

Firearm examinations are a valuable resource in the investigation and prosecution of major, often violent, crimes. The findings of these examinations can provide new leads or confirm the current theory of investigators. To address delays experienced by the Lexington County Sheriff's Department (LCSD) and the 11th Judicial Circuit Solicitor's Office (the Solicitor) in fully preparing criminal cases involving the analysis of firearms, LCSD requests financial assistance from the State of South Carolina to outfit and begin operation of a Firearms Examination Lab. The lab would be housed within the Lexington County Sheriff's Department's Crime Scene Unit, which falls under the umbrella of the Major Crimes Unit.

Goals for the project would include:

(1) Conducting timely and accurate firearm examinations in support of cases (brought by the 14 Lexington County law enforcement agencies) for prosecution by the Solicitor; (2) Reducing the number of backlogged firearms lab requests; (3) Reducing the number of Firearm Examinations conducted by the South Carolina Law Enforcement Division's (SLED) Firearm Division.

LCSD currently has a trained firearm examiner, who is a member in good standing of the Association of Firearms and Tool mark Examiners (AFTE). The proposed lab will follow guidelines established by the Occupational Health and Safety Administration (OSHA). The lab will conduct examinations in accordance with best practices set forth by AFTE and the SLED Firearms Division.

The lab will consist of three separate areas: (1) the LCSD CSU Lab, where weapons and other evidence will be temporarily stored during the examination, and for weapon examinations and manipulation; (2) the Evidence Depository's warehouse where a shoot tank will be located, allowing for the shooting of weapons for the NIBIN program and for firearm examinations; and (3) the CSU office area where the comparison microscope will be located. This area will be for the purpose of microscopic comparison of bullets, fired cartridge cases, and toolmarks.

Toward fully equipping the proposed lab, funding in the amount of \$156,000 for the purchase of the following items is requested:

(1) Firearm and Tool Marks Comparison Microscope (\$120,000). The microscope will be used for bullet, cartridge case, and tool mark comparisons and is the workhorse of the Forensic Firearm Examiner.

(2) Barrel and Overall Length Gauge (\$1,000). A barrel and overall length gauge is used to determine if the barrel length and the overall length of the firearm is within the limits set forth by Federal and State Statutes. These scales are ISO 17025 certified to ensure accurate measurements each time.

(3) Serial Number Restoration Kit (\$300). The serial number restoration kit is used to chemically recover the obliterated serial number from a firearm. There are various chemicals used during this process depending on the metal the serial number is stamped in.

(4) Workbench and Tools (\$1260). The workbench (\$400) is used to as a dedicated place to store tools and clean and disassemble firearms to determine if they are operational. Other tools include a Trigger Gauge (\$60), Gun Vise (\$300), and an Armorer Tool Kit (\$500)

(5) Cotton Box (\$9,000.00). The Cotton Box is used to fire a questioned firearm, for the purpose of recovering both the projectile and the cartridge case. The cotton box is a cheaper alternative to a water recovery tank and can either be fabricated or purchased. .

(6) 55gl Steel Drum (\$200). The Steel Drum is used to fire a questioned firearm, for the purpose of recovering the expended cartridge case for the IBIS Initiative.

(7) Automated Triage System (ATS) (\$25,000), is a triage system designed to evaluate, identify, and sort expended cartridge cases. The system allows for the CSU in the field to collect the expended cartridge case in a LOCI preservation capsule. This capsule is designed to protect the expended cartridge case from cross contamination of latent prints and DNA.