



**Price Proposal to Renew and Expand Subscription-Based
Gunshot Detection, Location, and Forensic Analysis Service
for the City of New Haven, Connecticut**

October 5, 2021

Proposal ID: NHAVENCT100521

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Executive Summary

Introduction

ShotSpotter is pleased to provide this proposal to renew the City of New Haven's gunshot detection, location, and forensic analysis services and expand the City's coverage footprint, per the City of New Haven's request. ShotSpotter is honored to have served the New Haven Police Department (NHPD) in its gun violence reduction efforts since September 2009, and we are pleased to present the following proposal to renew the subscription and expand the City's current 5.5 square miles of ShotSpotter coverage. While the original coverage area was deemed the most critical at the time of the original deployment, there are additional areas of the City that would benefit from ShotSpotter coverage. ShotSpotter has collaborated with NHPD to identify those areas which would benefit most from expanded coverage.

This proposal includes special pricing whereby if NHPD contracts with ShotSpotter to renew the current subscription for a four-year term and expand coverage by 1.56 square miles, ShotSpotter will honor the City's current Phase II annual subscription rate of \$68,906 per mi² and waive the Annual Subscription Fee for a one-year term for the 1.56 square mile expansion. ShotSpotter will also freeze the price rates for the existing coverage and the expansion for the entire four-year term. This offer, in addition to a multi-year term commitment discount on Service Initiation Fees, equates to an overall savings of \$123,093 for NHPD. This offer is contingent upon ShotSpotter receiving a fully executed contract for a four-year term by no later than October 31, 2021.

The ShotSpotter gunshot detection, alert, and analysis services provide what would be otherwise unobtainable, critical real-time gunfire intelligence. The core capabilities of the ShotSpotter solution are:

- **DETECT** – ShotSpotter detects and locates gunfire incidents enabling a fast, precise response to over 90% of shooting incidents within the targeted areas. This has a powerful deterrent effect and disrupts the gun violence cycle.
- **PROTECT** – ShotSpotter helps to protect officers by providing them with comprehensive data on the actual amount of gunfire activity that occurs in the neighborhoods they patrol and provides critical situational awareness when responding to specific incidents.
- **CONNECT** – By applying community policing-oriented best practices, ShotSpotter provides a unique opportunity for law enforcement agencies to connect with vulnerable communities. Rapid response to gunfire incidents in communities that have been most impacted by gun violence builds positive attitudes towards law enforcement and leads to more constructive engagements and cooperation.

ShotSpotter has become an indispensable crime-fighting tool for these agencies, in light of the community dynamics that fuel gun violence and the well-documented challenges of relying solely on 9-1-1 calls for service:

- **Under-reporting of persistent gunfire:** Nationwide, on average, less than 20% of gunfire incidents are reported to 9-1-1. Why don't residents call? The answer is complex, but typically involves the following concerns:
 - Recognition: "Was that gunfire, fireworks, or something else?"
 - Retaliation: "If they find out I called, will they come after me?"
 - Resignation: "No one came the last time I called..."

Without ShotSpotter, most law enforcement agencies are working with an 80% to 90% deficiency in their gun violence-related intelligence.

- **Late and inaccurate information:** When a citizen reports a gunfire incident, the 9-1-1 call typically comes several minutes after the event has occurred, and, based on analysis, the location provided is usually mislocated by 750 feet (on average). As a result, valuable time and resources are wasted trying to locate the incident, greatly diminishing the opportunity to identify suspects and witnesses, recover evidence, and, most important, render life-saving aid to victims.

The ability to receive near real-time gunfire intelligence data provides law enforcement agencies with a critical advantage in their efforts to reduce and prevent gun violence and improve officer safety. Specific results include:

- Officers can more quickly and more accurately go directly to the scene of the shooting
- Situational awareness is vastly improved over what is available when relying solely on the 9-1-1 system
- Law enforcement has a better chance of arriving before the shooter has left the scene
- Officers are much more likely to find evidence in the form of shell casings (which, in conjunction with NIBIN/IBIS, provide valuable investigative leads) and/or other ground truth that can aid in the investigation
- Officers are more likely to find witnesses who may have information that can aid in the investigation
- Community engagement is heightened, which often translates into more information from the community (e.g., tip lines, field interviews, etc.)
- Targeted enforcement (precision policing) is enhanced
- More court-admissible and scientifically sound forensic evidence is available to strengthen prosecutions of the worst offenders

How it Works

Based on an analysis of known gunfire-related crimes, the ShotSpotter team designs and deploys networked sensors within the targeted coverage area. These acoustic arrays detect and locate gunshot activity within the coverage area and report that information to ShotSpotter's Incident Review Center (IRC) which is staffed 24/7/365. ShotSpotter uses a two-factor incident review process to minimize false alerts. The first tier is performed by sophisticated AI software. Once the software has performed an initial review and filtered out any incidents that are determined not to be gunfire (e.g., helicopter noise, fireworks, etc.), the data is received at our IRC.

The IRC review process is performed by a team of highly trained acoustic experts. In addition to examination of the incident audio, the review process involves examination of visual characteristics of the detected pulses and the incident, such as the number of participating sensors, the wave form, pulse alignment, and the direction of sound. The IRC review results in publishing (Gunshot or Probable Gunshot) or dismissal (Non-Gunshot) of the incident with a high level of precision. If the reviewer classifies the incident as a gunshot, the reviewer sends an alert, including location information and an audio snippet, to law enforcement agencies via a password-protected application on a mobile phone, in-car laptop, or computer. In addition to the dot on the map and audio, ShotSpotter provides details such as number of shots fired, whether multiple shooters are involved, and whether high-capacity and/or fully automatic weapons are being used. This entire process (i.e., recording the impulsive sound, two-factor review, and publishing alerts to authorized users) is designed to be completed in less than 60 seconds (but is often completed within 25 to 30 seconds).

ShotSpotter customers receive a contextually rich, detailed gunfire alert that enables a fast, precise, and safer response to gunfire incidents. In addition, ShotSpotter alerts can also trigger other technology platforms such as cameras that can pan and zoom in the direction of an event. ShotSpotter has also successfully integrated with a wide range of third-party applications such as CAD, RMS, License Plate Readers, drones, and other applications.

We look forward to working with the City of New Haven to extend the benefits of ShotSpotter to this new coverage area as you expand your efforts to reduce gun violence in your community.

Proposed Coverage Areas

ShotSpotter systems are deployed to provide coverage for one or more specified areas, each bounded by a specific coverage area perimeter. ShotSpotter will design the final coverage area based upon the Department's requirements and based upon analysis of historical crime data.

The area delineated by a red boundary in the images below depicts New Haven's current ShotSpotter coverage area. The areas delineated by a blue boundary in the images below are rough estimates of the recommended coverage area expansions, based on the Department's specifications and labeled in order of priority.

The precise size of each area (i.e., in square miles) can only be verified with actual acoustic propagation information; therefore, the final coverage area may vary. ShotSpotter will perform this verification during the installation process.

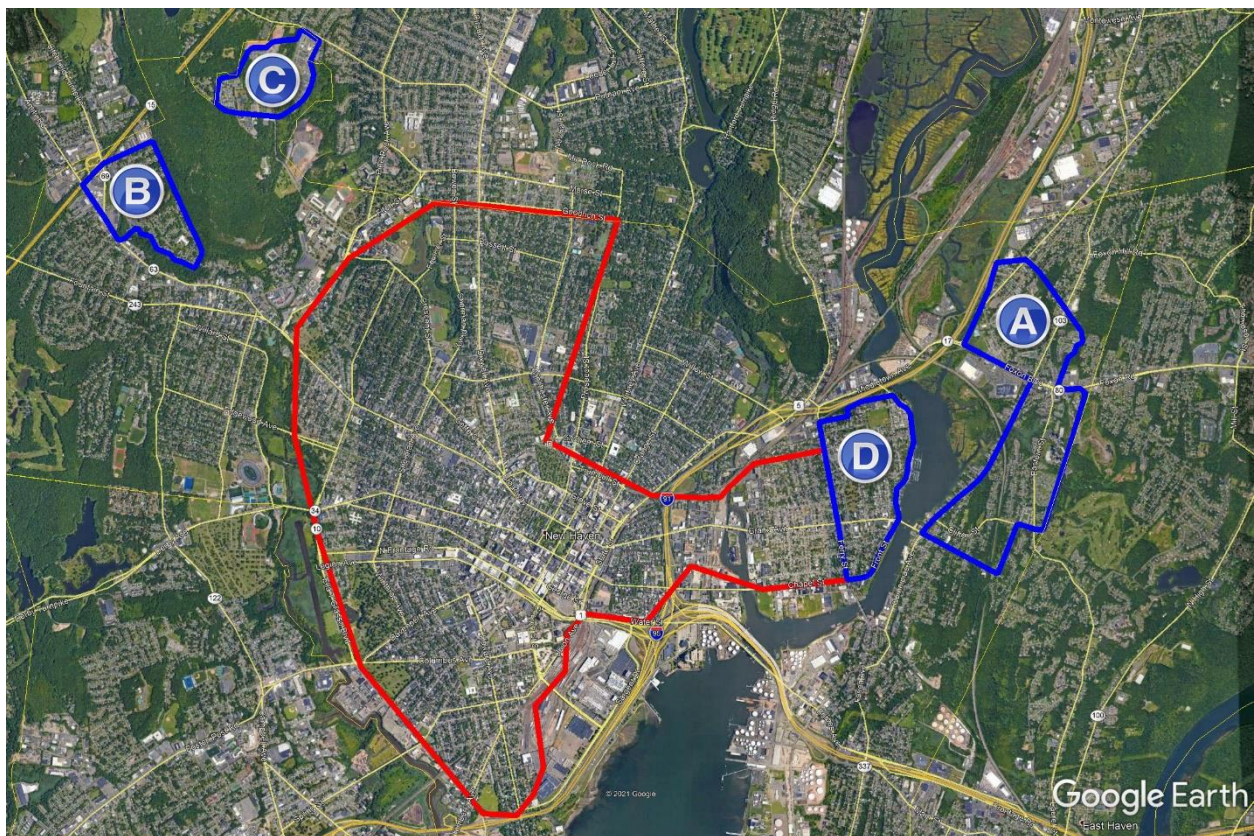


Figure 1: Proposed Expanded ShotSpotter Coverage Areas



Figure 2: Area A = 0.75 square miles
Area D = 0.37 square miles



Figure 3: Area B = 0.25 square miles



Figure 4: Area C = 0.19 square miles

Pricing

Subscription Renewal (Phase I & II) and Expansion (Phase III)

Service	Quantity	Unit Price (per mi ²)	Discounted Unit Price	Subtotal	Fees Waived (Four-Year Agreement)*	Total
Phase I Annual Subscription Fee	1.50 mi ²	\$41,990		\$62,985		\$62,985
Phase II Annual Subscription Fee	4.00 mi ²	\$68,906		\$275,625		\$275,625
Phase III Service Initiation (per square mile)	1.56 mi ²	\$10,000		\$15,600	(\$15,600)	\$0
Phase III Annual Subscription Fee	1.56 mi ²	\$70,000	\$68,906	\$107,493	(\$107,493)	\$0
YEAR 1 TOTAL				\$461,703	(\$123,093)	\$338,610
YEAR 2 TOTAL	7.06 mi ²			\$446,103		\$446,103
YEAR 3 TOTAL	7.06 mi ²			\$446,103		\$446,103
YEAR 4 TOTAL	7.06 mi ²			\$446,103		\$446,103
FOUR-YEAR TOTAL						\$1,676,919

*See Pricing Assumptions below for details.

Forensic Consultation Services

Forensic Consultation Service Fee (Expert Witness Services) \$350/hour
 Expert Witness Testimony Services are available upon request and billed separately at the above rate.

Payment Terms

Payment for the subscription shall be as follows:

Year 1	\$338,610	Phase I & II fees due prior to November 1, 2021
Year 1	\$0	Phase III fees due upon ShotSpotter activation (live) status
Year 2	\$338,610	Phase I & II fees due prior to November 1, 2022
Year 2	\$107,493	Phase III fees due prior to 1 st anniversary of ShotSpotter live status
Year 3	\$338,610	Phase I & II fees due prior to November 1, 2023
Year 3	\$107,493	Phase III fees due prior to 2 nd anniversary of ShotSpotter live status
Year 4	\$338,610	Phase I & II fees due prior to November 1, 2024
Year 4	\$107,493	Phase III fees due prior to 3 rd anniversary of ShotSpotter live status

Pricing Assumptions

This pricing is submitted based on the following assumptions:

- This pricing assumes that the services will be delivered under the terms of the ShotSpotter Respond (formerly Flex) Services Agreement dated June 23, 2015.
- When NHPD contracts with ShotSpotter for 1.56 square miles of coverage expansion, the Annual ShotSpotter Respond Subscription fees for 1.56 square miles will be waived for the first year. NHPD agrees to pay the Annual ShotSpotter Respond Subscription fees for the 1.56 square mile expansion area for years 2, 3, and 4 of the 4-Year contract term.
- This pricing is contingent upon ShotSpotter receiving a four-year contract commitment allowing us to invoice automatically for each annual subscription term over the four years of the agreement, without any requirement for obtaining additional approvals, purchase orders, or notifications.
- This pricing assumes that service and billings for the City’s existing coverage areas (Phase I and Phase II) are renewed immediately upon expiration of the existing subscription term (October 31, 2021) and thereby will continue uninterrupted.
- This pricing is contingent upon ShotSpotter receiving a fully executed contract amendment for the four-year term and the related purchase order on or before October 31, 2021.
- This pricing assumes that NHPD will provision network access to meet ShotSpotter minimum specifications and requirements for all computers (PCs and MDCs) that will access the ShotSpotter service.
- This pricing does not include any state or local taxes; if taxes are applicable, we will be happy to provide an amended price quotation upon request.