POSITION STATEMENT

A2881/S2379 & A9141/S5561
PROHIBIT POSSESSION OF FRANGIBLE AMMUNITION, CHANGE THE DEFINITION OF ARMOR PIERCING & EXPLOSIVE AMMUNITION

CONCEPT

The proposal expands the definition of armor piercing projectiles to include additional materials and construction methods that are professed as capable of penetrating ballistic vests of the type worn by law enforcement personnel. While it is critical that the law be kept current with changes in technology, it is equally important that such changes be based on factual information from technically competent sources. Decisions must be based on demonstrated performance and not on marketing claims and press releases.

POSITION

Oscar Wilde once said, "[a]ll bad poetry springs from genuine feeling." This proposal is the legislative equivalent. While we share the stated purpose of the proposed legislation -- maintaining the safety of law enforcement personnel -- we believe the changes in definition and the resulting restrictions have no basis in fact and do nothing to achieve this result. Moreover, in one case, it disregards the common law principle that a crime requires knowledge or criminal intent. The current State law is in agreement with Federal law[1] and is entirely adequate for the intended purpose.

The expansion the current Penal Code definition of "armor piercing ammunition" to include projectiles composed of ceramics or polymer plastics.[2]

These proposed changes should be rejected, as neither of these materials is suitable for manufacturing armor piercing ammunition.

We do not know of any handgun projectile that is made of ceramic material and intended to be armor piercing. Ceramic materials would appear to be a poor choice for armor penetration as they would be much more likely to shatter than penetrate. There have been several patents over the last 20 years for ceramic frangible projectiles intended for frangible training ammunition (see below), but none has proven practical.

We see no reason to include polymer plastics in this definition. Plastic projectiles are used, in fact, in training ammunition and blank ammunition because they are the antithesis of regular ammunition, with rapid velocity loss and limited range. Polymers are also used as binders in some frangible bullets. There have been claims made for new products, made of carbon based plastic polymers, that are purported to be armor piercing. None as ever proven effective. Perhaps the best-known example was the "Black Rhino" announced in 1994 but never submitted to the ATF for testing, nor put in production.[3]

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[1] 18 U.S.C. § 921 (17)
[2] P.L. § 265.00 (18)
[3] Fox Butterfield, (1994, December 29). *Company Puts Hold on a Plastic Bullet*. New York Times
Kelly Heyboer, (1995, March). *Shooting Blanks*. American Journalism Review

The fact remains, regardless of the claims of the inventors of "new technologies", that the laws of physics remain unchanged. An effective kinetic energy (KE) based armor piercing projectile must be made of a non-deformable material tougher than the armor, delivered at a high enough velocity and against a small enough area to present more force than the armor can resist. The law restricts the use of those materials that have proven technically and economically suitable for armor piercing handgun projectiles, and handgun bullets are way too small to utilize any other penetrator technology.

Add a new definition for "Devastator Ammunition", defined as a projectile that is capable of being used in handguns and that is designed to explode on impact.[4]

The proposed change should be rejected, as the net effect is to substitute an obsolete trade name for a perfectly adequate and more comprehensive technical definition.

There appears to be little point in this proposed change. Knowingly possessing ammunition, in fact merely a bullet, containing an explosive substance designed to detonate on impact is already illegal in New York State.[5] This definition seems adequate if it is desired to add additional offenses. The replacement of a clear, generic term with a product trademark seems to be directed at inciting an emotional response based on what is, at best, a misconception.

This proposal is presumed to be directed at Devastator® ammunition manufactured by Bingham Ltd from 1979 to about 1981[6]. The bullets in this ammunition were otherwise conventional hollow points containing a small capsule of lead azide, a primary explosive. The capsule was intended to detonate on impact and enhance the expansion of the hollow point bullet. The explosive charge was far too small to cause any direct damage. As Federal law does not prohibit or regulate explosive projectiles containing less than ¼ ounce of explosive,[7] the Government proceeded against Bingham Ltd using explosive restrictions in the Organized Crime Control Act[8]. While it may be occasionally found in old stocks, this ammunition has not been manufactured in over 25 years. In any case, they did not represent a performance improvement over conventional ammunition.

Add a new definition for "frangible ammunition", defined as a projectile that is capable of being used in handguns and is composed of hybrid materials, pressed, or glued together, and designed to fracture or disintegrate on impact.[9]

As frangible projectiles, by definition, fragment completely upon impacting anything harder than itself, it cannot in any sense be construed to be an armor-piercing projectile. In 2002, an anonymous rumor spread via the internet that frangible bullets would split upon impacting a ballistic vest and penetrate it. Tests conducted under controlled conditions quickly determined that in no case did a frangible bullet penetrate a vest and no incursion exceeded the penetration of a high performance conventional bullet.[10]

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[4] New P.L. § 265.00 (25)
[5] P.L. § 265.01 (7)
[6] The "Devastator" name has been used for other shooting products, including Lyman Products bullet molds and a custom pistol cartridge.
[7] 18 U.S.C. § 921 (4)
[8] 18 U.S.C. § 841-847
[9] New P.L. § 265.00 (24)
[10] Orange County Sheriff's Department. Orange County CA www.ocsd.org

Frangible bullets are designed to disintegrate on impact with a hard surface into particles so small that they lose velocity almost immediately and are unlikely to cause injury. The first bullets of this type were developed in the 1930's for use in amusement park shooting galleries. These bullets, made of lead and sodium carbonate and loaded in .22 short cartridges, were marketed under the trade names of "Spatterless" and "Spatterproof". They were discontinued in the 1980's. The military developed frangible .30 caliber machine gun ammunition during World War II for the purpose of training aerial gunners using towed targets. The bullet was designed to disintegrate if it hit the lightly armored tow plane. The bullet, made of powdered lead and Bakelite, was standardized as Ball, Frangible M22.[11] It was never developed for use in handguns.

Modern frangible handgun ammunition was developed in response to the need for law enforcement training ammunition that could be safely utilized in realistic training scenarios employing close range and multidirectional shooting using a wide range of reactive targets. The primary need was to eliminate ricochets and over penetration. This would permit the construction of such facilities from lighter, less costly material.

The result was the development of frangible bullets, comprised of about 90% powdered, non-toxic metal, usually zinc or copper, and 10% binder.[12] These bullets disintegrate upon impacting a hard surface and perform about the same as conventional full-jacketed bullets upon impacting a soft target. Frangible ammunition usually has a maximum range of about half that of conventional ammunition. There is clearly no reason for including frangible ammunition in the category of "armor piercing". This would be legislation based on urban legend.

RECOMMENDATION

With respect to the specific items in A2881/S2379:

We fully support Section 2 that would make possession of armor piercing ammunition with intent to use against another a class D felony, and attempted possession with intent to use against another a class E felony. We oppose the inclusion of frangible ammunition. The possession of any explosive substance with intent to use is already a class B felony.[13] We fully support Section 3 that would increase the penalty for aggravated assault upon a police or peace officer.

We oppose Section 4, 5, and 6 of the proposed legislation to change the definition of armor piercing ammunition and to include new prohibited types for frangible and "devastator" ammunition for the reasons stated above.

We oppose Section 7 that would remove knowledge as a component of the offense of possession of explosive ammunition or evidence of possession with intent to use unlawfully as a component of the offense of possession of armor piercing or frangible ammunition[14]. This contravenes the basic common law precept that a crime requires intent. Such ammunition is not necessarily marked as to type and may be in packaging

[11] The Corning Glass Works experimented with glass bullets as part of this project.
[12] John F. Mullins, (2001). *Frangible Ammunition – The New Wave in Firearms Ammunition*. Paladin Press, Boulder CO.
[13] P.L. § 265.04 (1)
[14] Amended P.L. § 265.01 (7,8)

with coded or foreign language markings. We also oppose penalizing simple possession by collectors, scholars, etc.

We support Section 8 with respect to the inclusion of possession with intent to use armor piecing ammunition.[15]

We oppose Section 9 with respect to the inclusion of frangible and "devastator" ammunition for the reasons stated above. We have no objection to the inclusion of armor piercing ammunition.[16]

We have no objection to Section 10 providing an exemption for officers at correctional and detention facilities.[17] It would appear that this section is redundant, as these people are already exempt by virtue of their peace officer status. We have no objection to Section 11 providing an exemption for manufacturers.

We believe the technical definitions presented in A2881/S2379 are defective:

With respect to the "devastator" ammunition, the issue has already been addressed. Explosive handgun ammunition (or rifle ammunition for that matter) is a rarity for the simple reason that it does not work. The U.S. military hasn't used explosive bullets in small arms since World War I, as small arms projectiles are too small to contain a useful amount of explosive. As noted above, Devastator® ammunition has not been manufactured in over 25 years. Possession and use of explosive bullets is already illegal.[18] This is a case of using inflammatory rhetoric for political purposes.

Frangible ammunition is simply not armor piercing ammunition and poses no additional threat to law enforcement personnel. It is intended to disintegrate on impact with a hard surface, making training for a dangerous profession safer. It certainly will not penetrate a ballistic vest. The proposed legislation is based on an urban legend.

To be effective and enforceable, legislation addressing armor piercing ammunition must be based on the design and construction of the bullet, as well as the material used. It must address existing technologies and not attempt to preempt future developments. This was the method employed in 1986 in the drafting of the Federal legislation and in the 1993 amendment.[19] The National Rifle Association was instrumental in drafting the original bill and fully supported the amendment.

Sections 1 and 2 of A9141/S5561 should be rejected for the reasons stated above.

Legislation cannot be based on marketing claims and media hype. History is replete with promoters of amazing new discoveries that repeal the laws of physics. Nor should it be influenced by the deliberately misleading claims of gun control advocates. This is not an area for experimentation that may result in exposing law enforcement personnel to unnecessary risk. The use of terms such as "cop killer bullets" to arouse media hype and inflame public opinion do nothing to achieve a higher level of officer safety.

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[15] New P.L. § 265.02 (9,10)
[16] P.L. §.265.10 (1,2)
[17] P.L. §.265.20 (a)(2)
[18] P.L. §.265.01 (7) and P.L. § 265.04(1)
[19] 18 U.S.C. § 921(17)

ADDENDUM

This addendum contains information supplemental or peripheral to the Position statement on this bill.

US CODE

The most of the Federal law pertaining to firearms is contained in Title 18, Chapter 44, Sections 921-931. The section covering armor piercing ammunition is included here:

18 U.S.C. § 921(17)

(A) The term "ammunition" means ammunition or cartridge cases, primers, bullets, or propellent powder designed for use in any firearm.

(B) The term "armor piercing ammunition" means—

(i) a projectile or projectile core which may be used in a handgun and which is constructed entirely (excluding the presence of traces of other substances) from one or a combination of tungsten alloys, steel, iron, brass, bronze, beryllium copper, or depleted uranium; or

(ii) a full jacketed projectile larger than .22 caliber designed and intended for use in a handgun and whose jacket has a weight of more than 25 percent of the total weight of the projectile.

(C) The term "armor piercing ammunition" does not include shotgun shot required by Federal or State environmental or game regulations for hunting purposes, a frangible projectile designed for target shooting, a projectile which the Attorney General finds is primarily intended to be used for sporting purposes, or any other projectile or projectile core which the Attorney General finds is intended to be used for industrial purposes, including a charge used in an oil and gas well perforating device

ARMOR PIERCING BULLETS

The effort to develop pistol caliber penetrators grew out of the need for law enforcement to deal with use of automobiles by organized crime during Prohibition. All the major U.S. manufacturers produced "metal piercing" pistol ammunition until the early 1950's. Never a big seller, only Winchester continued it in their product line until about 1960. Germany accidentally produced 9mm ammunition with penetrating capabilities during World War II when they load ammunition with steel cores to conserve lead. After the war, it was sold as cheap practice ammunition and, before anyone figured out its penetrating capabilities, it had been virtually all consumed. In short, the older types of penetrators have been out of production for over 50 years and are now collector's items.

Military and police interest revived in the late 1960's resulting in an array of monolithic and jacketed penetrator designs, some of rather exotic architecture. Few got past the development stage and only two, the Swedish M39B 9mm and the American KTW designs, reaching production quantities. The other endeavors, which number over 65 unique types, only resulted in leaving collectors "with a withering array of unobtainable specimens".[20]

[20] Collins, Matthew, *Pistol Caliber Penetrators – History and Legal issues*, 468 IAA Journal 4-8 (2009)

The Swedish firm Bofors[21] developed the 9X19 M39B round in the late 1950's for the Swedish military. The bullet, weighing 106 grains, is comprised of a lead core in a steel jacket covered by a thin copper coat. The jacket is heavily reinforced in the front. This bullet will penetrate Level IIa and IIIa vests of the type worn by law enforcement personnel. The law defining armor piercing bullets had focused on bullet cores or solid bullet material. This bullet turned the design concept on its head by making the jacket the penetrating element and the composition of the core material irrelevant.

Bullets of this design were imported into the United States in very limited quantities for law enforcement use. It has been reported that the Secret Service strongly opposed importation even for law enforcement or military use, fearing that there would be "leakage to the dark side". There was some civilian availability in Sweden but whether this was through regular commercial channels or leakage from the military is unknown. Production ceased in 2003. There is no record of this design being used in any other caliber. The Federal law was amended in 1993 with the addition of 18 U.S.C. § 921 (17)(B)(ii) to cover this design.

The KTW design was brought to market in 1968 for law enforcement use in dealing with suspects in automobiles or behind barricades. It was marketed only to law enforcement agencies. The projectile was comprised of a monolithic core made of steel, brass, or tungsten coated with Teflon. The Teflon had nothing to do with the penetration characteristics; it was solely for the purpose of protecting the bore of the firearm from the hard penetrator. Production ceased in 1985, after a 1982 farcical NBC News special falsely labeled it as a cop killer that would penetrate Kevlar vests – something it was never designed to do.

The New York State definition of "armor piercing ammunition"[22] is identical with 18 U.S.C. § 921 (17)(B)(i) in the Federal law included above. In the A5382 Bill Summary, the Summary of Provisions includes the expansion of the New York State definition to include the text from (B)(ii) above. It is not, however, included in the actual bill text.

LIMITED PENETRATION AMMUNITION

Although not normally classified as "frangible", there is "pre-fragmented" ammunition with bullets designed to break up on contact and disperse their energy to the target. These bullets are intended for defensive use in environments where ricochets or over penetration would be a hazard.

Magsafe, produced by Magsafe Ammo Inc., Casselberry, FL (www.magsafeonline.com), is made of lead shot .14 or .15 inches in diameter imbedded in an epoxy resin.

The Glaser Safety Slug, produced by Dakota Ammo Inc., Sturgis SD (www.dakotaammo.net), is made of lead shot .05 to.11 inches in diameter compressed in a thin wall jacket with a soft polymer cap.

Both of these bullet designs are engineered to fragment on impact and rapidly transfer their energy to the threat with limited penetration. The purpose is to achieve maximum

[21] Now owned by the Norwegian firm Nammo AS
[22] P.L. § 265.00 (18)

stopping power without over-penetration. Bullets missing the intended target will fragment and not ricochet off hard surfaces and will not penetrate a sheet rock wall. They will certainly not penetrate ballistic vests. In fact, the small shot sized Glaser bullets are recommended for use only in warm climates where light clothing is worn.

Glaser ammunition was used by the Federal Sky Marshals until it was determined that conventional jacket hollow point ammunition did not pose a risk of over-penetration and potential damage to the aircraft did not impair airworthiness.

In the late 1980's and early 1990's, both Glaser and Magsafe produced pre-fragmented ammunition that would penetrate the ballistic vests of the day when fired at close range. They were the Glaser black tip and the Magsafe Agent rounds. They achieved this by driving very light bullets at a very high velocity. The 9mm Magsafe round used a 52 gr. Bullet at 2120 fps. Vests have improved significantly in the last 15 years. Some manufactures of current Level II and up vests claim to protect against these rounds. As they have been out of production for over 15 years and have not been identified as a threat, they have not been formally tested against the current National Institute of Justice standard.[23]

[23] NIJ Standard 0101.06 (July 2008)