

Internship Project Report: An Analysis of Citation Data from the City of Buffalo Speed Camera Program

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On March 9, 2021, I started an internship with Community Planning & Development Associates, LLC, to examine the impact of a speed camera program on the diverse populations of the City of Buffalo, New York. This effort focused specifically on the violations issued by the City of Buffalo through its speed camera program.

This internship project report is divided into sections that discuss the report's *objective*; provide *background* information on the speed camera program; address the *scope* of this project and the *methodology* applied; document the *findings* of this project; and explain overall *conclusions* and *recommendations* for addressing any identified weaknesses of the speed camera program.

Through this analysis, it was found that (1) vehicle owners living closest to speed cameras received the most citations; (2) the highest rates of unpaid citations exist in Buffalo's low-income, high-poverty zip codes; (3) more than 20% of speed camera citations issued to City residents went to the five zip codes with the lowest median household income levels; (4) nearly 30% of speed camera citations issued to City residents went to zip codes with a poverty rate above 30%; (5) over 60% of speed camera citations issued to City residents went to zip codes where more than half of the population is minority; (6) a total of 1,006 speed camera citations were erroneously issued by the two Canisius High School speed cameras when school was not in session, and the City has so far collected \$39,650 in fines from those erroneous citations; and (7) the City of Buffalo was forced to cancel 51,838 speed camera citations because they were mailed after the 14-day statutory mailing deadline.

Objective

It has already been demonstrated through separate quantitative research that the City of Buffalo has installed more speed cameras in low-income, high-poverty, and minority neighborhoods than anywhere else in the City.¹ Therefore, it was the objective of this internship project to determine whether speed camera *violations* issued by the City of Buffalo are having a disproportionate impact on the City's low-income, high-poverty, and minority populations.

Background

In March 2019, the City of Buffalo Common Council issued an amendment to Chapter 479-14 of the City Code that established 15-mile-per-hour speed limits in "designated school zones," defined as areas within ¼-mile of a school building or school parking lot entrance.^{2,3} The City then posted school zone speed limit signs around each school and one daycare facility⁴ in Buffalo. Below each school zone speed limit sign is a smaller sign that indicates the times that the lower speed limit is in effect, which is one hour before and one hour after school is in session.

In August 2019, the City announced that it would be installing speed cameras in up to 20 school zones, and that vehicles traveling more than 10 miles per hour over the posted speed limit would receive a \$50

¹ Rizzo, Peter. "Independent Review: City of Buffalo School Zone Safety Program." A presentation to the Legislation Committee of the City of Buffalo Common Council. February 9, 2021.

² Williams, Deidre. "[Slow down by schools? Buffalo wants to make it more than just an idea.](#)" *The Buffalo News*. March 11, 2019.

³ Buffalo City Code, Chapter 479-14(4)(B).

⁴ Buffalo Promise Neighborhood Children's Academy, 2563 Bailey Avenue, Buffalo, NY 14215.

fine in the mail.⁵ Buffalo Mayor Byron Brown said that the objective of the City's speed camera program was "to reduce the number of crashes in areas where children are going to and from school."⁶

By January 2020, the City had installed its first 14 speed cameras in nine different school zones. According to Mayor Brown "the school zones that we have selected [for speed cameras] are based on 3-1-1 [calls] and police data. They are areas that have very high traffic counts and also areas where there have been crashes in the past."⁷

On March 11, 2020, speed cameras began fining vehicle owners at two schools; these cameras were turned off after only three days of operation after COVID-19 caused state-wide school closures. On October 13, 2020, certain private schools resumed in-person instruction, and cameras at five such schools began fining vehicle owners.

In February 2021, Mayor Brown's statements from January 2020 were challenged following analysis of crash data that showed the City had installed half of its speed cameras in school zones with comparatively low historic crash rates and some that have very low traffic rates.⁸ This analysis also found that the City had installed more speed cameras in low-income, high-poverty, and minority neighborhoods than anywhere else in the City.⁹ In summary, this research determined that the City's speed camera program was disproportionately impacting particular segments of Buffalo's population.

City of Buffalo Parking Commissioner Kevin Helfer responded to these findings by claiming that they represent "unsupported and false allegations [that fall] apart under greater scrutiny," but provided no details to support this argument.¹⁰ Mayor Brown echoed this position in his public comments on the matter.¹¹ Essentially, these two City leaders argue that the speed camera program is not having a disproportionate impact on any segment of Buffalo's population.

Scope

This internship project attempted to test Commissioner Helfer and Mayor Brown's assertions that the City of Buffalo speed camera program is not having a disproportionate impact on particular segments of Buffalo's population by examining actual speed camera violation data provided by the City of Buffalo Parking Violations Bureau. Specifically, the review addressed the impact of the speed camera program on low-income, high-poverty, and minority neighborhoods in Buffalo, and explored other interesting aspects of the datasets provided by the City.

Methodology

Data Request

Through a New York State Freedom of Information Law request to the City of Buffalo Parking Violations Bureau, two datasets were obtained for all valid speed camera citations issued between Wednesday, March 11, 2020 (the first day that violations were issued) through Friday, January 29, 2021 (the last day violations were issued before a month-long pause of the speed camera program). The first dataset

⁵ Preval, Jeff. "[Buffalo to install speed cameras outside schools this fall.](#)" *WGRZ-TV*. August 9, 2019.

⁶ Carter, Madison. "[Targeted or not: Digging into how City officials chose locations for school zone speed cameras.](#)" *WKBW-TV*. January 6, 2020.

⁷ *id.*

⁸ Rizzo, Peter. "Independent Review: City of Buffalo School Zone Safety Program." A presentation to the Legislation Committee of the City of Buffalo Common Council. February 9, 2021.

⁹ *id.*

¹⁰ Stated by City of Buffalo Parking Commissioner Kevin Helfer during the February 23, 2020 Common Council Legislation Committee meeting.

¹¹ Walker, Jackie. "[Ask the Mayor: COVID-19, Speed Cameras, Police Reform and More.](#)" *WIVB-TV*. February 11, 2021.

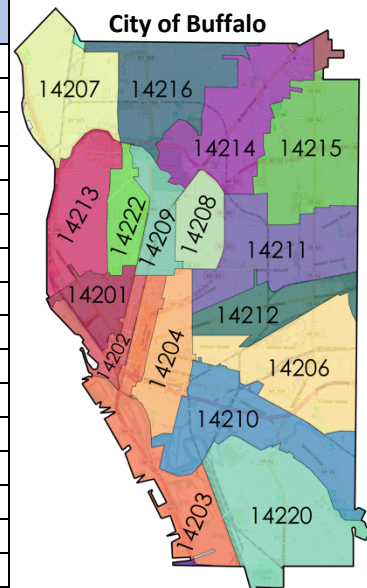
contained the unique “Citation Number,” “Violation Date,” “Citation Issuance Date,” “Citation Status,” “Violation Location,” and “Recipient Zip Code” for all speed camera citations that were considered valid by the City of Buffalo. The second dataset included the unique “Citation Number,” “Violation Date,” “Hearing Date,” “Ruling Date,” “Ruling” (e.g., liable, not liable), and “Reason” that a hearing officer provided for finding an alleged violator liable or not liable for all *contested* speed camera citations that are considered valid by the City of Buffalo and were issued between the two referenced dates.

Data Integrity Verification

The datasets received from the City of Buffalo Parking Violations Bureau did not initially appear to be complete. This is in part because, according to *The Buffalo News*, the City had issued 100,427 speed camera citations from March 11, 2020 through January 29, 2021.¹⁶ However, the dataset provided by the City that apparently contained all citations for that same time period only listed 48,589 citations. Clarification was sought from the City of Buffalo Parking Violations Bureau, which confirmed in a reply that the actual number of *valid* speed camera citations issued by the City from March 11, 2020 to January 29, 2021 is 48,589, and that the higher number reported by *The Buffalo News* included an additional 51,838 citations that the City cancelled because they were mailed to violators after the 14-day statutory deadline.^{17,18}

TABLE 1: Select Demographics by Zip Code, Buffalo, NY

Buffalo, NY Zip Code	% of Population White ¹²	% of Population Minority ¹³	Median Household Income ¹⁴	Poverty Rate ¹⁵
14201	49.60%	50.40%	\$29,554	44.0%
14202	66.70%	33.30%	\$49,954	20.0%
14203	39.60%	60.40%	\$43,173	30.2%
14204	22.10%	77.90%	\$22,500	38.9%
14206	76.30%	23.70%	\$40,751	21.6%
14207	50.80%	49.20%	\$29,250	37.8%
14208	13.30%	86.70%	\$29,292	31.4%
14209	52.10%	47.90%	\$39,447	29.4%
14210	80.50%	19.50%	\$37,380	26.6%
14211	15.10%	84.90%	\$26,739	35.7%
14212	43.20%	56.80%	\$23,882	43.7%
14213	45.10%	54.90%	\$36,471	37.8%
14214	51.20%	48.80%	\$47,122	29.4%
14215	14.80%	85.20%	\$33,788	29.8%
14216	42.80%	57.20%	\$59,346	17.1%
14220	90.20%	9.80%	\$58,671	12.4%
14222	71.80%	28.20%	\$58,957	11.1%



¹² U.S. Census Bureau. American Community Survey, Race and Hispanic Origin Variables, Erie County, NY. December 16, 2020.

¹³ *id.*

¹⁴ U.S. Census Bureau. American Community Survey, Median Household Income in Past 12 Months, Erie County, NY. January 14, 2021.

¹⁵ U.S. Census Bureau. American Community Survey, Poverty Status Variables, Erie County, NY. January 14, 2021.

¹⁶ Williams, Deidre. “[After rocky start, Buffalo says school speed camera missteps resolved.](#)” *The Buffalo News*. January 29, 2021.

¹⁷ City of Buffalo Parking Violations Bureau. Email to Oluwademilade Adeniji. Subject: “Re: FOIL Request 1001358603 Available for FOIL Requests Parking.” April 29, 2021.

¹⁸ NYS Vehicle & Traffic Law 1180-D, Paragraph (g)1 requires that speed camera citations be mailed no greater than 14 business days after the date of the alleged violation.

Data Preparation

To prepare the data for analysis, the two datasets were merged using the “VLOOKUP” function in Microsoft Excel. This involved using the “Citation Numbers” column to properly match the data from both datasets and create a single dataset. Specifically, the “Hearing Date,” “Ruling Date,” “Ruling,” and “Reason” columns from the contested speed camera citations dataset were brought into the dataset containing the list of all speed camera citations.

Next, the contents of the “Reason” column were addressed to minimize the number of unique entries to allow for analysis. In follow-up emails with the City of Buffalo Parking Violations Bureau, it was learned that the City has no standard way of documenting the “reason” that a particular “ruling” was issued by a speed camera hearing officer. Therefore, in the “Reason” column, spelling errors were corrected and variations of the same “reason” were standardized.

Findings from this project considered the impact of speed camera citations on particular populations defined by Buffalo zip code. To understand the demographics of Buffalo’s various zip codes, data were obtained from the U.S. Census Bureau’s American Community Survey, which was last updated on January 14, 2021. See TABLE 1, which identifies selected demographics information for each Buffalo zip code. A corresponding zip code map illustrates the boundaries of each zip code within the City.

Findings

1. Vehicle owners living closest to speed cameras received the most citations.

For each of the six schools with speed cameras, vehicle owners living within the school’s zip code and in immediately adjacent zip codes received the most citations.

The **Buffalo Promise Neighborhood Children’s Academy** is located at 3149 Bailey Avenue, Buffalo, NY 14215. Residents of this zip code received 3,045 citations from the two speed cameras posted outside of this facility, representing 24.5% of all citations issued by these cameras. The zip code with the second-highest number of citations for this school was 14211 with 926 citations. This school had speed cameras in operation for 48 days during the study period.

Nichols School is located at 1250 Amherst Street, Buffalo, NY 14216. Residents of this zip code received 1,468 citations from the two speed cameras posted outside of this facility, representing 18.7% of all citations issued by these cameras. The zip code with the second-highest grossing number of citations for this school was 14217 with 764 citations. This school had speed cameras in operation for 39 days during the study period.

Canisius High School is located at 1180 Delaware Avenue, Buffalo, NY 14222. Residents of this zip code received 747 citations from the two speed cameras posted outside of this facility, representing 10.3% of all citations issued by these cameras. The zip code with the second-highest grossing number of citations for this school was 14216 with 674 citations. This school had speed cameras in operation for 31 days during the study period.

St. Joseph University School is located at 3275 Main Street, Buffalo, NY 14214. Residents of this zip code received 1,797 citations from the two speed cameras posted outside of this facility, representing 12.2% of all citations issued by these cameras. The zip code with the highest grossing number of citations for this school was 14215 with 1,829 citations. This school had speed cameras in operation for 29 days during the study period.

Notre Dame Academy is located at 1125 Abbott Road, Buffalo, NY 14220. Residents of this zip code received 952 citations from the one speed camera posted outside of this facility, representing 28.1% of all citations issued by these cameras. The zip code with the second-highest grossing number of citations for this school was 14218 with 378 citations. This school had its speed camera in operation for 28 days during the study period.

The **Stanley Makowski Early Childhood Center** is located at 1095 Jefferson Avenue, Buffalo, NY 14208. Residents of this zip code received 113 citations from the two speed cameras posted outside of this facility, representing 9.3% of all citations issued by these cameras. The zip codes with the highest grossing number of citations for this school was 14215 and 14211, with 182 and 137 citations, respectively. This school had speed cameras in operation for 3 days during the study period.

2. The highest rates of unpaid citations exist in Buffalo’s low-income, high-poverty zip codes.

Of the 24,011 speed camera citations issued to City of Buffalo residents between March 11, 2020 and January 29, 2021, 36.8% were unpaid and overdue as of the April 22, 2021, when the City furnished its violation datasets. An examination of the percent of unpaid citations by zip code shows that low-income and high-poverty zip codes have higher rates of unpaid citations, possibly indicating that persons living in those zip codes do not have the financial ability to pay their citations.

As illustrated in Chart 1, the rate of unpaid citations decreases as median household income increases. This indicates that persons living in lower income zip codes are less likely to have paid their speed camera citations, whereas persons living in higher income zip codes are more likely to have paid their citations.

As illustrated in Chart 2, as the poverty rate decreases, so too does the rate of unpaid citations. The relationship between these two variables is so closely aligned that the trend lines appear parallel. This indicates that persons living in higher poverty zip codes are less likely to have paid their speed camera citations,

CHART 1: Relationship between the percent of unpaid speed camera citations and median household income by zip code in Buffalo, NY

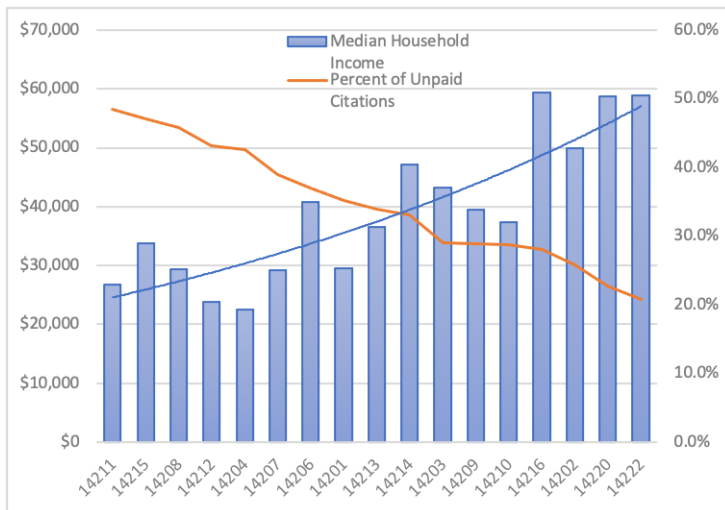
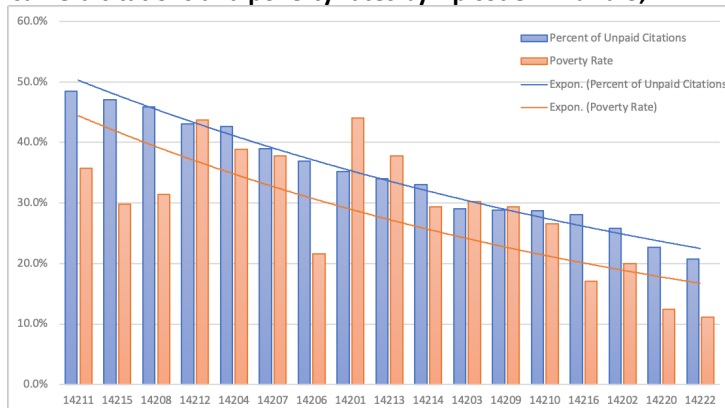


CHART 2: Relationship between the percent of unpaid speed camera citations and poverty rates by zip code in Buffalo, NY



whereas persons living in zip codes with lower poverty rates are more likely to have paid their citations.

3. More than 20% of speed camera citations issued to Buffalo residents went to vehicle owners in the five zip codes with the lowest median household income levels.

Of the 24,011 speed camera citations issued to City of Buffalo residents from March 11, 2020 to January 29, 2021, a total of 5,120 (21.3%) were issued to residents living in Buffalo's five poorest zip codes, with median household incomes ranging from \$22,500 to \$29,250 (Buffalo's median household income is \$37,354).¹⁹ These zip codes include:

- 14204 (median household income of \$22,500)
- 14212 (median household income of \$23,882)
- 14211 (median household income of \$26,739)
- 14207 (median household income of \$29,250)
- 14208 (median household income of \$29,292)

4. Nearly 30% of speed camera citations issued to Buffalo residents went to vehicle owners in zip codes with poverty rates above 30%.

Of the 24,011 speed camera citations issued to City of Buffalo residents from March 11, 2020 to January 29, 2021, a total of 7,029 (29.3%) were issued to residents living in Buffalo's most impoverished zip codes, where poverty rates range from 30.2% to 44.0%.²⁰ These zip codes include:

- 14201 (poverty rate of 44.0%)
- 14212 (poverty rate of 43.7%)
- 14204 (poverty rate of 38.9%)
- 14207 (poverty rate of 37.8%)
- 14213 (poverty rate of 37.8%)
- 14211 (poverty rate of 35.7%)
- 14208 (poverty rate of 31.4%)
- 14203 (poverty rate of 30.2%)

5. Over 60% of speed camera citations issued to Buffalo residents went to vehicle owners in zip codes with predominantly minority populations.

Of the 24,011 speed camera citations issued to City of Buffalo residents from March 11, 2020 to January 29, 2021, a total of 14,876 (62.0%) were issued to residents living in zip codes with predominantly minority populations, where the percentage of minority residents range from 50.4% to 86.7%.²¹ These zip codes include:

- 14208 (minority population of 86.7%)
- 14215 (minority population of 85.2%)
- 14211 (minority population of 84.9%)
- 14204 (minority population of 77.9%)

¹⁹ U.S. Census Bureau. American Community Survey, Median Household Income in Past 12 Months, Erie County, NY. January 14, 2021.

²⁰ U.S. Census Bureau. American Community Survey, Poverty Status Variables, Erie County, NY. January 14, 2021.

²¹ U.S. Census Bureau. American Community Survey, Race and Hispanic Origin Variables, Erie County, NY. December 16, 2020.

- 14203 (minority population of 60.4%)
- 14216 (minority population of 57.2%)
- 14212 (minority population of 56.8%)
- 14213 (minority population of 54.9%)
- 14201 (minority population of 50.4%)

6. The City of Buffalo issued 1,006 citations from two speed cameras at Canisius High School on two days that school was closed and has since collected \$39,650 in fines from those citations.

On October 13, 2020 and October 14, 2020, Canisius High School held “no classes” according to their academic calendar.²² Despite this, the two speed cameras posted outside of this school issued 207 citations on October 13, 2020 and 799 on October 14, 2020. The City of Buffalo has received payment on 793 of these bogus citations, meaning they have collected \$39,650 from vehicle owners who were wrongfully cited.

7. The City of Buffalo had to cancel 51,838 speed camera citations because they were mailed after the 14-day statutory mailing deadline, representing a \$2,569,150 revenue loss.

New York State Vehicle & Traffic Law 1180-D, Paragraph (g)1, requires that speed camera citations be mailed (postmarked) no more than 14 business days after the date of a violation. Of the reported 100,427 citations issued by the City of Buffalo’s speed camera vendor, Sensys Gatso USA, 51,838 were mailed after the 14-day statutory deadline.²³ This represents more than half—51.6%—of all speed camera citations issued between March 11, 2020 and January 29, 2021, and a loss of \$2,569,150 in potential fine revenue split between the City and Sensys Gatso.

In December 2020, *The Buffalo News* reported that only “about 20,000 motorists” were affected by delayed citations, which Sensys Gatso said was caused by “a severe ice storm in the Midwest the week of October 26th, affecting both our fulfillment processing center and the United States Postal Service.”²⁴ The additional 31,838 citations that were mailed late have not yet been reported by the media.

Conclusions & Recommendations

Through the findings detailed above, it is clear that the City of Buffalo speed camera program is having a significant impact on low-income, high-poverty, and minority communities. These populations are less likely to be able to pay the \$50 fine that comes with each citation, and it is unclear what the City will do to collect overdue, unpaid fines alleged violators.

Considering the effects this program has already had on these historically disenfranchised populations with speed cameras operating in only six school zones, it is alarming that the City is now operating speed cameras in a total of 20 school zones, a majority of which are in low-income, high-poverty, and minority communities.

²² Canisius High School. “[October 2020 Academic Calendar](#).” N.D.

²³ City of Buffalo Parking Violations Bureau. Email to Oluwademilade Adeniji. Subject: “Re: FOIL Request 1001358603 Available for FOIL Requests Parking.” April 29, 2021.

²⁴ Williams, Deidre. “[Buffalo’s school speed zone program may be in for an overhaul](#).” *The Buffalo News*. December 8, 2020.

The fact that the City collected \$39,650 from vehicle owners who were wrongfully cited on October 13 and 14, 2020 when Canisius High School was not in session—and that the City knows that the school was not in session on those days²⁵—indicates that this program is not being operated ethically or morally. All citations issued on those days should have been dismissed and refunds provided.

Instead of hurting low-income households with a punitive traffic enforcement program that is not being effectively or ethically managed, the City should instead be investing money into traffic safety infrastructure improvements that naturally show drivers and create safer pedestrian environments. These include, for example, speed humps, raised crosswalks, signage improvements, roadway markings, and striped crosswalks.

²⁵ The “Hearing Results” dataset provided by the City of Buffalo Parking Violations Bureau indicates that a small number citations issued from the Canisius High School speed cameras on October 13 and 14, 2020 were dismissed City hearing officers because the vehicle owners argued in their citation hearings that the school was closed on those days.