



**CITY OF FORT WORTH  
CHAPTER 252 EXEMPTION FORM**

Instructions: Fill out the entire form with detailed information. Once you have completed this form, provide it to the Purchasing attorney for review. The attorney will review the information you have provided to determine whether an exemption to Chapter 252's bidding requirements is defensible. If you are printing this form to provide to Legal, please do not provide the Primer portion. Failure to provide sufficient information may result in follow up questions and cause a delay in the attorney's determination.

**Section 1: General Information**

Requesting Department: Police – Crime Laboratory

Name of Contract Manager: Kelly Cleveland

Department's Attorney: Taylor Paris, Andrea Phillips

Item or Service sought: Cadre TopMatch 3D System – Scanning system for  
firearm forensics

Goods:

Service:

Anticipated Amount: \$141,050.00 + if funding is available 4 year option  
for service up to \$47,200 for 4 years

Vendor: Cadre Forensics

Current/Prior Agreement for item/service: Yes  No

CSC or Purchase Order #: N/A

Amount: N/A

Projected M&C Date: N/A

How will this item or service be used? The Cadre system will be used to supplement the comparison microscopy in the Crime Lab Firearm Unit. The 3D microscopy systems are where the science is heading and what the Texas Forensic Science Commission has recommended that we adopt.

Has your department started a requisition or otherwise contacted the Purchasing Division related to obtaining this good/service?      Yes                          No   

If yes, please provide requisition number or brief explanation of contact with Purchasing Division: [DETAILED DESCRIPTION]

**Section 2: Claimed Exemption and Justification (Other than sole source)**

NOTE - For a claimed sole-source exemption, only complete Section 3.

Please indicate the non-sole-source exemption you believe applies to the purchase and provide information to support its applicability. Please refer to the Exemption Primer for detailed information about common exemptions:

- A procurement necessary to preserve or protect the public health or safety of the City of Fort Worth’s residents;
- A procurement necessary because of unforeseen damage to public machinery, equipment, or other property;
- A procurement for personal, professional, or planning services;
- A procurement for work that is performed and paid for by the day as the work progresses;
- A purchase of land or a right-of-way;
- Paving drainage, street widening, and other public improvements, or related matters, if at least one-third of the cost is to be paid by or through special assessments levied on property that will benefit from the improvements;
- A public improvement project, already in progress, authorized by the voters of the municipality, for which there is a deficiency of funds for completing the project in accordance with the plans and purposes authorized by the voters;
- A payment under a contract by which a developer participates in the construction of a public improvement as provided by Subchapter C, Chapter 212;
- Personal property sold:
  - at an auction by a state licensed auctioneer;
  - at a going out of business sale held in compliance with Subchapter F, Chapter 17, Business & Commerce Code;
  - by a political subdivision of this state, a state agency of this state, or an entity of the federal government; or

- under an interlocal contract for cooperative purchasing administered by a regional planning commission established under Chapter 391;
- Services performed by blind or severely disabled persons;
- Goods purchased by a municipality for subsequent retail sale by the municipality;
- Electricity; or
- Advertising, other than legal notices.

Please provide details and facts to explain why you believe the exemption applies to the purchase. You may also attach documentation to this form. [Click or tap here to enter text.](#)

### **Section 3: Claimed Sole-Source Exemption and Justification**

NOTE - For any non-sole-source exemption, complete Section 2.

Please indicate the sole-source exemption you believe applies to the purchase and provide information to support its applicability. Please refer to the Exemption Primer for detailed information about common exemptions

- \*A procurement of items that are available from only one source, including:
  - items that are available from only one source because of patents, copyrights, secret processes, or natural monopolies;
  - films, manuscripts, or books;
  - gas, water, and other utility services;
  - captive replacement parts or components for equipment;
  - books, papers, and other library materials for a public library that are available only from the persons holding exclusive distribution rights to the materials; and
  - management services provided by a nonprofit organization to a municipal museum, park, zoo, or other facility to which the organization has provided significant financial or other benefits;

How did you determine that the item or service is only available from one source?  
Cadre as well as research into the systems and technology.

Attach screenshots and provide an explanation of any independent research you conducted, through internet searches, searching cooperatives, or discussions with others knowledgeable on the subject matter that corroborate that the item is available only from a single source.

Cadre has been involved in the forensic firearm examination and comparison field for many years and have been vendors at the Association of Firearm and Toolmark Examiners (AFTE)

yearly meeting and training seminars. Cadre has participated in several comparison studies that have been published in the AFTE Journal. Cadre is working with NIST in the development of algorithms for the use of 3D microscopy in forensic firearm examinations. Cadre has also been purchased and is being validated by the Houston Forensic Science Center (HFSC). The Texas Forensic Science Commission has also recommended that the lab adopt this new technology. Please find the attached letters from Cadre in regards to their system.

Did you attach a sole source justification letter?  Yes  No

Describe the uniqueness of the item or service (e.g. compatibility or patent issues, etc.). Cadre is the only manufacturer that is working directly with the National Institute of Standards and Technology (NIST) on the validation and acceptance of the 3D systems. The validation and acceptance is key in the court admissibility of the use in forensic case work.

#### **Section 4: Attorney Determination**

With the facts provided by the department, is the use of the claimed exemption defensible if the City were to be challenged on this purchase?  Yes  No.

Was there anything attached to this form that was relied on in making this determination?  Yes  No.

If yes, please explain: Sole source letter, dated 1/25/23, and letter explaining sole source features, dated 3/7/23

Was there anything not included on this form or attached hereto that was relied on in making this determination?  Yes  No.

If yes, please explain: Click or tap here to enter text.

Will the standard terms and conditions apply?  Yes  No.

Will the contract require special terms?  Yes  No.

Will the contract require review by the department attorney?  Yes  No.

**Approved By:**

*Jessika Williams*  
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Jeremy Anato-Mensah/Jessika Williams  
Assistant City Attorney

Date: 8/23/23

**Ryan H. Lilien – MD, PhD**  
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RYAN.LILIEN@CADREFORENSICS.COM  
DIRECT: (312) 620-9958



January 25, 2023

To Whom it May Concern,

Thank you for your interest in our **TopMatch-3D** scanning systems for firearm forensics. Per your inquiry, this letter serves to formally state that Cadre is the sole and only manufacturer and distributor of our TopMatch-3D scanning systems in the US and Canada. This includes both our desktop scanner and portable scanner. Cadre is also the only provider of system warranty and support / licenses / upgrades for the hardware and software of these scanning systems. There are no other distributors or service providers within the US and Canada. Cadre is the inventor of the TopMatch-3D technology; we designed the hardware and software and we maintain a US Patent on some of the technology elements.

We look forward to hearing from you.  
Best regards,

A handwritten signature in black ink, appearing to read "Ryan Lilien". The signature is fluid and cursive, with the first name being more prominent.

Ryan Lilien  
Chief Science Officer

**Ryan H. Lilien – MD, PhD**  
Chief Science Officer  
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RYAN.LILIEN@CADREFORENSICS.COM  
DIRECT: (312) 620-9958



March 7, 2023

To Whom it May Concern,

Thank you for your interest in our scanning systems for firearm forensics. The **Cadre TopMatch-3D** system is the industry leading 3D scanning system for firearm forensics. Cadre can make sole source claims on the following (to our knowledge, no competitor can make these claims):

- Use of a proprietary gel-pad to eliminate specularities and improve scan resolution. The gel removes the optical effects of surface reflectivity on 3D scan measurement. Metal surfaces (such as firearms ammunition) are highly reflective / shiny which has negative effects on most scanning systems. The use of our patented gel-pad provides a significantly higher resolution scan than other systems. It allows us to see fine striated toolmarks which are not resolvable on other systems. This is critical for striated toolmarks such as aperture shear and is thus important for comparison of certain makes of firearms (eg. Glock). No other system offers such a method of correcting surface reflectance problems.
- TopMatch is the only system with an automated batch scanning system capable of scanning up to 15 (fifteen) cartridge cases in one batch. Cadre's tray easily allows for multiple different calibers per tray. The use of the tray improves the speed and automated loading improves the accuracy of scan acquisition.
- Cadre is the only provider of validated tools for Virtual Comparison Microscopy (VCM). Our software has been successfully validated via five VCM studies involving over 200 participants. It is also the only system validated by both the FBI Firearms / Toolmarks Unit and the Canadian RCMP for VCM. A system validated for VCM by other respected labs provides confidence that your lab will also be able to successfully complete an internal validation study and thus begin using the technology.
- TopMatch is the only system that has been successfully used in the US court system. A successful Daubert hearing involving Cadre VCM occurred in Oregon in 2022. Cadre VCM has also been admitted without admissibility challenge in other US court cases. To our knowledge, no other 3D VCM system has met this milestone.
- TopMatch is the only 3D VCM system that implements NIST's CMC (Congruent Matching Cells) comparison algorithm for determining common source. CMC is supported by several peer-reviewed publications authored by NIST.
- TopMatch is the only American system for 3D firearm and toolmark examination. Developed by, manufactured by, distributed by, and supported by an American company.

In addition to the above sole source unique features, Cadre proudly offers:

- TopMatch scanners come with remote access software allowing examiners the ability to access acquired scans back at their desktop Windows computer. The remote software supports saved views, screenshots, source linkages, notes, comparison algorithms, and reports. No other software includes all these features.
- TopMatch scanners support multiple independent users, keeping their work separated. Case management tools makes it easy to assign cases to specific users and to track work completion.
- TopMatch fully supports both reading and writing of the X3P open file format for the exchange of 3D surface topography data. Cadre was a founding member (along with NIST) of the Open Forensic Metrology Consortium (OpenFMC). This working group selected X3P as the common file format for firearm forensics and is in the final stages of approving a firearm specific data record to encode firearm specific fields (eg. caliber, make/manufacturer, etc.) within the X3P file format.

Best regards,

A handwritten signature in black ink, appearing to read "Ryan Lilien".

Ryan Lilien  
Chief Science Officer