

Appendix B
February 10th, 2025 Meeting Materials

Todd Lizotte – Coinventor of Intentional Firearm Microstamping

TACLABS appreciate the opportunity to provide technical input regarding the viability of microstamping technology in semi-automatic handguns. As technologists specializing in forensic ballistics and firearm traceability, we recognize that microstamping is not a new or unproven concept. For over a century, firearms have been unintentionally microstamping cartridge casings during discharge, a phenomenon we refer to as Unintentional Firearm Microstamping (UFM).

Historical Precedent: The Foundation of Forensic Firearm Analysis

For more than 100 years, forensic experts have relied on UFM to analyze firearms recovered from crime scenes. Every fired cartridge carries a unique imprint left by imperfections in the firearm’s manufacturing and usage history—burrs, scratches, and other surface irregularities. These marks are systematically analyzed through the National Integrated Ballistic Information Network (NIBIN), forming the core of forensic firearm trace analysis. The ability to extract ballistic signatures from spent casings has been an essential tool for law enforcement in identifying patterns, linking firearms to criminal activity, and tracing firearm trafficking routes, as long as the firearms are recovered. IFM provides further reliability by enhanced extraction, simply integrating 1 to 4 cartridges found at a crime scene, the probability of identifying the firearm approaches >96%.

Harnessing Proven Science: From UFM to IFM

TACLABS builds upon this century-old forensic method by deliberately engineering a more consistent and structured approach to microstamping—Intentional Firearm Microstamping (IFM). Rather than relying on random manufacturing defects to leave marks on cartridge casings, IFM integrates well-defined alphanumeric and geometric codes into firearm components, such as the firing pin or breech face, to ensure that every discharged cartridge carries an identifiable imprint.

This technological refinement utilizes established principles of physics and mechanics, alongside modern advancements in microscopy, AI-enhanced imaging, and high-resolution forensic analysis. Similar to how license plates on vehicles are identified through imaging technologies, microstamped firearm markings can be extracted with simple optical methods, ensuring rapid and reliable identification.

Reliability: A More Effective Forensic Tool

The reliability of IFM is straightforward when compared to the historical precedent of UFM. Traditional UFM provides forensic evidence only when a firearm is recovered, requiring investigators to match markings to known weapons. IFM, on the other hand, allows forensic experts to identify firearms directly from spent casings—even without recovering the firearm itself.

This significantly enhances the ability of law enforcement agencies to generate patterns to track firearm trafficking and illegal sales. IFM provides structured, intentional data points that integrate seamlessly into existing

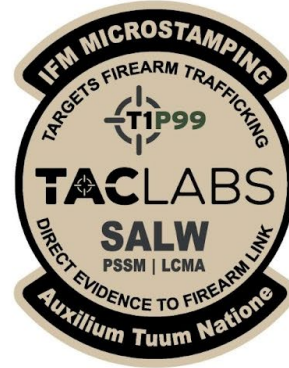
forensic workflows and programs such as CompStat, offering a more reliable means of identifying firearms linked to criminal activity. The ability to extract full or partial alphanumeric codes from recovered casings adds another layer of forensic intelligence, improving the probability of linking firearms to specific sources—including straw purchases, theft rings, and rogue firearm dealers.

Conclusion: The Industry’s Role in Advancing Firearm Forensics

The debate over reliability should not be about whether microstamping works—it already has, informally, for over a century. Instead, the focus should be on whether the firearm industry is willing to take the lead in modernizing forensic analysis to combat firearm trafficking. IFM simply refines an existing forensic tool, turning a century of unintentional microstamping into a proactive, structured methodology that enhances crime scene investigations and public safety.

We urge state officials to act swiftly in affirming the general viability of IFM, establishing initial performance standards, allowing the industry to start with a single surface to reduce their perceived cost limitations and implementing this technology to ensure California is prepared for the upcoming mandate that all semi-automatic handguns sold include microstamping capability.

Intentional Firearm Microstamping
**Combating
Firearms Trafficking**
Local, National and International



What is Intentional Firearm Microstamping (IFM™)?

IFM technology creates alphanumeric and geometric code elements within firearms, that stamp a cartridge casing with a code when fired. The ejected cartridge will identify the firearm without having to recover the firearm.



Firearm Cycles & Ejects

What is Intentional Firearm Microstamping (IFM™)?

TACLABS has developed a methodology which balances process know-how, materials interaction, microstructure geometry with lifecycle work hardening.

Within semiautomatic firearms small code structures are placed that can withstand the mechanical forces and chemical environment that is generated during the ignition of the cartridge primer to the main discharge propelling the projectile out the barrel.

With over 28 years of development and lifecycle testing, the TACLABS IFM process is robust and durable.

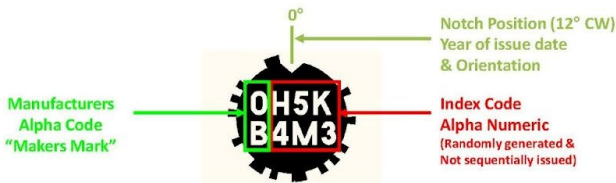


What is Intentional Firearm Microstamping (IFM™)?

The Power of The IFM Code

Optimized Code Geometry

What can be extracted from the code?



IFM Code acts as a license plate to identify the firearm when cartridges are found at a crime scene or military exchange/engagement.



What is Intentional Firearm Microstamping (IFM™)?

Microstamping: Tested / Continuously Improved

Microstamping Process Enhancement & Lifetime Testing:

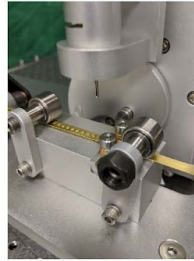
- Microstamping test program, features a new firearm model every six months
- TACLABS developed an accelerated lifetime test apparatus for firing pins (~50,000 Cycles/Pin)
- TACLABS tests a variety of ammunitions with varying primer and casing hardness and materials



Marking Transfer
Circa 2000-2005
(8 Digit Code)

Marking Transfer
Circa 2008-2018
(8 Digit Code / Gear Code)

Marking Transfer
Circa 2020
(8 Digit / Gear
Code / Embedded
Notch / Check
Sum Redundancy)
AR-15 Program



Firing Pin Microstamp Lifetime Testing

- 50,000 Cycles
- Cartridge Primer Brass Strips
- 1 cycle/second Rate
- Military Level Testing



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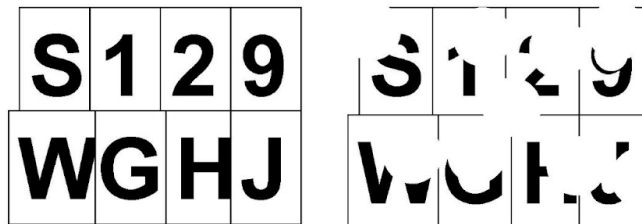
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What is Intentional Firearm Microstamping (IFM™)?

The Power of The IFM Code

Microstamping: **Heuristic Algorithm Code Extraction Method**

Optimized to Firearm, Fixed Font, and Standardized Placement
 “Yields High Degree of Extraction Capability”



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IFM Extracting/ Mapping Information

Leveraging Existing Forensic Infrastructure

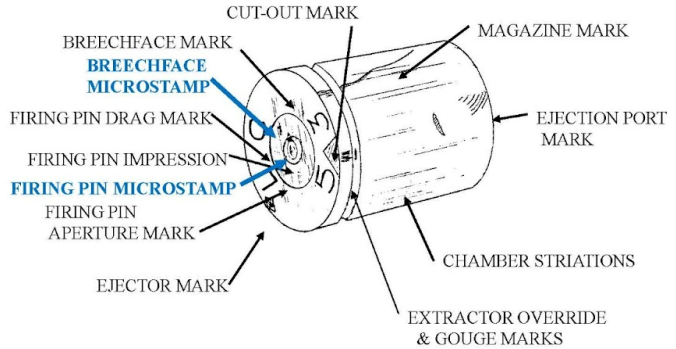
Examiner



Extraction Methods

- **Tool Mark Analysis**
 - Unique geometric line attributes
 - Curves, linear marks, etc
- **Cycle of Fire Analysis**
 - Identify unique tool markings representative of a specific firearm mechanism type
- **Observation Code Extraction**
 - Read the letters and number directly
 - Redundant Encoded Geometrics
- **Heuristic Analysis**
 - Match Characters and Numbers to known geometric attributes of the code design.
- **Multi-Cartridge Code Integration**
 - Two or more cartridge code integration
- **Code Index Analysis**
 - Code History based on visible characters (Code Characteristics)

MARKS LEFT ON EXPENDED CARTRIDGE CASINGS (cycle of fire marks & microstamping marks)



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IFM Extracting/ Mapping Information

Leveraging Existing Forensic Infrastructure

Microstamp Microscopy: Extracting Data Efficiently

| Microscopy Technology | Stereo Microscope 10x to 90x | Tool Makers or Comparison Microscope 10x to >200x | Confocal Microscope 10x to >100x | Scanning Electron Microscope 10x to >50,000x |
|-------------------------------|------------------------------------------------|-----------------------------------------------------------|--------------------------------------------------------|----------------------------------------------------|
| Methods Improve Image Quality | Cross Polarizing Ring Illuminator | Cross Polarization Methods | 3D Laser Profilometry | Standard or Backscatter Imaging |
| Image Quality | Non-polarized Illumination Lighting | Comparison with POLARIZATION Low Magnification Inspection | Laser Scanning Profilometry High Resolution Inspection | Standard SEM Image |
| | Polarized Illumination "Metalurgical" Lighting | | | Scanning Electron Image High Resolution Inspection |

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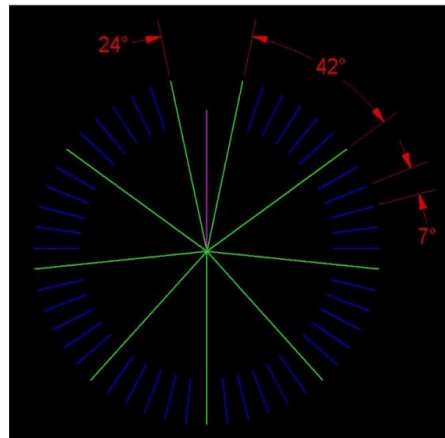
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Lizotte-Ohar Partial Code Extraction Method

- 1.0** for each character that can be read with absolute certainty.
- .75** for each damaged character that has enough information to identify it as one unique character.
- .50** for damaged characters that might represent two or three possible outcomes.
- .25** for wiped out characters that appear to have some intact structure.
- 0** for completely wiped out characters

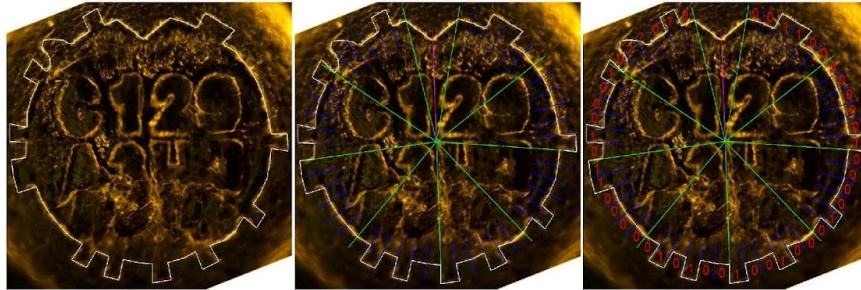
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Gear Code Extraction



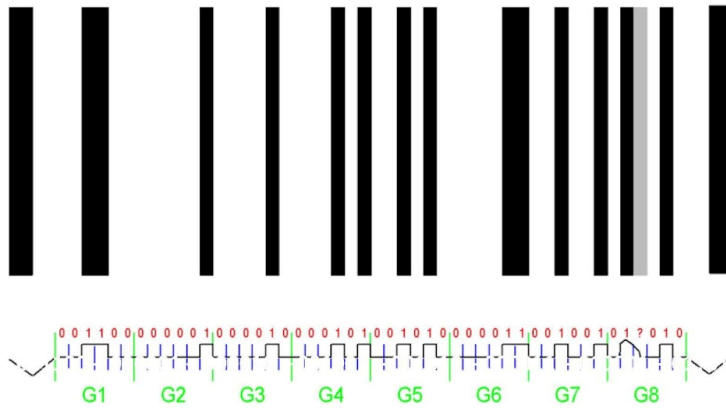
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Off the shelf software



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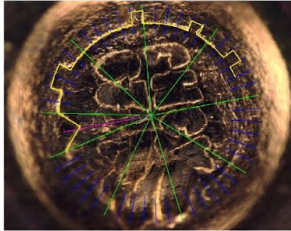
Read like a bar code...



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Code Redundancy

Combining and confirming codes increases certainty

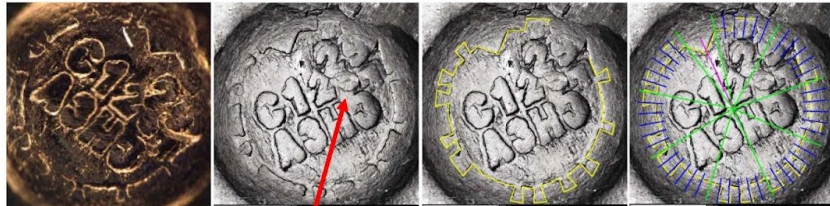


| 45 APC test fired: June 25, 2008 | | Alphanumeric Code | | | | | | | | Gear Code | | | | | | | | Combi Score | | |
|-------------------------------------|--------------|-------------------|----|----|-----|----|----|----|----|-----------|----|----|----|----|----|----|----|-------------|-----|----------|
| | | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | AC o/a | G1 | G2 | G3 | G4 | G5 | G6 | G7 | | G8 | GC o/a |
| 371 | ID Score | 0 | .5 | .5 | .75 | 1 | 1 | 1 | 1 | .72 | 1 | 1 | 1 | .5 | 0 | 0 | 0 | 0 | .53 | 0.97 |
| | Extract Code | ? | ? | ? | 9 | A | 3 | H | J | | C | 1 | 2 | ? | ? | ? | ? | ? | | C129A3HJ |

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IFM Extracting/ Mapping Information

**Extracting Data:
Multi-Strike & Pin Drag**



| 45 APC test June 25, 2008 | | Alphanumeric Code | | | | | | | | Gear Code | | | | | | | | Combi Score | | |
|------------------------------|--------------|-------------------|----|-----|-----|----|----|----|----|-----------|-----|-----|----|----|----|----|----|-------------|-----|----------|
| | | C1 | C2 | C3 | C4 | C5 | C6 | C7 | C8 | C ave | G1 | G2 | G3 | G4 | G5 | G6 | G7 | | G8 | G ave |
| 841 SEM | ID Score | 1 | 1 | .75 | .5 | 1 | 1 | 1 | 1 | .88 | .25 | .25 | 1 | 1 | 1 | 1 | 1 | 1 | .81 | 1.0 |
| | Extract Code | C | 1 | 2 | ? | A | 3 | H | J | | ? | ? | 2 | 9 | A | 3 | H | J | | C129A3HJ |
| 841 Optical | ID Score | 1 | 1 | .75 | .50 | 1 | 1 | 1 | 1 | .84 | 0 | 0 | 1 | 1 | 1 | 1 | 1 | .75 | .72 | 1.0 |
| | Extract Code | C | 1 | 2 | ? | A | 3 | H | J | | ? | ? | 2 | 9 | A | 3 | H | J | | C129A3HJ |

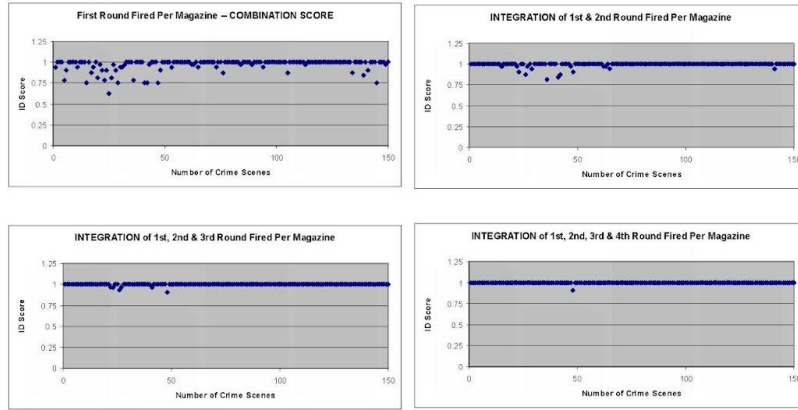
Test fire #841 Optical on the left, Back-Scatter SEM to the right with software enhanced extraction (100% Extraction)

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IFM Extracting/ Mapping Information

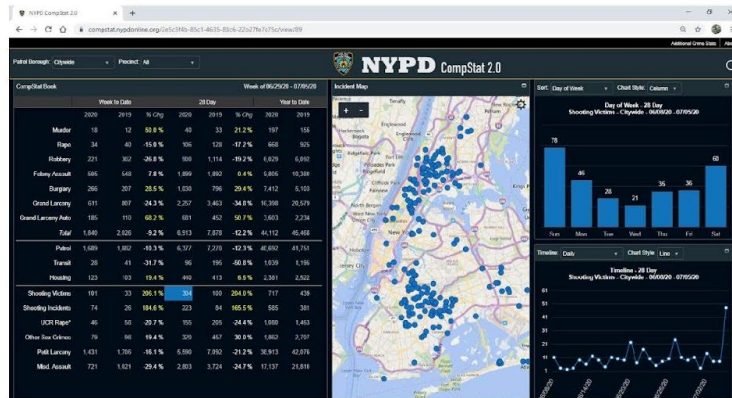
Integration Scatter Chart (>2 Cartridges Found, 99% Identification)



IFM Extracting/ Mapping Information



IFM Targets Firearms Trafficking



NYPD CompStat

What is IFMTM Forensic Intelligence?

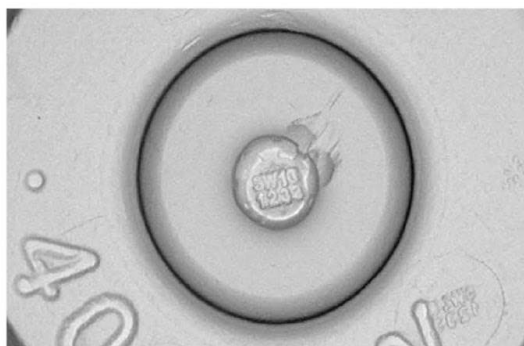
IFM is a forensic intelligence tool that can drive intelligence-led policing. IFM technology will identify a firearm when it is not recovered and provide the shortest time to crime link between the purchase or acquisition of a firearm and its first use in crime.

IFM Impact On Forensic Intelligence

- *There is an obvious fact; firearm trafficking investigations are aided by rapid firearm identification.*
- *Firearms are rarely recovered at crime scenes, but fired cartridge casings are almost always recovered.*
- *Current firearm identification technologies used such as IBIS are limited to tracing firearms that are recovered at the scene.*
- *There is a need for a technology that leverages existing forensic infrastructure and adds to the mosaic of forensic intelligence*

Microstamping Technology

My name is Joshua Horwitz and I am the Dana Feitler Professor of the Practice and the Co-Director at the Johns Hopkins Center for Gun Violence Solutions. This testimony today represents my opinion and does not necessarily reflect that of Johns Hopkins University.



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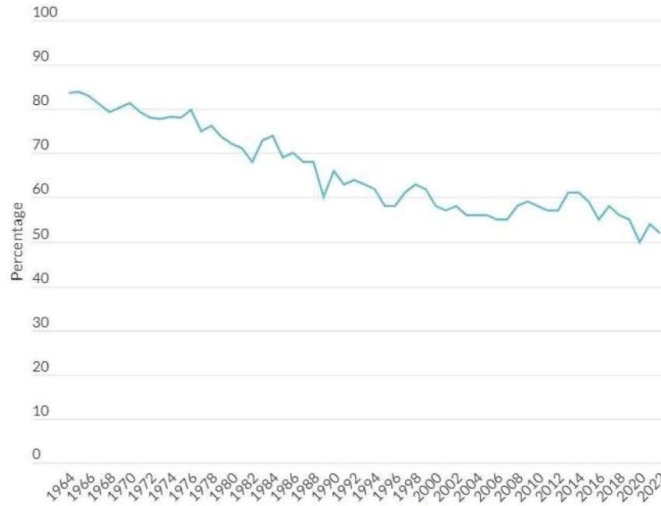
This blue 1990 Chevy Caprice was used as a rolling sniper's nest by John Allen Muhammed and Lee Boyd Malvo in their 2002 attacks.



The Bushmaster .223-caliber rifle that had been used in each attack by the Bel Muhammed and Lee Boyd Malvo was found in the trunk of the car when they v

2

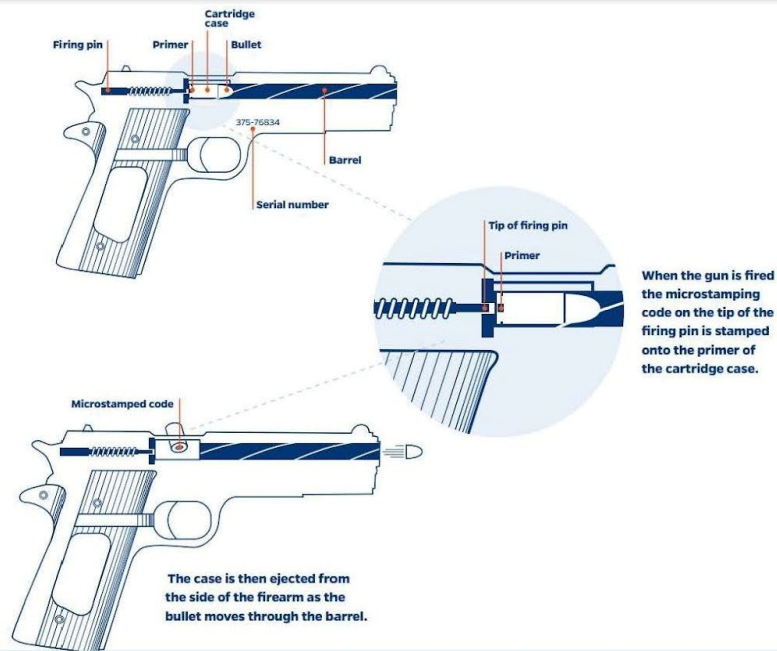
The Crisis of Unsolved Shooting



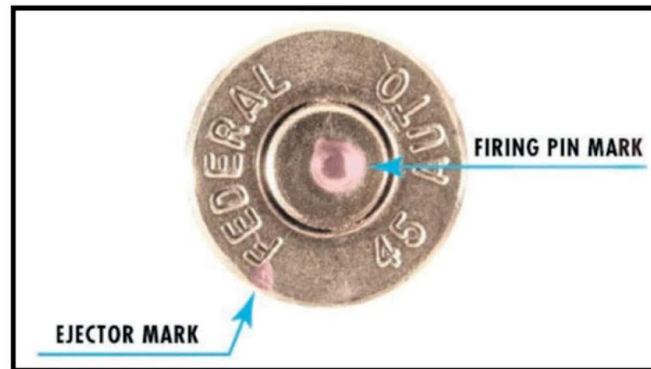
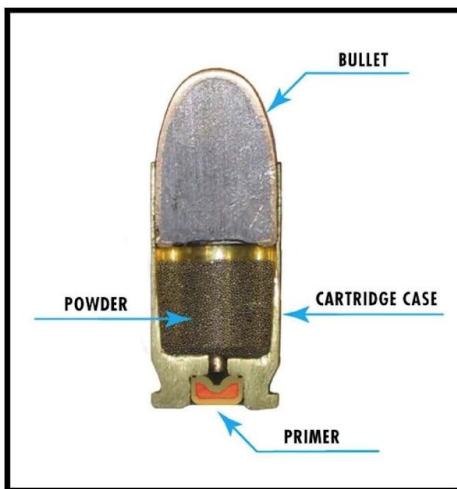
Source: Kaplan, J. (2023). Uniform crime reporting program data: Offenses known and clearances by arrest (Return A), 1960-2022.



Unknown circumstances and victim-offender relationships make it harder for detectives to solve murder cases, and vice versa: lower case clearance rates make it harder to determine circumstances and relationships. The homicide clearance rate declined 9% in 2020, continuing a downward trend that began in the 1960s. In 2022, the clearance rate was at about 50%, meaning that just half of murders resulted in an arrest and fewer than half result in a conviction.

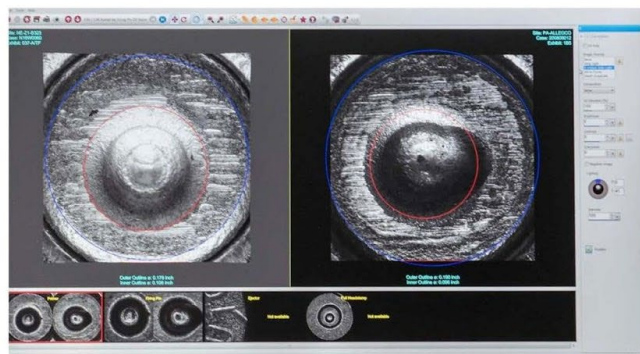


Cartridge Case and Firing Pin Impressions



The Current Identification Process

- Analysis of unintentional markings through NIBIN database
- Valuable tool but:
 - Requires a recovered firearm
 - Process can be time-consuming and resource intensive
 - Variable use depending on the jurisdiction



Comparing unintentional markings on shell casings using NIBIN

IN THE SUPREME COURT

OF MARYLAND*

No. 10

September Term, 2022

KOBINA EBO ABRUQUAH

v.

STATE OF MARYLAND

“Firearms identification examiner testifying as an expert witness should not have been permitted to offer an unqualified opinion that crime scene bullets and a bullet fragment were fired from the petitioner’s gun.”



A 5.56x45 mm cartridge fired from a AR-15 rifle after 341 rounds of firing (left), and a 45 caliber cartridge fired from a semiautomatic pistol after 8,532 rounds of firing (right).

Microstamping: A License Plate for Expended Cartridge Casings

- Stamps a microscopic code on a cartridge as the gun is fired
- Code is linked the gun's serial number
- Trace shooting to the original purchaser of the gun without recovering a gun



A firing pin equipped with microstamping

The Benefits of Microstamping

- Identifies the gun used in a shooting without recovering a gun
- Link multiple shootings carried out with the same gun
- Identify trafficking channels and irresponsible dealers
- Unobtrusive tool
- Removes bias from current identification process

Current Landscape

Manufactures can produce microstamping

- Admitted in court documents
- Developed similar ballistic marking technology

Commercially viable

- No patent restrictions
- Commonly used laser technology
- Process can be incorporated onto the manufacturing floor or produced by a third-party laser job shop

JOHNS HOPKINS
BLOOMBERG SCHOOL
OF PUBLIC HEALTH

Center for
Gun Violence Solutions

Microstamping

A Tool to Identify Crime Guns, Solve Shootings,
& Hold Gun Traffickers Accountable

Overview

Microstamping adds unique codes on the inside of a gun which are stamped onto the cartridge casing each time the gun is fired. When police officers respond to a shooting and recover expended casings, they can quickly link the microstamped code on the cartridge casings to the serial number of the crime gun. Gun dealers are currently required to keep records of the serial numbers of each gun they sell, so microstamping would allow law enforcement to identify that serial number and trace a gun to the original gun dealer and gun buyer without having to recover the crime gun itself.

This stamp can provide law enforcement vital real-time intelligence to help solve shootings and identify the gun traffickers and dealers that supply crime guns.

Though research shows microstamping is reliable and has no impact on the functionality of the firearm, the gun industry has refused to incorporate this tool into their guns.¹ They have boycotted a microstamping law in California by refusing to sell new models of firearms in the state.

To address the industry's resistance, California, New Jersey, and New York recently passed new legislation to push the gun industry to incorporate microstamping into guns distributed in their states.

Microstamped cartridge cases are collected at the scene of a shooting

Police officers use a microscope to read the microstamped code

Codes are entered into a computer and linked to the serial number of the gun used

Other shootings carried out with the same gun are identified and linked

Law enforcement trace the gun to the original gun dealer and gun buyer

Trafficking channels are identified, leads are generated

<https://publichealth.jhu.edu/gun-violence-solutions> • CDVS@jh.edu

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Testimony of Monte Frank
Massachusetts Special Commission on Emerging Firearm Technology
February 10, 2025

Honorable members of the Massachusetts Special Commission on Emerging Firearm Technology, my name is Monte Frank. While I am the chair of the American Bar Association's Standing Committee on Gun Violence, I am here in my individual capacity as only the president of the ABA can speak on its behalf.

I am a resident of the State of Connecticut with strong connections to Massachusetts. My law firm has an office in Springfield, Massachusetts, my wife and I own a home on the Cape, and I am a die-hard Red Sox fan. I am also a past president of the New England Bar Association.

Since the shooting at the Sandy Hook School, I have been active in working on ways to reduce gun violence. In December 2012, I lived in Sandy Hook and was a town attorney for the Town. I had a front row seat to what mass shootings can do to families and communities. Since then, I have learned how devastating gun violence is for our urban communities. I heard representative Robin Kelly from Chicago describe it as a "slow moving massacre." My efforts have been focused on non-partisan efforts to reduce gun violence. In 2018 I gave up my party registration as a Democrat and ran for Lieutenant Governor with Oz Griebel, a former GOP gubernatorial candidate in Connecticut. In doing so, I was able to speak directly with members of both parties and unaffiliated voters about the gun violence, and I learned that despite the political rhetoric, most Americans understand that reasonable regulation of firearms is necessary to reduce gun violence, drive down homicides and suicides, and help identify and prosecute those who use guns illegally.

Since 2015, I have served on the American Bar Association's Standing Committee on Gun Violence. I am the current chair of the Committee. The American Bar Association is the largest voluntary association of lawyers and legal professionals in the world. The ABA's House of Delegates is the policy-making body of the association. The House of Delegates drafts, debates and votes on resolutions that establish Association policy on professional and public issues. It represents not only various groups within the Association, but also the legal profession as a whole, and includes delegates from state, local and specialty bars.

Over the course of the last six decades, the ABA has adopted many nonpartisan and evidence-informed policies aimed at curbing the scourge of gun violence in America while respecting the Second Amendment.

Among ABA policy on reducing gun violence is Resolution 115 adopted in 2010 concerning microstamping. I will note that the chair of the Standing Committee on Gun Violence at that time was Judge Robert B. Collings of United States District Court of the District of Massachusetts.

Resolution 115 states:

RESOLVED, That the American Bar Association urges federal, state and territorial governments to enact laws requiring that all newly-manufactured semi-automatic pistols be fitted with microstamping technology which would ensure that when a firearm is fired, an alphanumeric and/or geometric code would be stamped on the cartridge casing by way of the firing pin, breech face or other internal surfaces of the firearm, that would enable law enforcement to identify the serial number of the pistol and hence the first known purchaser of a weapon used in a crime.

This resolution remains ABA policy today.

The Report, which accompanies the Resolution, sets forth the reasoning for the resolution, including the need to identify semi-automatic pistols directly through cartridge casings found at crime scenes, much like a license plate enables law enforcement to identify a car's make, model and VIN number. Since cartridge evidence is much more likely to be recovered at the site of shootings than the gun itself, microstamping enables law enforcement to use the microstamped markings on the cartridge to obtain the serial number and to begin an immediate trace request. As stated by the International Association of Chiefs of Police: "This technology would be used to help law enforcement to identify the first known purchaser of a weapon used in crime, therefore providing leads that would allow for substantial evidentiary information that will help identify, apprehend and arrest criminals."

To the extent that persons who commit violent crimes by the use of firearms are detected and prosecuted, gun violence in this country will decrease and our citizens will be that much safer. Microstamping technology will be a material aid to law enforcement in the effort to solve crimes committed by use of guns. It is cost effective and will not impinge on the rights of any gun owners. The Report specifically provides that microstamping does not have Second Amendment implications.

In addition, the use of this technology would deter federal crimes involving "straw purchases" in which a prohibited person recruits an individual with a clean criminal record to pass a background check and purchase a firearm for that person. "Straw purchasers" would be less likely to act in that capacity if they knew that the gun could be successfully traced back to them after the gun was used in the commission of a crime. Thus,

microstamping would help implement long standing ABA policy aimed at reducing the illegal trafficking of firearms.

I will attach the ABA Resolution and Report to my testimony which I will submit. Thank you for consideration of this important matter that will save lives without impacting the rights of law-abiding citizens as protected by the Second Amendment.

AMERICAN BAR ASSOCIATION
ADOPTED BY THE HOUSE OF DELEGATES
AUGUST 9-10, 2010

RECOMMENDATION

RESOLVED, That the American Bar Association urges federal, state and territorial governments to enact laws requiring that all newly-manufactured semi-automatic pistols be fitted with microstamping technology which would ensure that when a firearm is fired, an alphanumeric and/or geometric code would be stamped on the cartridge casing by way of the firing pin, breech face or other internal surfaces of the firearm, that would enable law enforcement to identify the serial number of the pistol and hence the first known purchaser of a weapon used in a crime.

REPORT
(REVISED)

I. Introduction

As a firearm is discharged, tool marks on the interior surface of the weapon (unintentional byproducts of the manufacturing process) create markings on the expended cartridge casing. These markings take the form of microscopic scratches and indentations. For close to one hundred years, trained firearms examiners have used these markings to help identify or match a cartridge case with the weapon from which it was discharged. The unintentional markings on an expended cartridge cannot, however, identify a specific firearm unless the firearm has been recovered and a test round has been produced for comparison. This is a significant limitation on the ability of law enforcement to identify a firearm from which a cartridge was fired and to solve crimes involving gun violence.

Intentional firearms microstamping, in contrast, allows guns used in a crime to be identified without the need to recover the gun itself. Microstamping uses the same forces that produce the transfer of unintentional markings to create a unique code that can be extracted from the expended cartridge case by a firearms examiner. The technology uses lasers to make precise, microscopic engravings on the internal mechanisms of a handgun, such as the breech face and firing pin. As the gun is fired, information identifying the make, model and serial number of the gun is stamped onto the cartridge as alphanumeric and geometric codes.

II. Why This Recommendation is Necessary

Microstamping enables law enforcement to identify semi-automatic pistols directly through cartridge casings found at crime scenes, much like a license plate enables law enforcement to identify a car's make, model and VIN number. Since cartridge evidence is much more likely to be recovered at the site of shootings than the gun itself, microstamping enables law enforcement to use the microstamped markings on the cartridge to obtain the serial number and to begin an immediate trace request. As stated by the International Association of Chiefs of Police: "This technology would be used to help law enforcement to identify the first known purchaser of a weapon used in crime, therefore providing leads that would allow for substantial evidentiary information that will help identify, apprehend and arrest criminals."¹

This technology would also deter federal crimes involving "straw purchases" in which a prohibited person recruits an individual with a clean criminal record to pass a background check and purchase a firearm for that person. "Straw purchasers" would be less likely to act in that capacity if they knew that the gun could be successfully traced back to them after the gun was used in the commission of a crime.

¹Resolution of the International Association of Chiefs of Police adopted at the 115th Annual Conference, San Diego, California, November 11, 2008.

Thus, microstamping would give law enforcement a new investigative tool. In most cases, learning the identity of the original purchaser would not be the end but rather just the first step in an investigation. Evidence of the identity of the original purchaser obtained by use of the microstamps does not mean that the original purchaser should be charged with the crime in the absence of other competent and admissible evidence identifying the original purchaser as the actual perpetrator or accomplice to the crime. Put another way, before any charge is brought against the original purchaser, additional investigation will have to be conducted to determine at the very least that the weapon which has been identified by use of the microstamp has remained in the possession, custody and/or control of the original purchaser and has not been transferred, legally or illegally, to another person such as, for example, by theft. Further, introduction of microstamping evidence at a criminal or civil trial would require that the proponent of the evidence meet the jurisdiction's prerequisites for the admission of scientific evidence. The Court would rule on the question of admissibility upon the record made by the parties.

Microstamping does not require the creation of any new database of gun owners or ballistic information; it simply improves the usefulness of an existing tracing system by adding more information to that system. Microstamping does not collect any new personal information from gun owners in any way and has no Second Amendment implications whatsoever.

Requiring the microstamping capability would not materially increase the cost of guns. It has been estimated to cost about \$6.00 per gun to do the microstamping engraving process. Further, the inventors of the technology have relinquished the patent rights back so that any manufacturer can use the technology at no cost.

Peer reviewed research has shown that a broad array of pistols outfitted with the microstamping technology has consistently produced extractable markings through thousands of test rounds. Two papers, which were authored by the inventors of the technology, represent the most extensive testing and evaluation of the microstamping technology.² These studies were relied on by the Committee. The Committee acknowledges that other studies pre-dated this research.³

The patents filed on the existing microstamping technology have expired and as a result it

² Todd E. Lizotte and Orest Ohar, Forensic Firearm Identification of Semiautomatic Handguns Using Laser Formed Microstamping Elements, *Optical Technologies for Arming, Safing, Fuzing, and Firing IV*, edited by Fred M. Dickey, Richard A. Beyer, Proc. of SPIE Vol. 7070, 70700K, (2008); Orest P. Ohar, Todd E. Lizotte, Extracting Ballistic Forensic Intelligence: Microstamped Firearms Deliver Data for Illegal Firearm Traffic Mapping – Technology, *Optical Technology for Arming, Safing, Fuzing, and Firing V*, edited by Fred M. Dickey, Richard A. Beyer, Proc. of SPIE Vol. 7434, 743416, (2009).

³ George G. Krivosta, Nanotag Markings From Another Perspective, *AFTE Journal* –Volume 38, Number 1, 41-47, Winter 2006; David Howitt, Frederic A. Tulleners and Michael T. Beddow, What Micro Serialized Firing Pins Can Add To Firearms Identification In Forensic Science: How Viable Are Micro-Machined Firing Pin Impressions As Evidence. Report from Forensic Science Graduate Group, University of California, Davis, downloaded at: http://extension.ucdavis.edu/masters/forensic_science/pdf/UCD-Microserial%20Number%20CPRC%20Report%20May%20April.pdf

is available for use by manufacturers. Other microstamping technologies that meet the requirements of the Resolution may exist or become available. The ABA is not recommending the adopting of a specific source of microstamping.

III. Enactment in California

On October 13, 2007, California Governor Arnold Schwarzenegger signed microstamping legislation into law, mandating the microstamping of all new models of semi-automatic handgun models sold in the state beginning this year. The provision is codified at Penal Code Section 12126(b)(7). The legislation garnered the support of 65 police chiefs and sheriffs across the state.

IV. Enactment in the District of Columbia

On March 31, 2009, an amendment to the statutes of the District of Columbia to provide for microstamping on semi-automatic pistols became law. The requirements for microstamping become effective on January 1, 2011. The provision is codified at D.C. Code § 7-2504.08 and § 7-2505.03.

V. Conclusion

To the extent that persons who commit violent crimes by the use of firearms are detected and prosecuted, gun violence in this country will decrease and our citizens will be that much safer. Microstamping technology will be a material aid to law enforcement in the effort to solve crimes committed by use of guns. It is cost effective and will not impinge on the rights of any gun owners. The technology should be required on all newly- manufactured semi-automatic pistols manufactured in this country.

Respectfully submitted,
Honorable Robert B. Collings
Chair, Standing Committee on Gun Violence
August 2010

GENERAL INFORMATION FORM1. Summary of the Recommendation:

In trying to solve violent crimes in which guns are used, law enforcement is limited in the investigative use which can be made of the cartridge casing of spent ammunition which are usually left at the scene. Only if a weapon is recovered will law enforcement be able to do forensic tests to determine whether the particular weapon was used in the crime. Unfortunately, more often than not, the weapon is not recovered at the scene. Fitting newly-manufactured semi-automatic pistols with microstamping technology would enable law enforcement to examine the cartridge casing fired from such weapons and learn the serial number of the weapon used. This, in turn, will enable law enforcement to trace the original purchaser of the weapon and to commence an investigation to attempt to identify the person (whether the original owner or someone else) who used the weapon in the violent crime.

2. Approval by the Submitting Entity:

The Standing Committee on Gun Violence voted to submit the report and recommendation in a telephone conference call on March 23, 2010.

3. Has this or a similar recommendation been submitted to the House of Delegates or Board previously?

No.

4. What existing Association policies are relevant to this recommendation and how would they be affected by its adoption?

The proposed policy recommendation builds upon a recommendation adopted by the House of Delegates in August 2004 in support of strengthened investigation, apprehension and prosecution of violent gun offenses. The 2004 approved policy provided for Association support for federal, state and territorial efforts to implement and enforce the nation's gun laws. Specifically, it called for more federal prosecutorial and investigative resources to be devoted to enforcement of laws dealing with illegal trafficking in firearms, corrupt dealer practices, and illegal sales to minors, among others. It supported legislation and administrative steps to implement fully the National Instant Check System (NICS) by requiring federal agencies and departments to cooperate with NICS, by supporting state efforts to automate background records of persons prohibited under existing law from possessing or purchasing firearms, including felony, domestic violence misdemeanor offenses, and mental health-related adjudications. Last, it recommended repeal of a recent legislative amendment that requires destruction of NICS background records within 24 hours and would permit sharing of NICS records and crime trace data with state and local police, which was the longtime practice until adoption of an amendment in January 2004. These steps would help to provide a reliable background

check system to prevent sales of firearms to persons now disqualified under federal law from possessing or purchasing firearms and would focus federal enforcement resources more carefully on illegal trafficking in firearms.

Adoption of the proposed recommendation supporting laws to implement microstamping technology would put the Association on record in support of a step to support stronger law enforcement investigation, apprehension, and prosecution of violent offenders using firearms without posing barriers to lawful gun owners' use and possession of firearms.

5. What urgency exists which requires that action on this matter be taken at this meeting of the House?

To the extent that law enforcement can identify and apprehend those persons who use firearms to commit violent crimes, the public at large will be safer. Since implementation of this recommendation will require the enactment of legislation which usually takes some time, it is important that the effort to get the legislation enacted begin as soon as possible.

6. Pending Legislation.

There is no pending legislation in Congress. Bills to require microstamping are currently pending in Illinois (S.B. 3425), Massachusetts (H.B. 2247), New York (A.B. 6468 and S.B. 6005) and Wisconsin (A.B. 221).

7. Costs to the Association.

None.

8. Disclosure of interests.

No known conflict of interest exists.

9. Referrals.

The report and recommendation will be referred to the following Sections, Divisions, Forums and bar associations within ten days.

Alameda County Bar Association
 Association of the Bar of the City of New York
 Bar Association of San Francisco
 Beverly Hills Bar Association
 Criminal Justice Section
 Dispute Resolution Section
 Domestic Violence Commission
 Family Law Section
 Government and Public Sector Lawyers Division

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Individual Rights and Responsibilities Section
Judicial Division
Litigation Section
Los Angeles County Bar Association
Minority Bars Caucus
National Association of District Attorneys
Philadelphia Bar Association
Santa Clara Bar Association
State and Local Government Law Section
Tort Trial and Insurance Practice Section
Young Lawyers Division

10. Contact Person. (Prior to the meeting, please include name, address, telephone number and email address.)

Honorable Robert B. Collings
Chair, Standing Committee on Gun Violence
United States District Court, District of Massachusetts
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Boston, Massachusetts 02110
E-Mail: Honorable_Robert_Collings@mad.uscourts.gov
Telephone: 617-748-9228
Cell: 617-595-2529
FAX: 617-748-9231

11. Contract Person. (Who will present the report to the House.)

Honorable Robert B. Collings
Chair, Standing Committee on Gun Violence
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EXECUTIVE SUMMARY1. Summary of the Recommendation:

In trying to solve violent crimes in which guns are used, law enforcement is limited in the investigative use which can be made of the cartridge casing of spent ammunition which are usually left at the scene. Only if a weapon is recovered will law enforcement be able to do forensic tests to determine whether the particular weapon was used in the crime. Unfortunately, more often than not, the weapon is not recovered at the scene. Fitting newly-manufactured semi-automatic pistols with microstamping technology would enable law enforcement to examine the cartridge casing fired from such weapons and learn the serial number of the weapon used. This, in turn, will enable law enforcement to trace the original purchaser of the weapon and to commence an investigation to attempt to identify the person (whether the original owner or someone else) who used the weapon in the violent crime.

2. Summary of the Issue which the Recommendation addresses:

The Recommendation addresses the issue of the inability of law enforcement to identify guns used in violent crimes when the cartridge casing, but not the gun, is retrieved at a crime scene.

3. An explanation of how the proposed policy position will address the issue:

Requiring all newly-manufactured semi-automatic pistols to be equipped with microstamping technology will enable law enforcement to identify the gun from the microstamped markings on the spent casing.

4. A summary of any minority views:

None known.

MICROSTAMPING
Performance Standards and Qualifying Criteria

For a firearm to qualify as a microstamping-enabled firearm for inclusion on the microstamping roster as set forth under N.J.S.A. 2C:58-2.13 *et seq.*, the firearm must meet the following performance standards and qualifying criteria:

1. When the firearm fires a round, it shall impart an imprint, etching, stamp, or other marker onto the expended cartridge case that is readily associable by law enforcement and other governmental authorities with the specific firearm from which the cartridge case was expended.
2. The firearm must impart such a marker regularly, including after sustained firing of the firearm.
3. The firearm shall not physically deform or deteriorate as a result of firing rounds, and shall not fire with less reliability than other commercial firearms sold in New Jersey.
4. The firearm shall not discharge in response to abuse or mishandling of the firearm.
5. The firearm's design shall comply with all applicable New Jersey and federal laws.
6. The firearm shall be made by a manufacturer possessing all licenses required by law for such manufacturers.
7. The firearm shall be submitted for application by the manufacturer or its authorized distributor or dealer, or otherwise with the consent of the manufacturer or authorized distributor or dealer.

MICROSTAMPING
Process for Determination of Microstamping-Enabled Firearms

Statutory Background

A Microstamping Examiner appointed by the Attorney General will determine whether the make and model of firearm proposed by an Applicant may be designated as a microstamping-enabled firearm. N.J.S.A. 2C:58-2.13(e). The Microstamping Examiner's determination is based on whether the firearm meets the Attorney General's microstamping performance standards and qualifying criteria. N.J.S.A. 2C:58-2.13(c). Upon designation of the first microstamping-enabled firearm, the Microstamping Examiner shall create a microstamping roster, which shall include all firearms designated as such. N.J.S.A. 2C:58-2.13(d).

Process

1. The Microstamping Examiner's determination of whether a make and model of firearm meets the microstamping performance standards and qualifying criteria shall be based upon (1) application materials submitted by the Applicant; and (2) live-fire testing by a testing entity of one or more firearms of that make and model. The testing shall be conducted according to criteria to be issued by the Microstamping Examiner.
2. The Microstamping Examiner will issue application materials and additional guidance, in conjunction with the Office of the Attorney General and New Jersey State Police, for Applicants as quickly as practicable after their appointment. The guidance will include further information on how the Microstamping Examiner will review and approve an Applicant's testing plan, including protocols for conducting live-fire tests and evaluating test results. The guidance will also include further information on what the Microstamping Examiner will consider to be an imprint, etching, stamp, or other marker that is readily associable with the specific firearm from which the cartridge case was expended.
3. The entity conducting live-fire testing shall issue a Final Test Report to the Applicant at the conclusion of the testing process, with a copy to the New Jersey State Police, and the Attorney General or designee.
4. Once the Final Test Report is issued, the Applicant may apply to the Microstamping Examiner for their determination of whether a firearm can be designated as a microstamping-enabled firearm. Application materials shall include the Final Test Report; a statement of how the imprint, etching, stamp, or other marker shall be readily associable by law enforcement and other governmental authorities to a specific firearm, and of how any associated records will be maintained; and certifications of compliance

with federal and New Jersey law. The Microstamping Examiner may ask the Applicant for additional information or materials if needed to reach their determination.

5. After reviewing Applicant's materials, the Microstamping Examiner will determine whether the firearm meets the microstamping performance standards and qualifying criteria. The Microstamping Examiner will issue a Preliminary Decision with a written justification.
6. If the Applicant's firearm is denied for inclusion on the roster by the Microstamping Examiner, an Applicant may, within 30 days of the Microstamping Examiner's Preliminary Decision, submit a letter to the Microstamping Examiner seeking reconsideration. The Microstamping Examiner must then respond to the reconsideration letter with a Final Decision accompanied by a written justification. If the Applicant does not submit a reconsideration letter within 30 days of the issuance of the Preliminary Decision, then the Preliminary Decision shall automatically convert to a Final Decision. The Applicant may submit a new application for the rejected firearm to the Microstamping Examiner no earlier than 60 days after the issuance of the Final Decision.
7. If the Applicant's firearm is approved by the Microstamping Examiner, the firearm shall be designated as a microstamping-enabled firearm and placed on the microstamping roster, which shall be maintained by the Microstamping Examiner and published on a website maintained by the New Jersey State Police.
8. Any alteration to the design of a make and model of firearm that has been approved for addition on the roster shall require a determination from the Microstamping Examiner that the firearm continues to meet the performance standards and qualifying criteria. The Microstamping Examiner also reserves the right to remove firearms from the microstamping roster if new information indicates that the firearm does not meet the performance standards and qualifying criteria, or is otherwise in violation of New Jersey or federal laws.
9. If the Microstamping Examiner determines that a firearm should be removed from the microstamping roster, they must provide a Notice of Intent to the manufacturer of the firearm. The Notice of Intent must provide a written justification for the removal of the firearm. The manufacturer may respond to the Notice of Intent in writing within 30 days of issuance of the Notice of Intent. If no written response is submitted by the manufacturer challenging the Notice of Intent, then the firearm shall be removed from the microstamping roster immediately after the 30-day period. If a written response by the manufacturer is submitted within the 30-day period, the Microstamping Examiner must issue a Final Decision of Removal with a written justification for the decision.