on any other police-related issues that affect communities, including traffic collisions and non-criminal disorder, suspicious activity, disputes, and other demands for police service. We were determined to study all such factors in the present project.

Thus, despite a fair amount of previous research into casinos’ effects on crime, we begin this project with something of a blank slate, owing to the fact that:

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<sup>11</sup> Johnson, L. T., & Ratcliffe, J. H. (2014). A partial test of the impact of a casino on neighborhood crime. *Security Journal* advance online publication, 30 June 2014; doi:10.1057/sj.2014.28.

- Previous research has found wildly varying results, from significant decreases to no change to significant increases.
- By the admission of researchers who have studied the impact of casinos, whether crime increases or decreases is related to a large number of poorly-understood variables.
- Previous research has generally considered only serious crime, generally ignoring less-serious crime and non-crime issues.
- Previous research has generally been based on annual summary statistics rather than incident-level data that considers a multitude of factor, including day, month, time, specific location, victim and offender factors, and property factors.
- Previous research has generally failed to establish a causal relationship between increases caused specifically by gambling versus those caused by any complex that draws large numbers of people.
- Previous research, as conducted under traditional academic models, has been focused on proving or disproving hypotheses at a pre-determined level of statistical significance, not specifically in generating findings useful for local criminal justice and policy-making agencies to use in combatting any negative trends.

This series of studies will not necessarily solve all of these problems, but it does have the advantage of being an ongoing series, considering multiple installations over multiple time periods, rather than a one-time study. Most important, it has the advantage of collecting incident-level data on both crime and non-crime issues, thus allowing for a far greater depth of analysis and operational utility of the results.

# Incidents at Plainridge Park

Both the Massachusetts State Police and the Plainville Police Department respond to incidents occurring at Plainridge Park specifically, including the casino interior, exterior, parking lot, and street directly in front. (To further complicate matters, State Police responses are divided between the Gaming Enforcement Unit, which handles the bulk of the activity at the casino, and regular troopers from the local barracks.) Both agencies log incidents in their respective databases, and in many cases, these incidents overlap (e.g., both agencies respond and both take a report). A security department at Plainridge Park may handle minor incidents, in which case the activity would be reflected in neither database.

Two statistical sets are offered below: one for Plainville Police and one for the Gaming Enforcement Unit at Plainridge Park. An analysis of the two datasets suggests that the *crimes* reported in the Plainville Police dataset are almost all duplicated in the Gaming Enforcement Unit statistics but the other *calls for service* in the Plainville Police dataset are not. The Plainville Police dataset is a better snapshot on what is happening in the parking areas and perimeter roads, while the Gaming Enforcement Unit data better depicts what is happening in the casino interior.

## Incidents at Plainridge Park reported by the Gaming Enforcement Unit

The following statistics were compiled by the Gaming Enforcement Unit from July 2015 to June 2017. These numbers should be considered the most authoritative of the sources for total figures at Plainridge Park; however, they might exclude some activity in the exterior reported to the Plainville Police. These numbers were supplied in summary form (statistics only) and are thus not subject to further analysis.

No distinction is made in this data between crimes and other incident types.

### Crimes and other incidents, July 2015–June 2017

Crime Type	July–Dec 2015	Jan–Jun 2016	Jul–Dec 2016	Jan–Jun 2017	Total
Assault	0	1	1	3	5
Assistance to security	281	180	215	301	977
Assistance to other agency	182	135	133	114	564
Burglary	5	0	0	0	5
Child Abuse/Endangerment	NC	3	0	0	3
Firearms Offenses	0	1	0	0	1
Forgery/counterfeiting	3	16	11	19	49
Fugitive from justice	1	0	1	1	3
Gambling violations	1	0	0	3	4
Identity theft	4	0	0	0	4
Theft, fraud, embezzlement	60	86	81	68	295
Missing persons	16	0	0	0	16
Drug investigations	37	40	42	24	143
Intoxicated persons	52	62	71	67	252
Suspicious persons	136	88	112	75	411
Medical	73	40	27	34	174
<b>Total</b>	<b>851</b>	<b>652</b>	<b>694</b>	<b>709</b>	<b>2906</b>

## Trends seen among data supplied by the Gaming Enforcement Unit

The figures reported by the Gaming Enforcement Unit are commensurate with what we might expect at a large facility offering dining and entertainment services, serving alcohol, and maintaining large common areas and parking structures. And just like other such facilities, we can identify a few common trends and patterns within the Plainridge Park data.

The list of trends below is based on Gaming Enforcement Unit summaries of activity. Because not all activity is so summarized, I cannot attach exact numbers to the identified trends. In all cases, I have identified the *minimum* number of incidents associated with that trend since PPC opened.

I caution readers that pending further analysis with statistics from comparison casinos, the identification of these trends does not signify that Plainridge Park has *uniquely* high volumes in these areas.

Trends are presented in descending order by volume.

1. *Theft of gaming credits*, generally in the form of TITO tickets, committed by one patron against another (at least 80 in 2 years). The offending patron snatches a ticket printed by the victim and cashes it in, often before the victim notices that it's gone. Because of widespread surveillance, the GEU and casino security have generally been able to identify and charge the perpetrators. Casino policy is to make restitution to the victims in such cases so the casino, rather than the patron, takes the loss.

2. *Drug use and distribution outside the casino* (at least 40). The parking garages and lots have been sites for drug users to ingest cocaine, heroin, and marijuana in their vehicles. Such individuals are generally identified by security and reported to the GEU or the Plainville Police.

3. *Drunk, angry, obnoxious patrons on the casino floor* (at least 32). These represent intoxicated patrons expressing anger, bothering customers, or harassing employees.

4. *Drunk patrons getting into cars and/or attempting to drive away from the casino* (at least 22). The GEU, casino security, and the Plainville Police occasionally have identified intoxicated individuals in the parking areas preparing to drive away from the casino. They are typically placed into protective custody until they regain sobriety. In a couple of instances, the individuals have ignored police and driven away, resulting in subsequent stops and arrests for drunk driving.

5. *Theft of personal property* (at least 20). A number of patrons report losing personal electronic devices, jackets, wallets, and other small items of personal property in the busy casino floor. Copious surveillance often makes identification of the offender possible.

6. *Fake ID* (at least 12). Banned or underaged patrons or those with active warrants passing fraudulent identification to enter the casino floor.

7. *Angry patrons damaging casino machines* (at least 10). Patrons frustrated with losses breaking glass or pouring drinks into machines.

8. *Domestic disputes and assaults* (at least 10). Although a trend, this number seems low given the number of couples that must visit the casino. All so far have been male assailants victimizing girlfriends and wives, often while intoxicated.

6. *Small children left alone in cars by gambling parents* (at least 6). It's a small number, but enough to cause concern.

7. *Money laundering* (at least 4). There were several reports of individuals from out of state bringing large amounts of small bills into the casino, feeding them into machines, obtaining TITO tickets, and cashing them out for larger-denomination bills. The specific nature of their criminal enterprises is unknown.

## Incidents at Plainridge Park reported to the Plainville Police Department

### Crimes, July 2015–June 2017

Crime Type	Jul–Dec 2015	Jan–Jun 2016	Jul–Dec 2016	Jan–Jun 2017	Total
Bad checks	1				1
Burglary	2				2
Credit card fraud		1	1		2
Drug offenses	7	5	3		15
Drunkenness	3	9	2	8	22
Other theft	3				3
Stolen property offenses	2	1			3
Theft from building	9	4	7	7	27
Theft from vehicle			2	1	3
Trespassing	2	1			3
Vandalism	2			1	3
Threats			1		1
Family offenses		3			3
Weapon offenses		1			1
All other		1			1
<b>Total</b>	<b>31</b>	<b>26</b>	<b>16</b>	<b>17</b>	<b>90</b>

### Calls for service, July 2015–June 2017

Call Type	Jul–Dec 2015	Jan–Jun 2016	Jul–Dec 2016	Jan–Jun 2017	Total
Administrative	186	183	190	181	740
Animal complaint	3	1	3	2	9
Assault*			2		2
Assist other agency	5	3	8	2	18
Building check	1				1
Child abuse or neglect		1			1
Crime enforcement	2	1		1	4
Disabled vehicle	11	4	7	8	30
Disorderly	9	7	5	8	29
Domestic dispute	3	1		1	5
Drugs*	1	4			5
Fire	8	5	4		17
Fraud and forgery*			2		2

Call Type	Jul-Dec 2015	Jan-Jun 2016	Jul-Dec 2016	Jan-Jun 2017	Total
General service	19	16	21	12	68
Investigation	6	8	3	3	20
Liquor*	2			2	4
Lost property	2	1	1		4
Medical	1	1			2
Missing person	1			1	2
Municipal or utility prob.		1	1		2
Notification	2				2
Other Theft*	15	9	16	10	50
OUI				1	1
Prisoner transport	6	4	2	2	14
Suspicious activity	74	48	31	19	172
Theft from vehicle*	1	1	1		3
Traffic collision	14	11	14	12	51
Traffic complaint	37	51	41	25	154
Traffic enforcement		2	1		3
Traffic offenses	7	7	12	2	28
Trespassing*	3	1			4
Vandalism*				1	1
Vehicle stop	33	23	24	20	100
Warrant service	1	3	3	2	9
Well-being check		4	1	2	7
Youth disorder	1	1			2
<b>Total</b>	<b>454</b>	<b>402</b>	<b>393</b>	<b>317</b>	<b>1566</b>

\*In the case of calls for service relating to crimes, the figures offered are for the call for service as originally dispatched. Sometimes when an officer arrives on scene, he determines that the actual crime committed was different than the crime dispatched. The table above this one, which records actual reported crimes, is a better indicator of criminal activity than the call-for-service table.

## How much did Plainridge Park impact Plainville's statistics?

If we ask the question, "Did Plainridge Park cause an overall increase in crime and calls for service in Plainville," the answer is yes, obviously—if we include incidents that happened at Plainridge Park itself. Without the casino, the incidents that happened *at* the casino would not have happened.

The next sections of this report attempt to estimate the impact of the casino on the *surrounding community*, but if we want to answer the literal impact of the casino itself, the calculation is fairly simple: the percentage of activity at Plainridge Park divided by the total activity in the town. At least, it would be that simple if the casino was a brand-new complex, but the location has hosted a horse racing course since 1999, so we must subtract the average of the activity at that location pre-casino from the post-casino figures. The table below shows the results.

### Plainville Activity, June 2015–July 2017

Category	Number at Casino	Total Plainville Number	Prior 2-year Average at Racetrack	% New Caused by Casino
Violent crime offenses	0	80	0	0%
Property crime offenses	47	419	6	+10%
Total crime offenses	90	689	10	+12%
Calls for service	1,566	16,594	1,130	+3%

Thus, in an extremely literal sense, in a two-year period, Plainridge Park is responsible for 10% more property crimes (41 total), 12% more total crimes (80 total), and 3% more calls for service (436 total) than the agency would have reported without the casino—not accounting for any surrounding community impact, which is analyzed in the next sections. The police department, it must be noted, received a 36% increase in sworn officers (14 to 19) to handle this increase in activity.

The casino became the Plainville Police Department’s top crime and call-for-service location in 2016 and 2017, surpassing the Plainville Commons shopping center at 91 Taunton Street. To put the figures above in context, we compare Plainville’s new top location to the top locations of its surrounding cities and towns, in terms of crime and call-for-service demand.

### Percentage of activity at top locations, June 2015–July 2017

Community	Top Offense Location	% Violent Crimes	% Property Crimes	% Total Crimes	% Calls for Service
Plainville	Plainridge Park	0%	11%	13%	9%
Plainville #2	Plainville Commons	0%	12%	10%	2%
Attleboro	Bristol Place	1%	9%	8%	3%
Mansfield	Xfinity Center*	24%	4%	58%	<1%
North Attleborough	Emerald Square	6%	23%	17%	11%
Wrentham	Wrentham Village outlets	12%	62%	59%	24%

As such, the activity experienced by the Plainville Police Department at Plainridge Park is not significantly different—and even compares favorably—to top hot spots in other towns, including its own second most-visited location.

# Before and after analysis of crimes and calls for service

The following figures note changes in the region and for individual agencies for the periods of 1 July–30 June ending in both 2016 and 2017, along with the average of the two years. These figures exclude activity specifically at Plainridge Park, as they are meant to help assess notable changes in the surrounding community.

As a reminder, the goal here is not simply to identify what crimes increased or decreased in comparison to their norms. Crimes fluctuate all the time for any number of reasons. Our goal is:

1. To determine which crimes increased *significantly enough* that some external factor—and not just random fluctuations in data—is likely to be responsible for those increases; and
2. To analyze those significant increases for evidence that Plainridge Park is that “external factor.”

The “Z” score is a figure that helps us determine if an increase is significant. It indicates where the figure stands in the post-casino period compared to its normal value, in the context of its normal deviation or variance. Z-scores between -1 and +1 would be expected about 2/3 of the time from random fluctuations in the data alone. Z-scores higher than 1.5 would be expected only about 6% of the time due to random fluctuations. The higher the z-score, the more likely that something external is influencing the data. In the analysis below, I set a threshold of  $z=1.75$  for each individual year and  $z=1.5$  for the combined years to determine which crimes and calls for service I fully investigated.

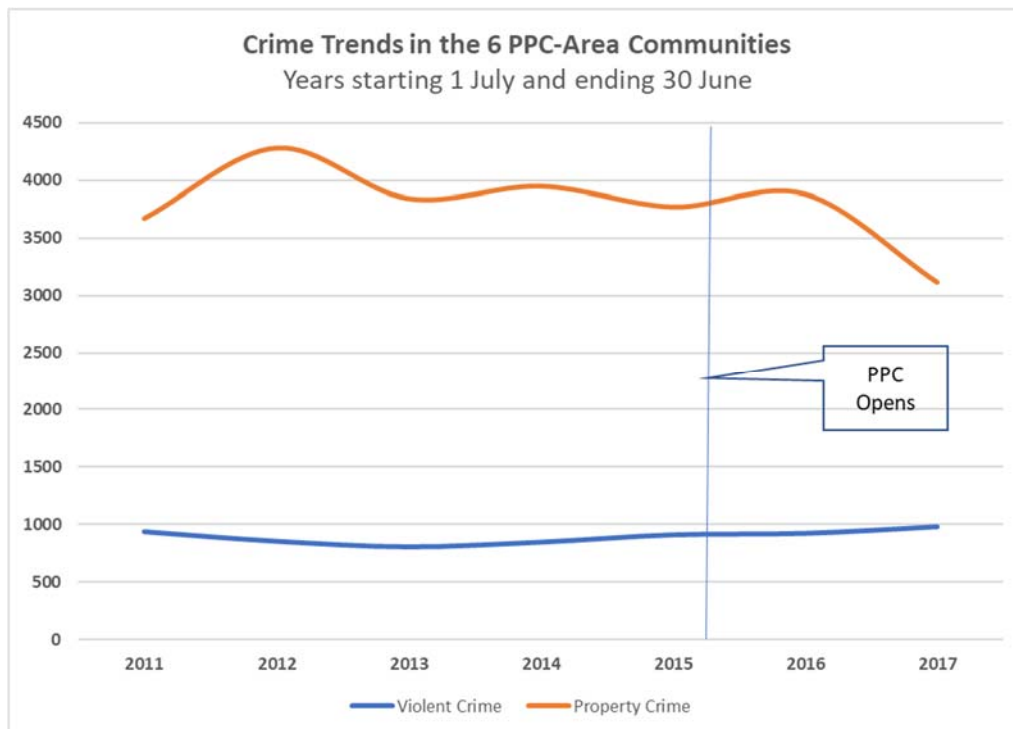


Figure 3: Property crimes decreased in the area after Plainridge Park opened while violent crimes showed a slight increase (though probably not related to the casino).



Two other important notes on the statistics below:

- The statistics do not apply a “hierarchy rule”; all offenses committed in all incidents are counted
- Please remember that 2017 totals for North Attleborough (and thus the total for all communities) are estimated for May and June 2017, as per the information in “threats to validity” above.

## Summary of all communities’ activity

In aggregate, the six contributing communities have seen a significant net reduction in **total crime** and **property crime** since Plainridge Park opened. With a couple of exceptions, profit-motivated crimes like theft, burglary, and robbery have been average or low. Police have also not reported increases in vice-related crimes like drugs, liquor, and general disorder.

Unfortunately, the area has been struggling with an increase in **violent crime** particularly in the year ending 30 June 2017. Analysis shows that the bulk of the increase is in **domestic violence** (mirrored by a comparable increase in “**family offenses**,” which is primarily made up of restraining order violations). While Plainridge Park does not seem to have anything to do with this increase, it is analyzed in full later in this report.

There have been some significant increases in several non-criminal calls for police service, possibly reflecting (in part) the extra traffic in the community going to and from Plainridge Park. These categories include **lost property**, **traffic collisions**, and **traffic complaints**.

## Incidents reported to all communities, 1 July–30 June

Offense	2010–2015 Average.	Standard Deviation	2016	2017	2016 Z-Score	2017 Z-Score	Post Avg.	Avg. Z-Score
Murder	1.2	0.75	1	1	-0.27	-0.27	1.0	-0.27
Sexual Assault	52.2	7.83	59	65	0.87	1.63	62.0	1.25
Robbery	33.0	8.22	22	24	-1.34	-1.09	23.0	-1.22
Aggravated Assault	170.6	9.95	157	187	-1.37	1.65	172.0	0.14
Simple Assault	607.4	47.01	670	682	1.33	1.59	676.0	1.46
Kidnapping	6.0	3.35	12	6	1.79	0.00	9.0	0.90
Burglary	516.0	88.05	427	264	-1.01	-2.86	345.5	-1.94
Purse-Snatching	4.4	1.62	2	2	-1.48	-1.48	2.0	-1.48
Shoplifting	526.6	59.64	608	496	1.36	-0.51	552.0	0.43
Theft from Building	230.2	33.89	213	251	-0.51	0.61	232.0	0.05
Theft from Machine	1.0	1.26	2	1	0.79	0.00	1.5	0.40
Theft from Persons	8.0	2.19	14	14	2.74	2.74	14.0	2.74
Theft from Vehicle	311.4	96.57	221	248	-0.94	-0.66	234.5	-0.80
Theft of MV Parts	55.4	8.36	64	37	1.03	-2.20	50.5	-0.59
Other Theft	1022.0	75.25	984	571	-0.51	-5.99	777.5	-3.25
Auto Theft	109.4	10.37	88	72	-2.06	-3.61	80.0	-2.84
Arson	7.4	2.42	8	6	0.25	-0.58	7.0	-0.17
Bad Checks	31.6	6.31	31	17	-0.10	-2.31	24.0	-1.20

Offense	2010–2015 Average.	Standard Deviation	2016	2017	2016 Z-Score	2017 Z-Score	Post Avg.	Avg. Z-Score
Credit Card Fraud	104.0	14.87	177	109	4.91	0.34	143.0	2.62
Employee Theft	30.0	6.07	26	28	-0.66	-0.33	27.0	-0.49
Forgery	92.2	9.52	95	63	0.29	-3.07	79.0	-1.39
Fraud/Con Games	139.0	9.01	192	171	5.88	3.55	181.5	4.72
Identity Theft	92.4	48.88	147	157	1.12	1.32	152.0	1.22
Stolen Property	53.2	12.51	67	56	1.10	0.22	61.5	0.66
Vandalism	570.4	54.72	542	461	-0.52	-2.00	501.5	-1.26
Drugs	226.0	14.68	211	203	-1.02	-1.57	207.0	-1.29
Drunk Driving	269.6	29.29	305	268	1.21	-0.05	286.5	0.58
Disorderly	410.4	34.43	424	355	0.40	-1.61	389.5	-0.61
Drunkenness	1400.4	272.90	972	718	-1.57	-2.50	845.0	-2.04
Family Offenses	420.6	41.15	514	553	2.27	3.22	533.5	2.74
Liquor Laws	418.0	144.56	148	77	-1.87	-2.36	112.5	-2.11
Pornography	9.2	5.04	13	9	0.75	-0.04	11.0	0.36
Prostitution	1.4	1.02	3	1	1.57	-0.39	2.0	0.59
Threats	220.2	37.99	163	168	-1.51	-1.37	165.5	-1.44
Trespassing	110.6	12.83	111	94	0.03	-1.29	102.5	-0.63
Weapons	44.0	7.54	39	40	-0.66	-0.53	39.5	-0.60
<b>Violent Total</b>	<b>870.4</b>	<b>45.82</b>	<b>921</b>	<b>965</b>	<b>1.10</b>	<b>2.06</b>	<b>943.0</b>	<b>1.58</b>
<b>Property Total</b>	<b>3904.6</b>	<b>211.21</b>	<b>3908</b>	<b>3024</b>	<b>0.02</b>	<b>-4.17</b>	<b>3466.0</b>	<b>-2.08</b>
<b>Total Crimes</b>	<b>8305.4</b>	<b>513.81</b>	<b>7732</b>	<b>6475</b>	<b>-1.12</b>	<b>-3.56</b>	<b>7103.5</b>	<b>-2.34</b>
Alarm	5748.0	79.02	5740	5623	-0.10	-1.58	5681.5	-0.84
Disabled Vehicle	2179.2	185.87	2008	2002	-0.92	-0.95	2005.0	-0.94
Disorderly	3503.0	246.74	3152	3249	-1.42	-1.03	3200.5	-1.23
General Service	6037.6	356.07	6070	5393	0.09	-1.81	5731.5	-0.86
Lost Property	233.8	23.27	277	425	1.86	8.22	351.0	5.04
Medical	2797.2	368.23	3305	3975	1.38	3.20	3640.0	2.29
Psychological	381.0	24.11	470	425	3.69	1.83	447.5	2.76
Suspicious Activity	7166.6	406.09	7346	6959	0.44	-0.51	7152.5	-0.03
Traffic Collision	4583.2	182.50	4869	5081	1.57	2.73	4975.0	2.15
Traffic Complaint	1692.4	156.67	1954	1939	1.67	1.57	1946.5	1.62

### Summary of notable increases: Total of all communities

Incident Type	Significant in	Factors present	Likelihood of PP relationship	Notes
Kidnapping	2016	COM	Not related	What sounded like a troubling increased turned out to be a miscellany of domestic “confining” incidents with no PPC relationship.

<b>Incident Type</b>	<b>Significant in</b>	<b>Factors present</b>	<b>Likelihood of PP relationship</b>	<b>Notes</b>
<b>Total violent crime</b>	2017 Total	REG	Unlikely	Heavily influenced by the simple assault increase, which is again studied in the “trends” section below.
<b>Theft from persons</b>	All periods	LOG, COM	Unlikely	Increase confined solely to Attleboro and rated “unlikely” there; see Attleboro analysis.
<b>Credit card fraud</b>	2016 Total	LOG, COM, REG, REL, MAP, OTH	Likely	See trend analysis in ending sections.
<b>Fraud/con games</b>	All periods	LOG, COM, REG, REL	Uncertain	Analyzed in full in final section.
<b>Family offenses</b>	All periods	LOG, COM, REG, REL, MAP	Uncertain	See full analysis in “trends” section.
<b>Lost property</b>	All periods	LOG, REG	Uncertain	An increase in this type of activity is to be expected with more people visiting the area, but not quite at the volume we’ve seen. The call type does not show expected spatial patterns or location type patterns (e.g., increases at hotels, restaurants, and other places PPC visitors would frequent). Although I have rated this “likely” for some individual cities, I am cautious about applying that label to the total area.
<b>Medical aids</b>	2017 Total	LOG	Unlikely	One might expect medical aids to increase to the area with an influx of people, but the increases are confined to Foxborough and Attleborough and not in the communities closer to the casino. See those agencies for an account of their increases.
<b>Psychological calls</b>	All periods	LOG, MAP	Uncertain	Increases in Plainville, Attleboro, and Mansfield. No direct evidence of casino relationship, but these are CAD-only incidents, so documentation is scant. Review of call remarks suggests increase in “suicidal” individuals in these communities. Determining any relationship with PPC will probably need to rely on data outside the scope of this analysis.
<b>Traffic collisions</b>	2017 Total	LOG, REG, REL, MAP	Likely	See full analysis in “trends” section at end of report.
<b>Traffic complaints</b>	Total	LOG, REG, REL	Uncertain	While the increase in this call type seems logical given extra traffic in the area, spatial patterns do not support a PPC relationship. Overall, there is too little data with the CAD records to determine cause and to separate this category from self-directed traffic enforcement. I have rated the increase “likely” for some individual towns but it remains uncertain for the area as a whole.

## Summary of all Plainville activity



Two years after the opening of Plainridge Park, Plainville has not seen the increases feared in classic property crime categories (burglary, theft, robbery, auto theft) nor in vice-related crimes like drugs, liquor, and prostitution. Property crime actually declined significantly, although there were exceptions in **credit card fraud, identity theft, and vandalism**, all discussed below.

The agency did report a troubling increase in **violent crime** in the year ending in 2017, driven mostly by both **aggravated assault** and **simple assault**. These incidents coupled with a large increase in **family offenses** suggests an upward trend in domestic violence (not directly attributable to Plainridge Park), fully analyzed in the “trends” section.

Finally, the town continues to see an uptick in a variety of call-for-service types that might be expected to increase with extra people and vehicles in town, including **suspicious activity, traffic complaints, and lost property**.

### Incidents reported to Plainville, 1 July–30 June

Offense	2010–2015 Average.	Standard Deviation	2016	2017	2016 Z-Score	2017 Z-Score	Post Avg.	Avg. Z-Score
Murder	0.0	0.00	0	1	NA	NA	0.5	NA
Sexual Assault	2.4	1.36	3	3	0.44	0.44	3.0	0.44
Robbery	1.4	0.80	0	2	-1.75	0.75	1.0	-0.50
Aggravated Assault	4.6	1.50	7	13	1.60	5.61	10.0	3.61
Simple Assault	21.0	5.62	12	30	-1.60	1.60	21.0	0.00
Kidnapping	0.2	0.40	4	0	9.50	-0.50	2.0	4.50
Burglary	29.2	4.87	22	11	-1.48	-3.73	16.5	-2.61
Purse-Snatching	0.0	0.00	0	0	NA	NA	0.0	NA
Shoplifting	26.2	5.64	27	36	0.14	1.74	31.5	0.94
Theft from Building	19.2	4.49	18	16	-0.27	-0.71	17.0	-0.49
Theft from Machine	0.0	0.00	0	0	NA	NA	0.0	NA
Theft from Persons	0.0	0.00	0	0	NA	NA	0.0	NA
Theft from Vehicle	36.2	15.21	13	20	-1.53	-1.07	16.5	-1.30
Theft of MV Parts	4.4	1.02	4	1	-0.39	-3.33	2.5	-1.86
Other Theft	23.4	9.13	13	10	-1.14	-1.47	11.5	-1.30
Auto Theft	5.2	1.47	3	3	-1.50	-1.50	3.0	-1.50
Arson	0.2	0.40	0	0	-0.50	-0.50	0.0	-0.50
Bad Checks	2.6	1.62	1	2	-0.98	-0.37	1.5	-0.68
Credit Card Fraud	13.4	2.42	22	20	3.56	2.73	21.0	3.14
Employee Theft	1.2	1.47	0	1	-0.82	-0.14	0.5	-0.48
Forgery	6.2	2.64	6	3	-0.08	-1.21	4.5	-0.64
Fraud/Con Games	1.6	1.20	2	5	0.33	2.83	3.5	1.58
Identity Theft	2.4	2.06	8	6	2.72	1.75	7.0	2.23
Stolen Property	1.4	1.50	6	0	3.07	-0.94	3.0	1.07

Offense	2010–2015 Average.	Standard Deviation	2016	2017	2016 Z-Score	2017 Z-Score	Post Avg.	Avg. Z-Score
Vandalism	35.8	7.14	54	42	2.55	0.87	48.0	1.71
Drugs	9.6	2.15	12	6	1.11	-1.67	9.0	-0.28
Drunk Driving	17.6	2.94	21	16	1.16	-0.54	18.5	0.31
Disorderly	2.2	0.75	0	8	-2.94	7.75	4.0	2.41
Drunkenness	18.2	2.32	13	7	-2.25	-4.84	10.0	-3.54
Family Offenses	2.0	1.67	5	12	1.79	5.98	8.5	3.88
Liquor Laws	3.0	1.79	2	1	-0.56	-1.12	1.5	-0.84
Pornography	0.0	0.00	0	0	NA	NA	0.0	NA
Prostitution	0.2	0.40	0	0	-0.50	-0.50	0.0	-0.50
Threats	4.0	2.19	1	3	-1.37	-0.46	2.0	-0.91
Trespassing	5.4	3.26	4	3	-0.43	-0.74	3.5	-0.58
Weapons	1.4	1.02	4	3	2.55	1.57	3.5	2.06
<b>Violent Total</b>	<b>29.6</b>	<b>6.34</b>	<b>26</b>	<b>49</b>	<b>-0.57</b>	<b>3.06</b>	<b>37.5</b>	<b>1.25</b>
<b>Property Total</b>	<b>208.6</b>	<b>25.59</b>	<b>199</b>	<b>176</b>	<b>-0.38</b>	<b>-1.27</b>	<b>187.5</b>	<b>-0.82</b>
<b>Total Crimes</b>	<b>301.8</b>	<b>33.33</b>	<b>287</b>	<b>284</b>	<b>-0.44</b>	<b>-0.53</b>	<b>285.5</b>	<b>-0.49</b>
Alarm	397.6	43.67	457	424	1.36	0.60	440.5	0.98
Disabled Vehicle	134.2	30.05	148	144	0.46	0.33	146.0	0.39
Disorderly	163.0	13.64	174	159	0.81	-0.29	166.5	0.26
General Service	370.0	65.66	436	467	1.01	1.48	451.5	1.24
Lost Property	36.8	6.46	58	56	3.28	2.97	57.0	3.13
Medical	9.6	3.72	2	2	-2.04	-2.04	2.0	-2.04
Psychological	29.4	4.03	30	37	0.15	1.89	33.5	1.02
Suspicious Activity	605.0	26.37	787	721	6.90	4.40	754.0	5.65
Traffic Collision	312.0	22.96	310	348	-0.09	1.57	329.0	0.74
Traffic Complaint	234.8	31.86	312	347	2.42	3.52	329.5	2.97

### Summary of notable increases: Plainville

Incident Type	Significant in	Factors present	Likelihood of PP relationship	Notes
Aggravated Assault	2017	LOG, REL, OTH	Unlikely	Only agency to report a significant increase in this category, though others reported increases in simple assault. See more information in the trend analysis section. Increase related to domestic violence and shows no PPC or gambling nexus.
Kidnapping	2016 Total		Not Related	Individual analysis of all incidents shows that they concerned local domestic situations with no causal factors related to gambling or PPC. Increased did not continue in 2017.
Credit Card Fraud	All periods	LOG, COM, REG, REL, OTH	Likely	See the “trends” section at the end of this report.

Incident Type	Significant in	Factors present	Likelihood of PP relationship	Notes
<b>Fraud/Con Games</b>	2017 Total	LOG, COM, REG, REL	Uncertain	No patterns seen among individual incidents and no explicit mention of casino relationship, but this category is increasing throughout the area. See full analysis in “trends” section.
<b>Identity Theft</b>	All periods	LOG, COM, REG, REL	Unlikely	One of several agencies to report large increases. See the “trends” section for reasons why it is probably not PPC related.
<b>Stolen Property</b>	2016	LOG	Unlikely	Reports for a miscellany of incidents show no overt PPC connection, no comparable increase in other agencies, and did not continue in 2017.
<b>Vandalism</b>	2016 Total		Unlikely	Interesting pattern of residential vandalism in the town, with several one-night sprees during the first 18 months (see map below) after PPC opened. A lack of a logical relationship between a casino and residential vandalism, a failure to see the crime throughout the rest of the region, and a return to normal in 2017 all make a PPC connection unlikely.
<b>Disorderly</b>	2017 Total	LOG, MAP	Uncertain	Small numeric increase (to 8 in the 24-month period) in rarely-reported crime. Three arrests at the Plainville Commons shops, three incidents at residences, and two on the street. In one of the Plainville Commons incidents, the disorderly individual, who threatened staff members, let the store and immediately went to Plainridge Park, where he was arrested. For this one incident, therefore—which makes up half of the “increase”—the relationship is certain, but less so for the overall spike.
<b>Family Offenses</b>	All periods	LOG, REL, REG	Unlikely	Related to an increase in domestic violence in the area. Unlikely relationship to PPC.
<b>Weapon Offenses</b>	2016 Total		Unlikely	None of the relevant factors present. No commonalities in type of weapon. Almost all incidents at residences for which officers were summoned for other offenses.
<b>Violent Crime Total</b>	2017		Uncertain	Influenced primarily by simple and aggravated assault increases; see the full trend analysis.
<b>Lost Property</b>	All periods	LOG, REG, MAP	Likely	Though I rated this “uncertain” for the region, CAD notes specifically from Plainville show numerous lost wallets, cell phones, and ATM cards during this period, often from out-of-town visitors, at places that casino visitors are likely to frequent, such as restaurants, bank ATMs, and gas stations. The increase seems consistent with PPC-related traffic in the town.

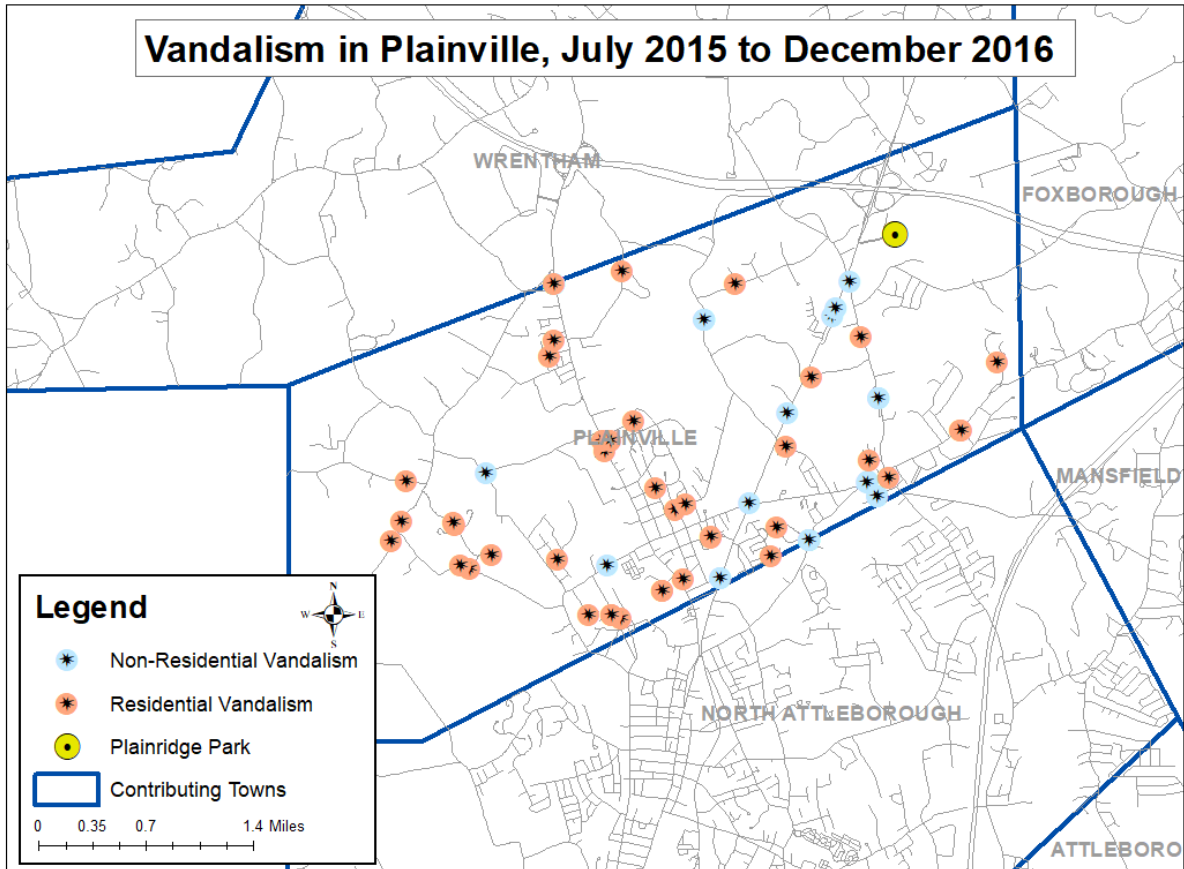


Figure 4: Plainville's increase in vandalism has been primary residential, with several one-night sprees of multiple incidents in each reporting period

Incident Type	Significant in	Factors present	Likelihood of PP relationship	Notes
Psychological Calls	2017	LOG	Unlikely	While it is possible for a facility like a casino to take a psychological toll on certain individuals, it seems unlikely to see the effects so rapidly concentrated in the immediate area. All of Plainville's increase in the 18-month period can be tied to three residential addresses. Without further details on the specific issues faced by those residents, a PPC relationship is uncertain but seems unlikely overall.
Suspicious Activity	All periods	LOG, REL, MAP	Likely	The dramatic increase in these calls perhaps suggests a local population on high-alert for "suspicious" out-of-towners. A review of CAD notes supports this hypothesis, with many calls for cars parked for long periods and/or furtive activity within them. The call type has a logical relationship to extra traffic in the community, and the map below shows a spatial relationship as well.

Incident Type	Significant in	Factors present	Likelihood of PP relationship	Notes
Traffic Complaints	All periods	LOG, REL, REG, MAP	Likely	The connection is logical: As more cars arrive in the town to make use of PPC, there are more opportunities for residents to complain about illegal parking, erratic drivers, and other traffic problems. Parking complaints quadrupled from the historical average while other traffic complaints increased by about 50%. Similar increases in all other cities except Attleboro (the furthest away) bolster the idea of a PPC relationship, as does a concentration of these incidents on Route 1 itself and other routes funneling traffic to and from PPC. Only a lack of specific data on drivers and origins keeps this from rating "Certain."

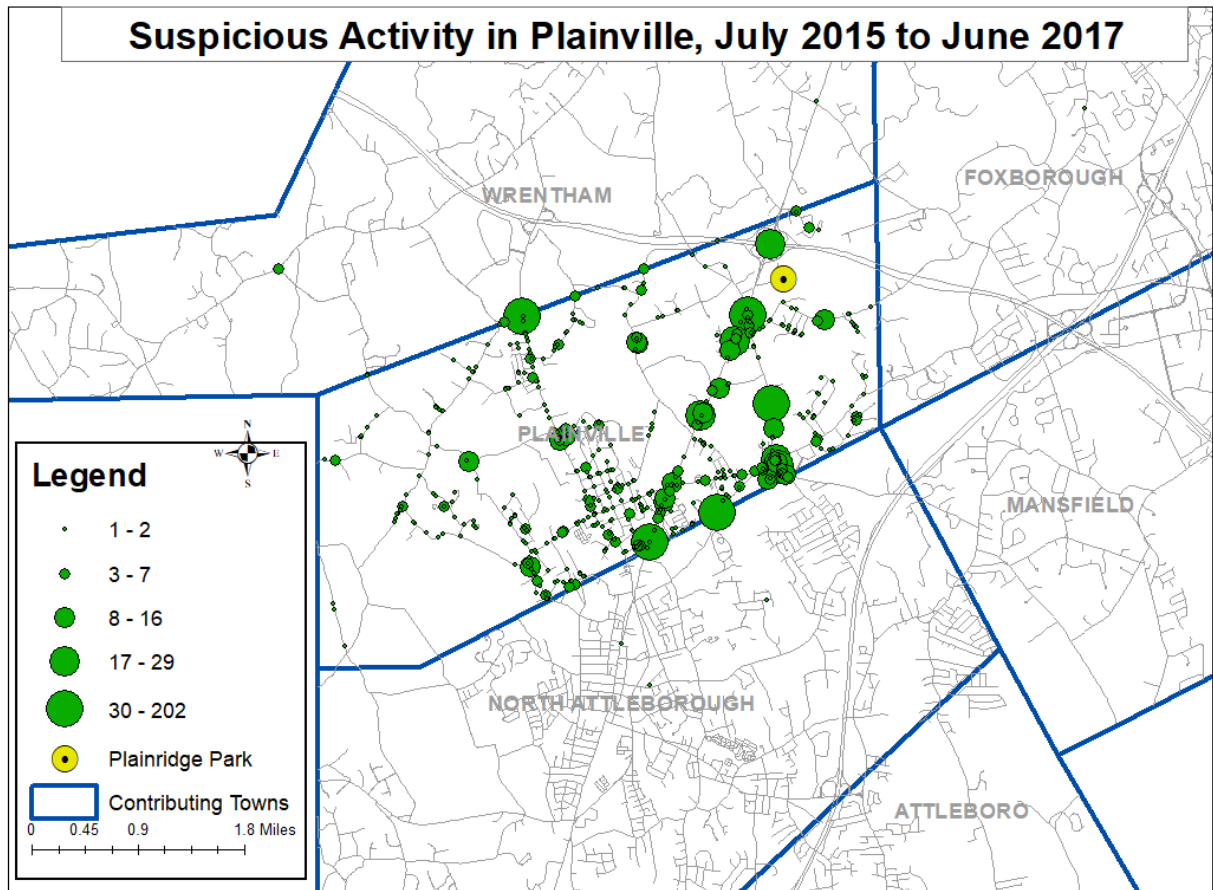


Figure 5: Hot spot of suspicious activity in Plainville show concentrations on routes to and from the casino.



## Summary of all Attleboro activity



Overall, Attleboro saw a significant decrease in total crimes, and particularly **property crimes**, during the 24 months following the opening of Plainridge Park. The major exception was in the area of **credit card fraud**, which increased significantly in the city, as it did in the surrounding area.

Attleboro was the only jurisdiction in the area to see sustained increases in several of the theft categories. However, the increases in these categories are balance by a major decrease in the **other theft** category and my general sense is that most of these increases are a result of the new crime analyst doing a better job coding the data so the “other” category is used less often and the thefts are reported under their proper codes.

In addition to credit card fraud, Attleboro was part of the area-wide increase in **con games, identity theft, family offenses, and traffic collisions**, all of which receive fuller analysis in the last section of this report.

Attleboro was unique among area agencies in implementing a specific flag in its records management system to identify incidents that were casino-related, generally because the offender acknowledged that he was in the area to visit Plainridge Park. Understanding the vagaries of data quality, I did not rely exclusively on this code, but it was illustrative that in the two years since Plainridge Park opened, the Attleboro Police only used the code eight times, generally for crimes that did not otherwise see an increase in the area. Crimes tagged with the code include a robbery, a shoplifting incident, two miscellaneous thefts, a family offense, a drug incident, a drunk driving incident, and an “all other.” Attleboro’s experience suggests that the area communities may be seeing contributions to their crime volume caused by PPC-bound offenders, but not in enough volume to cause a statistically notable increase.

### Incidents reported to Attleboro, 1 July–30 June

Offense	2010–2015 Average.	Standard Deviation	2016	2017	2016 Z-Score	2017 Z-Score	Post Avg.	Avg. Z-Score
Murder	0.4	0.49	1	0	1.22	-0.82	0.5	0.20
Sexual Assault	34.4	6.89	37	39	0.38	0.67	38.0	0.52
Robbery	20.6	7.26	14	15	-0.91	-0.77	14.5	-0.84
Aggravated Assault	88.4	18.45	64	60	-1.32	-1.54	62.0	-1.43
Simple Assault	288.4	18.68	321	295	1.74	0.35	308.0	1.05
Kidnapping	3.8	2.04	2	4	-0.88	0.10	3.0	-0.39
Burglary	208.0	43.71	186	120	-0.50	-2.01	153.0	-1.26
Purse-Snatching	0.2	0.40	1	1	2.00	2.00	1.0	2.00
Shoplifting	196.0	37.99	207	158	0.29	-1.00	182.5	-0.36
Theft from Building	119.4	17.26	96	152	-1.36	1.89	124.0	0.27
Theft from Machine	0.8	1.17	2	1	1.03	0.17	1.5	0.60
Theft from Persons	2.2	1.94	8	9	2.99	3.51	8.5	3.25
Theft from Vehicle	162.6	67.77	134	155	-0.42	-0.11	144.5	-0.27
Theft of MV Parts	46.8	9.37	52	31	0.56	-1.69	41.5	-0.57
Other Theft	551.2	112.02	555	241	0.03	-2.77	398.0	-1.37
Auto Theft	62.0	8.99	44	20	-2.00	-4.67	32.0	-3.34
Arson	4.4	2.06	3	3	-0.68	-0.68	3.0	-0.68
Bad Checks	12.4	3.44	9	5	-0.99	-2.15	7.0	-1.57

Offense	2010–2015 Average.	Standard Deviation	2016	2017	2016 Z-Score	2017 Z-Score	Post Avg.	Avg. Z-Score
Credit Card Fraud	32.4	4.67	55	30	4.84	-0.51	42.5	2.16
Employee Theft	8.4	1.36	10	12	1.18	2.65	11.0	1.92
Forgery	38.8	6.24	39	24	0.03	-2.37	31.5	-1.17
Fraud/Con Games	63.4	4.08	79	74	3.82	2.60	76.5	3.21
Identity Theft	39.4	13.60	72	73	2.40	2.47	72.5	2.43
Stolen Property	22.2	7.93	30	33	0.98	1.36	31.5	1.17
Vandalism	299.6	35.45	241	184	-1.65	-3.26	212.5	-2.46
Drugs	98.4	17.00	103	71	0.27	-1.61	87.0	-0.67
Drunk Driving	111.2	16.29	98	93	-0.81	-1.12	95.5	-0.96
Disorderly	207.4	30.43	182	136	-0.83	-2.35	159.0	-1.59
Drunkenness	0.4	0.49	0	28	-0.82	56.34	14.0	27.76
Family Offenses	386.2	38.39	474	479	2.29	2.42	476.5	2.35
Liquor Laws	43.6	9.91	34	20	-0.97	-2.38	27.0	-1.67
Pornography	5.6	3.72	9	7	0.91	0.38	8.0	0.65
Prostitution	0.4	0.49	1	1	1.22	1.22	1.0	1.22
Threats	111.6	26.62	89	91	-0.85	-0.77	90.0	-0.81
Trespassing	29.0	4.10	37	28	1.95	-0.24	32.5	0.85
Weapons	29.6	6.47	24	26	-0.87	-0.56	25.0	-0.71
<b>Violent Total</b>	<b>436.0</b>	<b>31.98</b>	<b>439</b>	<b>413</b>	<b>0.09</b>	<b>-0.72</b>	<b>426.0</b>	<b>-0.31</b>
<b>Property Total</b>	<b>1870.2</b>	<b>138.69</b>	<b>1823</b>	<b>1326</b>	<b>-0.34</b>	<b>-3.92</b>	<b>1574.5</b>	<b>-2.13</b>
<b>Total Crimes</b>	<b>3329.6</b>	<b>126.17</b>	<b>3313</b>	<b>2719</b>	<b>-0.13</b>	<b>-4.84</b>	<b>3016.0</b>	<b>-2.49</b>
Alarm	1525.8	121.45	1400	1420	-1.04	-0.87	1410.0	-0.95
Disabled Vehicle	606.8	71.16	539	556	-0.95	-0.71	547.5	-0.83
Disorderly	1750.4	192.25	1525	1523	-1.17	-1.18	1524.0	-1.18
General Service	2323.8	270.57	1389	1182	-3.45	-4.22	1285.5	-3.84
Lost Property	61.6	15.62	71	55	0.60	-0.42	63.0	0.09
Medical	900.4	315.73	1075	1761	0.55	2.73	1418.0	1.64
Psychological	295.2	30.34	377	332	2.70	1.21	354.5	1.95
Suspicious Activity	2831.4	342.98	2484	2556	-1.01	-0.80	2520.0	-0.91
Traffic Collision	1795.0	62.95	1921	2033	2.00	3.78	1977.0	2.89
Traffic Complaint	592.0	195.38	557	527	-0.18	-0.33	542.0	-0.26

### Summary of notable increases: Attleboro

Incident Type	Significant in	Factors present	Likelihood of PP relationship	Notes
Purse Snatching	All periods	LOG	Unlikely	Just a single incident in 2016 and 2017, up from the “average” of hardly ever reported at all. Local residents charged and none flagged as casino-related by APD.
Thefts from	2017	LOG, REL	Unlikely	A fairly large increase in 2017 after drop in

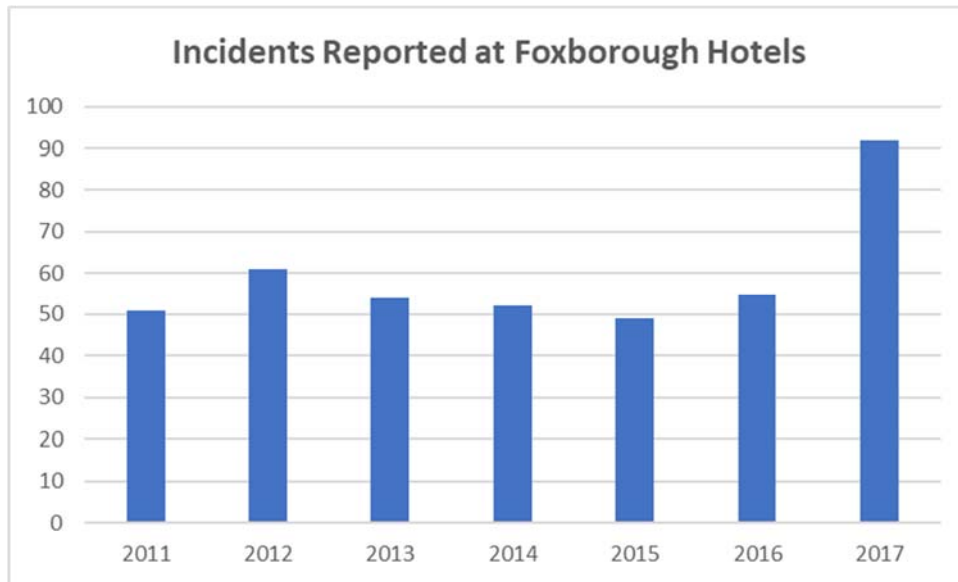
Incident Type	Significant in	Factors present	Likelihood of PP relationship	Notes
<b>Buildings</b>				2016. There are a few retail hot spots, but about 50% are at residences. As the increase is accompanied by a major drop in “other theft” during the same period, improved coding of this crime type seems the logical explanation for the “increase.”
<b>Thefts from Persons</b>	All periods	LOG, REL	Unlikely	Small overall numbers in the historical average suggest that these incidents were miscoded as 23H in previous time periods and now coded correctly thanks to the agency’s new analyst. No patterns are seen among the incidents nor any explicit casino relationship.
<b>Credit Card Fraud</b>	All periods	LOG, COM, REG, REL, OTH	Likely	See the full analysis in the “trends” section for credit card fraud in the area.
<b>Employee Theft</b>	2017 Total	LOG, REL	Unlikely	Again likely tied to improved coding, with new incidents equaled by their equivalent loss in the “other theft” category. Not replicated in other communities and no evidence among suspects that gambling is an issue.
<b>Fraud/Con Games</b>	All periods	LOG, COM, REG, REL	Uncertain	See the full analysis of fraud in the “trends” section.
<b>Identity Theft</b>	All periods	LOG, COM, REG, REL	Unlikely	See the full analysis of identity theft in the “trends” section.
<b>Drunkenness</b>	6-month 2016 18-month total	LOG	Unlikely	Given the steepness of the increase, it would seem that Attleboro was not coding its protective custodies with the 90E IBR code until recently. Given that every “incident” results in an PC, we would expect to see a PPC relationship mentioned here if it existed. That the crime is not increasing elsewhere—in fact, it is significantly down in other towns—makes a PPC relationship very unlikely.
<b>Family Offenses</b>	All periods	REG	Uncertain	See the full analysis of “family offenses” in the “trends” section.
<b>Trespassing</b>	2016		Unlikely	Brief increase for a single year shows mostly residential issues. There’s no logical tie to the casino, it did not sustain, and no other agencies reported it.
<b>Medical</b>	2017 Total	LOG	Unlikely	More people drawn to an area could easily equate to more medical aids, but the results are inconsistent across the communities. Attleboro’s increase during this one period is heavily localized at four addresses: the police station itself and three residential addresses, none of which suggest a PPC connection.
<b>Psychological</b>	2016	LOG, REG	Unlikely	Detailed review of CAD notes by APD analyst

<b>Incident Type</b>	<b>Significant in</b>	<b>Factors present</b>	<b>Likelihood of PP relationship</b>	<b>Notes</b>
<b>Calls</b>	Total			showed no PPC relationship. Incidents seem concentrated at a few residences, suggesting repeat problems with individuals. Increased dropped off after first year.
<b>Traffic Collisions</b>	All periods	LOG, REG	Likely	As noted in the “trend analysis” section, an increase in traffic collisions in the area is logical given extra traffic. While Attleboro is the most remote community from the casino, it has several travel routes to and from PPC with collision hot spots. A more conclusive analysis awaits statewide collision data.

## Summary of all Foxborough activity



As the host of Gillette Stadium and numerous hotels, restaurants, and retail establishments, Foxborough had the second-highest overall crime and call-for-service totals in the area, both before and after Plainridge Park. Its existing crime is heavily influenced by its visiting population. As the closest major hotel cluster (there are 7 within the town limits, plus two in nearby Mansfield), there were concerns from the beginning that Foxborough might see an increase in activity at hotels. For a while, it looked like the predicted increase wasn't happening, but the agency saw a sudden spike in the first six months of 2017, contributing to a large increase in the year ending 30 June 2017.



The increase is almost entirely in the “All Other” crime category, which is naturally unhelpful when it comes to analysis. An analysis of the incidents related to the original call for service shows that many of them are prompted by “disturbance” calls, medical aids, and well-being checks. I am awaiting further analysis from Foxborough on the individual cases to help explain the increase.

Foxborough also contributed to regional increases in **credit card fraud** and **aggravated assault** and showed some local increases in other types of theft. It also contributed to regional increases in **lost property** and **traffic complaints**, but all of these increases have uncertain relationships to PPC, as discussed below.

It was one of the few agencies to show an aggregated decrease in violent crimes in the two years post-Plainridge Park. Unlike other communities, Foxborough saw no increase in simple assaults, and its burglary total absolutely plummeted.

### Incidents reported to Foxborough 1 July–30 June

Offense	2010–2015 Average.	Standard Deviation	2016	2017	2016 Z-Score	2017 Z-Score	Post Avg.	Avg. Z-Score
<b>Murder</b>	0.0	0.00	0	0	NA	NA	0.0	NA
<b>Sexual Assault</b>	4.8	1.72	3	8	-1.05	1.86	5.5	0.41
<b>Robbery</b>	3.2	3.06	3	1	-0.07	-0.72	2.0	-0.39

Offense	2010–2015 Average.	Standard Deviation	2016	2017	2016 Z-Score	2017 Z-Score	Post Avg.	Avg. Z-Score
Aggravated Assault	31.6	7.55	32	53	0.05	2.83	42.5	1.44
Simple Assault	108.6	13.87	74	92	-2.50	-1.20	83.0	-1.85
Kidnapping	0.4	0.49	1	0	1.22	-0.82	0.5	0.20
Burglary	74.0	7.72	58	53	-2.07	-2.72	55.5	-2.40
Purse-Snatching	0.8	0.98	0	0	-0.82	-0.82	0.0	-0.82
Shoplifting	15.0	4.24	28	29	3.06	3.30	28.5	3.18
Theft from Building	24.8	5.74	29	27	0.73	0.38	28.0	0.56
Theft from Machine	0.0	0.00	0	0	NA	NA	0.0	NA
Theft from Persons	1.4	0.80	2	2	0.75	0.75	2.0	0.75
Theft from Vehicle	2.6	0.49	1	0	-3.27	-5.31	0.5	-4.29
Theft of MV Parts	0.2	0.40	1	0	2.00	-0.50	0.5	0.75
Other Theft	99.2	10.17	122	90	2.24	-0.90	106.0	0.67
Auto Theft	10.2	3.25	12	8	0.55	-0.68	10.0	-0.06
Arson	0.4	0.49	1	0	1.22	-0.82	0.5	0.20
Bad Checks	6.8	2.79	8	6	0.43	-0.29	7.0	0.07
Credit Card Fraud	9.4	3.77	18	11	2.28	0.42	14.5	1.35
Employee Theft	3.0	1.26	2	1	-0.79	-1.58	1.5	-1.19
Forgery	15.0	2.68	10	12	-1.86	-1.12	11.0	-1.49
Fraud/Con Games	29.6	5.43	27	30	-0.48	0.07	28.5	-0.20
Identity Theft	21.2	20.16	21	25	-0.01	0.19	23.0	0.09
Stolen Property	9.6	2.24	7	8	-1.16	-0.71	7.5	-0.94
Vandalism	86.6	10.78	83	83	-0.33	-0.33	83.0	-0.33
Drugs	39.8	8.03	25	53	-1.84	1.64	39.0	-0.10
Drunk Driving	63.0	10.43	64	56	0.10	-0.67	60.0	-0.29
Disorderly	115.2	17.21	137	102	1.27	-0.77	119.5	0.25
Drunkenness	870.0	275.46	554	369	-1.15	-1.82	461.5	-1.48
Family Offenses	16.8	6.11	8	29	-1.44	2.00	18.5	0.28
Liquor Laws	115.8	63.35	37	24	-1.24	-1.45	30.5	-1.35
Pornography	0.6	0.49	1	2	0.82	2.86	1.5	1.84
Prostitution	0.2	0.40	0	0	-0.50	-0.50	0.0	-0.50
Threats	42.0	9.70	28	26	-1.44	-1.65	27.0	-1.55
Trespassing	47.2	8.11	51	41	0.47	-0.76	46.0	-0.15
Weapons	5.0	2.76	2	3	-1.09	-0.73	2.5	-0.91
<b>Violent Total</b>	<b>148.6</b>	<b>19.02</b>	<b>113</b>	<b>154</b>	<b>-1.87</b>	<b>0.28</b>	<b>133.5</b>	<b>-0.79</b>
<b>Property Total</b>	<b>409.8</b>	<b>35.09</b>	<b>430</b>	<b>385</b>	<b>0.58</b>	<b>-0.71</b>	<b>407.5</b>	<b>-0.07</b>
<b>Total Crimes</b>	<b>1874.0</b>	<b>324.89</b>	<b>1450</b>	<b>1244</b>	<b>-1.31</b>	<b>-1.94</b>	<b>1347.0</b>	<b>-1.62</b>
Alarm	891.0	22.91	894	805	0.13	-3.75	849.5	-1.81
Disabled Vehicle	346.4	34.58	274	316	-2.09	-0.88	295.0	-1.49
Disorderly	252.4	14.14	221	326	-2.22	5.21	273.5	1.49
General Service	912.2	38.45	1024	836	2.91	-1.98	930.0	0.46

Offense	2010–2015 Average.	Standard Deviation	2016	2017	2016 Z-Score	2017 Z-Score	Post Avg.	Avg. Z-Score
Lost Property	40.6	5.92	51	156	1.76	19.50	103.5	10.63
Medical	982.6	293.77	1449	1319	1.59	1.15	1384.0	1.37
Psychological	29.8	10.50	18	13	-1.12	-1.60	15.5	-1.36
Suspicious Activity	1392.6	84.26	1340	1235	-0.62	-1.87	1287.5	-1.25
Traffic Collision	577.6	50.52	583	612	0.11	0.68	597.5	0.39
Traffic Complaint	109.6	40.38	173	227	1.57	2.91	200.0	2.24

### Summary of notable increases: Foxborough

Incident Type	Significant in	Factors present	Likelihood of PP relationship	Notes
Aggravated Assault	2017	LOG, OTH	Unlikely	As with the other cities seeing increases in assaults, incidents are overwhelmingly at residences, with victim and offender factors suggesting domestic violence. Keyword search of cases fails to find any in which gambling or casinos are mentioned as an inciting factor. See trend analysis section.
Shoplifting	All periods	LOG, REL	Unlikely	Foxborough's shoplifting activity is heavily concentrated at the Patriot Place stores (just outside the stadium). Almost all of its increase during this period is found at "Ulta Beauty," which only opened in mid-2014, so there was no contribution to the historical baseline.
Theft of MV Parts	2016	LOG	Unlikely	A single incident in a rarely-reported category.
Other Theft	2016	LOG	Unlikely	Increase in 2016 that didn't carry to 2017, confined largely to the Patriot Place shopping center and the high school.
Credit Card Fraud	2016	LOG, REG, REL	Likely	Although it didn't sustain beyond the first six months post-PPC, the increase for that one period seems to be related to a regional trend. See the "trends" section for a full analysis.
Pornography	2017 Total		Not related	All incidents are related to the investigation and arrest of a local teen.
Disorderly	2017	LOG	Unlikely	The increase is entirely concentrated at Gillette Stadium. To postulate a PPC relationship would first have to establish that PPC influenced an increase in visitors to the stadium.
General Service	2016	LOG	Unlikely	Increase was temporary (it decreased significantly in 2017) and was mostly in an "assist citizen" category that may be self-initiated.

<b>Incident Type</b>	<b>Significant in</b>	<b>Factors present</b>	<b>Likelihood of PP relationship</b>	<b>Notes</b>
<b>Lost Property</b>	All periods	LOG, REG	Uncertain	Foxborough spiked in this call-for-service type in 2016 and 2017, contributing to much of the increase for the area. While the call would be expected to increase with more people in the area, the increase in Foxborough is so startling that a change in dispatch policy seems the more likely explanation. Incidents are scattered all over, with no particular hot spots.
<b>Traffic Complaints</b>	2017 Total	LOG, REG, REL	Uncertain	As with other communities in the area, this call type is hard to separate from self-directed traffic enforcement. Increase is a bit too dramatic to attribute simply to extra traffic in the general area. In Foxborough's case, most hot spots seem around the stadium and not on routes to PPC.



## Summary of all Mansfield activity



Mansfield has seen a significant reduction in property crime and total crime in the 24 months post-Plainridge Park, but it is one of the agencies to show an increase in violent crime, concentrated almost entirely in **simple assaults**. Even while enjoying property crime reductions in general, the department, like many others, is dealing with a spike in **fraud** and **identity theft**, although curiously not credit card fraud like so many neighboring communities.

The agency also joined its neighbors in seeing increases in traffic-volume-related calls for service like **suspicious activity** and **traffic complaints**. These have a less certain connection to the casino than in other communities owing to traffic patterns that don't fit casino-specific routes.

### Incidents reported to Mansfield, 1 July–30 June

Offense	2010–2015 Average.	Standard Deviation	2016	2017	2016 Z-Score	2017 Z-Score	Post Avg.	Avg. Z-Score
Murder	0.6	0.80	0	0	-0.75	-0.75	0.0	-0.75
Sexual Assault	8.2	1.60	10	11	1.13	1.75	10.5	1.44
Robbery	4.4	2.33	2	2	-1.03	-1.03	2.0	-1.03
Aggravated Assault	35.8	2.32	31	25	-2.07	-4.66	28.0	-3.37
Simple Assault	120.2	9.33	147	140	2.87	2.12	143.5	2.50
Kidnapping	1.6	1.50	5	0	2.27	-1.07	2.5	0.60
Burglary	143.4	53.50	53	34	-1.69	-2.04	43.5	-1.87
Purse-Snatching	1.2	0.75	1	1	-0.27	-0.27	1.0	-0.27
Shoplifting	50.0	8.67	39	38	-1.27	-1.38	38.5	-1.33
Theft from Building	57.4	12.44	46	35	-0.92	-1.80	40.5	-1.36
Theft from Machine	0.0	0.00	0	0	NA	NA	0.0	NA
Theft from Persons	1.8	0.75	3	2	1.60	0.27	2.5	0.94
Theft from Vehicle	0.6	0.49	1	14	0.82	27.35	7.5	14.08
Theft of MV Parts	0.4	0.80	1	4	0.75	4.50	2.5	2.63
Other Theft	145.0	22.08	93	87	-2.35	-2.63	90.0	-2.49
Auto Theft	17.0	4.34	14	17	-0.69	0.00	15.5	-0.35
Arson	1.6	0.80	3	2	1.75	0.50	2.5	1.13
Bad Checks	5.8	2.32	3	4	-1.21	-0.78	3.5	-0.99
Credit Card Fraud	20.8	5.08	19	4	-0.35	-3.31	11.5	-1.83
Employee Theft	1.6	1.36	0	1	-1.18	-0.44	0.5	-0.81
Forgery	22.8	5.84	29	17	1.06	-0.99	23.0	0.03
Fraud/Con Games	41.4	1.85	67	46	13.80	2.48	56.5	8.14
Identity Theft	22.4	10.59	38	50	1.47	2.61	44.0	2.04
Stolen Property	17.6	5.95	16	6	-0.27	-1.95	11.0	-1.11
Vandalism	115.8	14.44	83	84	-2.27	-2.20	83.5	-2.24

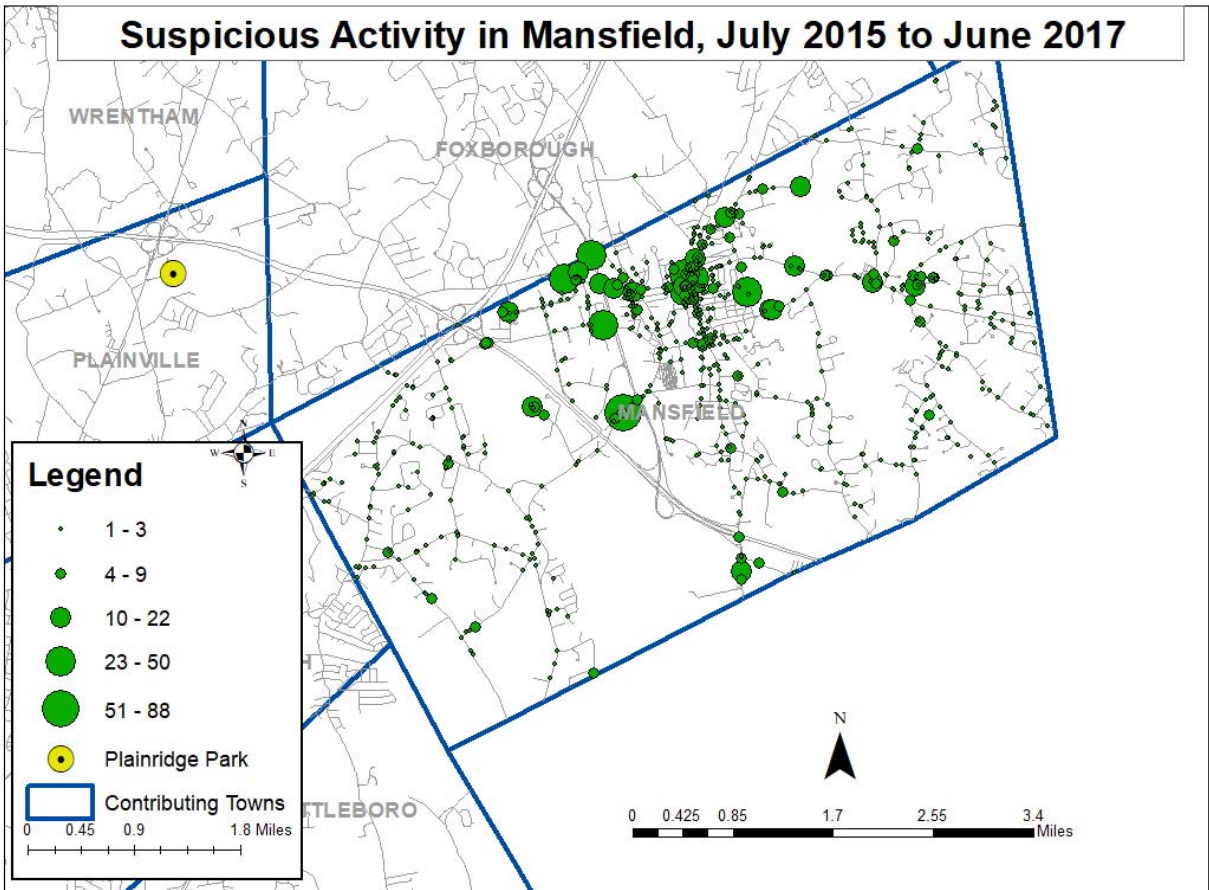
Offense	2010–2015 Average.	Standard Deviation	2016	2017	2016 Z-Score	2017 Z-Score	Post Avg.	Avg. Z-Score
Drugs	63.2	12.73	33	54	-2.37	-0.72	43.5	-1.55
Drunk Driving	51.4	5.89	54	48	0.44	-0.58	51.0	-0.07
Disorderly	78.6	15.46	80	78	0.09	-0.04	79.0	0.03
Drunkenness	495.4	67.80	333	263	-2.40	-3.43	298.0	-2.91
Family Offenses	14.4	4.59	4	4	-2.27	-2.27	4.0	-2.27
Liquor Laws	253.6	87.70	69	30	-2.10	-2.55	49.5	-2.33
Pornography	2.6	1.85	2	0	-0.32	-1.40	1.0	-0.86
Prostitution	0.6	0.80	0	0	-0.75	-0.75	0.0	-0.75
Threats	53.2	4.07	33	31	-4.96	-5.46	32.0	-5.21
Trespassing	27.4	7.99	14	19	-1.68	-1.05	16.5	-1.36
Weapons	7.6	0.80	6	4	-2.00	-4.50	5.0	-3.25
<b>Violent Total</b>	<b>170.8</b>	<b>7.30</b>	<b>195</b>	<b>178</b>	<b>3.31</b>	<b>0.99</b>	<b>186.5</b>	<b>2.15</b>
<b>Property Total</b>	<b>666.6</b>	<b>107.24</b>	<b>509</b>	<b>446</b>	<b>-1.47</b>	<b>-2.06</b>	<b>477.5</b>	<b>-1.76</b>
<b>Total Crimes</b>	<b>1885.4</b>	<b>194.62</b>	<b>1332</b>	<b>1155</b>	<b>-2.84</b>	<b>-3.75</b>	<b>1243.5</b>	<b>-3.30</b>
Alarm	980.6	38.11	1006	983	0.67	0.06	994.5	0.36
Disabled Vehicle	392.2	37.81	325	409	-1.78	0.44	367.0	-0.67
Disorderly	466.0	20.50	500	420	1.66	-2.24	460.0	-0.29
General Service	1377.0	86.36	1145	1040	-2.69	-3.90	1092.5	-3.29
Lost Property	0.0	0.00	0	0	NA	NA	0.0	NA
Medical	13.2	3.06	14	7	0.26	-2.03	10.5	-0.88
Psychological	24.0	8.67	43	40	2.19	1.85	41.5	2.02
Suspicious Activity	842.0	55.29	974	850	2.39	0.14	912.0	1.27
Traffic Collision	674.4	38.32	727	693	1.37	0.49	710.0	0.93
Traffic Complaint	168.4	26.41	230	222	2.33	2.03	226.0	2.18

### Summary of notable increases: Mansfield

Incident Type	Significant in	Factors present	Likelihood of PP relationship	Notes
Sexual Assault	2017		Unlikely	Mansfield's sexual assault increased over the 18-month period was only 3 incidents, but against a highly-predictable baseline I do not collect supplemental data on sexual assault cases, so Mansfield Police will have to say if any of the incidents suggest the victim or offender was in the area for PPC reasons, but a lack of similar increases in other communities and the small numeric increase make a PPC connection unlikely.
Simple Assault	All Periods	LOG, REL, OTH	Uncertain	One of several agencies to report an increase; see "trends" section for more.
Kidnapping	2016		Not related	All incident read and studied and involve domestic situations with no PPC relationship.

<b>Incident Type</b>	<b>Significant in</b>	<b>Factors present</b>	<b>Likelihood of PP relationship</b>	<b>Notes</b>
<b>Thefts from Vehicles</b>	2017 Total	LOG, REL	Unlikely	Historical average is too low to be believable. Sudden increase right when the new crime analyst came aboard suggests the increase is simply an improvement in coding accuracy. No similar increases in other communities.
<b>Thefts of MV Parts</b>	2017 Total	LOG, REL	Unlikely	See above
<b>Arson</b>	2016		Unlikely	Prevalence is higher than normal, but with small overall numbers, no likely casino factors present, and crime not seen in other towns.
<b>Fraud/Con Games</b>	All Periods	LOG, COM, REG, REL	Uncertain	See analysis in "trends" section.
<b>Identity Theft</b>	2017 Total	LOG, COM, REL, REG	Unlikely	See "trend analysis" for full information.
<b>Psychological Calls</b>	All periods	LOG	Uncertain	As with the similar increase in other communities, there is not enough data with the call for service to establish any potential casino or gambling relationship.
<b>Suspicious Activity</b>	2016	LOG, REG	Uncertain	One might expect an increase in this call type with more people in the area, but results have been inconsistent across the 6 agencies. Mansfield's increase seems to be in its usual retail and entertainment hot spots, not necessarily related in a spatial manner to PPC (see figure below). Increase did not persist into 2017.
<b>Traffic Complaint</b>	All periods	LOG, REG, REL	Uncertain	There is a logical connection with increased traffic to the area and increased traffic complaints, but Mansfield is somewhat remote from Plainville traffic patterns. Overall, there is not enough data with the CAD call to ascertain the nature of the complaints.

# Suspicious Activity in Mansfield, July 2015 to June 2017



## Summary of all North Attleborough activity



As noted in previous reports, North Attleborough began an admirable re-dedication to correct NIBRS coding starting in 2015. Unfortunately, this makes it difficult to separate true increases from those caused by the improved coding, and in particular many Group B offenses—**drunk driving, disorderly conduct, drunkenness, liquor law violations, weapon violations, and trespassing** among them—difficult to trust.

North Attleborough was part of the area-wide increase in both **simple and aggravated assault**, as well as **family offenses**, which receive more thorough analysis later in the report. It was also one of the agencies affected by an increase in **credit card fraud**, and in general there is some evidence that extra traffic in the town heading to the casino next door has (at least in part) caused an uptick in **traffic complaints** and **traffic collisions**.

Please note that, as reported in the “methodology” section, crime totals for May and June of 2017 are estimated based on calls-for-service received during those months. At report time, the agency had not finished coding its incidents for that period.

### Incidents reported to North Attleborough, 1 July–30 June

Offense	2010–2015 Average.	Standard Deviation	2016	2017	2016 Z-Score	2017 Z-Score	Post Avg.	Avg. Z-Score
Murder	0.0	0.00	0	0	NA	NA	0.0	NA
Sexual Assault	1.6	1.20	5	4	2.83	2.00	4.5	2.42
Robbery	2.8	1.33	2	3	-0.60	0.15	2.5	-0.23
Aggravated Assault	6.0	11.51	17	34	0.96	2.43	25.5	1.69
Simple Assault	61.8	22.87	101	108	1.71	2.02	104.5	1.87
Kidnapping	0.0	0.00	0	1	NA	NA	0.5	NA
Burglary	38.4	9.85	81	42	4.32	0.37	61.5	2.34
Purse-Snatching	2.2	1.33	0	0	-1.66	-1.66	0.0	-1.66
Shoplifting	192.4	17.47	194	130	0.09	-3.57	162.0	-1.74
Theft from Building	5.4	6.15	2	1	-0.55	-0.72	1.5	-0.63
Theft from Machine	0.2	0.40	0	0	-0.50	-0.50	0.0	-0.50
Theft from Persons	0.8	0.75	0	0	-1.07	-1.07	0.0	-1.07
Theft from Vehicle	94.4	31.73	60	45	-1.08	-1.56	52.5	-1.32
Theft of MV Parts	3.0	3.29	6	0	0.91	-0.91	3.0	0.00
Other Theft	109.0	21.51	141	108	1.49	-0.05	124.5	0.72
Auto Theft	10.8	3.06	10	18	-0.26	2.35	14.0	1.05
Arson	0.2	0.40	1	1	2.00	2.00	1.0	2.00
Bad Checks	4.0	2.53	8	0	1.58	-1.58	4.0	0.00
Credit Card Fraud	25.2	11.58	42	39	1.45	1.19	40.5	1.32
Employee Theft	12.8	7.22	9	13	-0.53	0.03	11.0	-0.25
Forgery	6.2	1.94	9	4	1.44	-1.13	6.5	0.15
Fraud/Con Games	0.2	0.40	10	14	24.50	34.50	12.0	29.50
Identity Theft	0.0	0.00	0	0	NA	NA	0.0	NA

Offense	2010–2015 Average.	Standard Deviation	2016	2017	2016 Z-Score	2017 Z-Score	Post Avg.	Avg. Z-Score
Stolen Property	0.2	0.40	1	0	2.00	-0.50	0.5	0.75
Vandalism	15.2	14.92	67	65	3.47	3.34	66.0	3.41
Drugs	7.8	5.46	15	13	1.32	0.95	14.0	1.14
Drunk Driving	18.6	13.48	63	49	3.29	2.25	56.0	2.77
Disorderly	4.6	6.31	24	28	3.07	3.71	26.0	3.39
Drunkenness	6.6	13.20	53	40	3.52	2.53	46.5	3.02
Family Offenses	0.0	0.00	19	28	NA	NA	23.5	NA
Liquor Laws	0.6	0.80	6	2	6.75	1.75	4.0	4.25
Pornography	0.0	0.00	1	0	NA	NA	0.5	NA
Prostitution	0.0	0.00	0	0	NA	NA	0.0	NA
Threats	6.4	7.14	11	15	0.64	1.20	13.0	0.92
Trespassing	0.8	1.60	2	2	0.75	0.75	2.0	0.75
Weapons	0.4	0.80	2	3	2.00	3.25	2.5	2.63
<b>Violent Total</b>	<b>72.2</b>	<b>32.08</b>	<b>125</b>	<b>150</b>	<b>1.65</b>	<b>2.42</b>	<b>137.5</b>	<b>2.04</b>
<b>Property Total</b>	<b>520.6</b>	<b>49.40</b>	<b>641</b>	<b>480</b>	<b>2.44</b>	<b>-0.82</b>	<b>560.5</b>	<b>0.81</b>
<b>Total Crimes</b>	<b>638.6</b>	<b>109.50</b>	<b>962</b>	<b>810</b>	<b>2.95</b>	<b>1.57</b>	<b>886.0</b>	<b>2.26</b>
Alarm	1241.0	47.47	1213	1241	-0.59	0.00	1227.0	-0.29
Disabled Vehicle	436.8	72.00	356	342	-1.12	-1.32	349.0	-1.22
Disorderly	708.2	56.38	559	620	-2.65	-1.56	589.5	-2.11
General Service	879.6	463.04	1924	1685	2.26	1.74	1804.5	2.00
Lost Property	61.4	7.53	52	64	-1.25	0.35	58.0	-0.45
Medical	343.6	35.25	208	299	-3.85	-1.27	253.5	-2.56
Psychological	0.0	0.00	0	0	NA	NA	0.0	NA
Suspicious Activity	1091.8	125.57	1237	1153	1.16	0.49	1195.0	0.82
Traffic Collision	1018.0	48.78	1065	1132	0.96	2.34	1098.5	1.65
Traffic Complaint	477.8	20.13	572	429	4.68	-2.42	500.5	1.13

### Summary of notable increases: North Attleborough

Incident Type	Significant in	Factors present	Likelihood of PP relationship	Notes
Sexual Assault	All periods		Unlikely	Disturbing increase, but incidents were all at residences and a school. No PPC relationship is apparent.
Aggravated Assault	2017 Total	LOG, REL	Uncertain	See “trends” section for full analysis of assault increases
Simple Assault	2017 Total	LOG, REL, REG, OTH	Uncertain	See “trends” section for full analysis of assault increases
Total Violent Crime	All periods	LOG, REL	Uncertain	Several types of assault increased in North Attleborough this period. See “trends” section for more.

<b>Incident Type</b>	<b>Significant in</b>	<b>Factors present</b>	<b>Likelihood of PP relationship</b>	<b>Notes</b>
<b>Burglary</b>	2016 Total	LOG	Unrelated	North Attleborough was the only agency to post a burglary increase. Analysis of the reports shows two patterns responsible for the increase, both in the last half of 2015 (year ending 2016), both involving young local residents committing the crimes for heroin. They had no PPC association.
<b>Auto Theft</b>	2017	LOG	Unlikely	Odd increase in fall 2016 with more than half the incidents on Route 1. This was the only agency reporting such an increase in any period. Distance from PPC and local recovery patterns do not suggest PPC relationship.
<b>Arson</b>	All periods		Not related	Single incident in each post-PPC year on top of a near-0 baseline. Both incidents resulted in charges against local residents with no PPC relationship.
<b>Fraud/Con Games</b>	All periods	LOG, COM, REL, REG	Uncertain	See full analysis in "trends" section below.
<b>Stolen Property</b>	All periods	LOG	Not Related	"Increase" to 1 in rarely-reported crime. A homeless man stole rings while working on a house and tried to sell them at a jewelry store. No indication of gambling motivation.
<b>Vandalism</b>	All periods	MAP	Unlikely	Although there are a fair number up and down Route 1, most of the increases is seen at residences in town. This crime is down in most communities and is probably better explained by better attention to coding.
<b>Drunk Driving</b>	All periods	LOG	Uncertain	Only Mansfield reported a similar increase. By NAPD's own admission in previous periods, the increase is likely to be a result of improved coding and extra police enforcement; however, at least one drunk driver arrested admitted to drinking at Plainridge Park. This category needs to be monitored in the future and compared to statistics on drunk driving crashes.
<b>Disorderly Conduct</b>	All periods	LOG	Unlikely	The sudden spike in this crime starting in 2015 seem to be related to the agency's improved coding. Almost all of the incidents are at residences, making a PP relationship unlikely.
<b>Drunkenness</b>	All periods	LOG	Unlikely	By the agency's own admission, they simply were not coding this crime type before 2015. A lack of similar increases in other communities means a Plainridge Park relationship is unlikely.

<b>Incident Type</b>	<b>Significant in</b>	<b>Factors present</b>	<b>Likelihood of PP relationship</b>	<b>Notes</b>
<b>Family Offenses</b>	All periods	LOG, REG	Uncertain	Increased in several communities; see "trends" section. Complicated in NAPPD's case because they never used the code in prior periods, so "real" increase is unknown.
<b>Liquor Laws</b>	All periods	LOG	Not Related	"Increase" involves 9 incidents in a 24-month period for a crime that was hardly ever coded before and no one else is seeing increase. Miscellany of incident involving local youths too young to use PPC. Better coding is almost certainly at the root of this one.
<b>Weapon Violations</b>	All periods		Not Related	Increase to 6 incidents in 24 months; crime was almost never reported before. All incidents were at residences and involved local residents.
<b>Total Violent Crimes</b>	2017 Total	LOG, REG	Uncertain	Heavily influenced by aggravated and simple assault increases. See "Trends" section.
<b>Total Property Crimes</b>	2016 Total	LOG	Unlikely	Increase is almost entirely in burglary and vandalism categories which have not shown a PPC relationship.
<b>Total Crimes</b>	All periods		Uncertain	Boosted by near-universal increases, total crimes increased significantly in the town in the 24-months post-PPC, but it is impossible in some cases to untangle the <i>real</i> increases from the improved coding to which the agency admits.
<b>General Service Calls</b>	All periods	LOG	Uncertain	Increases in this call-for-service type are logical with more people in the area. But a lack of detail in the CAD records makes it impossible to tell if a visiting population coming to and from PPC is responsible for the general increase.
<b>Traffic Collisions</b>	2017 Total	LOG, REG, REL, MAP	Likely	See "trends" section for full analysis.
<b>Traffic Complaints</b>	2016	LOG, REG, REL, MAP	Uncertain	As with Plainville, increase in collisions is both logical and geographically concentrated on travel routes to and from the facility. However, incidents plummeted 2017 and reversed the trend.



## Summary of all Wrentham activity



The town is the smallest and least active of the contributing communities. It did contribute to regional increases in **credit card fraud** and **traffic collisions**, both of which are analyzed later.

Wrentham also saw increases that were localized entirely at the Premium Outlets. Such crimes include **shoplifting**, **stolen property**, and the non-crimes of **traffic collisions** and **lost property**. A key question is whether, therefore, there is any evidence that traffic to Plainridge Park is increasing traffic to the Premium Outlets, or whether the shopping

center has undergone its own expansion unrelated to the casino. The answer to this question might make the difference in judgement for some of the crimes in the “uncertain” zone.

### Incidents reported to Wrentham, 1 July–30 June

Offense	2010–2015 Average.	Standard Deviation	2016	2017	2016 Z-Score	2017 Z-Score	Post Avg.	Avg. Z-Score
Murder	0.2	0.40	0	0	-0.50	-0.50	0.0	-0.50
Sexual Assault	0.8	0.75	1	0	0.27	-1.07	0.5	-0.40
Robbery	0.6	0.80	1	1	0.50	0.50	1.0	0.50
Aggravated Assault	4.2	2.32	6	3	0.78	-0.52	4.5	0.13
Simple Assault	7.4	8.26	15	17	0.92	1.16	16.0	1.04
Kidnapping	0.0	0.00	0	1	NA	NA	0.5	NA
Burglary	23.0	8.32	25	4	0.24	-2.28	14.5	-1.02
Purse-Snatching	0.0	0.00	0	0	NA	NA	0.0	NA
Shoplifting	47.0	25.91	113	105	2.55	2.24	109.0	2.39
Theft from Building	4.0	4.20	9	6	1.19	0.48	7.5	0.83
Theft from Machine	0.0	0.00	0	0	NA	NA	0.0	NA
Theft from Persons	1.8	1.60	1	1	-0.50	-0.50	1.0	-0.50
Theft from Vehicle	15.0	15.92	12	11	-0.19	-0.25	11.5	-0.22
Theft of MV Parts	0.6	0.80	0	1	-0.75	0.50	0.5	-0.13
Other Theft	94.2	33.84	57	35	-1.10	-1.75	46.0	-1.42
Auto Theft	4.2	2.64	5	6	0.30	0.68	5.5	0.49
Arson	0.6	0.80	0	0	-0.75	-0.75	0.0	-0.75
Bad Checks	0.0	0.00	1	0	NA	NA	0.5	NA
Credit Card Fraud	2.8	1.72	20	4	10.00	0.70	12.0	5.35
Employee Theft	3.0	2.45	5	0	0.82	-1.22	2.5	-0.20
Forgery	3.2	2.71	2	3	-0.44	-0.07	2.5	-0.26
Fraud/Con Games	2.8	2.71	7	2	1.55	-0.29	4.5	0.63
Identity Theft	7.0	7.13	8	3	0.14	-0.56	5.5	-0.21
Stolen Property	2.2	2.04	4	9	0.88	3.33	6.5	2.11
Vandalism	17.4	5.20	12	2	-1.04	-2.96	7.0	-2.00
Drugs	7.2	0.75	11	3	5.08	-5.61	7.0	-0.27
Drunk Driving	7.8	2.71	5	5	-1.03	-1.03	5.0	-1.03

Offense	2010–2015 Average.	Standard Deviation	2016	2017	2016 Z-Score	2017 Z-Score	Post Avg.	Avg. Z-Score
Disorderly	2.4	1.02	1	0	-1.37	-2.35	0.5	-1.86
Drunkenness	9.8	1.33	7	1	-2.11	-6.63	4.0	-4.37
Family Offenses	1.2	1.60	1	1	-0.13	-0.13	1.0	-0.13
Liquor Laws	1.4	1.50	0	0	-0.94	-0.94	0.0	-0.94
Pornography	0.4	0.49	0	0	-0.82	-0.82	0.0	-0.82
Prostitution	0.0	0.00	2	0	NA	NA	1.0	NA
Threats	3.0	1.41	1	1	-1.41	-1.41	1.0	-1.41
Trespassing	0.8	0.98	0	1	-0.82	0.20	0.5	-0.31
Weapons	0.0	0.00	0	1	NA	NA	0.5	NA
<b>Violent Total</b>	<b>13.2</b>	<b>9.97</b>	<b>23</b>	<b>22</b>	<b>0.98</b>	<b>0.88</b>	<b>22.5</b>	<b>0.93</b>
<b>Property Total</b>	<b>228.8</b>	<b>46.59</b>	<b>281</b>	<b>192</b>	<b>1.12</b>	<b>-0.79</b>	<b>236.5</b>	<b>0.17</b>
<b>Total Crimes*</b>	<b>276.0</b>	<b>56.26</b>	<b>332</b>	<b>227</b>	<b>1.00</b>	<b>-0.87</b>	<b>279.5</b>	<b>0.06</b>
Alarm	712.0	86.78	770	750	0.67	0.44	760.0	0.55
Disabled Vehicle	262.8	53.21	366	235	1.94	-0.52	300.5	0.71
Disorderly	163.0	21.42	173	201	0.47	1.77	187.0	1.12
General Service	175.0	45.40	152	183	-0.51	0.18	167.5	-0.17
Lost Property	33.4	8.06	45	94	1.44	7.51	69.5	4.48
Medical	547.8	141.94	557	587	0.06	0.28	572.0	0.17
Psychological	2.6	1.85	2	3	-0.32	0.22	2.5	-0.05
Suspicious Activity	403.8	28.54	524	444	4.21	1.41	484.0	2.81
Traffic Collision	206.2	18.77	263	263	3.03	3.03	263.0	3.03
Traffic Complaint	109.8	14.82	110	187	0.01	5.21	148.5	2.61

### Summary of notable increases: Wrentham

Incident Type	Significant in	Factors present	Likelihood of PP relationship	Notes
Shoplifting	All periods	LOG, COM, OTH	Unlikely	Agency is reporting large increases in shoplifting of clothing at the Premium Outlets during this period, with the majority of new offenders coming from Rhode Island. Lacking similar increases in other agencies or for other crimes, changes in store security are the most likely explanation.
Credit Card Fraud	All periods	LOG, REG, REL, OTH	Likely	See analysis in the "trends" section.
Stolen Property	2017 Total	LOG, REL	Unlikely	All incidents are at the Premium Outlets and seem related to the shoplifting increase discussed above (as with shoplifting, most offenders are from Rhode Island).

Incident Type	Significant in	Factors present	Likelihood of PP relationship	Notes
Drugs	2016	LOG	Unlikely	Spike was temporary and mostly related to motor vehicle stops of area residents. No indication that they were coming from the casino, no spatial relationship to casino, and incidents decreased significantly next year.
Disabled Vehicle	2016	LOG	Unlikely	There would be a logical relationship here with extra traffic in the area, but spatial patterns are not consistent with a PPC relationship and the increase did not continue, nor was it seen in other agencies.
Disorderly	2017	LOG	Unlikely	Increase is related to repeat calls at a handful of residential addresses, likely ongoing noise or domestic disputes.
Lost Property	2017 Total	LOG, REG	Uncertain	While I rated this "likely" for Plainville, the overwhelming concentration in Wrentham is at the Premium Outlets.
Suspicious Activity	2016 Total	LOG	Unlikely	Though there might be a logical relationship with extra people in the area, the increased did not sustain and not replicated in other communities. As with most Wrentham activity, concentration is at the Premium Outlets.
Traffic Collision	All periods	LOG, REL, REG	Likely	No reason to think that Wrentham isn't part of area trend. Washington Street went from an average of 23 collisions a year to 42 and 35 in 2016 and 2017. See full analysis at end.
Traffic Complaints	2017 Total	LOG, REG	Uncertain	Tempting to chalk this up to Plainridge Park and the extra vehicles inevitably in town, much as we did for Plainville. But here the totality of the increase is at the Premium Outlets.

### Summary of 2-year z-scores for all communities

Offense	Plainville	Attleboro	Foxborough	Mansfield	N. Attleborough	Wrentham	Total
Murder	NA	0.20	NA	-0.75	NA	-0.50	-0.27
Sexual Assault	0.44	0.52	0.41	1.44	2.42	-0.40	1.25
Robbery	-0.50	-0.84	-0.39	-1.03	-0.23	0.50	-1.22
Aggravated Assault	3.61	-1.43	1.44	-3.37	1.69	0.13	0.14
Simple Assault	0.00	1.05	-1.85	2.50	1.87	1.04	1.46
Kidnapping	4.50	-0.39	0.20	0.60	NA	NA	0.90
Burglary	-2.61	-1.26	-2.40	-1.87	2.34	-1.02	-1.94
Purse-Snatching	NA	2.00	-0.82	-0.27	-1.66	NA	-1.48
Shoplifting	0.94	-0.36	3.18	-1.33	-1.74	2.39	0.43
Theft from Building	-0.49	0.27	0.56	-1.36	-0.63	0.83	0.05
Theft from Machine	NA	0.60	NA	NA	-0.50	NA	0.40
Theft from Persons	NA	3.25	0.75	0.94	-1.07	-0.50	2.74

Offense	Plainville	Attleboro	Foxborough	Mansfield	N. Attleborough	Wrentham	Total
Theft from Vehicle	-1.30	-0.27	-4.29	14.08	-1.32	-0.22	-0.80
Theft of MV Parts	-1.86	-0.57	0.75	2.63	0.00	-0.13	-0.59
Other Theft	-1.30	-1.37	0.67	-2.49	0.72	-1.42	-3.25
Auto Theft	-1.50	-3.34	-0.06	-0.35	1.05	0.49	-2.84
Arson	-0.50	-0.68	0.20	1.13	2.00	-0.75	-0.17
Bad Checks	-0.68	-1.57	0.07	-0.99	0.00	NA	-1.20
Credit Card Fraud	3.14	2.16	1.35	-1.83	1.32	5.35	2.62
Employee Theft	-0.48	1.92	-1.19	-0.81	-0.25	-0.20	-0.49
Forgery	-0.64	-1.17	-1.49	0.03	0.15	-0.26	-1.39
Fraud/Con Games	1.58	3.21	-0.20	8.14	29.50	0.63	4.72
Identity Theft	2.23	2.43	0.09	2.04	NA	-0.21	1.22
Stolen Property	1.07	1.17	-0.94	-1.11	0.75	2.11	0.66
Vandalism	1.71	-2.46	-0.33	-2.24	3.41	-2.00	-1.26
Drugs	-0.28	-0.67	-0.10	-1.55	1.14	-0.27	-1.29
Drunk Driving	0.31	-0.96	-0.29	-0.07	2.77	-1.03	0.58
Disorderly	2.41	-1.59	0.25	0.03	3.39	-1.86	-0.61
Drunkenness	-3.54	27.76	-1.48	-2.91	3.02	-4.37	-2.04
Family Offenses	3.88	2.35	0.28	-2.27	NA	-0.13	2.74
Liquor Laws	-0.84	-1.67	-1.35	-2.33	4.25	-0.94	-2.11
Pornography	NA	0.65	1.84	-0.86	NA	-0.82	0.36
Prostitution	-0.50	1.22	-0.50	-0.75	NA	NA	0.59
Threats	-0.91	-0.81	-1.55	-5.21	0.92	-1.41	-1.44
Trespassing	-0.58	0.85	-0.15	-1.36	0.75	-0.31	-0.63
Weapons	2.06	-0.71	-0.91	-3.25	2.63	NA	-0.60
<b>Violent Total</b>	<b>1.25</b>	<b>-0.31</b>	<b>-0.79</b>	<b>2.15</b>	<b>2.21</b>	<b>0.93</b>	<b>1.58</b>
<b>Property Total</b>	<b>-0.82</b>	<b>-2.13</b>	<b>-0.07</b>	<b>-1.76</b>	<b>1.89</b>	<b>0.17</b>	<b>-2.08</b>
<b>Total Crimes*</b>	<b>-0.49</b>	<b>-2.49</b>	<b>-1.62</b>	<b>-3.30</b>	<b>2.91</b>	<b>0.06</b>	<b>-2.34</b>
Alarm	0.98	-0.95	-1.81	0.36	-0.29	0.55	-0.84
Disabled Vehicle	0.39	-0.83	-1.49	-0.67	-1.22	0.71	-0.94
Disorderly	0.26	-1.18	1.49	-0.29	-2.11	1.12	-1.23
General Service	1.24	-3.84	0.46	-3.29	2.00	-0.17	-0.86
Lost Property	3.13	0.09	10.63	NA	-0.45	4.48	5.04
Medical	-2.04	1.64	1.37	-0.88	-2.56	0.17	2.29
Psychological	1.02	1.95	-1.36	2.02	NA	-0.05	2.76
Suspicious Activity	5.65	-0.91	-1.25	1.27	0.82	2.81	-0.03
Traffic Collision	0.74	2.89	0.39	0.93	1.65	3.03	2.15
Traffic Complaint	2.97	-0.26	2.24	2.18	1.13	2.61	1.62

## Before and after comparison of other variables

The statistics in this section help bolster our understanding of trends in the Plainville area since Plainridge Park opened. It is possible that total volume of particular crimes and calls for service didn't increase, but shifts in other variables happened beneath the surface. For those categories that did increase, analysis of these variables can help us understand and explain those increases.

### Individuals arrested and charged

Whatever changes Plainridge Park has brought to the region, there has been a precipitous drop in individuals arrested, charged, and placed into protective custody during the last two years. Among the six local communities, only North Attleborough showed an increase, and it was an insignificant one. The Massachusetts State Police also showed an increase, due to the number of arrests occurring at Plainridge Park itself.

#### All individuals arrested, summonsed, or placed into protective custody, 1 July–30 June, years ending 2011–2017

Agency	Pre-PPC Avg	St. Dev.	Post-PPC Avg.	Z
Plainville	91.8	19.30	81.0	-0.56
Attleboro	2300.2	146.49	2090.5	-1.43
Foxborough	1392.0	339.51	912.0	-1.41
Mansfield	1516.2	138.15	1021.0	-3.58
North Attleborough	319.8	68.68	356.5	+0.53
Wrentham	97.6	36.69	69.0	-0.78
<b>Total</b>	<b>5717.6</b>	<b>386.75</b>	<b>4530.0</b>	<b>-3.07</b>

#### All individuals arrested, summonsed, or placed into protective custody by Massachusetts State Police, in the 6 communities, years ending 30 June

Agency	2014	2015	2016	2017
<b>State Police</b>	<b>634</b>	<b>452</b>	<b>537</b>	<b>679</b>

Analysis of the specific types of crimes involved shows that 75% of the decrease among the six local communities is found within the crimes of drunkenness (most "arrests" for this crime are actually protective custodies; the individual is released upon sobriety with no criminal charges) and liquor law violations. Most of *these* decreases, in turn, are found within Foxborough and Mansfield, indicating changes in policy or practice at the venues that have historically produced most of those custodies: Gillette Stadium and the Xfinity Center.

Without the liquor crimes, the change become less dramatic in most communities, and the figures for the post-Plainridge Park years fall generally within expected levels. The major exception is Mansfield, but unfortunately most of the remaining drop is in the "all other" offense category. This is difficult to analyze further with existing data. For most agencies, the category is made up primarily of motor vehicle offenses.

**All individuals arrested or summonsed (liquor violations and protective custody removed)  
years ending 2011–2017**

<b>Agency</b>	<b>Pre-PPC Avg</b>	<b>St. Dev.</b>	<b>Post-PPC Avg.</b>	<b>Z</b>
Plainville	60.0	12.70	62.5	+0.20
Attleboro	2111.6	170.38	1931.0	-1.06
Foxborough	370.6	18.87	377.5	+0.37
Mansfield	723.6	36.76	633.5	-2.45
North Attleborough	294.6	49.13	258.5	-0.73
Wrentham	69.2	12.70	63.0	-0.37
<b>Total</b>	<b>3629.6</b>	<b>101.54</b>	<b>3326.0</b>	<b>-2.99</b>

Between Plainville and the Gaming Enforcement Unit, Plainridge Park itself has added about 76 arrests per year to the area, making it the fourth-highest location in the six communities.

**Individuals arrested or charged, by single address, year ending 30 June**

<b>Location</b>	<b>Town</b>	<b>2016</b>	<b>2017</b>
Xfinity Center	Mansfield	396	347
Gillette Stadium/Patriot Place	Foxborough	206	124
Bristol Place shopping center	Attleboro	159	98
Plainridge Park	Plainville	66	86
Mansfield Crossing	Mansfield	54	54
Wrentham Premium Outlets	Wrentham	48	44
Emerald Square	North Attleborough	64	6
Attleboro Police Department	Attleboro	33	23
Yankee Spirits	Attleboro	27	16

**Location type**

Prior to the opening of Plainridge Park, one common hypothesis is that it would increase activity at the types of places that cater to visitors, such as hotels, gas stations, and convenience stores. This is not necessarily because we expected that the visiting population would be composed of criminals or uniquely problematic. It was a simple recognition that every time you increase the number of people at a location, crimes tend to increase as well.

At first glance, this seems to have happened. Convenience stores, gas stations, and hotels all saw significant increases in activity in the two years post-Plainridge Park, as did banks, specialty stores, and government buildings. (Location types with fewer than 10 incidents in both of the periods do not appear on the list.)

There are reasons to be cautious about drawing conclusions based on this data, however, since the same period also showed a significant drop in the “Other/Unknown” category. This makes it likely that many of the “increases” are simply the result of more accurate coding of this data field, with records that were before lazily coded as “other” now shifted to their proper categories.

Still, it’s worth analyzing to see if there’s anything useful in the data. Taking them one at a time, we find the following:

1. The increase at **banks** is largely related to the overall increase in fraud, credit card fraud, and identity theft in the area. The incidents are not really happening *at* banks, but “bank” is used as a default code when it’s unclear where a financial fraud occurred. See the analysis of those crimes for more information about the trends.

2. The uptick at **convenience stores** is almost entirely explained by the increase in credit card fraud in the area. (Average of 5 per year before 2016 up to 16 in 2016 and 8 in 2017.) This is consistent with my hypothesis, covered in the “trends” section, that the credit card fraud increase is largely to do with “partiers” coming to the area and bringing stolen credit cards with them.

3. The **gas station** increase is unfortunately found in the elusive “all other” category of offenses, making it difficult to analyze. It’s also confined almost entirely to Foxborough and Mansfield.

4. Foxborough and Mansfield were also the only two agencies to see the increase at **government and public buildings**, although in different years—Mansfield in 2016 and Foxborough in 2017. The increases can be further narrowed down specifically to the Mansfield Police Department and Foxborough Town Hall. Unfortunately, they’re also in the “All Other” category. Whatever is happening here, it doesn’t seem to have anything to do with Plainridge Park.

5. The dramatic **hotel** increase is all in 2017 (2016 was average) and primarily in Foxborough, which makes sense because it has the highest number of hotels. Mansfield had a small but still-significant increase. We can narrow the increase down further to only three specific properties: the Red Roof Inn in Mansfield, the Comfort Inn in Foxborough, and the Hilton Garden Inn in Foxborough at Patriot Place. That last one didn’t open until 2016, so that explains part of the increase in a way that definitely isn’t related to Plainridge Park, but its contribution (14 incidents in two years) was the least of the three.

A large number of offenses increased in small amounts at these locations—including many in that elusive “all other” category, probably signaling self-directed police activity like warrant arrests and criminal charges for motor vehicle offenses in the parking lots. Drug offenses, simple assaults, and drunkenness are among the offenses that increased in small amounts. The increase is pretty small when we break it down that far (fewer than 10 incidents in two years), but it nonetheless does seem like a real trend that could plausibly be related to extra traffic in the area going to Plainridge Park.

6. The increase at **specialty stores** is overwhelmingly in North Attleborough, with Wrentham reporting a small increase. In the latter case, it appears to be a real increase in shoplifting at the Premium Outlets, covered in Wrentham’s section above. In the case of North Attleborough, the increase is simply a shift in coding. Addresses coded as “department store” and “other” in prior years were coded under the more precise category in 2016 and 2017. The agency actually saw a net decrease in retail crimes in 2016 and 2017.

Location Type	Pre-PPC Avg.	St. Dev.	Post-PPC Avg.	Z
Air/Bus/Train Terminal	25.0	5.40	30	0.925292
Bank	60.4	14.36	104	3.035988
Bar	208.8	119.47	48.5	-1.34173
Church	26.2	5.49	19	-1.31104

Location Type	Pre-PPC Avg.	St. Dev.	Post-PPC Avg.	Z
Commercial Buildings	69.0	20.83	37	-1.53605
Construction Site	95.0	23.18	95	0
Convenience Store	87.6	7.50	102	1.920171
Department Store	559.4	64.38	498.5	-0.94592
Drug/Doctor/Hospital	100.8	13.44	119	1.354443
Field/Woods	63.0	14.39	59	-0.27789
Gas Station	99.6	14.18	121	1.509289
Government/Public	133.6	18.29	162.5	1.579825
Grocery	89.6	18.71	99	0.502279
Hotel	132.4	9.83	176	4.435147
Liquor Store	40.6	6.31	48.5	1.251605
Office	119.2	13.35	108	-0.8391
Other/Unknown	1957.0	224.61	1353.5	-2.68684
Park	9.6	14.35	30	1.421888
Parking Lot/Garage	573.0	202.39	290	-1.39831
Residence	2969.0	193.96	3034	0.335126
Restaurant	189.8	15.07	171	-1.24791
School	152.6	28.33	100.5	-1.83898
Shopping Mall	28.0	55.50	42.5	0.261255
Specialty Store	180.4	32.65	324.5	4.413026
Street	1071.6	150.06	919.5	-1.01359

## Offender and victim travel distances

Analysis of travel distances (for known victims and offenders) helps us determine if there are significant shifts in the populations of victims and offenders for various crimes regardless of whether the total volumes changed. Distances are measured in direct lines (unfortunately, I did not have the resources to measure likely driving distance) from the actual crime locations to the center points of the victims' and offenders' towns of residence. (Only crimes with at least 30 known victims and offenders in both pre- and post-PPC periods are included.) Within the 6 Plainridge Park communities, the maximum distance is about 15 miles. Thus, median travel distances of less than 15 miles indicate that the majority of victims and offenders live among the six communities. The higher the median travel distance, the more victims and offenders the crime is pulling from outside the area communities.

Certain crimes show logical results. Since "family offenses" generally occur at the victim's home, the median travel distance is extremely small for the crime. Assaults, which tend to be domestic and located within residences, are similarly small. Crimes like liquor law violations and drunkenness, overwhelmingly committed by outside visitors to facilities like Gillette Stadium and the Xfinity Center, both have long travel distances.

**Median distance traveled (in miles) for victims and offenders, per crime type** ("NA" indicates the crime primarily involves commercial victims or always occurs at the victim's home, thus making travel distances meaningless)

Offense	Victims			Offenders		
	Before PPC	After PPC	Variance	Before PPC	After PPC	Variance
Robbery	2.44	2.78	14%	4.07	3.74	-8%
Aggravated Assault	2.28	2.13	-7%	2.34	2.58	11%
Simple Assault	2.08	2.24	8%	2.29	2.38	4%



Offense	Victims			Offenders		
	Before PPC	After PPC	Variance	Before PPC	After PPC	Variance
Burglary	NA	NA	NA	3.92	3.19	-19%
Auto Theft	2.91	3.69	27%	4.63	6.26	35%
Purse-Snatching	5.67	4.11	-27%	6.57	6.66	1%
Theft from Building	1.52	1.85	21%	3.93	4.86	24%
Theft from Persons	3.68	5.25	43%	3.07	2.75	-10%
Theft from Vehicle	2.65	2.54	-4%	4.16	4.60	10%
Theft of MV Parts	3.24	3.59	11%	4.07	5.34	31%
Shoplifting	NA	NA	NA	5.23	6.71	28%
Employee Theft	NA	NA	NA	5.36	7.40	38%
Other Theft	2.01	2.34	16%	3.98	4.27	7%
Bad Checks	NA	NA	NA	5.41	5.40	0%
Credit Card Fraud	NA	NA	NA	4.62	9.65	109%
Forgery	NA	NA	NA	7.41	10.27	39%
Fraud	1.75	2.38	36%	8.46	11.82	40%
Identity Theft	1.88	1.83	-2%	11.53	14.39	25%
Stolen Property	3.32	5.09	53%	4.16	7.25	74%
Vandalism	2.00	1.95	-2%	2.68	3.36	25%
Trespassing	3.03	3.35	10%	12.17	6.51	-47%
Drugs	NA	NA	NA	4.82	5.80	20%
Drunk Driving	NA	NA	NA	4.07	4.41	8%
Drunkennness	NA	NA	NA	28.48	23.09	-19%
Disorderly	NA	NA	NA	5.33	5.14	-4%
Threats	1.54	1.99	29%	2.86	3.07	7%
Liquor Laws	NA	NA	NA	20.91	8.90	-57%
Family Offenses	1.37	1.56	14%	3.25	4.69	45%
Weapons	2.09	2.67	28%	1.98	2.09	5%

The data shows that in the Plainville area, the overwhelming number of victims and offenders in both periods are from within the local area. This would be fairly common among any group of agencies. But increase in certain categories, particularly in offender travel distances among the fraud categories, suggest shifting patterns that may have Plainridge Park as a cause. These crimes are discussed in more detail in the “trends” section.

# Comparison of Plainville area changes with control areas

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Comparing an area to its own history can yield valuable results, but the results become even more valuable in comparison to what is happening in similar areas around the state. If a crime type increases in the Plainville area following the introduction of Plainridge Park, a causal relationship with the casino becomes less likely if the same crime is increasing everywhere but more likely if the same crime is holding steady or decreasing elsewhere.

To answer this question, I must use a slightly different dataset than the ones used in the previous section, in which we extracted data directly from the records management systems of the Plainville-area communities. For this part of the study, I used crime data submitted to the Massachusetts Incident-Based Reporting (IBR) system.

The advantages to this type of analysis that by comparing the “study” communities to other communities, we can better measure the impact of a new variable like Plainridge Park. This type of study, using control areas, is generally required by serious quantitative researchers to reach a conclusion. Among other things, the before-and-after analysis in the preceding sections assumes that if Plainridge Park impacted the surrounding communities, that impact would be reflected in *increases* in crime. In fact, if crime was already decreasing in those communities for other reasons, the impact of the casino might be seen in *lesser decreases* rather than increases, something that a comparative analysis should be able to tell us.

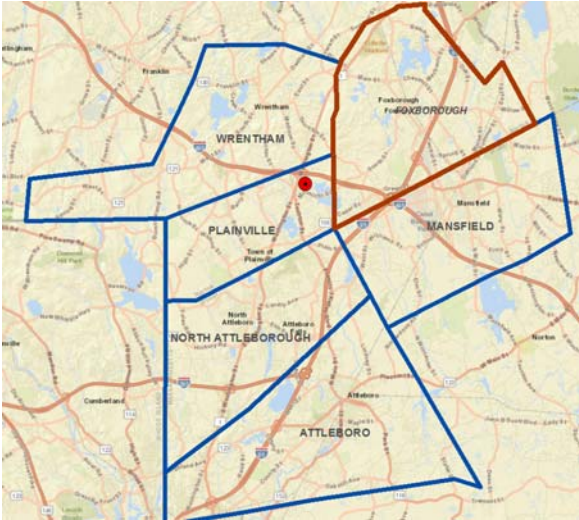
This data has some regrettable limitations. Due to delays in reporting from both the Plainville-area and comparison-area communities, this analysis **covers only the 18-month period between 1 July 2015 and 31 December 2016**. 2017 data will not be available until mid-way through 2018. The second limitation is that only crime, not other calls for service, are reported to the state IBR program. Third, because we received the data in summary form (totals only), we cannot specifically exclude incidents at Plainridge Park itself, nor can we perform more detailed analysis of the data beyond crime category and time period.

Finally, the figures for the “study” area do not include Foxborough, as the agency has not reported annual figures to the state Crime Reporting Unit for several years.

To conduct this analysis, I first identified three comparison areas of roughly similar population, square mileage, and crime total. I looked for areas near highways with strong retail corridors to best match the geographic, traffic, and economic profile of the Plainville-area communities. The table below identifies the three comparison areas and shows their comparative statistics.

Area	Communities	Population (2010)	Square Miles	2014 IBR Total
<b>Study</b>	Plainville, Attleboro, Foxborough, Mansfield, North Attleborough, Wrentham	131,401	122.9	3,924
<b>Comparison 1</b>	Berlin, Hudson, Marlborough, Northborough, Shrewsbury, Southborough, Westborough	139,230	124.9	3,519
<b>Comparison 2</b>	Canton, Dedham, Norwood, Randolph, Westwood	121,622	62.4	3,953
<b>Comparison 3</b>	Bedford, Concord, Lexington, Lincoln, Waltham, Weston	140,638	102.2	2,910

I also compare the study area to the totality of Massachusetts agencies reporting to the IBR program (though excluding those that did not reported consistently for this period). This list includes 303 city and town police departments and 16 college, university, and institutional police departments but excludes Boston, the State Police, and 47 other communities (almost all very small) that do not report to the IBR standard or do not have their own police agencies.



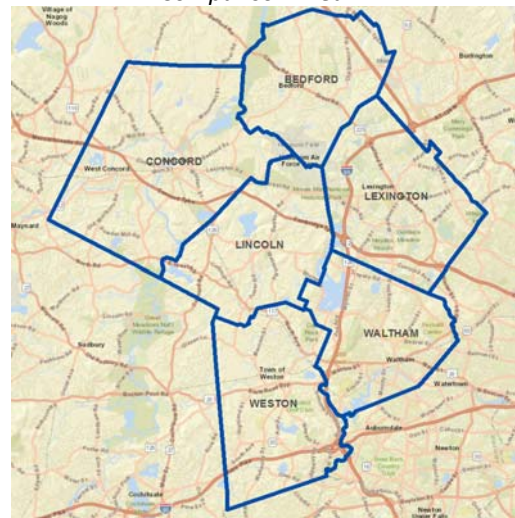
Study Area



Comparison Area 1



Comparison Area 2



Comparison Area 3

The table below compares the percentage changes observed in these various groups of communities in the second half of 2015 (July–December) when compared to an average of the same time period over the five previous years.

**Changes in crime in study areas and comparison areas, July 2015–December 2016 vs. average of previous 5 years**

Measure	Study Area	Comparison 1	Comparison 2	Comparison 3	All Comparisons	Rest of Massachusetts
<b>Murder</b>	-100%	-100%	+150%	-55%	0%	-17%
<b>Sexual assault</b>	+1%	-32%	+17%	+7%	-5%	-2%
<b>Robbery</b>	-20%	-17%	-21%	-51%	-30%	-17%
<b>Kidnapping</b>	+22%	+25%	-73%	-81%	-53%	-10%
<b>Aggravated Assault</b>	-8%	+1%	+2%	-12%	-3%	0%

Measure	Study Area	Comparison 1	Comparison 2	Comparison 3	All Comparisons	Rest of Massachusetts
Simple assault	+18%	-15%	+1%	-19%	-11%	-7%
Arson	-9%	-55%	+14%	-23%	-17%	-24%
Burglary	-28%	-31%	-37%	-35%	-34%	-33%
Auto Theft	-26%	-13%	+6%	-22%	-6%	-7%
Purse snatching	-58%	-26%	-50%	-100%	-44%	-21%
Shoplifting	+9%	-26%	+22%	-17%	+1%	0%
Theft from a building	-3%	+55%	-19%	-23%	+3%	-17%
Theft from a person	+25%	+35%	+28%	-18%	+4%	-8%
Theft from a vehicle	-21%	-11%	-19%	-24%	-18%	-24%
Theft of vehicle parts	-10%	-39%	-20%	-34%	-23%	-11%
Other theft	-22%	-26%	-10%	-22%	-20%	-19%
Employee theft	-8%	+70%	+11%	-60%	+17%	-11%
Vandalism	-13%	-4%	-30%	-36%	-24%	-18%
Counterfeiting/Forgery	+4%	-19%	+7%	+31%	+4%	-11%
Credit card fraud	+51%	+41%	-16%	+2%	+2%	+10%
Fraud/con games	+22%	+6%	+35%	+34%	+25%	+7%
Identity theft	+79%	+73%	+74%	+113%	+79%	+18%
Threats	-12%	-35%	-18%	-14%	-26%	-13%
Drug Offenses	-5%	-30%	-23%	-19%	-24%	-9%

The results suggest first that the Plainville area's decrease in many property crimes is indicative of a regional trend. The decreases we've seen in burglary, robbery, and different types of theft mirror those in comparison areas and in the state as a whole.

Significant variances between the Plainville area and the comparison communities are seen in the crimes of **kidnapping, credit card fraud, simple assault, thefts from persons, and drug offenses**. A few notes:

- The kidnapping increase in the area, as previously addressed, is related to the domestic violence increase in the area. The increase involves small numbers and only in 2016 (from an average of 6 to a 2016 total of 12). Each incident was fully reviewed and there was no PPC or gambling connection among the victims or offenders.
- The evidence from this analysis bolsters the finding that the credit card fraud increase is "likely" related to the casino; see the "trends" section for a full analysis.
- The simple assault variance is also related to the increase in domestic violence in the area; see the "trends" section for a full analysis.
- The increase in thefts from person and the "decreased decrease" in drug offenses (it went down in the Plainville area but not as much as in comparison communities) is due to activity at Plainridge Park itself. Thefts of TITO tickets and personal property are generally reported under the former category, and several drug arrests have been made in the casino parking lot. See the "incidents at Plainridge Park" section for more details.

Finally, this analysis shows that some of the major increases seen in the Plainville area—including identity theft and fraud—are also consistent with statewide increases in the same crimes, lessening the likelihood of a Plainridge Park relationship to those crimes.

# State Police statistics

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The Massachusetts State Police cover the highways, state roads, and state property throughout Massachusetts, including the Plainville area. As such, they often respond to crimes and calls for service that are not recorded in the databases of the local communities. Analyzing state police data is thus important in determining whether overall social harms increased in the Plainville area following the introduction of the casino.

Unfortunately, the State Police also have the most troublesome dataset of the agencies, lacking enough historical data to establish a valid baseline average, and showing several inconsistencies in coding.

As with Plainville, the numbers below exclude activity at 301 Washington Street (Plainridge Park) specifically, as they are covered in an earlier section. The purpose of this analysis is to help determine if activity has increase in areas *around* Plainridge Park.

## Crimes, July–June reported to the MSP in Plainville, Attleboro, Foxborough, Mansfield, North Attleborough, and Wrentham, 1 July–30 June

Crime Type	2014	2015	2016	2017
Aggravated assault	2	1	4	2
Simple assault	13	7	11	7
Threats	3	2	0	1
Burglary	1	0	0	0
Theft from a building	0	1	0	0
Other theft	5	0	6	4
Auto theft	1	0	0	0
Credit card fraud	0	0	2	0
Counterfeiting/Forgery	1	1	4	1
Stolen property	2	2	4	0
Vandalism	4	2	3	3
Drug offenses	23	28	14	14
Drunk driving	29	43	31	37
Disorderly conduct	13	12	10	11
Drunkenness	52	32	34	31
Liquor laws	19	19	8	10
Trespassing	3	1	2	2
Weapon offenses	1	1	2	4
All other offenses (incl. vehicle)	219	157	192	213
<b>Total</b>	<b>391</b>	<b>309</b>	<b>327</b>	<b>340</b>

With only two years of past data and two years of post data, there is no good way to establish statistical significance, but a simple scan of the numbers suggests that, in the highways and state properties surrounding Plainridge Park, it has been business as usual for the state police. No figure is notably higher post-casino than pre-casino.

## Non-crime incidents, July–June MSP in Plainville, Attleboro, Foxborough, Mansfield, North Attleborough, and Wrentham, 1 July–30 June

Crime Type	2014	2015	2016	2017
Abandoned vehicle	10	6	4	12
Administrative	14	6	6	8
Alarm	1	3	4	2
Animal complaint	55	39	46	42
Assist other agency	144	101	127	113
Building check	104	411	994	1016
Crime enforcement	156	188	281	322
Death investigation	43	45	57	70
Disabled vehicle	1176	1102	922	1030
Disorderly	75	46	73	63
Domestic dispute	15	11	6	4
Field Interview	11	1	1	14
Fire	104	78	73	123
General service	39	23	19	24
Investigation	100	68	82	74
Lost property	9	2	2	3
Medical	66	59	71	91
Missing person	5	4	8	9
Prisoner transport	33	36	82	76
Recovered stolen vehicle	8	6	8	4
Road conditions	283	226	220	236
Suspicious activity	63	39	47	26
Traffic complaint	222	158	137	175
Traffic enforcement	60	31	20	153
Vehicle stop	564	431	449	639
Warrant service	9	7	7	5
Well-being check	4	6	13	6
All other	110	67	89	99
Total calls for service <sup>12</sup>	3598	3282	3952	4534
Total reactive calls for service <sup>13</sup>	2589	2146	2119	2308

State Police calls for service data shows decreases in most *reactive* calls for service (those prompted by citizen complaints or events on the highways) but significant increases in several *proactive* calls for service. In particular, the State Police seem to have stepped up their proactive checks of buildings and rest areas (or, at least, the recording of those activities) during the post-casino period, as well as proactive traffic enforcement and crime enforcement.

Call types that we would have expected to increase due to increased traffic—traffic complaints, and disabled vehicles, suspicious activity—were all on par with previous years, suggesting that the area highways absorbed the new traffic to Plainridge Park without much problem. Even traffic collisions, which had showed a slight increase

<sup>12</sup> Total calls for service includes some activities previously covered in the “crimes” section and thus is higher than the sum of the selected call-for-service categories listed here.

<sup>13</sup> This total makes up the call types that are almost all citizen-generated, excluding traffic enforcement, crime enforcement, building checks, investigations, and vehicle stops.

after the first six months (July–December 2015) turned around in the first half of 2016 and ended the year on par with the previous two. 2017 was also consistent with the past average.

### Traffic collisions reported to the MSP, July-June, by Town

Town	2014	2015	2016	2017
Plainville	51	59	44	44
Attleboro	246	241	254	304
Foxborough	26	320	289	331
Mansfield	215	201	190	170
North Attleborough	130	154	134	191
Wrentham	111	117	111	112
<b>Total</b>	<b>1014</b>	<b>1092</b>	<b>1022</b>	<b>1152</b>

Collision figures show the State Police mostly adhering to historical averages until the spring of 2017, which put March–June totals well above average.

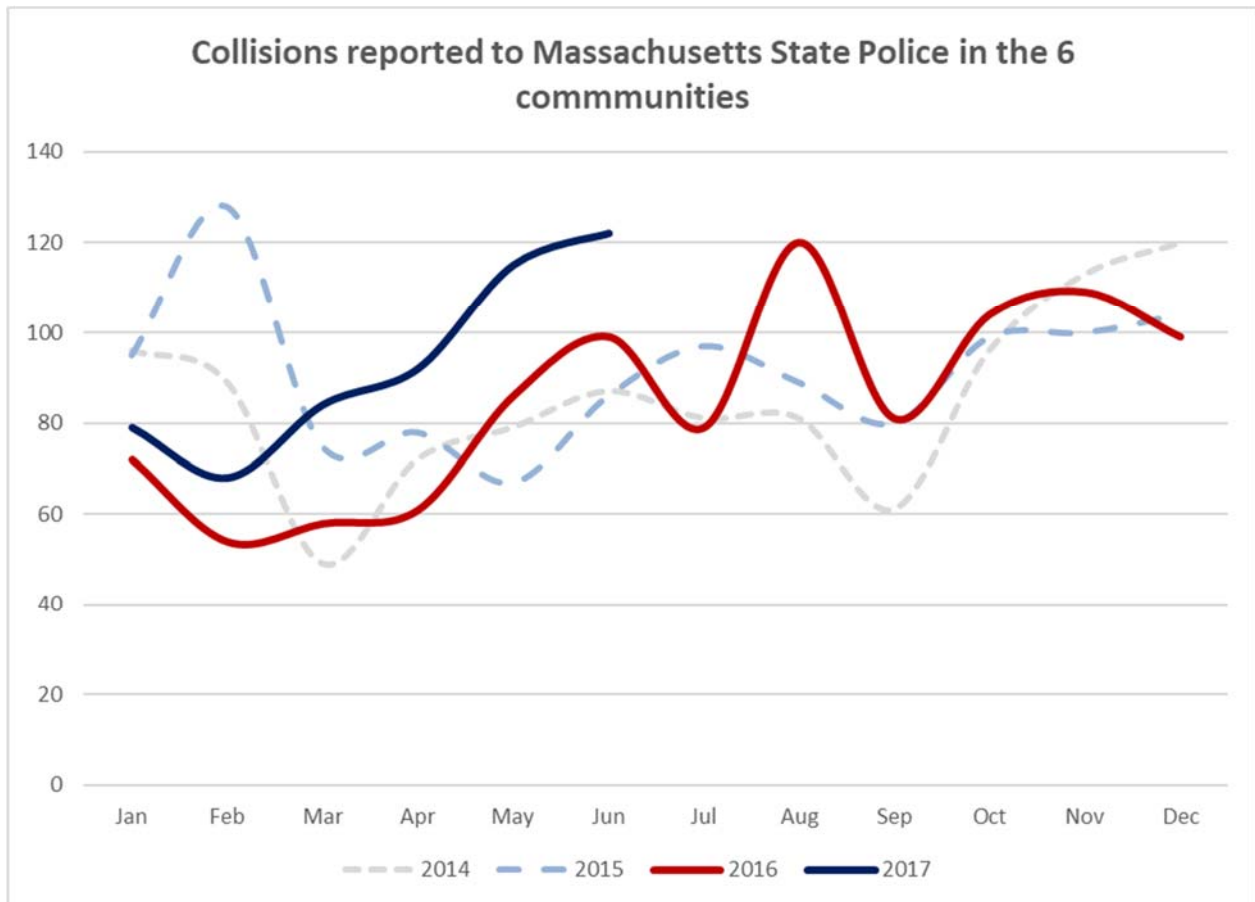


Figure 6: Collision data shows an increase in collisions on state roads in the area in 2017.

In the 6-month evaluation released in the spring of 2016, it seemed that traffic collisions were increasing slightly in the region—the line above for 2015 shows slightly above-average activity in June, July, and September, following the opening of Plainridge Park. But any increases were balance by far lower-than-normal totals in the first four

months of 2016, likely owing to far better weather than the previous years. Our conclusion at this point is that if Plainridge Park is causing any variances in traffic collisions, owing to greater traffic on state highways coming to the casino, the effect is extremely subtle and easily overwhelmed by other factors.

A full crash analysis must await the availability of a complete dataset for both state and local roads in 2018.



# Detailed analysis of significant trends

## Simple assault, aggravated assault, and family offenses

The Plainville area is in the grip of a domestic violence increase, manifested in both simple and aggravated assaults and the “family offenses” category, which usually involves child neglect or the violation of a restraining order. Plainville, Foxborough, and North Attleborough showed an increase in aggravated assault during the period (attacks with either a dangerous weapon or serious injury), and Mansfield and North Attleborough showed large increases in simple assault (an attack with no weapon and no serious injury). Family offenses were up in Plainville and Attleboro. The comparative analysis section shows no comparable increase in assaults in comparison communities or in the state at large.

Several variables point to this increase being related to domestic violence. First, most of the increase is occurring in residences, which does not inevitably connote family violence but usually does. Second, a look at the victim and offender ages and sexes suggests that the primary increase is within adult males abusing adult females—likely intimate partners or spouses. The reverse has also increased significantly, as have adult males abusing teenaged males and females (likely their own children).

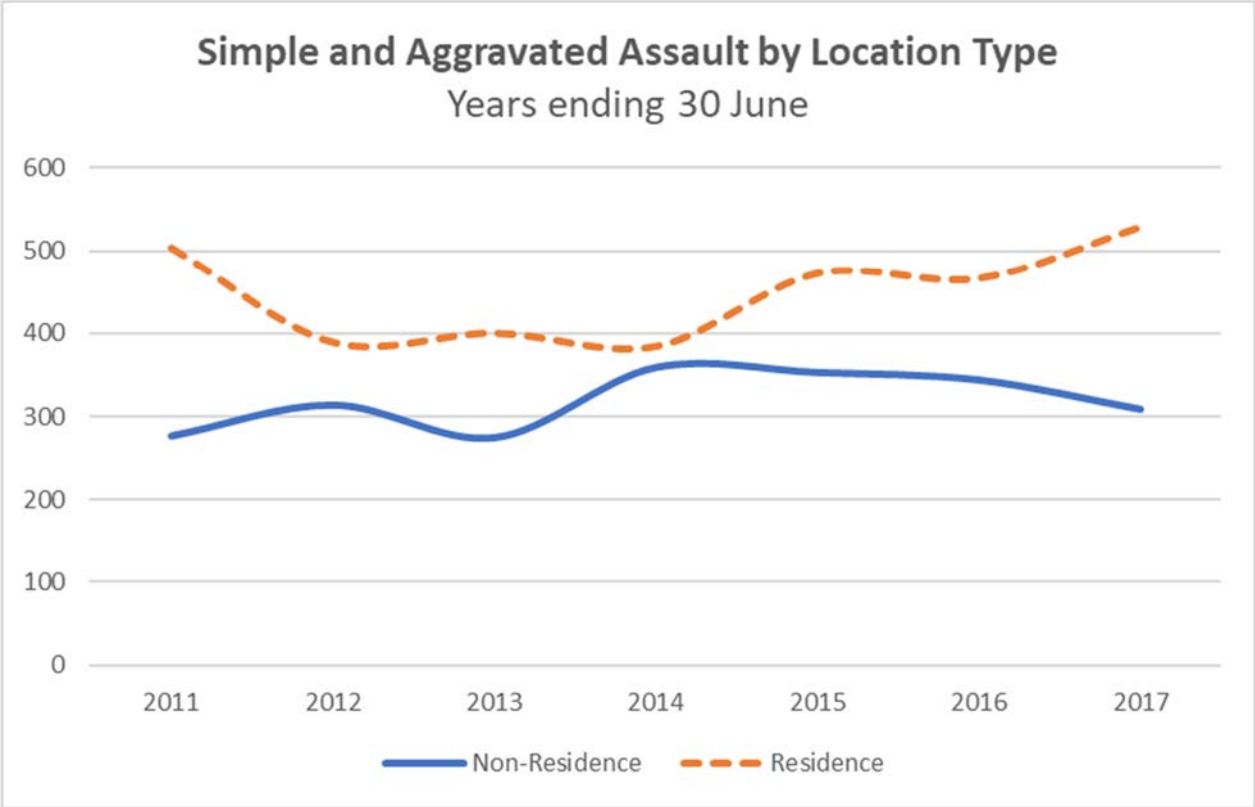


Figure 7: Increases in assaults are primarily concentrated at residences, suggesting domestic violence.

Finally, a review of a sample of 100 assault cases in Plainville and Foxborough shows that domestic assaults once accounted for between 35% and 40% of the assault total but have accounted for between 44 and 49% of the assault total in the last two years.

The increase, however, does not seem to have much to do with Plainridge Park. The trend began in the year before the casino opened. Studies do show a relationship between gambling and domestic violence. In particular, problem gambling is identified as a risk factor for increased domestic violence in several studies<sup>14</sup>. However, it is unclear from these studies whether we should expect to see such a large increase among an entire population so immediately adjacent to the casino. Moreover, if gambling were a contributor to these incidents, we would expect to see it mentioned in at least some of the reports, but the words “casino,” “gambling,” or “Plainridge” did not appear in any of the sample reports I reviewed. I conducted keyword searches of the entire databases in Plainville, Attleboro, and North Attleborough and found only one record of a “family offense” in Attleboro that even mentioned gambling or the casino, and even it only had a tangential relationship to the incident (the offender was located there after a local domestic assault). I am not discounting the possibility that gambling could have a subtle influence that does not necessarily manifest as the proximate cause of the immediate domestic violence incident, but if there were a gambling influence, I find it suspicious that no victim or offender statement references it at all.

#### Simple and aggravated assault in 6 communities by offender and victim demographics

Age/Sex victim/offender type	Pre-PPC Annual Average	Post-PPC Annual Average	Change
Adult male v. adult male	298.6	270.0	- 28.6
Adult male v. adult female	294.2	377.5	+83.3
Adult female v. adult male	119.2	155.0	+ 35.8
Teen male v. adult male	91.4	101.0	+ 9.6
Adult female v. adult female	56.2	86.0	+ 29.8
Teen male v. adult female	54.4	72.5	+ 18.1
Teen male v. teen male	50.4	62.0	+ 11.6
Adult male v. teen female	48.0	64.0	+16.0
Teen male v. teen female	43.0	42.5	- 0.5
Adult male v. teen male	38.6	76.0	+ 37.4

Increases have been somewhat inconsistent, with some agencies reporting decreases in one year and increases the next, or increases in one type of assault but decreases in the other. A third year will help determine if this is truly a “trend.” Beyond that, a more extensive study would need to use self-report data or cross-reference domestic violence offenders with problem gamblers to look for correlations that an analysis of crime reports might miss.

The area chiefs and crime analysts have offered several hypotheses for the increase, including frustration and tension over the economy and a greater willingness to report. These are equally difficult hypotheses to test. For now, the best we can say is that there is no *direct* evidence to tie the domestic assault increase in the Plainville area to Plainridge Park, gambling in general, or indeed any specific cause.

#### Credit card fraud

I have reported extensively on credit card fraud in the previous two reports. Almost immediately after the casino opened, we saw increases in the crime from all agencies except Mansfield. They were particularly high in Plainville and Wrentham. Overall, the region saw 70 more incidents of this crime in the 18-months following the opening of Plainridge Park than the average of the previous 5 years.

<sup>14</sup> See, for instance, the meta-analysis of 14 studies by Dowling, N. et. al. (2016). Problem gambling and intimate partner violence: A systematic review and meta-analysis. *Trauma, Violence, & Abuse* 17(1), 43–61. The study found “consistent evidence that there is a significant relationship between problem gambling and being a victim of [intimate partner violence],” and “even more consistent evidence that there is a significant relationship between problem gambling and perpetration of IPV.”

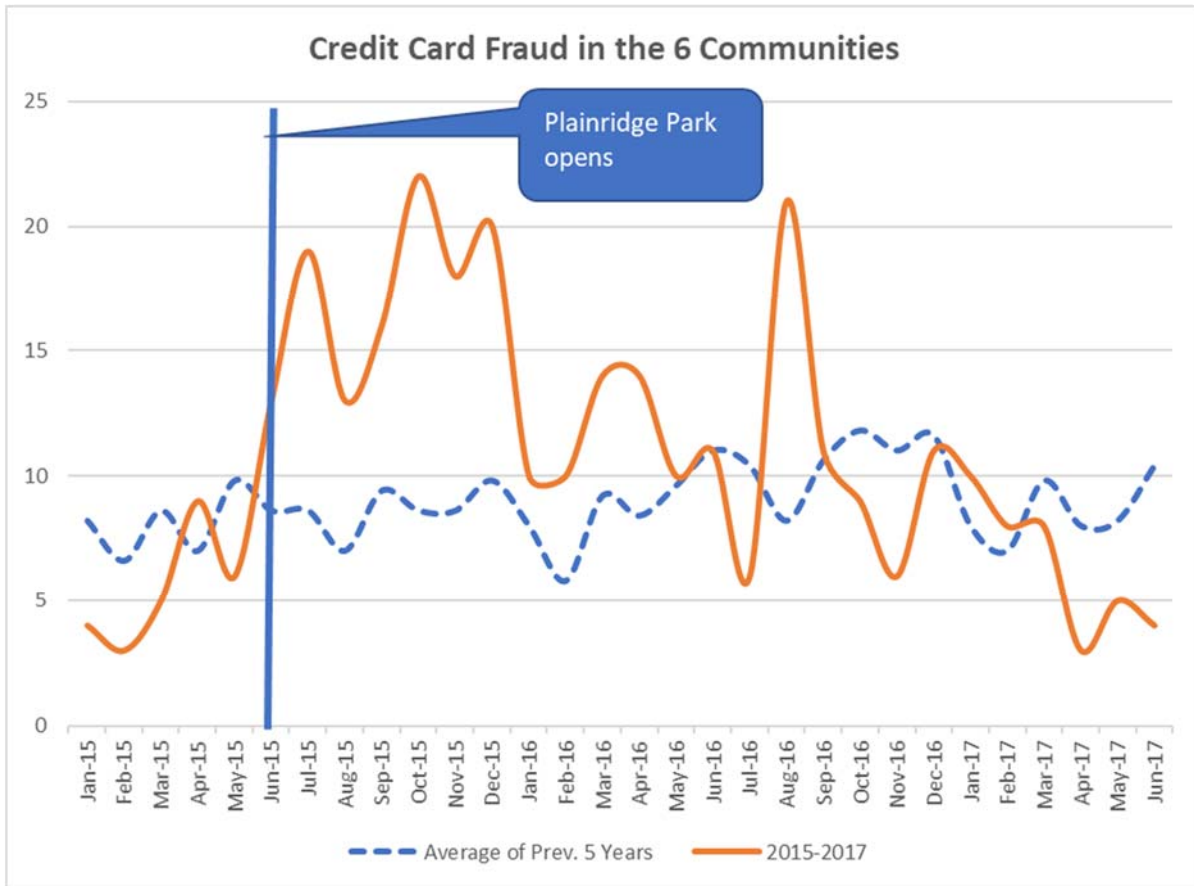


Figure 8: Credit card fraud increased during the first year after PPC opened but decreased the second year.

The evidence was circumstantial but compelling. The increase was almost immediate after the opening of Plainridge Park and sustained for the first 13 months. None of the comparison communities nor the state as a whole was reporting such a dramatic increase. Distance analysis shows more offenders coming from outside the Plainville region.

Further analysis led to a hypothesis. Most of the increase could be explained through the local purchase of food, liquor, and cigarettes, types of property consistent with a general increase seen in crimes at gas stations and convenience stores (see the analysis of location types above). The hypothesis was thus that a number of people were coming from out of town to visit Plainridge Park, bringing stolen credit cards with them, and using those cards to purchase vacation staples while saving their cash for the casino.

We lacked and still lack a “smoking gun”—a specific statement from offenders caught using stolen credit cards that they are in the area to visit Plainridge Park. On the other hand, the apprehension rate for such offenders is low. Only a small percentage of these offenders would have been interviewed by a police officer or detective, and it is not common practice among the area agencies to ask all arrested offenders whether they are in the area to gamble. The lack of this final link was thus troubling but not wholly unexpected.

Despite my confidence in the overall hypothesis, the trend disappeared in the year ending 30 June 2017, making it largely a first-year phenomenon. This doesn’t mean that the trend didn’t exist, but it happened to coincide with improved security measures on credit cards, and it’s possible that local merchants took extra steps to verify credit card purchases after getting swindled a few times. We will continue to monitor and report on this category in future reports.

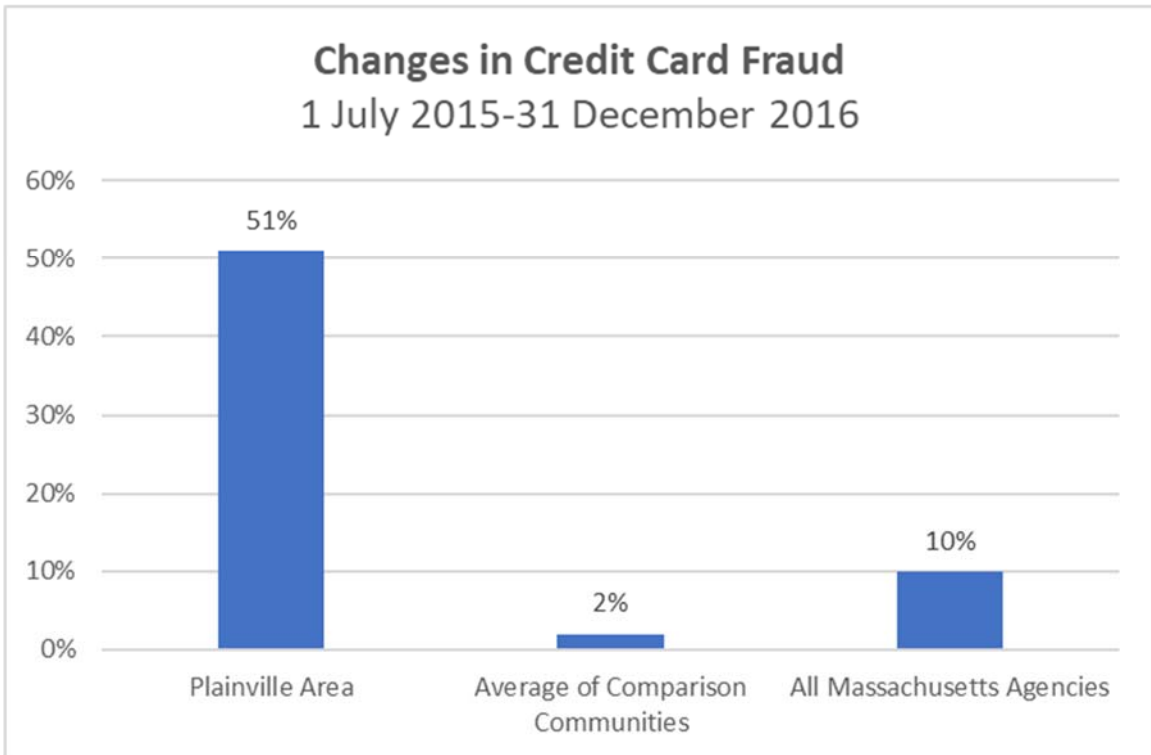


Figure 9: Credit card fraud has increased more in the Plainville area than in comparison areas.

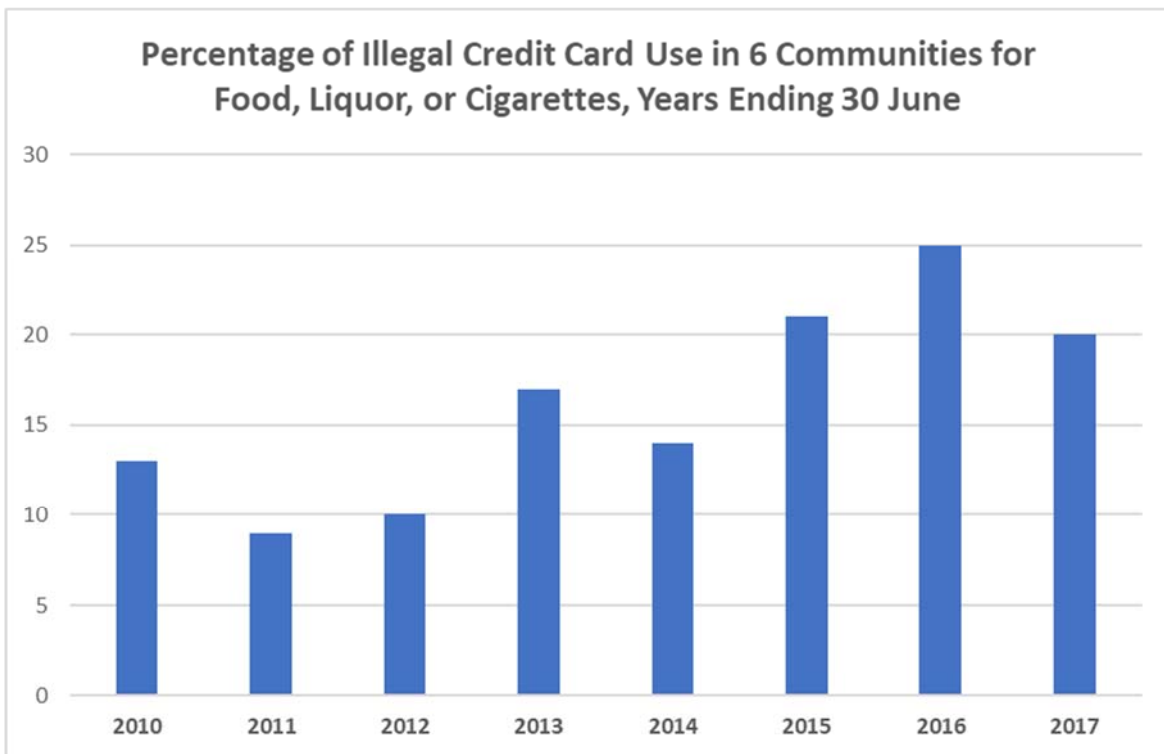


Figure 10: Most of the new fraud is going to purchase consumable goods.

## Fraud/con games

All agencies except Foxborough reported increases in this category, significantly in Attleboro, Mansfield, and North Attleborough—although in the case of the latter agency, the increase is confused by improved coding (the department almost never used this crime code before 2015).

The category encompasses a variety of con games and swindles, often committed electronically. A review of the narratives from the participating agencies reveals several patterns and trends:

- There is a clear trend of telephone scams at work in these communities, accounting for just over 30% of reported incidents. These cases involve offenders calling victims (often elderly) and impersonating distressed family members, IRS agents, credit bureau employees, or other officials. Through guile and trickery, they get the victim to turn over credit card or bank account information and subsequently use it to drain accounts, often out of the country. Such scams have been happening for years, and even if the offenders in such incidents were motivated by gambling, we would not expect the victims to be geographically clustered near the casino.
- Another complex trend was identified involving the use of online services like MoneyGram for purchases. The ruses might involve a “seller” who simply takes the victim’s money, or a “buyer” who over-pays for something the victim is selling and asks the victim to send back the remainder, only to discover later that the original payment was fraudulent. Again, this is a national trend that would not show a geographic cluster *near* the casino even if motivated by gambling.
- In about 20% of cases, the agencies mis-used the “fraud” category and should have coded the incidents as employee theft, regular theft, of possession of a fake ID.
- For the first 18 months post-casino, the crime was increasing in comparison communities at roughly the same rate that it increased in the Plainville area.
- No incident narrative, which includes interviews with offenders and victims, mentioned Plainridge Park, gambling, or casinos as a motive or in any way involved in the incidents.

Thus, my conclusion is that the increase in fraud in several of the reporting agencies is a combination of improved coding, *over-coding*, and a couple of legitimate patterns that nonetheless seem non-casino related and reflect larger regional trends. Nonetheless, the increased statistics alone are a cause for concern and I have rated the increase as “uncertain” in terms of a relationship to Plainridge Park.

## Identity theft

During the 24 months post-Plainridge Park, identity theft increased significantly in Plainville, Attleboro, and Mansfield and slightly in Foxborough.

### Identify theft per year in the 6 communities, years ending 30 June

Agency	2011	2012	2013	2014	2015	2016	2017
Attleboro	21	30	45	40	61	72	73
Foxborough	11	7	10	17	61	21	25
Mansfield	12	26	20	13	41	38	50
Plainville	4	0	0	3	5	8	6
Wrentham	1	0	4	11	19	8	3
<b>TOTAL</b>	<b>49</b>	<b>63</b>	<b>79</b>	<b>84</b>	<b>187</b>	<b>147</b>	<b>157</b>

Among law enforcement professionals, identity theft is regarded as one of the fastest-growing crimes in America. (Rarely a month goes by without a news story about a massive theft of personal identifying information from a private company.) The category includes a variety of situations in which an offender uses another person's identification or identity to apply for online credit, open bank accounts, obtain utility or phone services, obtain medical care, purchase or rent a vehicle, rent an apartment, enter age-restricted facilities, apply for jobs, purchase tobacco or alcohol, and otherwise engage financial responsibilities with no danger to the offender. (It should not include simple use of a credit card, which is categorized as "credit card fraud," nor use of a *fake* identification that does not have an original owner.) Victims of identity theft often do not realize they are victims until they start receiving collection notice and legal actions—or in extreme cases get arrested for warrants in their name. They often spend months or years trying to untangle illegitimate use of their identities from credit reports and criminal histories.

Although the incidents increased significantly in the Plainville area following Plainridge Park, there is no hypothesis by which a casino relationship makes sense. Identity theft is a time-consuming crime that does not result in an immediate payoff. Even if more offenders were motivated to commit it for gambling reasons, it would not make sense for the crime to be localized near the casino itself. A review of a sample of identity theft cases shows no casino or gambling relationship (when the offender is known); it also shows that while many of the *victims* are from the local area, the incidents themselves have often occurred online or at unknown locations.

Moreover, the statistics above show that the crime had been increasing in the area for years leading up to the casino's opening, peaking in the year *before* Plainridge Park. Statistics in the comparison section show that it has increased in the comparison communities at similar rates as in the Plainville area. The totality of factors suggests little evidence for a Plainridge Park relationship, and I have thus rated it "unlikely."

## Traffic collisions

An increase in traffic collisions is perhaps the most expected outcome of a facility like Plainridge Park, drawing thousands more vehicles per week to the region. While not every agency had a significant increase, the call for service type did increase at least slightly in each of the 6 agencies during the 18 months after the opening of the casino—significantly in Attleboro, North Attleboro, and Wrentham.

However, an analysis of the data suggests that the situation is more complicated than it first appears. First, traffic collisions were already high in the area when Plainridge Park opened. Since then, most monthly totals have been higher than the norm, but not strikingly so. Moreover, the increase in collisions seems confined to the working day (roughly 08:00–19:00), with a particular spike from 16:00–19:00, but not all hours that Plainridge Park is operational. It is possible that the increase is not caused by the extra traffic *per se* but the extra traffic in the early evening merging with existing commuter traffic to create more congestion-based collisions along heavily-trafficked routes.

While we see a geographic increase immediately adjacent to the casino, on Route 1, it is somewhat mild. Route 1 in North Attleboro has some mild and moderate increases, but the most-increased spots surround retail areas in Attleboro and not on a clear path to Plainridge Park.

I note here that the police chiefs participating in discussions of a draft of this report question these conclusions. They offered an alternate hypothesis that collisions are increasing in the area as part of a general increase in traffic, perhaps caused by economic recovery and overall population growth.

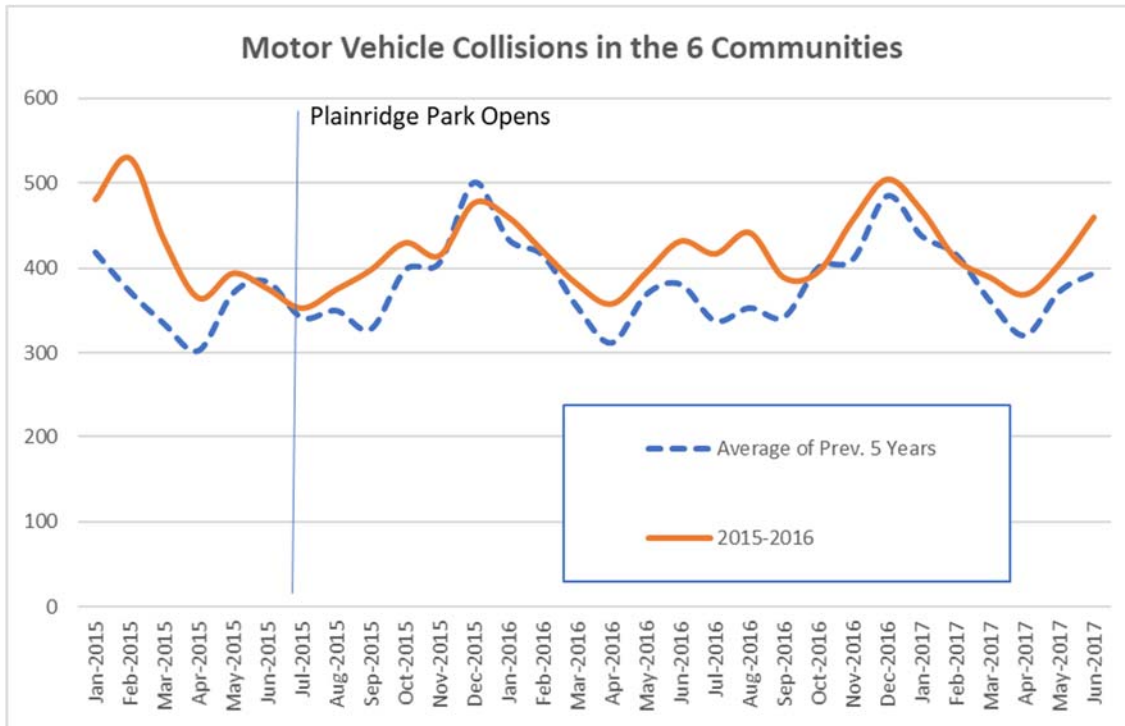


Figure 11: An increase in traffic collisions has been steady during this period, with few individual peaks.

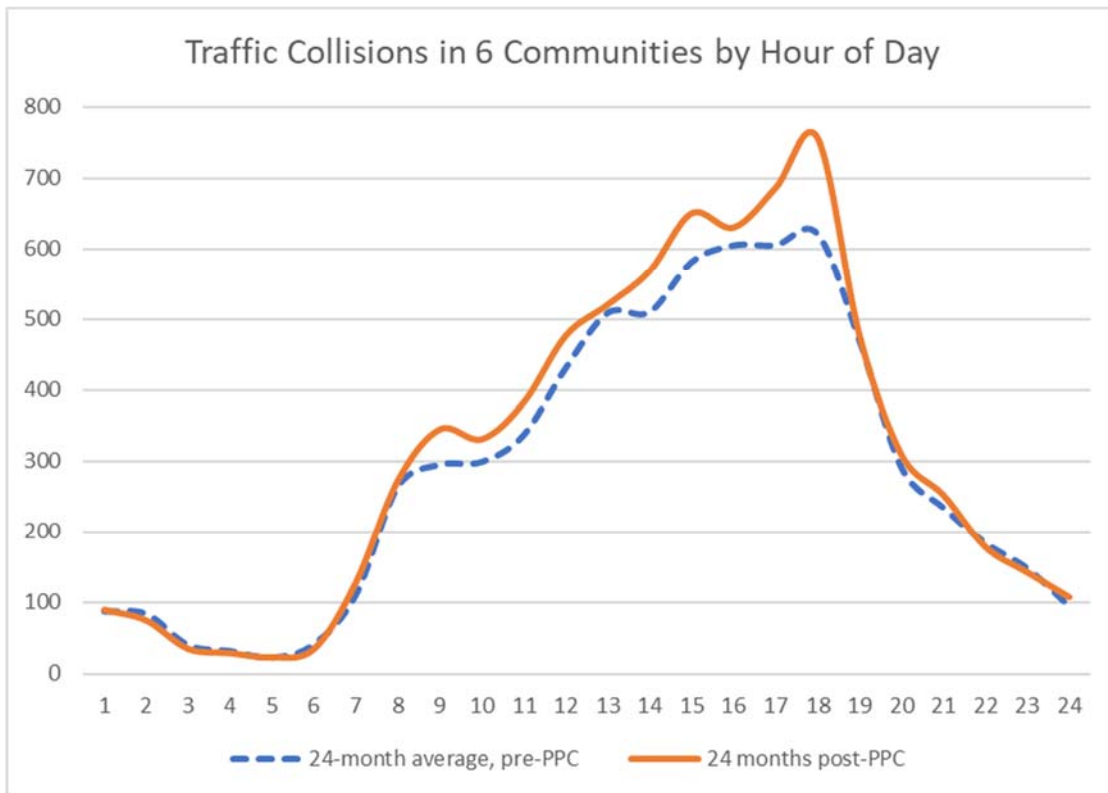


Figure 12: Most of the increase is in the afternoon hours, suggesting added congestion to commuting traffic.



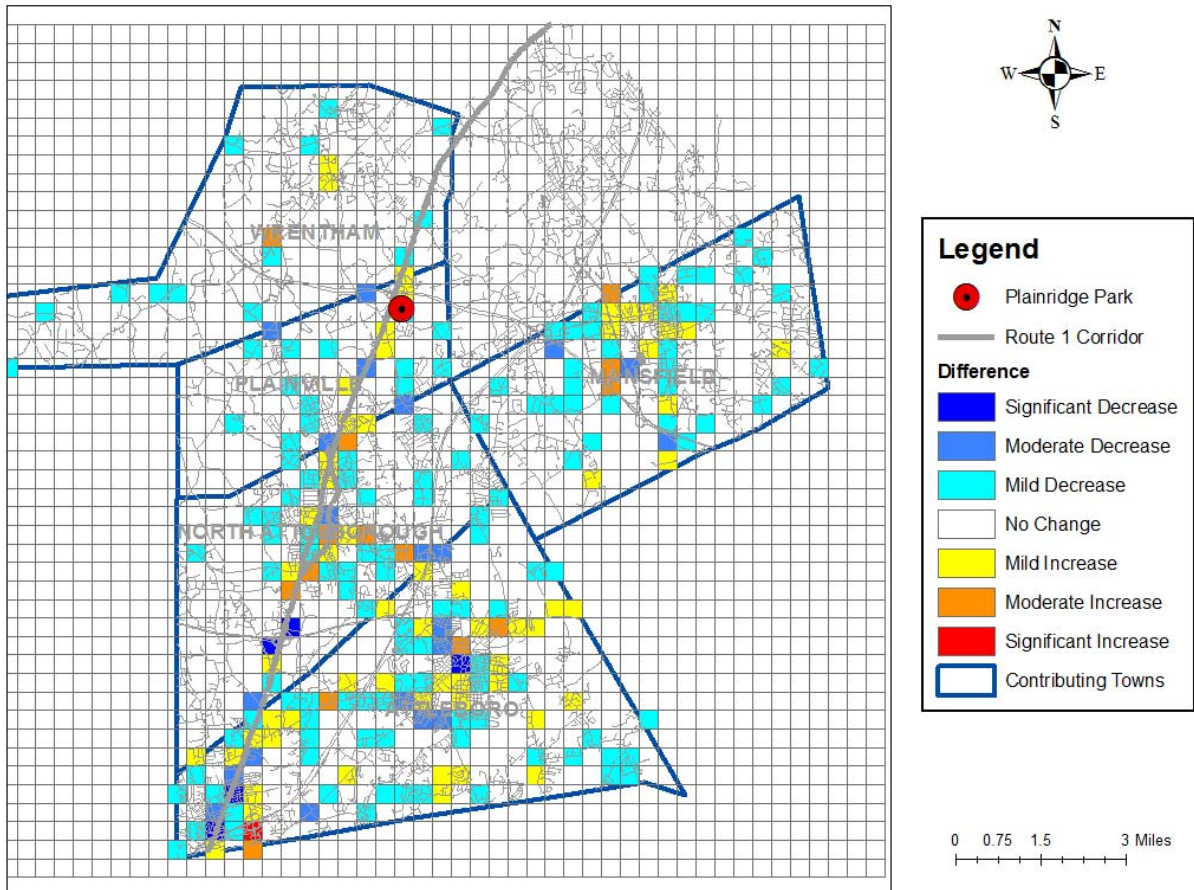


Figure 13: Geographic patterns show some increase along Route 1 but not consistently.

Until statewide traffic collision data is available for control areas in 2018, it is difficult to assess how much of the increase seen post-Plainridge Park is related to the extra traffic drawn by the casino and how much is related to other economic factors that influence driving. For now, it seems likely that Plainridge Park is responsible for at least *part* of the increase in some communities, but further analysis with comparison data is necessary to untangle what is happening in the Plainville area from general Massachusetts trends.



# Appendix A: Abbreviations and definitions

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## Acronyms and abbreviations

CAD	Computer-aided Dispatch (system)	A police database that holds information about police dispatches to calls for service, including incidents discovered by police officers. Some but not all of the incidents reported in CAD are crimes and have longer records in the RMS.
IBR	Incident-based reporting	See NIBRS.
MGC	Massachusetts Gaming Commission	The commonwealth agency charged with overseeing and regulating gaming in Massachusetts
FBI	Federal Bureau of Investigation	National investigative agency, part of the U.S. Department of Justice, in charge of collecting national crime statistics.
IACA	International Association of Crime Analysts	A global nonprofit professional association that provides training, literature, and networking to individuals who analyze crime data.
NIBRS	National Incident-based Reporting System	FBI program for data collection that supersedes UCR. Collects more specific data about a wider variety of crimes. With only a few exceptions, all Massachusetts agencies report to NIBRS and all Massachusetts RMS vendors have implemented NIBRS coding standards.
ODBC	Open Database Connectivity	A technology developed by Microsoft that allows any application that uses a database to connect to any database source. The primary mechanism by which we can extract data from police CAD and RMS databases.
RMS	Records Management System	A police data system that stores information about crimes and offenders. See also CAD.
SEIGMA	Social and Economic Impacts of Gaming in Massachusetts	A multi-year research project hosted by the University of Massachusetts Amherst School of Public and Health Sciences. The SEIGMA project has a much broader mandate for its study than just crime.
TITO	Ticket in, ticket out	A system for managing and collecting gaming funds. Instead of receiving cash for winnings, patrons receive a bar-coded ticket that can be exchanged for cash or inserted into other machines for further play.
UCR	Uniform Crime Reporting (program)	National program for the reporting of crime statistics to the FBI. Captures only summary data about a limited number of crime types. Contrast with NIBRS.

## Crime definitions

The following are definitions of the crime categories used in this report. These are mostly drawn without modification from the FBI's definitions for NIBRS crime categories. In almost all cases, *attempts* to commit these crimes are counted equally with completed offenses. These crimes must, of course, be reported to the police to be included in this report.

**Aggravated Assault:** An attack by one person upon another for the purpose of inflicting severe bodily injury. Aggravated assault is either accompanied by the use of a deadly weapon (e.g., gun, knife, club) or some mechanism that would result in serious harm (e.g., pushing someone down a staircase), or by serious injury even with a weapon that isn't normally "deadly" (e.g., punching someone and breaking his jaw). If the incident involved neither a deadly weapon nor serious injury, it's coded as a simple assault instead.

**Arson:** Intentional burning of a structure, vehicle, or personal property.

**Auto theft:** Thefts of vehicles capable of operating under their own power, including automobiles, trucks, buses, motorcycles, and snowmobiles.

**Bad checks:** The issuance of checks on accounts with insufficient funds. This type of crime is typically only reported by police when an arrest is made or an individual is charged.

**Burglary:** Unlawful entry of a structure, including residences, commercial buildings, and government buildings. The entry does not have to occur by force (e.g., a "break-in"). The usual motive for burglary is to steal something inside, but this isn't a necessary part of the definition.

**Counterfeiting/forgery:** Use or possession of an altered, copied, or imitated negotiable or non-negotiable instrument, including U.S. currency, checks, and money orders.

**Credit card fraud:** Use of a stolen credit card or credit card data to obtain goods or services.

**Disorderly:** Disorderly conduct that rises to the level of a criminal charge.

**Drug offenses:** Manufacturing, sale, trafficking, transporting, or possession of controlled substances. Typically, "incidents" of such crime are arrests, as the only way such incidents are reported is when they are discovered by the police.

**Drunk driving:** Operation of a motor vehicle while intoxicated; usually while above a state-designated legal blood alcohol level. As with many of the drug and alcohol categories, such incidents are only reported when discovered by the police, usually resulting in an arrest.

**Drunkenness:** Naturally, not all incidents of intoxication are a police matter. Police incidents that fall into this category are usually incidents of either public intoxication or individuals so dangerously intoxicated that they are placed into protective custody until sober.

**Employee theft:** Also, "embezzlement." Theft of an employer's property by an employee.

**Family offenses:** Unlawful, nonviolent acts by a family member that threaten the physical, mental, or economic well-being of another family member and are not classified under any other category. This category is only reported when someone is charged, and it almost always involves violations of restraining orders.

**Forgery:** Forgery of personal checks, business checks, U.S. currency, or similar negotiable and nonnegotiable documents.

**Fraud.** Theft of property by lying in such a way that convinces a victim to surrender money or goods. It is theft through some kind of scheme, “con game,” or ruse.

**Identity theft:** Representation of oneself as another (actual) person, or use of another person’s identifying information to obtain goods or services, housing, medical care, or status.

**Kidnapping:** The abduction of one person by another, whether through force or guile. Most incidents coded as such as “custodial” kidnappings involving a parent taking a child in violation of a custodial agreement.

**Liquor law violations:** Illegal manufacturing, sale, possession, or consumption of intoxicating drinks, often because the offender is below the legal age.

**Murder:** the killing of one person by another, including non-negligent homicides.

**Other thefts:** A general category that includes thefts of services (e.g., gas drive-offs), thefts from persons (e.g., pocket-picking), thefts from outdoor public areas. Essentially, any non-burglary, non-robbery theft that is not covered in one of the “theft” or “shoplifting” categories (below) is categorized here.

**Pornography:** Possession, sale, or manufacturing of illegal pornography. Since pornography is legal in Massachusetts, such incidents generally involve minors, either as the subjects or recipients of the pornography.

**Prostitution:** Promotion or participation of sexual activities for profit. As with drug offenses, most “incidents” of prostitution are arrests, as the crime is rarely reported except when discovered by the police.

**Purse snatching:** A theft in which an offender grabs a purse off the arm of the victim. If any significant force, violence, or threats are employed, this crime becomes a robbery.

**Robbery:** Taking or attempting to take anything of value from another person by force or violence or threat of force or violence. “Muggings” and “hold-ups” are examples of robberies. A robbery requires a direct confrontation between the offender and victim; houses and buildings cannot be “robbed.”

**Sexual assault:** Any sexual act directed against another person (of either sex), either by force or otherwise against the person’s will, or non-forcibly but when the victim is incapable of giving consent because of temporary or permanent mental or physical incapacity. This category combines rapes, indecent assaults, molestation, and sexual penetration with an object.

**Shoplifting:** Thefts of items offered for sale at retail establishments.

**Simple assault:** An assault that does not involve a dangerous weapon and does not result in significant injury.

**Stolen property offenses:** Possession or sale of property previously stolen including motor vehicles and personal property. Often, the person possessing the property is the one who stole it in the first place, but this category is used when the actual thief cannot be determined.

**Thefts from buildings:** Thefts of items from commercial or government buildings open to the public, where such entry does not constitute burglary. This often takes the form of thefts of employees’ property at businesses open to the public.

**Thefts from machines:** Thefts from coin-operated machines, either for the coins or for the products inside.

**Thefts from persons:** Thefts of personal property from the direct control of the owner. These often take the form of pocket-pickings or thefts of or from diners’ purses at restaurants. If any force, violence, or threats are employed, this crime becomes a robbery.

**Thefts from vehicles:** Thefts of items from motor vehicles. The category includes breaking into vehicles (e.g., smashing a window), unlocked entry, and thefts of items from a vehicle’s exterior, such as pickup truck beds. Note that thefts of vehicle parts are in a separate category.

**Thefts of vehicle parts:** Theft of parts or accessories from motor vehicles, including wheels, license plates, and engine parts.

**Threats:** Threats to commit physical violence by one person against another. If any weapon is actually displayed or employed, or if an assault is actually attempted, the crime is categorized as a simple or aggravated assault instead.

**Trespassing:** Illegal entry to a non-public part of a residence or business. Such entry is rarely to the *interior* of the property, or it would be coded as burglary instead. Most reportable incidents of trespassing are either after notice (e.g., a repeat shoplifter who is ordered not to return to a store) or at posted locations (e.g., construction sites, abandoned buildings).

**Vandalism:** Destruction or defacement of public property, buildings, vehicles, or personal property.

**Weapon offenses:** Possession, sale, or manufacturing of illegal weapons. This is often an additional offense discovered by police during arrests for other crimes.

**Offense types by associated crime category**

Offense	Category
Aggravated Assault	Violent Crime
All Other	Other Crime
Arson	Property Crime
Auto Theft	Property Crime
Bad Checks	Property Crime
Burglary	Property Crime
Credit Card Fraud	Property Crime
Disorderly	Societal Crime
Drug Equipment Offense	Drug/Alcohol Crime
Drug Offense	Drug/Alcohol Crime
Drunk Driving	Drug/Alcohol Crime
Drunkenness	Drug/Alcohol Crime
Employee Theft	Property Crime
Extortion	Property Crime
Family Offenses	Other Crime
Forgery	Property Crime
Fraud/Con Games	Property Crime
Gambling	Societal Crime
Identity Theft	Property Crime
Kidnapping	Violent Crime

Offense	Category
Liquor Law Violations	Drug/Alcohol Crime
Murder	Violent Crime
Other Thefts	Property Crime
Peeping Tom	Other Crime
Pornography	Societal Crime
Prostitution	Societal Crime
Robbery	Violent Crime
Runaway	Other Crime
Sexual Assault	Violent Crime
Shoplifting	Property Crime
Simple Assault	Violent Crime
Statutory Rape	Other Crime
Stolen Property Offense	Property Crime
Thefts from Buildings	Property Crime
Thefts from Vehicles	Property Crime
Thefts of Vehicle Parts	Property Crime
Threats	Other Crime
Trespassing	Other Crime
Vandalism	Property Crime
Weapon Offenses	Societal Crime

## Call for service definitions

*Calls for service* include both criminal and noncriminal police incidents and activities. In the case of criminal activities, such incidents receive a longer, more detailed report in the police records management system, and it so it makes more sense to analyze them using the crime categories above than in their original call-for-service form. Thus, the only incident types we have selected for analysis in this report are noncriminal. Definitions of those types appear below. Because the police officer does not usually write a full report for calls for service, the dataset available for analysis is more limited.

**Administrative:** A wide variety of call types that have to do with the administration of a police department, such as delivery of documents to businesses or other government facilities, attendance at meetings, vehicle maintenance, or even meal breaks. Agencies use their call-for-service systems to document such activities so that, later, they can determine what a particular officer or unit was doing at a particular time, although the incidents are not truly “calls for service.” Practices differ significantly between police agencies as to what is reported under this category, and it is generally not useful for analysis.

**Alarm:** A burglar, panic, or medical alarm that required a response but (probably) turned out to be false or would have a different final code.

**Animal complaint:** Calls involving sick, dangerous, or wild animals, animals in danger (e.g., left in a hot or cold car), or loose or noisy pets.

**Assist other agency:** A call type that involves rendering aid to a neighboring police or other government agency for any number of purposes, including serious crimes, fire and medical issues, and traffic issues.

**Crime enforcement:** Any number of pro-active police activities meant to deter crime, generally taking the form of a “directed patrol” to a particular location during a peak time for criminal activity (based either on citizen complaints or internal analysis). Though not a technical “call for service,” such incidents are recorded in the CAD database to document the officer’s activity.

**Disabled vehicle:** A call for service for a vehicle suffering physical or mechanical trouble, usually broken down in an active roadway.

**Disorderly conduct:** Any of a variety of types of disorderly conduct and excessive noise.

**Domestic dispute:** A dispute between family members, spouses, or intimate partners that has not risen to the level of physical violence.

**General service:** Minor calls for service that involve rendering aid to residents and visitors for a variety of issues such as giving directions, installing car seats, dealing with lockouts, and providing physical aid.

**Lost property:** Calls for service involving lost personal property such as wallets and mobile phones. If there is any indication of theft, these incidents are typically reported under the appropriate crime category.

**Medical aid:** All calls for medical aids except unattended deaths and overdoses. Police responses only are included in the figures in this report.

**Missing person:** a runaway or other missing person.

**Prisoner transport:** documentation of a police agency transporting an arrested person from one facility to another.

**Psychological issue:** Calls for service involving individuals with mental health issues.

**Suspicious activity:** Any suspicious person, vehicle, or other activity, whether identified by an officer or citizen.

**Traffic collision:** A collision involving at least one motor vehicle.

**Traffic complaint:** Complaint about reckless driving, illegal or unsafe parking, or other traffic issues.

**Trespassing:** Trespassing on private or public property.

**Vehicle stop:** An officer pulls over a vehicle for a moving or equipment violation.

**Warrant service:** a call type that documents the service, or attempted service, of an arrest warrant or search warrant. The category is entirely police-directed.

**Youth disorder:** Disorderly incidents involving youths congregating, skateboarding, making noise, and so forth.